



Good Jobs. Thriving Communities.

Why Networks Matter and How to Build Them

Human Networks

Humans have always been social. We love to connect with, share, and inspire one another. The human connections we build have long enabled change and innovation, as ideas find their way to the people who could do something of value with them.

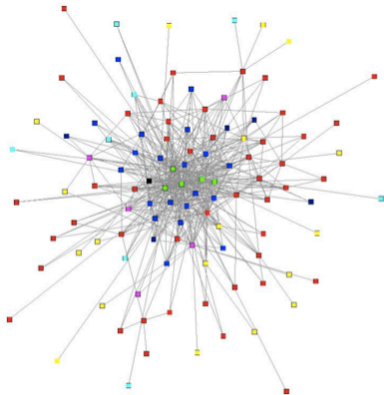
But the large-scale hierarchical institutions we build to generate efficiencies – government agencies, corporations, institutions of higher learning and others – can impede the natural flow of ideas that happens in a more chaotic environment. The walls we constructed to insure our organizational identities, strength, and security can also prevent the kind of collaboration necessary to tackle “wicked problems”¹ – like economic transformation and environmental sustainability.

Building community connectivity through networks can help.

Building Effective Community Networks

“Know the Net” through Social Network Analysis²

Using simple survey techniques and mapping software,³ we can visually represent community networks through maps. These maps, like the one below, allow us to see the “links” relationships, flows, or transactions) between “nodes” (people, groups, or organizations).



We can analyze these maps at two different levels. First, we can look at the individual connections:

- ▶ Are important actors with common interests linked?
- ▶ Are there “bottlenecks” - single individuals or organizations that are the only links between otherwise independent and sizable networks?
- ▶ Is there clustering? Where? What does it represent?

Second, we can analyze the shape of the network overall. Decades of research across many has helped us identify key characteristics of healthy networks:

¹ Wicked problems are unstructured (no one cause), multidimensional (no one solution), and relentless (not easily solved). Horst Rittel developed and presented this idea, eventually sharing it publicly in Horst W. J. Rittel and Melvin M. Webber, “Dilemmas in a General Theory of Planning,” a working paper presented at the Institute of Urban and Regional Development, University of California, Berkeley, November 1972.

² June Holley and Valdis Krebs pioneered this approach to Social Network Analysis in communities, and coined the phrase “Network Weaving,” also the name of their blog <http://networkweaver.blogspot.com>. CSW has developed a partnership with June Holley, with whom we are collaborating in large-scale community change efforts.

³ This software, called InFLOW™, was developed by Valdis Krebs.

- ▶ Clustering around common interests, attributes, goals, or governance structures;
- ▶ Diversity within clusters and across the network overall;
- ▶ Redundant links – so that there are multiple paths for information to flow from any two nodes;
- ▶ Boundary spanners – nodes that connect multiple hubs or connect the network to other networks; and
- ▶ Efficient pathways between nodes – so that information can flow as directly from one node to another without moving through multiple other nodes and creating distortion.

This gives us both an assessment of network health and a starting point for improving it.

“Weaving the Net”

Specific strategies will vary based on the shared interest of the network and what members seek to achieve by participating, but they will generally include two dimensions:

- ▶ Relationship building – simply connecting disparate parts and creating more effective information flow; and
- ▶ Collaboration – working together on shared projects (not just planning, not just meeting, not just schmoozing, but actual reciprocal collaborative doing).

The result of this process in the scientific community is discovery. In the business community, it’s innovation. In both cases, and in all communities, it is what the field calls *emergence*⁴ – small-scale interactions leading to important large-scale patterns.

And it’s what makes networks so powerful.

Improving Outcomes in Real Communities

Newton, Iowa

Among the most well known examples of network-based transformation efforts is the region in and around Newton, Iowa. Once the headquarters of the Maytag Corporation, which provided well-paying jobs for nearly one-third of the town’s residents, the community faced a difficult transition when the plant closed its doors. One of the most important actions the seven-county region took was to conduct a social network analysis (SNA) to guide region-building and collaboration efforts:

They found and addressed connectivity gaps among leaders across the seven counties.

They increased the diversity of leaders involved in community building.

They jointly developed economic development plans and strategies, attracting an array of federal grants and, subsequently, private investment in new industries.⁵

They learned how to actively cultivate networks in an ongoing way.⁶

⁴ A book of the same name (*Emergence: The Connected Lives of Ants, Brains, Cities, and Software*) was published in 2001 by Stephen B. Johnson, whose blog is here: <http://www.stevenberlinjohnson.com/>

⁵ This story was captured in a compelling narrative in a July 2009 edition of Audubon Magazine <http://audubonmagazine.org/features0907/solutions.html> (though the focus of the story is green jobs).

⁶ One key community leader, Kim Didier, remains an active network weaver, using an array of tools, including LinkedIn, where she actively posts stories and comments that provide common points of reference for the geographically dispersed members of the network. http://www.linkedin.com/groups?home=&gid=1809010&trk=anet_ug_hm

Advanced Energy in Northeast Ohio

Recently, Valdis Krebs used Social Network Analysis to map the connections between 350 advanced energy companies identified by NORTEC in Northeast Ohio, with the intent of identifying business development opportunities for this emerging industry.

He identified possible ways to connect firms with complementary competencies with each other – and created the beginnings of possible brokering methodology for economic and business development professionals, and more importantly, engaging members of the industry in its own development.⁷

Many Applications

Social network analysis can tell us how to optimize collaborative relationships to maximize the rate of innovation and project success. It can tell us much about how to be more effective in the world of economic and workforce development, based on strong history there and other fields.

For example, the Centers for Disease Control is working with social network analysis to better understand how integrated health system teams and departments can better prevent the spread of antibiotic-resistant bacteria. The U.S. federal government has the approach to better understand how terrorist networks have been so effective and how better to defeat them. Even simulations and gaming experts have used social network analysis—analyzing games like World of Warcraft, which has entertained over 10 million people worldwide—to better understand the characteristics of the most effective online collaborative teams.

There are infinite ways to apply this kind of analysis – at almost any stage of project development. While it relies on software mapping, and makes use of new social technologies to weave, what we’re really doing here is the same thing humans have been doing for millennia – finding kindred spirits who can help us to make things happen.

Could your community benefit from heightened collaboration? Understanding the health of relevant social networks, and taking clear and decisive steps to improve that health, could help take you down a new path to prosperity.

⁷ A five minute screencast about this project is available here <http://screenr.com/nus>.