



NETWORK EVALUATION



In complex settings, causality is also complex. We cannot identify a single action that will produce the outcomes we want. We often have to experiment, trying out a number of actions or strategies and then notice what about those exploratory forays worked. In the process of examining or reflecting on what we did, we often make breakthroughs in our thinking about the situation or problem and this helps us move to more effective actions.

For example, in combating infections in a hospital, we notice that when housekeeping staff work closely with – and are respected by – nursing staff and doctors, the resulting preventative actions are more innovative and effective. This insight leads us to become more inclusive in other aspects of our work, making sure that staff from many different roles work together on solutions. As a result, our hospital becomes a better place for both patients and staff. Complexity theorists use the term emergence to describe such new ways of operating that arise from this combination of self-organized experiments and reflection.

Of course, complex causality makes it difficult to determine whether a particular organization’s strategy is working or making a difference. And, in response to the complexity of problems, organizations in many communities have begun to work in networks so that they can utilize their differences to be more innovative and experimental and so they can access the power of scale, aggregation and diffusion.

A critical question then becomes: How do we determine the value of these networks? How are they contributing (or not) to the solution of problems? How can we tell if these networks are worth our investment?

We are just beginning to explore this terrain, but already we have developed a 3 faceted evaluative process that can be engaged in collaboratively by foundations, organizations and the individuals they are hoping to assist in some way. This evaluative process is meant to be inclusive and engaging, as well as developmental. Participants gain new understandings as a result of this process, and often need to restructure activities and even outcomes as they proceed.

This approach involves:

- Network Maps and Metrics
- Network Indicators
- Outcomes (and sub-group/network measures)

Network Maps & Metrics

Many of the insights we will get when we reflect on our actions have to do with relationships – who shares information with whom, which individuals are working together, who is generating and sharing new ideas with whom. Network maps enable us to track these relationships and then work together to improve information flow, innovation diffusion, and collaborative activities by improving the connectivity of individuals in the network.

We can look at the network patterns and notice individual elements (clusters, hub and spoke formations, and long paths) that can foster or hinder communication and collaboration. We can also look at stages of network development to evaluate where

our network is in its developmental process. And finally, we can use information we gathered about characteristics (called attributes in social network theory) to see if people with these attributes are clustered, isolated or well-integrated.

Network metrics, which have been developed over the last 50 years by social network analysts, provide a quantitative measure of the network. For each metric, there is a whole network measure and a score for each individual. The whole network scores are used to determine whether the network is moving towards increased network health; the individual scores help identify potential or emerging network leaders.

Network Indicators

In addition, it is often very useful to track what we call network structures and processes using network indicators. These are indicators of the shift to an environment where people are effectively self-organizing and where outcomes are likely to be greater. Network indicators include such things as the number of collaborations or joint activities, the number of innovations, and the number of Network Weavers.

Other network indicators track structures and processes and strive to answer the following questions about the network:

- What evidence is there of communication systems that encourage people to communicate and collaborate?
- Does the community have networking hubs – places where people can easily run into and interact with others?
- Are there innovation funds that provide incentives for people working together?
- Are there reflection processes where people are able to explore what is working?
- When collaboratives identify successful strategies, are there mechanisms so that these successes can be scaled or spread?
- Is there evidence of training and coaching systems for network weavers?
- Are collaboratives using innovative processes such as open space and conversation cafes?

Other important network indicators include evidence that a network culture is emerging as shown by the norms and values, skills sets and behaviors that are being expressed. For example, evidence that people are dismantling hierarchy and racism, appreciative, sharing information and connections with others, and opportunity seeking rather than problem oriented are indicators that the culture is shifting.

Evidence of skills – such as the ability to lead effective meetings, manage collaborative projects, resolve conflicts, negotiate, check assumptions, ask clarifying questions, analyze patterns, reflect on experience, identify opportunities, and mentoring and coaching – are signs that individuals in the network will have the capabilities to build effective networks and self-organize to transform the environment.

Outcomes

When outcomes require collaboration, innovation and effective information flow for their success, it can be very productive to identify the network patterns and corresponding metrics that are characteristic of high performing sub-networks. Once identified, we can then move those sub-networks with less optimal patterns and metrics closer to those of the highest performing networks.

For example, in one hospital system we mapped and measured the networks in 4 different units. We found that the unit that had the lowest infection transmission rate also had the highest integration or network health measure; many staff in the unit were working with others, both in their unit and with outside staff. The lowest performing unit (with the highest infection transmission rate) had a network that was highly centralized and isolated and had a low integration score. By encouraging the low performing unit to engage more nursing staff in infection prevention activities involving housekeeping and doctors, which would change the network pattern and metrics, we would also be likely to improve the infection transmission rates.

Critical to this approach is tracking outcomes by sub-units of the entire community – for example, by departments in an organization, in different locales (neighborhoods or cities), in different projects. This way we can compare the networks of the sub-units in ways that help us discover the types of networks that will generate optimal performance.

In a sense, the network indicators described on page 1 are also outcome measures, but they are measuring meta-outcomes: is the network generating a transformational culture that will continue to generate many types of positive outcomes over time? For example, when a hospital has a network culture and skill base, it is likely to move beyond successes in infection control to improve patient care in many other ways.

NETWORK INDICATORS

Indicator	Example	How to Measure
Collaborations/ self-organizing	<p>Joint projects Joint activities Twosies Ecosystem of different sized projects Diversity of initiators</p>	6 month survey asking for examples/lists/stories
Innovations	<p>New processes tried New services New programs New product</p>	6 month survey asking for examples/lists/stories
Network Structures	<p>Support for Communication *listserves/ group email, wikis, blogs *social networking sites Network hubs/ gathering places Innovation Funds Scaling/viral mechanisms Reflection Sessions/ sharing breakthroughs Network Weaver Training/Coaching System Communities of Practice Liberating Structures *Open Space *Conversation Café *World café</p>	<p>6 month survey asking for examples/lists/stories</p> <p>Content analysis web sites, newsletters, etc.</p>
Network Weavers & Network Guardians	<p>Formal Informal</p>	6 month survey asking for examples/lists/stories/self-assessments
Network norms/ reframing	<p>Complex reciprocity Affirmation/ appreciative Opportunity seeing Relish diversity Experimental Value collaboration</p>	<p>Checklist of values Observation Content analysis</p>
Network Skills	<p>Ability to effectively close triangles Ability to lead effective meetings Small project management Conflict resolution Negotiation Checking assumptions Asking questions Pattern analysis Reflection Opportunity identification Mentoring/coaching leaders & network weavers</p>	Skills checklist as part of 6 month survey
Collaborations/ self-organizing	<p>Joint projects Joint activities Twosies Ecosystem of different sized projects Diversity of initiators</p>	6 month survey asking for examples/lists/stories