



**Minnesota**  
**FOOD CHARTER**  
Network

# Generating Maps with Software

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# Web-based SNA Planning Template

## Three-month timeline:

- Month 1: Design and build awareness of the survey and its value with network members
- Month 2: Survey administration, including multiple strategies to increase the response rate to at least 60%
- Month 3: Survey data analysis, including creation of maps and data tables; facilitated sessions with members to reflect on the findings

Timing	Mapping Task/Activity	Who is responsible?	Who else involved?	Notes
<b>Design and engagement</b>				
Week 1	Develop timeline, pull together a Mapping Design group, assign tasks and roles			
Week 2	First meeting with Mapping Design Group			
	Find old email list or re-enter new names			
	Develop survey questions or identify relevant questions from past surveys (based on purpose and guiding questions)			
	Develop an email message and group email for sending out an SNA announcement			
Week 3	Second call with mapping design			
	Finalize survey questions and names			
Week 4	Upload names and questions into survey			
	Design Group takes survey to find typos and to make sure it takes no more than 15 minutes to finish			
<b>Data collection and cheerleading begins; goal is to reach at least a 60% response rate</b>				

Week 5	Send email to respondents with link to survey			
	Send out reminder email message with survey to non-respondents two times in first week			
Week 6	Run Influence metric to see key people who have not taken survey and send personal emails to them			
	Send out reminder email message with survey link to non-respondents two times second week			
Week 7	Make calls to key people who have not yet taken the survey			
Week 8	Final push to get respondents using emails, phone calls, and personal contacts to reach 60%+ goal			
<b>Data analysis and sharing</b>				
Week 9	Clean up data			
Week 10	Generate maps & export to PowerPoint template and develop legends			
	Generate metrics and make metric charts; ID potential Network Weavers			
Week 11	Analyze maps and metrics w/ Mapping Group and develop strategy for Network Weaving; determine which maps to show			
Week 12	Present results to larger network or subset			

## Sample Guiding Questions

### Definition of a guiding question

Overall questions that will be addressed. These questions stem from the purpose of the social network analysis effort and the developmental stage of the network. Good guiding questions are open-ended and intended to focus data collection. They contain few words but demand a lot. Remember, guiding questions are different than survey questions.

Purpose	Sample Guiding Questions
Strengthen a network mindset across members	<ul style="list-style-type: none"> <li>• To what degree do people see themselves as part of the network?</li> <li>• What and how is network language used?</li> <li>• To what degree do people promote network values and behaviors?</li> <li>• What network patterns exist and what strengths are amplified and how? What network weaknesses exist and how are they being addressed?</li> </ul>
Determine where the health of the network needs to be improved	<ul style="list-style-type: none"> <li>• How large is the core/periphery? Does it contain different but overlapping clusters? Is there enough energy?</li> <li>• Who is missing and key to engage given the network purpose and outcomes?</li> <li>• What are the pathways for engagement?</li> <li>• How dependent is the network on a small number of individuals?</li> <li>• What is the current network health and what are areas of priority for improvement in the short-term and long-term?</li> <li>• How is network leadership and capacity being developed?</li> <li>• What is the decision-making and governance structure?</li> <li>• How network resources/funds flow?</li> </ul>
Identify people with common interests who may not be aware of each other	<ul style="list-style-type: none"> <li>• What mechanisms are in place to identify and self-organize around skills, interests, actions, challenges or barriers?</li> <li>• Who functions as network weavers and in what key roles? (connector, convener, coach, guardian)?</li> </ul>
Evaluate the health and effectiveness of the network	<ul style="list-style-type: none"> <li>• What assessment and evaluation learning systems are utilized?</li> <li>• What evaluation capacity is in place and needed?</li> <li>• What communication mechanisms provide info on network health and ways to learn more and engage?</li> </ul>

## Sample Social Network Analysis (SNA) Web-based Survey Questions

**Question format:** SNA survey questions must be written in a specific way to minimize typographical errors and generate two files that can be easily converted to a nodes and links file. A **nodes file** captures data regarding the attributes of the individual people (nodes) and a **links file**, the connections or relationships between the nodes, so the results can be used to create maps.

**Number of questions:** Limit **attribute questions** to 12 to 15 (e.g. demographics, interests, challenges, skills, willingness to convene others) and **relationship questions** to 2 (e.g., who they have worked with or want to work with in the future or who do you go to for ideas).

**Types of question responses:** Questions require a certain type of response to be analyzed and used in mapping.

- Open-ended: Respondent fills in a comment box (limit, limit, limit use of this type of response)
- Forced choice: Multiple options but respondent can only pick 1 of them
- Rating scale options: 1 = no experience to 5 = highly experienced OR 1 = not at all interested to 5 = very interested
- Check yes or no: Options are to check yes or no

The first two types of question may also include the option of checking “other” and provide space for respondents to write in a response.

## Sample Attribute Questions (remember no more than 12-15 questions)

Node	Question	Type of response
Demographics	Respondent name and email	Survey link may capture name & email; otherwise use open-ended
	Name of primary organizational affiliation	Open-ended
	Name of network/collaborative (important if respondents are from multiple networks/collaboratives) (list options)	Forced choice
	Zip code	Dropbox list of options
	Primary sector affiliation (list options like Locally elected officials, Food/agriculture agency, Social service agency, Farm organization, Farmer, Food Bank/anti-hunger group, Faith-based organization, Cooperative extension or other university faculty, Public health, Environmental or sustainable community advocate, Parks & recreation, Community gardening org., Food processor, Food retailer, Small business support or local lending institution, Community-based or neighborhood org., Interested community member, Other)	Forced choice
	Role in your organization (list options like management, direct service/action, volunteer, trainer, consultant, food producer)	Forced choice
	Scale of work (list options like neighborhood, community, county, regional, statewide)	Forced choice
	Population served (options may focus on listings of age groups, ethnic groups, and/or special populations)	Forced choice
	Racial/ethnic heritage (list options like American Indian, Eskimo or Aleut, Black or African American, African, Hispanic or Latinx, Asian or Pacific Islander, White or Caucasian, Other)	Forced choice
	Gender (list options like Male, Female, etc.)	Forced choice
	Number of years doing food related work (list options like 1-2 years, 3-4 years, 5-6 years, 7-8 years, etc.)	Forced choice
	Age (list options like Under 18, 18-24, 25-34, 35-44, 45-54, 55-64, 65+)	Forced choice

Priority Issues/ topics	<p>Optional questions:</p> <ul style="list-style-type: none"> <li>• Which ONE of these issues/programs would you MOST be interested in being involved with in the coming year?</li> <li>• Which skill would you most like to develop during the coming year?</li> <li>• Which of the following are you most interested in learning more about with others?</li> </ul>	Forced choice
Challenges/ Opportunities/ Barriers	<p>Optional questions:</p> <ul style="list-style-type: none"> <li>• Which aspect of healthy eating [or insert another aspect of the food system] do you find the most challenging?</li> <li>• What do you feel to be the greatest opportunity area to grow the local food system?</li> <li>• What barrier or constraint MOST limits growth in our [insert local, regional, or statewide] food system?</li> </ul>	Forced choice
Skills / Assets	<p>Optional skill areas include: innovation, collaboration, communication technologies, a Minnesota Food Charter strategy, etc.</p> <ul style="list-style-type: none"> <li>• I can bring [insert skill area] and/or new perspectives into the healthy eating network.</li> <li>• If you are skilled in using [insert skill area], how willing are you to help others gain proficiency in social media or social networking?</li> </ul>	Check yes or no
	<ul style="list-style-type: none"> <li>• Describe your level of expertise in [insert skill area] such as [insert examples]?</li> <li>• How willing are you to increase your [insert skill area]?</li> </ul>	Rating scale
Capacity / Leadership	<p>Optional capacity / leadership areas include: Obtaining resources, developing skills of others, making connections with others</p> <ul style="list-style-type: none"> <li>• How interested would you be in [insert leadership area or role]?</li> <li>• How interested would you be in helping to build our capacity in [insert capacity area]?</li> </ul>	Rating scale

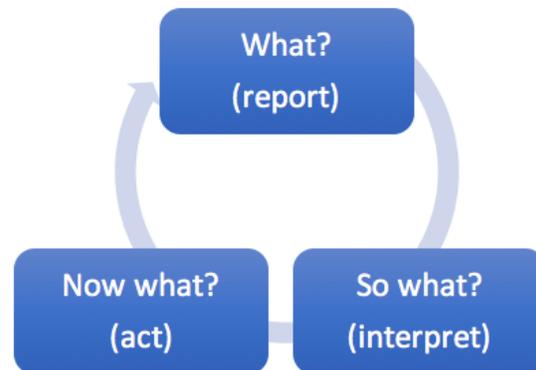
## Sample Relationship Questions (remember no more than 2 questions)

Links	Question	Type
Existing connections and relationships	<p>Optional questions:</p> <ul style="list-style-type: none"> <li>• Who have you worked with on a project?</li> <li>• Who do you look to for new ideas or innovation?</li> <li>• With whom do you exchange useful information on a regular basis (at least once per month)? [or specify another timeframe]</li> <li>• Who do you turn to regularly for advice and support on a significant challenge?</li> </ul>	<p>Network members are listed for respondent to check off all that apply + Other with space to write-in full names</p>
Priority future connections and relationships	<p>Who haven't you worked with on a project but want to work with them in the coming months?</p>	<p>Network members are listed for respondent to check off all that apply + Other with space to write-in full names</p>

# Sample Reflection Process and Protocol

## Overview

In this protocol, network members reflect on social network analysis findings and share their individual experiences in discussions with other members. The purpose is to build understanding, encourage listening and learning, and determine as a network where to focus celebrations and target needed improvements. It also eliminates the tendency for individuals to rush to action. Groups just beginning to reflect on SNA data will want to designate a facilitator.



## Basic Network Terminology

- Node:** The squares on a network map that represent individuals (or in some cases organizations).
- Links:** The lines connecting the nodes that represent a relationship. A directional link is shown by arrows on a map. When arrows go both ways, both people say they are in a relationship with each other. In some cases, the arrow will only be going in one direction; for example, if one person says she goes to another person for advice, the second person may not go to her for advice.
- Hub:** People who are well connected to others; usually hubs are also very influential.
- Core:** The center of a network where there are denser ties. Although people in the core may not know each other, they can access most individuals through their deep connections.
- Cluster:** Sets of individuals who are all similar in some way and tend to interact frequently.
- Periphery:** The outer part of a network, consisting of people who are only connected to the core through one or two people. A large periphery is important because it is the core's connection to new ideas and resources, and a gateway to many other networks.

# Sample Reflection Questions

## What? (Report)

- What do you notice? What do these data tell us? (re: nodes, links, directional arrows, number of nodes, proximity, patterns)
- What are the clusters or who are the hubs?
- Who is represented in the core? Who is missing in the core but part of the periphery?
- Who are the bridgers? Influentials?
- What don't these data tell us that we need to know?

## So what? (Interpret)

- Does the core have enough people (energy/diversity of perspectives) and connectivity?
- What connections, if strengthened, would significantly improve the network?
- What is the resiliency of the network? Is it too dependent on an individual or set of individuals?
- Who is missing that we need to engage given our purpose and outcomes?
- What expertise/resources/perspectives are needed in the periphery? How can these people be identified? How can you connect and build relationships with them?
- What are the qualities of the connections? Are they fit to purpose?

## Now what? (Act)

- What insights did I gain that I will share with others?
- With whom might I redo or continue adding to the network map?
- What actions will I take in the next 30 days to strengthen:
  - The network core
  - The network periphery
  - The network connectivity by:
    - Learning with others
    - Sharing or creating a resource
    - Developing skills or teaching skills to others
    - Focusing on what's working and why
    - Addressing and coaching on challenges

# Sample SNA Reporting

SNA maps are easily shared in Google slides or PowerPoint slide decks because of the visual nature of the findings.

In Kumu, the reflection can involve as many people as want to log onto this platform and analyze the data based on their interests and role.

If a core set of network participants will be analyzing and reflecting on the data together, it is useful for the design team to select a subset of key network maps and prepare a PowerPoint presentation in which one slide includes a map and the guiding question it is intended to address.

All the reports, regardless of the format used, should have the following sections:

- List of design team members and their roles (design, administration, analysis and reporting back)
- Purpose of the SNA
- Guiding questions
- Number of invited respondents and the percentage of those completing the web-based survey
- The time interval during which surveys were completed
- Key patterns that emerged
- Agreed-upon next action steps

## Tips and Reminders

### Survey length

If the survey takes too long and is too difficult, people will not take it or will stop part way through. At least a 60%-80% response rate is needed for the findings to be useful. For this reason, web-based surveys should have:

- No more than 12-15 attribute questions (attributes refer to demographic information: geographic location, food sector membership, organizational role, race, age, etc.).
- Two network questions (meaning the connections or relationships between members).
- No more than 150 names for respondents to check off the individuals with whom they have connections or relationships.
- The unit of analysis for each node should be at the individual level and responses should be based on an individual network participants attributes, experience and future activity.

## Design process

Think of social network analysis and mapping as a team sport. It is important to convene a team of 4-5 stakeholders to agree on the overall purpose for doing a social network analysis and how the information will be used, guiding questions that will be addressed, the actual survey questions, the sample size, and a proactive survey marketing and administration strategy.

- a. **Purpose statement.** There are different reasons to do a social network analysis using mapping. It is best to identify which of the following possible purposes is the most important to pursue at the time. The purpose selected should focus on the information needed to move forward.

Purpose	How Findings Are Used
Strengthen a network mindset across members	Network maps are a powerful way for members to visually see themselves as part of a network.
Determine where the health of the network needs to be improved	Network members can analyze the maps to identify who is missing, who is on the far periphery and should be brought into the core, and/or who isn't connected or well enough connected. They then can agree on steps to take to remedy these issues.
Identify people with common interests who may not be aware of each other	Network clusters refer to sets of individuals who are similar in some way. Network maps can help to identify people with common interests who can then be convened into a self-organizing cluster for learning or mini-project development
Evaluate the health and effectiveness of the network	Metrics may be tracked over time (annually or every few years) to document the network's strength and show how the structure is evolving

- b. **Guiding questions.** These are overall questions that stem from the purpose of the social network analysis effort and the developmental stage of the network. Good guiding questions are open-ended and intended to focus data collection.

- c. **Crafting survey questions.** SNA survey questions must be written in a specific way to minimize typographical errors and generate two files that can be easily converted to a node and links file. A **nodes file** captures data regarding the attributes of the individual respondents (nodes) and a **links file** (the connections or relationships between the nodes) so the results can be used to create maps.

Limit *attribute questions* to 12 to 15 (e.g. demographics, interests, challenges, skills, willingness to convene others) and *relationship questions* to 2 (e.g., who they have worked with or want to work with in the future or who do they go to for support or ideas).

The attribute questions must be multiple choice in which the respondent selects ONE answer. For the relationship questions, respondents will choose from a list of names of INDIVIDUALS, not organizations because only individual-to-individual connections allow focused network weaving.

**Web-based administration and analysis.** This is technical, requiring someone who is familiar with data collection (survey) software that can easily be loaded into an SNA software/platform. It is important to understand how to select and use a platform that can arrange the data into a format to produce the links file: Column A = Person taking survey, Column B = Name they gave of a connection, Column C = Relationship. Network data sets can be combined to generate more complete maps.

**e. Proactive marketing plan.** Getting a 60%+ response rate isn't easy. It requires a well thought out promotion and follow up plan that typically takes a 3 to 4-week period. The plan should address:

- The administration period, making sure it does not conflict with other important activities. If the respondents include many farmers and gardeners, it may be better to avoid the growing season.
- Announcements that the survey is coming and the importance of responding, including the purpose and how the information will be used.
- Reminder emails and calls that go out twice a week to non-respondents during the administration period.

Identifying and contacting key “influentials” in the network who have not responded via a personal email or phone call to encourage them to respond.