



Building Our Network Mapping Muscles

Perspectives on
the effective use of
network maps

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Version 1.0

A complex network diagram with numerous nodes and connecting lines, rendered in a light gray color, serves as the background for the slide.

Introduction

This slide deck was inspired by an earlier presentation on the [Network Weaver website](#) about the Innovation Learning Network (a network of hospital systems across the U.S.), which implemented a highly effective strategy to use their network maps.

A central message of the Innovation Learning Network resource is that “network mapping needs to be combined with a strategy for engaging network participants in interpreting the maps and then developing strategies for connecting people in the network and drawing in new participants.”

Building on the ILN’s learning, this resource offers additional perspectives on:

- different types of network maps and their utility for different applications; and
- high-leverage ways to make the most of your maps.

It was co-created by Paul van der Cingel ([Windesheim UAS](#), The Netherlands) and Katy Mamen ([Water Bear Collaborative](#), USA).

We hope that it will help both Network Weavers and network participants to build your “network mapping muscles.” We welcome questions, suggestions and other feedback at katy@sonic.net or p.van.der.cingel@windesheim.nl



Note: The text in certain network map images is left intentionally illegible to protect individuals’ privacy.

Why map networks?

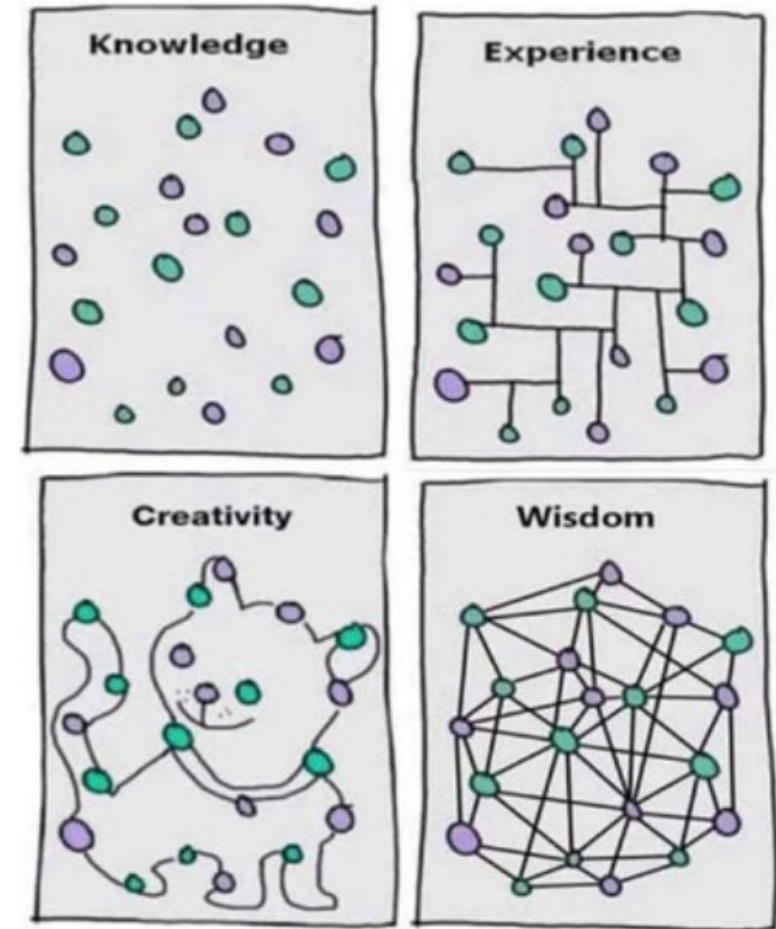


Visualizing networks can help us navigate complexity

Network mapping lets us quickly find patterns and deeper meaning.

“To create better health in a living system, connect it to more of itself.”

- Margaret J. Wheatley



Source: [Planned Coincidences](#)

Just **listing** the partners gives some information...

PARTNERS

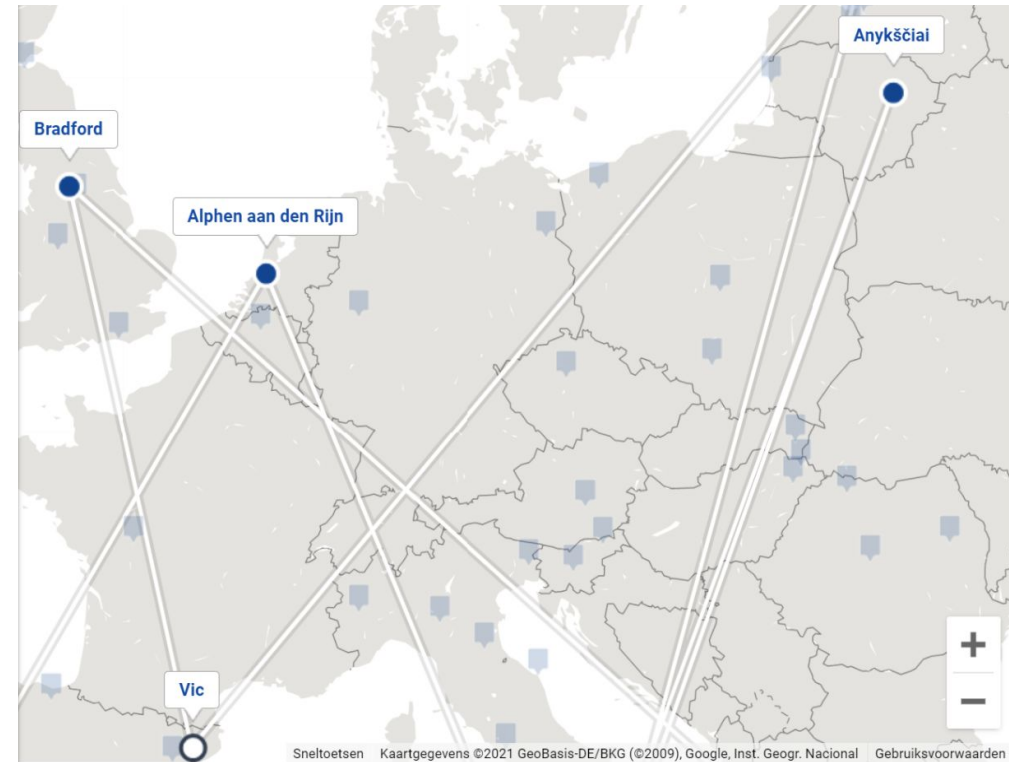
Lead Partner:
Amsterdam - Netherlands

Sofia - Bulgaria
Tallinn - Estonia
Dublin - Ireland
Vilnius - Lithuania
Riga - Latvia
Lisbon - Portugal
Greater London Authority - United Kingdom

[GO TO THE MAP](#)

[ACCESS | URBACT](#)

... but if we are to collaborate, showing the **connectedness** is much more informative.

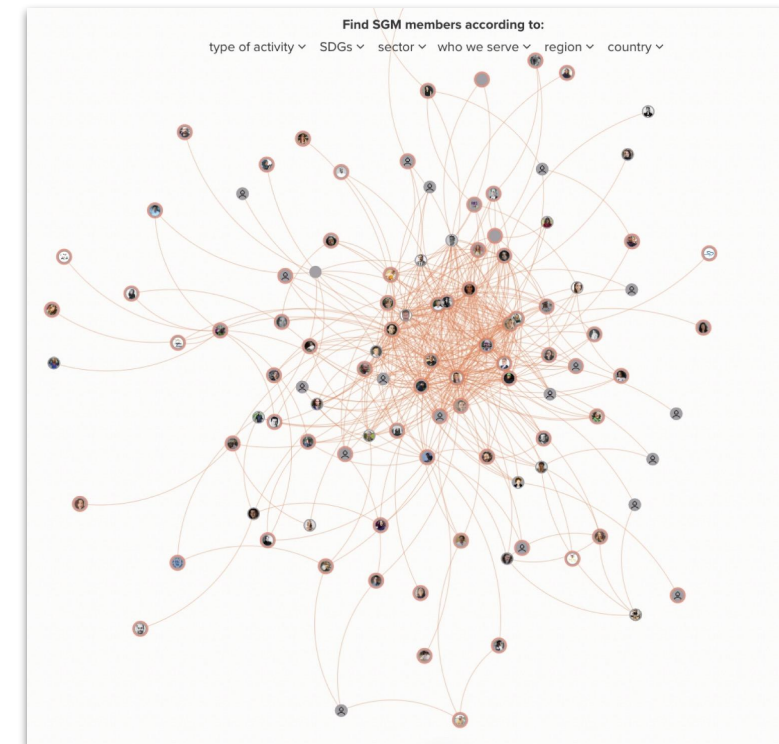


[Interactive map | URBACT](#)

We are trained to **analyse** each stakeholder separately...

... while stakeholder **synthesis** leads us to see that most stakeholders rarely operate in complete isolation.

STAKEHOLDERS ANALYSIS TABLE			
Stakeholder interest analysis (For understanding the various interested parties)			
Issue:			
Stakeholders	What interests? How affected by the issue?	Capacity? Motivation?	Possible actions to address stakeholder interests
Primary stakeholders			
Secondary stakeholders			





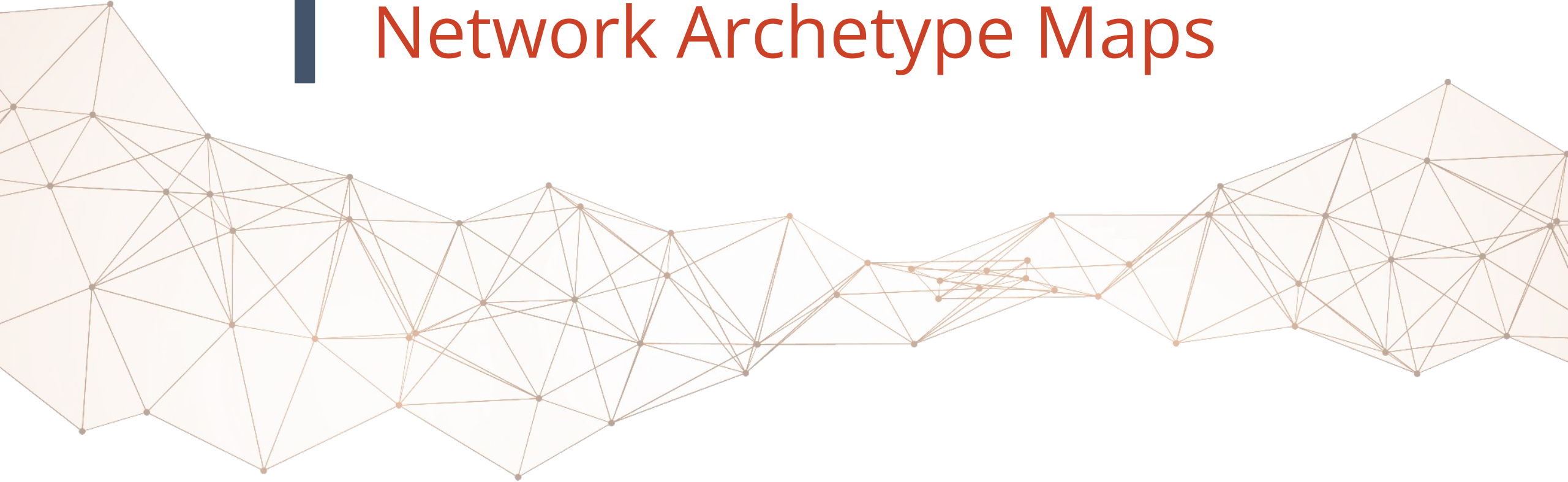
Network map types and their uses

In our work, we use different types of network maps. Each serves a different purpose. The following slides provide an overview of each type.

	Types of network map	Purpose
1	Network archetype maps	Conversation starters
2	Real-world maps: Concept maps	Thought provokers
3	Real-world maps: Data-rich maps	Collaboration enablers

1

Network Archetype Maps



Network archetype maps: What are they?

Network archetype maps are stylized illustrations of various network topologies (e.g. multi-hub and hub-and-spoke). These conceptual maps depict a set of classic forms that social networks tend to take and reflect their various states of connectedness.





Network archetype maps: When are they best used?

It may sound strange, but quite often network participants are not fully aware that they are part of a connected whole. Network archetype maps are powerful as **conversation starters** in situations where you want to create more awareness or engagement with stakeholders in a network.

It might help network participants to:

- discuss different perspectives on the current state of the real-world network
- start thinking about what it would be like if the network were to change to a different type
- start building containers for emerging themes, that could function as “magnets”, or strange attractors
- build up an appetite for making a real-world network map (see later)

Network archetype maps also have pitfalls:

- The “proof by intimidation trap.” Some people feel overwhelmed by network images. They find them messy or even chaotic. This could inhibit a meaningful conversation.
- The “judgment trap.” Some people might want to know if some archetypes are ‘better’ than others (Am I in the wrong sort of network?!).

Network archetype maps: Making the most of these maps

You might use these graphs to ask people:

- If you were to draw the network that you are part of, would it resemble one of these maps?

Suppose people choose the hub-and-spoke [topology](#). Then you might ask follow-up questions like:

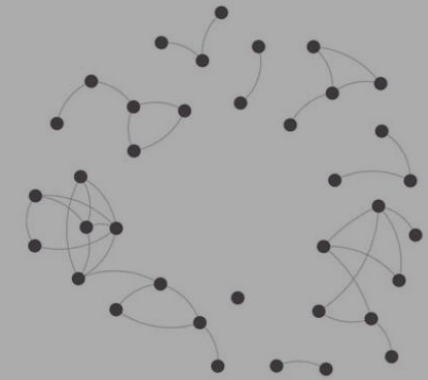
- Who is in the hub?
- How does this particular network structure help participants in their shared purpose?
- What is the downside of this structure? E.g., risk of network disintegration if the hub were to disappear.

Ask people to come up with themes: patterns of what network members want to explore or learn together. Emergent themes could function as “magnets”, or strange attractors, drawing in people and organizations that feel the need to create stronger ties.

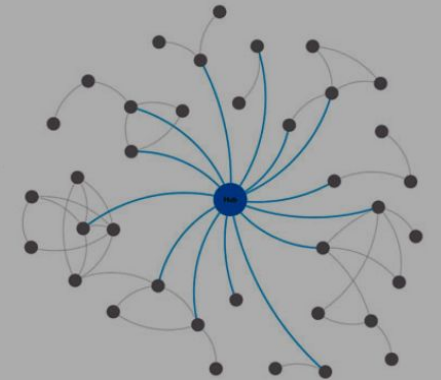
Showing all four topologies also makes people think about change.

- Would it help us if we were able to change the network topology, e.g. from hub-and-spoke to multi-hub?
- How could we make a first move?

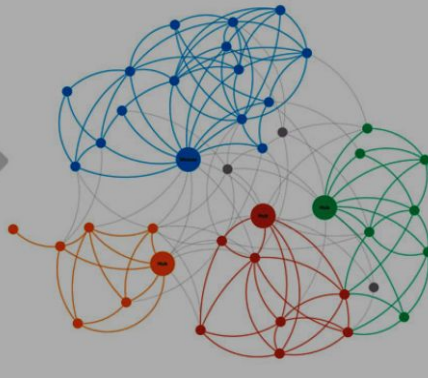
1. Scattered fragments



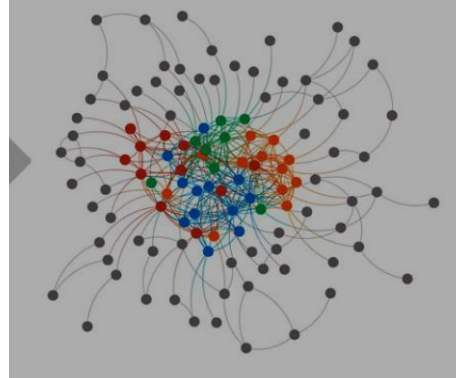
2. Hub and spoke



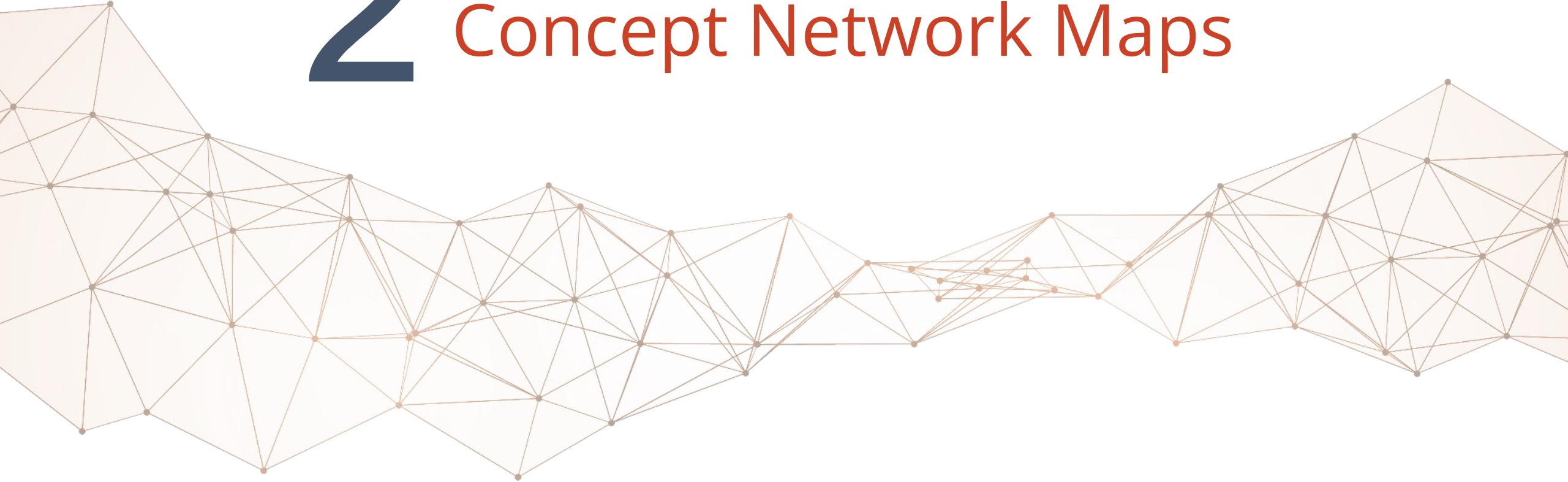
3. Multi-hub



4. Core/periphery



2 Concept Network Maps

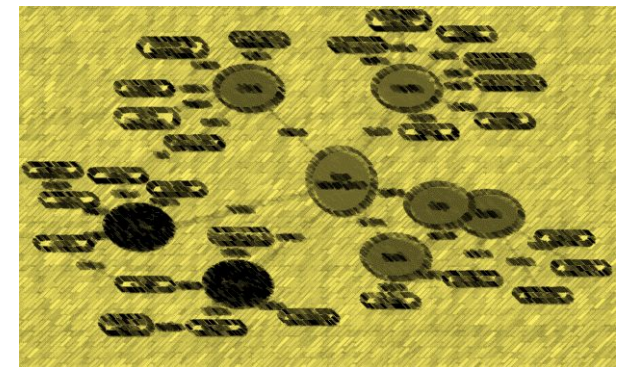
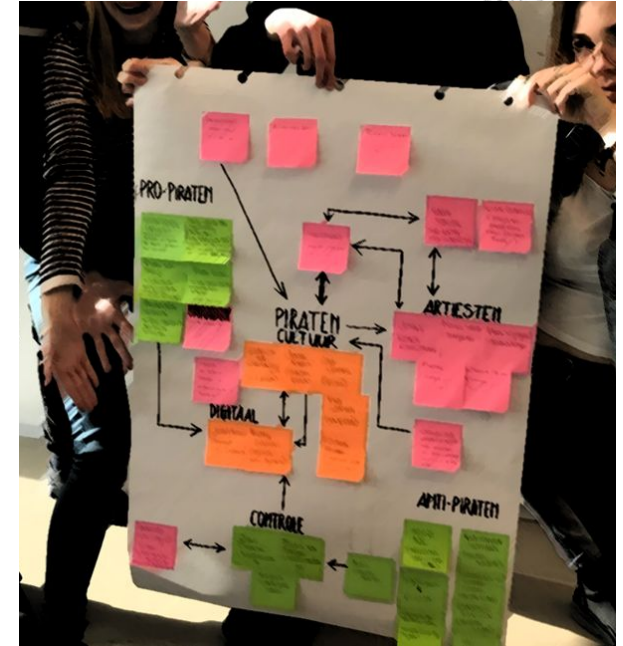


Concept network maps: What are they?

These maps serve the purpose of letting people visualize their own knowledge and perspective of interconnected stakeholders involved in a particular complex context. Although they are rooted in a real-world context, they are not primarily meant to describe the situation accurately.

It is the mapping *process* that is the most important here. The process of visualizing serves as a means for structured dialogue and sensemaking, either internally (as an individual) or within a group. The process helps participants to map “their known knowns” as well as to articulate their “known unknowns” and make sense of what emerges.

It does not matter how people draw their network. Old-school sticky notes on a flip chart will do just as well as a drawing made with network software like **diagrams.net**.





Concept network maps: When are they best used?

You could say that these maps are best used as **thought provokers**. Finding yourself in a complex situation is much like being part of a game. Quite often, people have considerable tacit knowledge of the game, e.g.. its players, their roles, connections and interactions, etc. Concept network maps help people making the tacit knowledge explicit, and provoking a deeper level of understanding on the fly.

They could also function as a logical follow-up to a discussion based on network archetype maps (see before).

People can do the mapping process on their own, but in our experience it works best if they go through the process as a group. Three to five people seems ideal. With over six people, it might be wise to make two teams.

Concept network maps not only structure the dialogue process during the drawing process. They can also facilitate dialogue after completion.

Concept maps also have pitfalls:

- The “hurry sickness trap”: These maps really need people to spend time together (say, half a day) to go through the process
- They are hard to work with in large groups of people
- The “spaghetti trap”: maps that look messy can inhibit people to start making sense of them

Concept network maps: Making the most of these maps

Ask people to go through a 5-stage process:

1. *Identify* all the stakeholders you think are involved. Please be as detailed and extensive as possible.
2. *Position* the stakeholders on paper, whiteboard or some digital space. Perhaps some should be in the center of the space, and some in the periphery. Perhaps some should be clustered together.
3. *Connect* the dots. Draw lines between stakeholders if you feel they are in some relevant way connected. Feel free to draw multiple sorts of relationships, e.g. financial ties, strong ties, dotted lines where you assumed relationships, solid for known relations, etc.
4. "So what?" Take the time to reflect on the map itself as well as on the process of creation.
 - Does the map resemble one of the archetype network maps? (see before)
 - Can we identify containers for emerging themes that might accelerate collaboration? (see before)
 - Who was surprised during the process? E.g. by participants offering other perspectives, that opened up new ways for progress.
5. "Now what?" Ask people to reflect on next steps: For example, in the concept map shown on the right, the team asked themselves:
 - What would happen if the two clusters below were linked directly?
 - If we wanted to get that done, what would be the most clever way to do this?

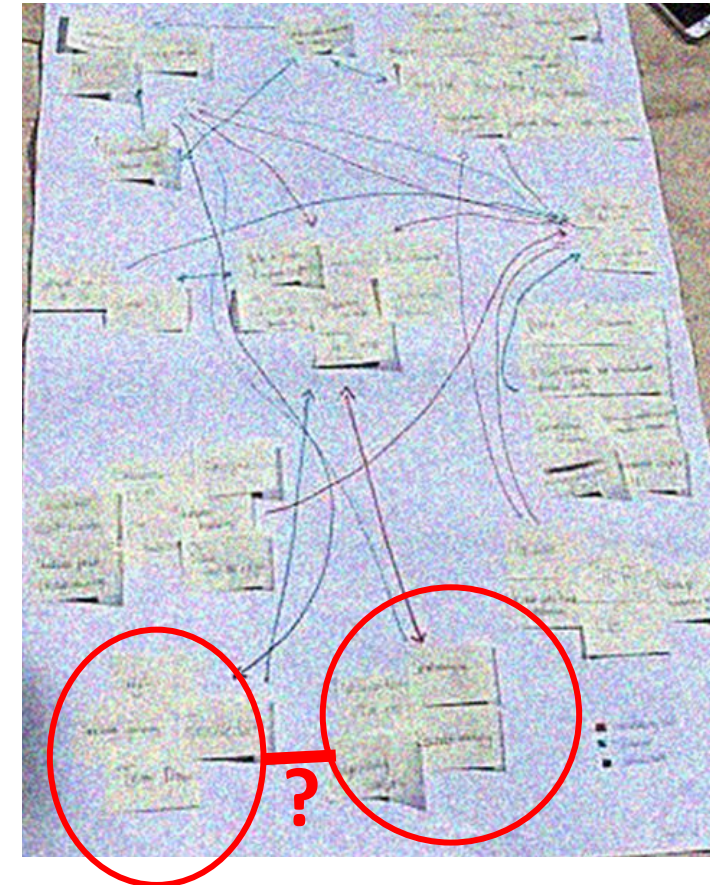


Image credit: Paul van der Cingel

3 Data-rich Network Maps



Data-rich network maps: What are they?

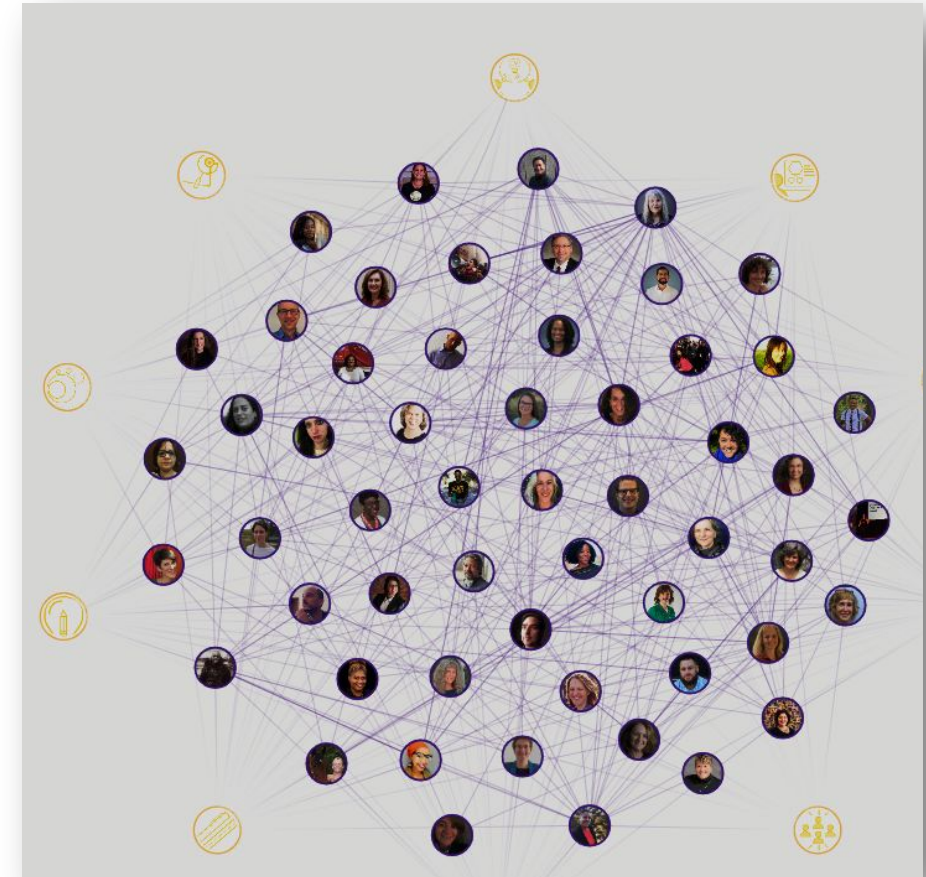
These maps are meant to depict people's interconnectedness in a particular complex situation as realistic as possible. Often, these maps involve large numbers of people and organizations.

This type of map requires data on the network *nodes* (people, organizations, etc.) and on network *connections* (relationships between the nodes). The database is then used to visualize the network.

One tool that helps you gather the data from the network participants is sum-app.net. Data collection tools can be embedded in network mapping software with built-in databases.

Typical examples of network mapping software with built-in databases include: Kumu, Gephi, GraphCommons, and Neo4j.

In concept mapping (see earlier), collaboration *upfront* in the mapping process is key. With data-rich maps, collaboration *on the output* is most meaningful.



The map of consultants on the [Network Weaver website](https://networkweaver.org). Made with Kumu.



Data-rich network maps: When are they best used?

You could say that these maps are best used as **collaboration enablers**. They enable people to:

- spot places of energy or isolation in the network more quickly
- share knowledge, expertise and resources more effectively and efficiently
- start new collaborations or adapt existing projects with more agility

Data-rich maps allow you to:

- extract network statistics, e.g. about the density of the network
- change the shape of the map easily, by clicking and dragging nodes to other positions
- add information to nodes and edges, e.g. photos of network members, of hyperlinks
- search the network easily, e.g. to look for particular groups or people, or even filter particular types of relationships

Data-rich maps also have pitfalls:

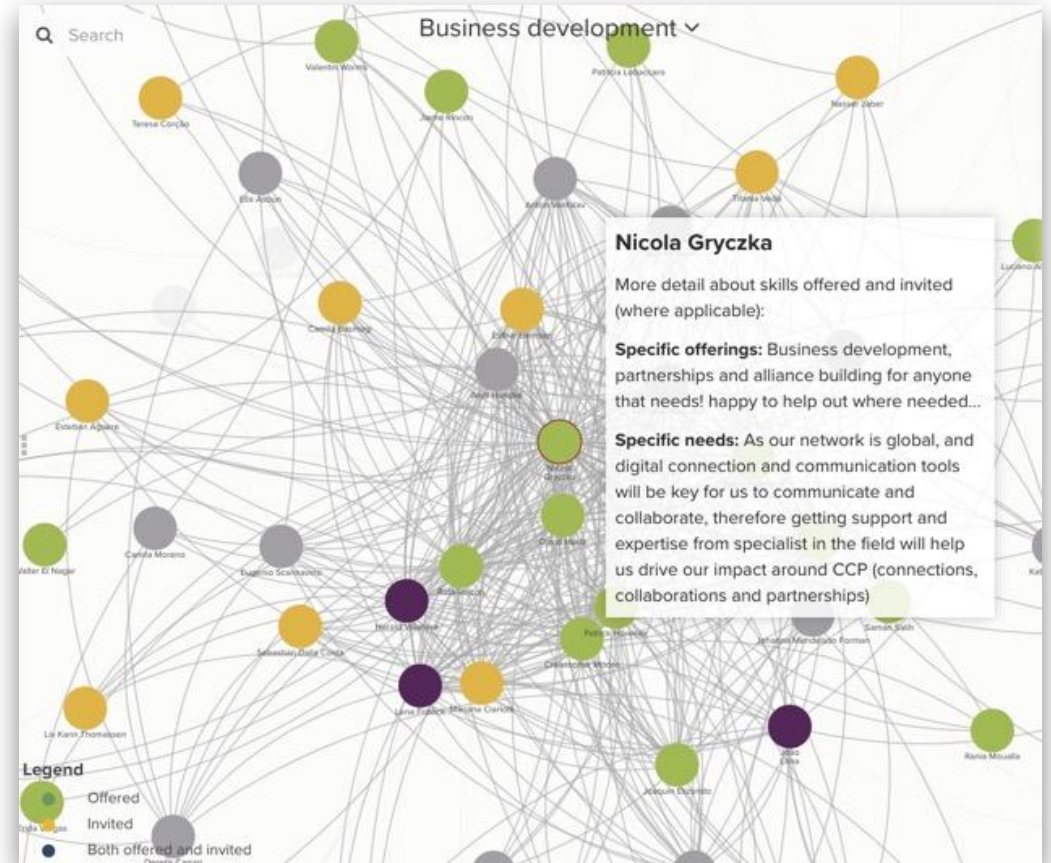
- The “sunk cost trap”: People are reluctant to change them, because they have put so much effort into the database.
- The “illusion of control trap”: They might give some people the idea that now they have the data, they are in control of the situation.
- The “solutionism trap”: People may start working with the data, just because they are there. This can lead to spending time creating solutions to non-relevant problems.

Data-rich network maps: Making the most of these maps

A. Design your map to serve a specific purpose.

Some ways to do this include:

- Surveying the network before initiating mapping to understand what they want to know about each other and aspire to do together. Integrate these questions into the map survey.
- Explicitly designing for two audiences: network members and the backbone (or network weavers). These groups often have different map goals.
- Couple visual data with rich, narrative data. In the example at right, skills represented with colors can be hovered over to reveal more specific asks and offers.



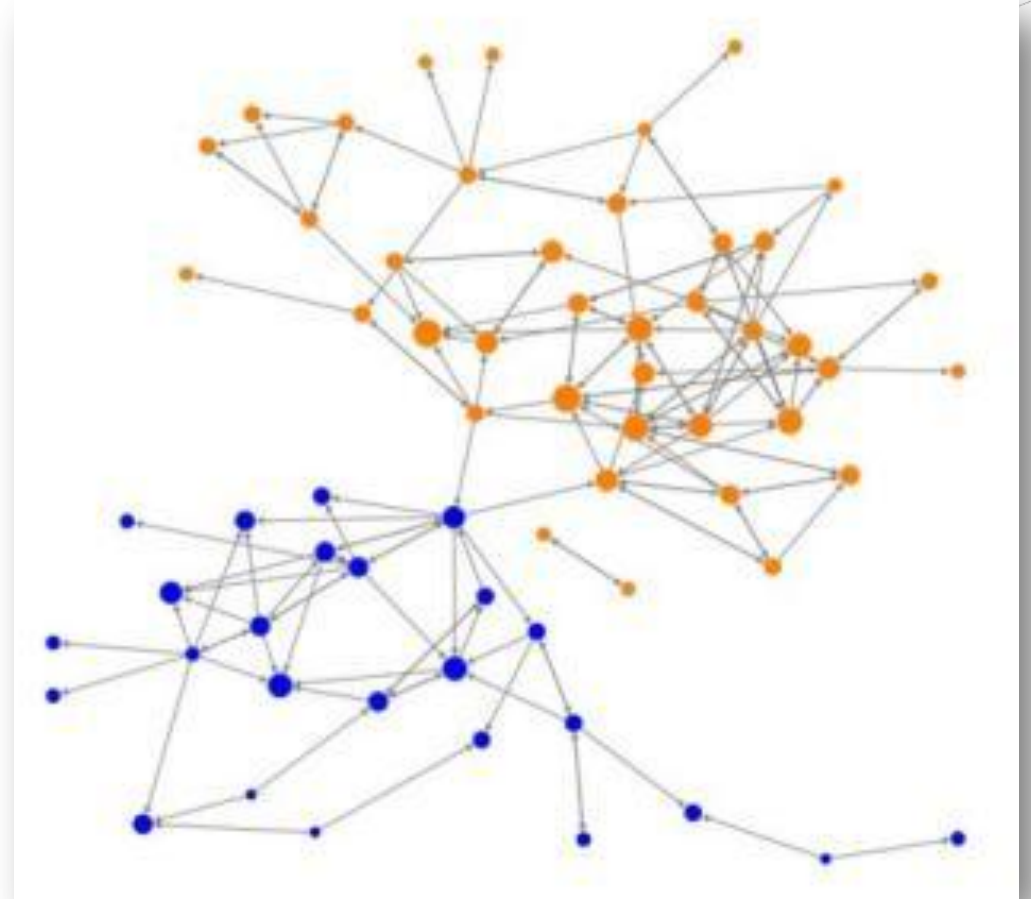
Data-rich network maps: Making the most of these maps

B. Use social network analysis for deeper insight into the network.

This **example** of a data-rich network shows social network analysis (SNA). A group of students were asked, who do you seek out for help and advice during your studies?

The dataset consisted of a subgroup of Danish students (orange nodes) and another subgroup of international students (blue nodes). Their answer to the question was used to generate the arrows in the map.

Even in the absence of network statistics, a couple of interesting observations can be made, e.g. students almost never consult with peers from “the other subgroup”. There are just 3 students that build bridges between both groups.



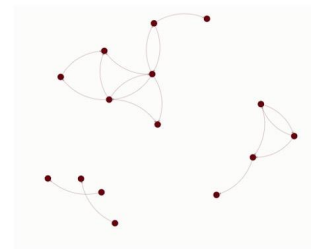
Map posted on LinkedIn by Richard Santos Lalleman from Innovisor

Data-rich network maps: Making the most of these maps

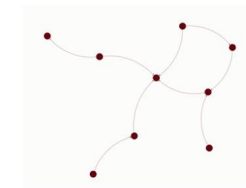
C. Draw out patterns across an attribute

This **example** of a data-rich network shows that leaders within a network have varying degrees of interconnections from sector to sector. Policy leaders, for example, are well-connected with each other, whereas local government leaders are much less so.

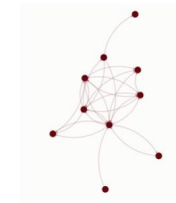
You can create snapshots of different aspects of your network to highlight patterns and help each other understand where to target network-building efforts.



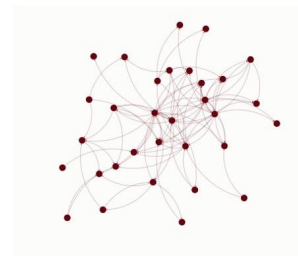
Local government



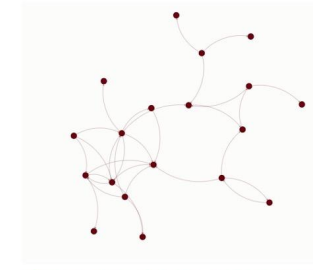
Academia/Research



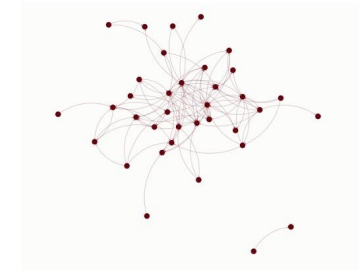
Philanthropy



Conservation/Enviro



Social justice advocacy



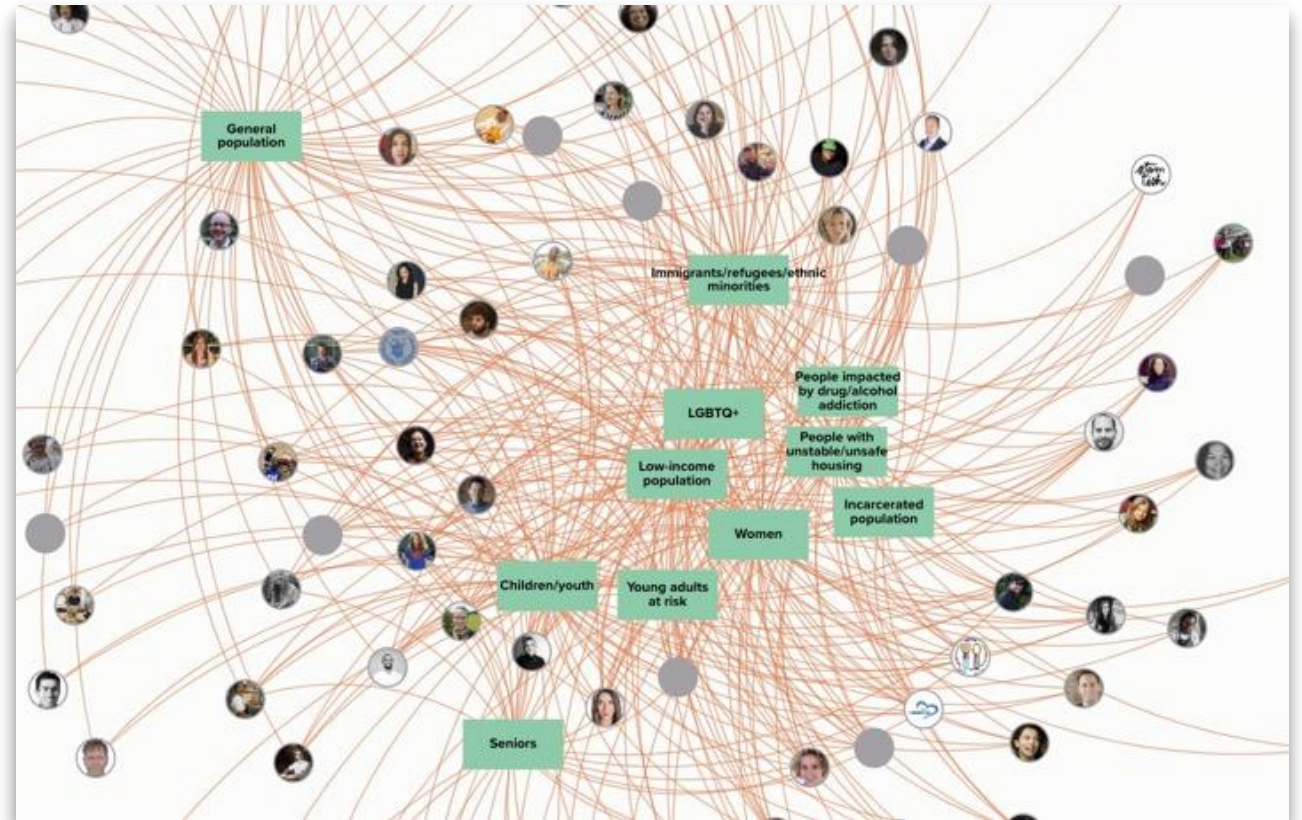
Policy/policy advocacy

Data-rich network maps: Making the most of these maps

D. Build containers for emerging themes

The map can help you visualize clusters of interest around specific topics. Network mapping software enables users to filter and cluster to see patterns of what network members want to explore or learn together and host exploratory calls around these themes. Sets of categories can be coupled with narrative text for richer data.

This snapshot shows specific populations that member organizations serve, and gives broad information at a glance, including clusters of categories that many of the same network members connect to.



Source: [Social Gastronomy Movement](#)

Data-rich network maps: Making the most of these maps

E. Socialize the map in everything you do.

Weave references to the map throughout all network events and activities to build network members' "mapping muscles." You can, for example:

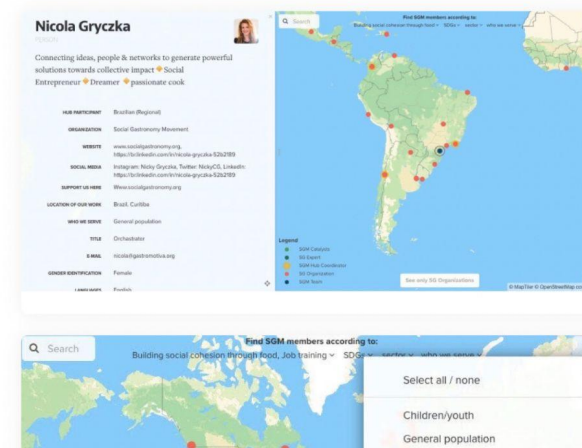
- include visual snapshots in outreach materials
- screenshare a profile from the map to introduce speakers in a workshop
- share via social media

Use every way possible to socialize the map to get people comfortable using it and remembering that it exists as a powerful tool.

BECOME A MEMBER TO ENJOY THE THE SGM MAP TO THE FULLEST.

Individuals working with the power of food to create social change can [register for free](#) to get a profile on the map, gain SGM membership, and access to the members map that displays the connections between members, contact details and a skills sharing.

FULL MAP FEATURES



View Member Profiles

Once on the map, members can view the full profile of others. Here, you can access their professional bio, information about their work, and contact details.

Filter through member organizations

The SGM Map allows anyone to search organization and member profiles by geographic region, the

Source: [Social Gastronomy Movement](#)

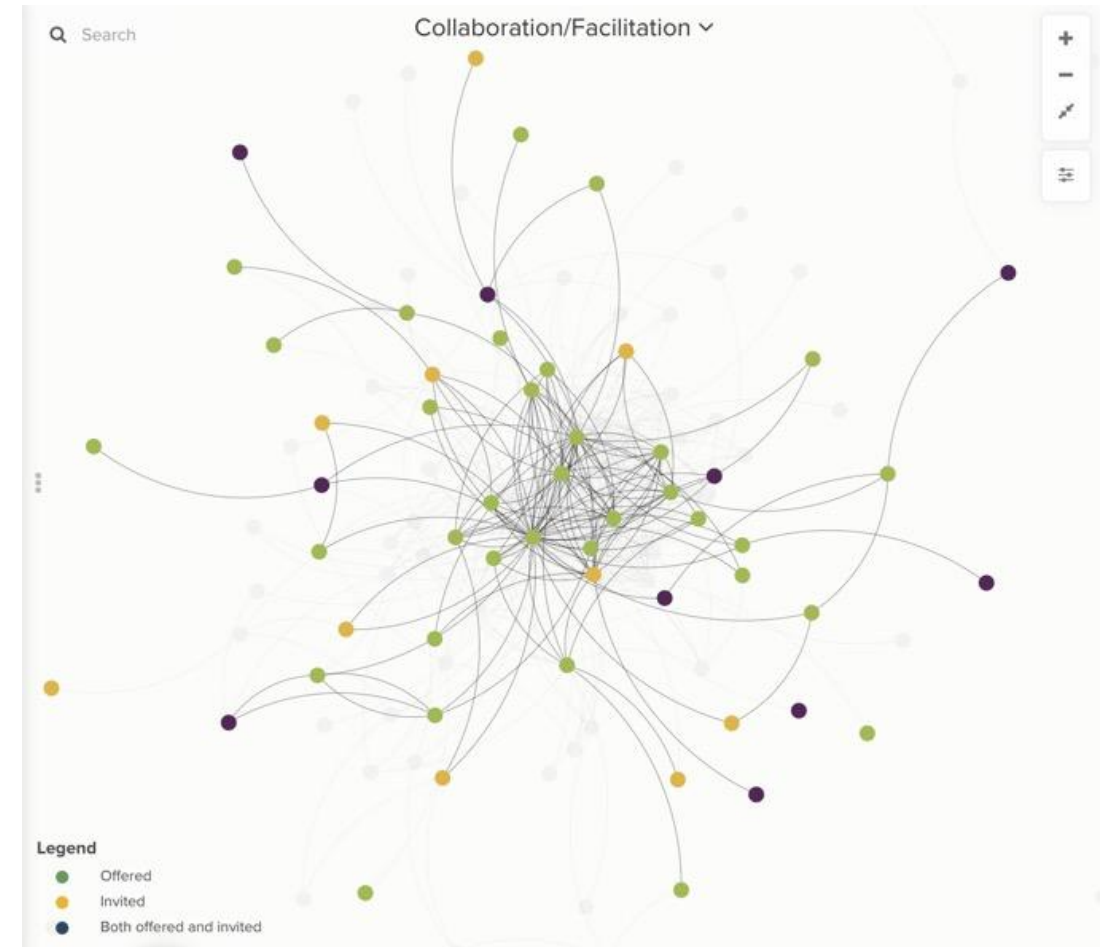
Data-rich network maps: Making the most of these maps

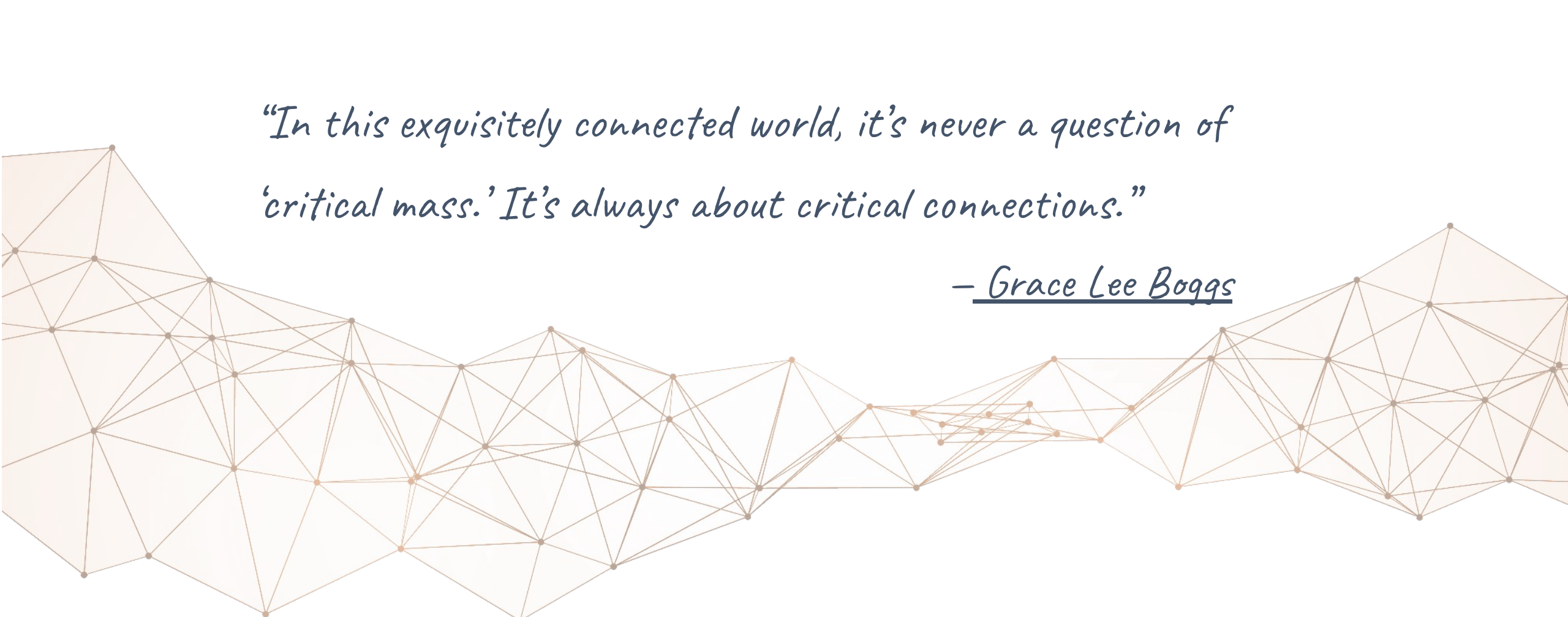
F. Empower network members to use the map to its fullest.

Encourage members to directly engage the network map to

- quickly find other members with shared interests, in specific locations, or with connections to someone they want to connect with.
- share assets and resources

Network maps can also include asset and resource sharing, such as this example where participants can offer their skills to other members, or invite support as needed.





“In this exquisitely connected world, it’s never a question of ‘critical mass.’ It’s always about critical connections.”

– Grace Lee Boggs

We welcome questions, suggestions and other feedback via:

- Paul van der Cingel ([Windesheim UAS](#), The Netherlands) at p.van.der.cingel@windesheim.nl
- Katy Mamen ([Water Bear Collaborative](#), USA) at katy@sonic.net