



HUMAN SYSTEMS
DYNAMICS INSTITUTE

Network Mapping Guide:

Using Adaptive Action to See, Understand, and Influence Your Network

Use the worksheet on the last page of this guide to you map your network as you work through this Adaptive Action cycle.

What?

First, you have to understand the basic elements of a network. They are very simple. You have **nodes**, and you have **connectors**.

- ▶ **Nodes** are the individual “agents” that make up a network. They are the people with whom you interact at work. They are the concepts and ideas that come together to form your own network of beliefs and values. They are the vendors that up your supply network. They are the communities that interact to shape your world.

In looking for the dynamics in your system, consider how the nodes themselves can represent the differences that make a difference in shaping the patterns you see.

Nodes can be represented in different ways. In a network map, nodes are represented by geometric shapes.

- ▷ In simple maps, these shapes might all be same-size circles.
- ▷ More complex maps represent differences that matter in the network.
 - Differently sized circles can represent more or less influence, more or less information, more or fewer resources, etc.
 - Different shapes can represent other differences: gender, age, department, ideologies, for example.
- ▷ You can also use size to represent the relative number of connections a node might have. Nodes that are connected to many other nodes are called “hubs” and can change the dynamics of the network—influencing the patterns that emerge.

When you want to use a network map to represent or explore the adaptive capacity of that network, you choose the differences that matter.

Nothing is intractable.

Those differences then will inform your decisions about how you want to represent the nodes.

- ▶ **Connectors** are the lines that represent the communications and connection pathways between and among the nodes.
 - ▷ Simple network maps use simple solid lines to show how nodes connect and which nodes are connected to each other.
 - ▷ More complex network maps use different types of connections to tell a more complete, meaningful story about the whole network.
 - Arrows show the direction of flow of information or resources or influence.
 - Single-end arrows show one-way flow, and double-ended arrows reflect two-way flow.
 - Density or weight of the line show the relative size or impact of the connection.
 - Solid lines show direct connections, while dotted or dashed lines might reflect less direct or secondary connections.

When you build your network map to represent the underlying dynamics that contribute to adaptability, you consider the strength, direction, and impact of the connections that exist.

So, basically that's all there is to building a network map. You consider questions about the patterns around you and use your insights to map what you see or what you experience. Those questions can include:

- ▶ **What is the pattern I want to understand and who is a part of that pattern?** Who or what seems to shape the pattern? Who or what is a "player" in the pattern? Who or what contributes to the strength or weakness of that pattern? Who or what has power or influence now? How are power and influence distributed or shared?
- ▶ **What is the network of differences and connections that shape this pattern?** Be specific. What is the container, or boundary, that shapes or frames this particular network? What is the identity of that network? What is its purpose or reason for coming together? What or how are those nodes connected? How do those connections serve the purpose of the greater network?

There are probably multiple networks at play in any complex system, so just choose to start with the one that is most familiar and where you have the greatest opportunity for influence.

- ▶ **What are the greatest differences that shape the pattern?** What are the nodes that frame this network and how do they “look”, relative to each other? How can I represent those differences in ways that make sense?
- ▶ **What connections carry information and other resources to shape, sustain, and/or weaken this pattern?** What connections exist and how do those connections contribute to or play in this pattern? How can I represent those differences in ways that make sense?
- ▶ **What external forces may be at play in your network to shape the existing patterns?**
- ▶ **What are desired patterns of interaction and decision making that will build a stronger, more adaptable network?**

So what?

As you consider the impact or meaning of the pattern, consider questions about what you see in the map.

- ▶ **So what nodes are more or less connected? What is the impact of those differences?**
 - ▷ Are there clusters or connections that make some areas of the network more or less sustainable? More or less adaptable?
 - ▷ Are the differences across the nodes differences in kind or degree?
 - ▷ How well do the nodes align with the overall purpose or identity of the network?
 - ▷ Are the differences negotiated easily or do they limit or shut down connections?
 - ▷ So what can you do to influence the differences to strengthen the network identity and fitness?
- ▶ **So what impact do the hubs have in the network?**
 - ▷ Do those hubs constrain the viability of the network, as a whole, by “hogging” too many resources or options? For instance, if one of the hubs failed, would it cause an epic failure across the rest of the network, or would the whole be able to create “work arounds” to make up for that loss?
 - ▷ Do those hubs strengthen the network by building robust paths for sharing resources and connections?
 - ▷ So what can you do to build more powerful and resilient connections between and among the hubs and nodes?

▶ **So what impacts do the connections have across the network?**

- ▷ Which connections support a robust, resilient network?
- ▷ Where do those connections limit or constrain the flow of information or resources?
- ▷ What connections can you influence? What might you do to move those connections toward greater efficiency and effectiveness for the network?

▶ **So what is the overall impact of external forces in the network?**

- ▷ What are the connections beyond the local network and how do they influence what happens within?
- ▷ How can you influence those forces outside to move toward greater support of the desired patterns?

Review the options for action to move your network toward the desired patterns of a more adaptable system. Identify those options that are within your scope of ability. Select the one that you will attempt first.

Now what?

Plan the action you decide on, considering the following questions:

- ▶ What steps must be taken to make the shift you have chosen?
- ▶ Who is involved and how will you engage them in taking action?
- ▶ What is your timeline?
- ▶ Who needs to know about the action you propose? How will you share the information that needs to be shared?
- ▶ What is the impact you hope for and how will you observe and measure it?
- ▶ How long do you project this phase of the action to take?
- ▶ What else is unique to your situation and needs to be considered in your planning.

After you have taken whatever action you planned, observe the change that occurred in the network.

- ▶ If it accomplished everything you hoped and expected, return to your network map to identify your next wise action.

- ▶ If it moved you toward, but did not reach, your overall goal of adaptability and resilience, focus your next **"What?"** on continuing in this course of action.
- ▶ If you don't believe your actions made the difference you needed to make, focus your next **"What?"** on identifying other options for action that may move you forward.

Repeat this Adaptive Action process and observe how your network transforms over time. Document your actions and outcomes to help you learn from each cycle of Adaptive Action.



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Network Mapping Space

Name this network: _____

Identify
your
nodes :



Identify
your
connections:



Tips:

- ▶ Name each node as you post it
- ▶ Consider where the hubs are
- ▶ Consider what kinds of connections exist
- ▶ Make sure you are looking at only one network at a time
- ▶ Consider specifically what gets shared across connections
- ▶ Consider the impact and source of external forces, etc. that may be influencing your network

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Notes:

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Network as Map
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