System Mapping:
A Guide to Developing Actor Maps

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A Guide to Developing Actor Maps

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About this Guide

System mapping is a process often cited in social change literature as an effective way to infuse systems thinking into strategy development and evaluation efforts. However, there is a dearth of practical "how to" guides to help stakeholders apply the principles of systems thinking to their work through visual mapping. In this brief publication, we offer practical advice on how to develop a specific type of system mapping tool called an actor map.

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System Mapping: A Guide to Developing Actor Maps

Summary: *System mapping is a process often cited in social change literature as an effective way to infuse systems thinking into strategy development and evaluation efforts. However, there is a dearth of practical "how to" guides to help stakeholders apply the principles of systems thinking to their work through visual mapping.* **In this brief publication, we offer practical advice on how to develop a specific type of system mapping tool called an actor map.**

INTRODUCTION: WHAT IS ACTOR MAPPING AND HOW IS IT USEFUL?

A system is defined as a group of interacting, interrelated, and interdependent components that form a complex and unified whole.[1] A system's overall purpose or goal is achieved through the actions and interactions of its components. For those working to address complex social and environmental problems, the implication of this is clear: These large-scale problems cannot be solved by any individual or single entity, no matter how large or powerful. Rather, the key to success lies in optimizing the activities, relationships, and interactions among the various components of a system.

System maps are powerful visualization tools that can help change agents describe and diagnose the current state of a given system and identify opportunities for improvement. Existing literature describes many types of system maps, including:

- *Actor maps,* which offer a visual depiction of the key organizations and/or individuals that make up and/or influence a system, as well as their relationships to a given issue and to one another.
- *Trend maps*, which highlight trends in the external environment that influence a given issue.
- *Issue maps*, which lay out the political, social, or economic issues that affect a given geography or constituency (and are often used by advocacy groups).
- *Causal-loop diagrams*, which make explicit the feedback loops (both positive and negative) that drive system functions or create patterns of system behavior.
- *Rich picture diagrams,* which allow stakeholders to use visual imagery to illustrate their understanding of how a system operates or express how an ideal system might function.[2,3]

This guide focuses on how to develop an actor map. These maps can be used as part of many different system change efforts (e.g., collective impact, other forms of collaborative action), and can be used to inform strategy development and refinement, as well as evaluation.

Actor maps can help us:

- Better understand current actors and their roles in the system.
- Diagnose the level of engagement and strength of connections among actors.
- Identify opportunities to build new relationships and explore other parts of the system.
- Identify potential points of intervention and levers of change.
- Identify and discuss ideas and questions that the map raises for both strategy and evaluation purposes (e.g., developing a strategy, focusing an evaluation's questions and design).

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[1] Coffman, J. (2007). A Framework for Evaluating Systems Change Initiatives. http://buildinitiative.org/WhatsNew/ViewArticle/tabid/96/ArticleId/621/Framework-for-Evaluating-Systems-Initiatives.aspx

[2] Additional types of systems maps include stock and flow diagrams, and social network maps.

[3] Refer to the appendix for additional resources on systems mapping.

Actor Mapping versus Stakeholder Analysis

Actor mapping is related to, but fundamentally distinct from, traditional stakeholder analysis. Stakeholder analysis is "a process of systematically gathering and analyzing qualitative information to determine whose interests should be taken into account when developing and/or implementing a policy or program."[4] Stakeholder analysis seeks to assess individuals' or groups' ability to **influence** specific projects, policies, or outcomes. The goal of these analyses is typically to produce a prioritized list of key individuals or groups to target as part of an action plan. By contrast, actor mapping explores the relationships and connections among actors, as well as their relationships to a given issue, project, or intended outcome. The purpose of actor mapping is to identify opportunities to **improve** a system's overall performance by, for example, strengthening weak connections or filling gaps in the system.

In addition, we avoid using the word "stakeholder" because some actors that may not have a "stake" in a particular initiative or outcomes may still wield influence over the initiative or be influenced by it.

OVERVIEW: BASIC STEPS IN ACTOR MAPPING

Actor mapping is an iterative, participatory process that draws on the experiences and insights of many people familiar with a given system. The best actor mapping processes are carefully customized to suit the specific context and information needs of the participants. As a result, no two actor mapping processes are exactly alike; however, there are rough guidelines that can help change agents prepare for and facilitate effective actor mapping processes. These guidelines are broken down into three parts in this guide:

1. **Prepare** for an actor mapping session.
   - Identify the topic and set clear boundaries
   - Frame the system
   - Identify an initial set of key actors
   - *Optional: Populate the draft frame with key actors*
2. **Facilitate** a live actor mapping session.
   - Populate the map
   - Refine the map by including additional actors
   - Map engagement, relationships, and connections
   - Identify momentum, blockages, and opportunities
   - Discuss implications
3. **Refine and revise** the actor maps.

PART 1: PREPARING FOR AN ACTOR MAPPING SESSION

Careful preparation in advance of a live actor mapping session is critical to success. During the preparation process, as we describe below, the facilitator or facilitation team will make several important strategic decisions. For example, they might consider questions such as: What will be the boundaries around the issue at hand? What is the right altitude to focus the map on? What level of detail is appropriate for the actor map? They will then develop a draft "system frame" (see below) for participants to build on. This preparatory work will provide guidance to mapping participants and help ensure a productive, energizing session.

Follow the guidelines below to prepare for an actor mapping session.

Step 1. Identify the Topic and Set Clear Boundaries

The first step in the mapping process is to identify the topic for the map and set boundaries around that topic. The choice of your topic will depend on a few factors, including:

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[4] Schmeer, K. Stakeholder Analysis Guidelines. http://www.who.int/workforcealliance/knowledge/toolkit/33.pdf.

- The desired geographic scale of the map (e.g., local, regional, national).
- The degree of specificity desired of the map (a *generic actor map* focuses on different types of actors, such as schools, government agencies, and service providers, whereas a *specific actor map* focuses on specific organizations, initiatives, and/or individuals). Several factors are likely to inform this strategic decision, including the intended purpose of the map, the backgrounds and expertise of mapping session participants, the desired degree of input or direction from participants, the time available for the mapping session, and the plan for refining and finalizing the actor maps.

When determining the level of specificity for the map, aim for a level of detail that allows you to meaningfully summarize the behavior of an individual actor or type of actors, capture relevant variation, and illustrate relationships between actors. At the same time, aim for a level of aggregation that allows users to interact with the map and generate meaningful insights without becoming overwhelmed.

> *Helpful Hint*
>
> If needed, you can create separate maps on sub-topics and/or different levels of detail to reduce complexity. For example, an early childhood map might include one map on the care and education sector and another on the health sector. Additionally, one map could be created with a local community landscape lens and one with a state or national policy lens.

Step 2. Frame the System

The "system frame" refers to the loose organizing structure for the actor map that identifies the map's core (e.g., the core beneficiaries of, or primary stakeholders in, the systems change work) and the related sub-systems that influence the main system. The frame serves as a conceptual guide for session participants. Follow the steps below to create a system frame:

1. Identify the core of the map and place the core at the center of the page.
2. Draw a circle around the core and label it (e.g., "Children Birth to 8").
3. Identify related sub-systems that influence the core. (For example, in an early childhood actor map, related sub-systems might include health, education, childcare, and social services.) Designate space for each related sub-system around the core.

Sample System Frame

Step 3. Identify an Initial Set of Key Actors and Roles in the System

Identifying actors and roles (e.g., provider, practitioner, funder, policymaker) is a useful preparatory step that helps participants get started efficiently and effectively on an actor mapping session. Participants will continue to add additional actors and roles throughout the actor mapping process.

Follow the below steps to identify the actors that will populate your draft map.

- Identify relevant actors and roles from internal documents (e.g., strategic plans, evaluation reports) and existing research (e.g., landscape assessments).

- Brainstorm additional relevant actors and roles using these prompts.
  - What people or places do core stakeholders interact with on a regular basis? (For example, in a map focused on 3rd grade reading, this category of actors might include schools, teachers, principals, social workers, and local faith-based leaders, among others.)
  - What organizations support or influence those that interact with the core? (For example, a teachers association would provide support to teachers.)
  - What types of local, regional, national or international organizations influence the core's experiences related to the topic? (For example, local school boards.)
  - Who funds relevant people, places, or organizations?
  - Who conducts relevant research?
  - Who sets policy?
- Filter the list for the most influential actors based on perceived level of influence over the core.

> *Helpful Hints*
>
> The number of actors identified in this step will vary based on the complexity of the system and the desired level of detail to be provided in the map. One simple heuristic is to think about three levels—"the part, the whole, and the greater whole."[5]
>
> When assessing influence, it may be helpful to consider factors such as size/footprint, evidence of past achievements, key relationships, and commitment to the issue, among others.

- Write these actors' names on sticky notes so each group of participants (see below) has a set.

### Step 4. Optional Final Step: Populate a Draft Map and Share It with Participants

Depending on how well developed the facilitation team wishes the draft actor map to be, an optional final step in the preparation process is to place the actors identified in Step 3 onto the draft system frame and share the draft actor map with participants in advance of the session.

The cover email to participants should do the following.
- Provide context, including a reminder of the objectives of the mapping session and a review of key decisions made in the preparation process (e.g., how the core of the system is defined or bounded). It may be helpful to indicate what, if any, feedback the facilitation team seeks on these basic strategic decisions during the live mapping session.
- Encourage participants to set aside a half hour to review the draft actor map before the session and reflect on the following questions.
  - What are your responses to the structure of the map (e.g., the core, the system boundaries, the related systems)?
  - What changes might you suggest to the current placement of actors on the map?
  - What organizations, agencies, companies, or individuals would you suggest adding to the map? How do these actors connect to what's already depicted?

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[5] Adapted from Glenda Eoyang and her colleagues at the Human System Dynamics Institute. http://www.hsdinstitute.org/about-hsd/what-is-hsd/faq-tools-and-patterns-of-hsd.html

Sample Pre-Session Draft Map
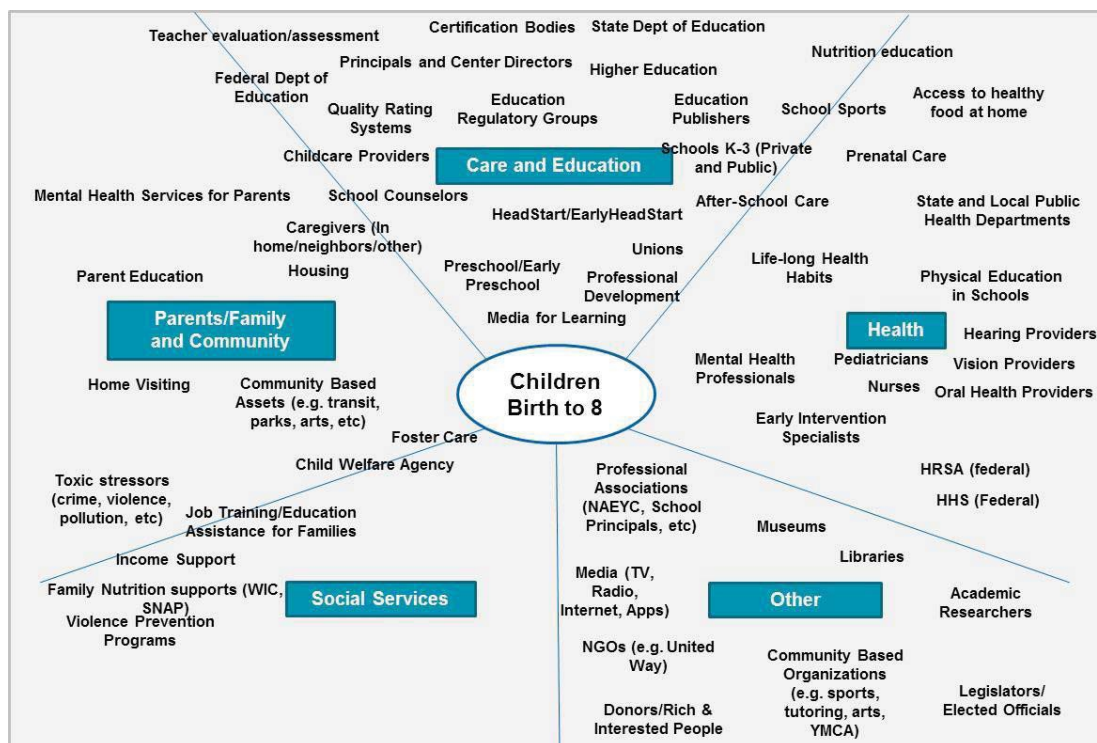
PART 2: FACILITATING AN ACTOR MAPPING SESSION

The guide below offers practical tips on how to structure and facilitate a 1.5- to 2-hour actor mapping session. The ideal group size for a session of this type is approximately 10 to 25 participants who represent a diversity of perspectives on the target issue (e.g., those who come from different organizations or teams or have different backgrounds, areas of expertise, or life experiences).

Suggested Room Setup and Materials
- Divide participants into groups of four or five. Distribute participants so that groups have a diversity of content expertise, level of seniority, level of tenure, etc.
  Note: You can ask each small group to work on the same actor map, or you can assign each small group a specific sub-system to work on. In either case, the facilitation team will need to combine the small groups' efforts after the session.
- Arrange the room so each group has a workspace with:
  - A large (approximately 36" x 48") printed copy of the draft system frame or actor map
  - A set of pre-populated sticky notes (from the preparation process, above)
  - Blank sticky notes, sharpie markers, dot stickers in multiple colors, and a flip chart

Facilitation Steps

Introduction
- Ask each group to gather at their workstation and share an introduction. *Refer to the speaking notes below for a suggested introduction.*

Speaking Notes: Stage Setting Introduction
The facilitator should adapt the introduction below to correspond with the selected topic.
Introduction to actor mapping
- "A *system* map is a visual depiction of the parts, interactions, and relationships between components of a system at a point in time."
- "An *actor* map is a type of system map that focuses on relationships and interconnections between various actors. These maps help show how the parts of, or people within, a system are connected, identify weak connections or gaps, bring out ideas for intervention points in the system, and help identify ways of determining whether those changes have occurred."

Overview of activity
- "Today, we will participate in an actor mapping activity to better understand the roles, engagement, relationships, momentum, blockages, and opportunities in our system. Our activity will include several steps: populating actors, refining the map, identifying engagement, relationships, and/or connections, mapping momentum and blockages, and identifying opportunities for influence."
- "We will use these maps to discuss our observations and implications for future action."

Step 1. Populating the Map with Actors

In this step, participants begin to build the actor maps. The pre-labeled sticky notes provide participants with examples to stimulate additional brainstorming. ***Note:*** *For simplicity's sake, the guidance below assumes that the facilitation team skipped Step 4 above (i.e., that the team did not share a draft actor map with participants in advance of the session). If a draft* was *shared with participants, the facilitation team should skip this step and move to Step 2 below.*

- Ask participants to take 15 minutes to place the pre-labeled sticky notes on the actor map frame by reading the instructions below aloud to the group.

Speaking Notes
- "You will see that we have prepared a draft frame for the actor map, identifying related sub-systems where you may wish to place the sticky notes."
- "Each group has a set of sticky notes with names or descriptions of key actors already written on them. Take 15 minutes as a group to place each sticky note where you think it belongs on the map, following these guidelines.
  - Place actors on the map in a way that illustrates which sub-system they belong to. If the actor cuts across two sub-systems, place the sticky note in between. You may modify the frame by adding or crossing out related sub-systems as needed.
  - Place actors on the map in a way that illustrates their degree of influence *(e.g., place actors with direct influence on the system in or close to the center)*.
  - Place actors on the map in a way that illustrates their "proximity" to one another (e.g., place an individual school next to its related school district)."

  Note: *You may need to adjust the draft language above if you are asking each small group to work on a different sub-system within the actor map.*

Step 2. Refining the Actor Map

In this step, participants are given the opportunity to react to a draft actor map, refine earlier work, and/or make changes to adjust for external context. ***Note:*** *This step is an appropriate starting point for groups that are building on a more well-developed draft map or revisiting existing actor maps.*

- Guide participants through a 20-minute activity to refine the actor map using the instructions below.

Speaking Notes
- "Now we want to leverage your diverse expertise to improve the map."
- "Are there additional types of actors/organizations at play that are important to <topic>? What's missing?"
- "Please take 3 minutes to write these actors/organizations on sticky notes. Note that we are not trying to build a comprehensive list of actors; rather, we are trying to capture the most relevant actors." *(3 minutes)*
  "Please take 10 minutes to discuss these new additions and plot each where it belongs on the actor map." *(10 minutes)*
- "Are there types of actors/organizations depicted here that are not important to <topic> and should be excluded? If yes, please move/remove these sticky notes." *(5 minutes)*

Figure C. Sample Refined System Map
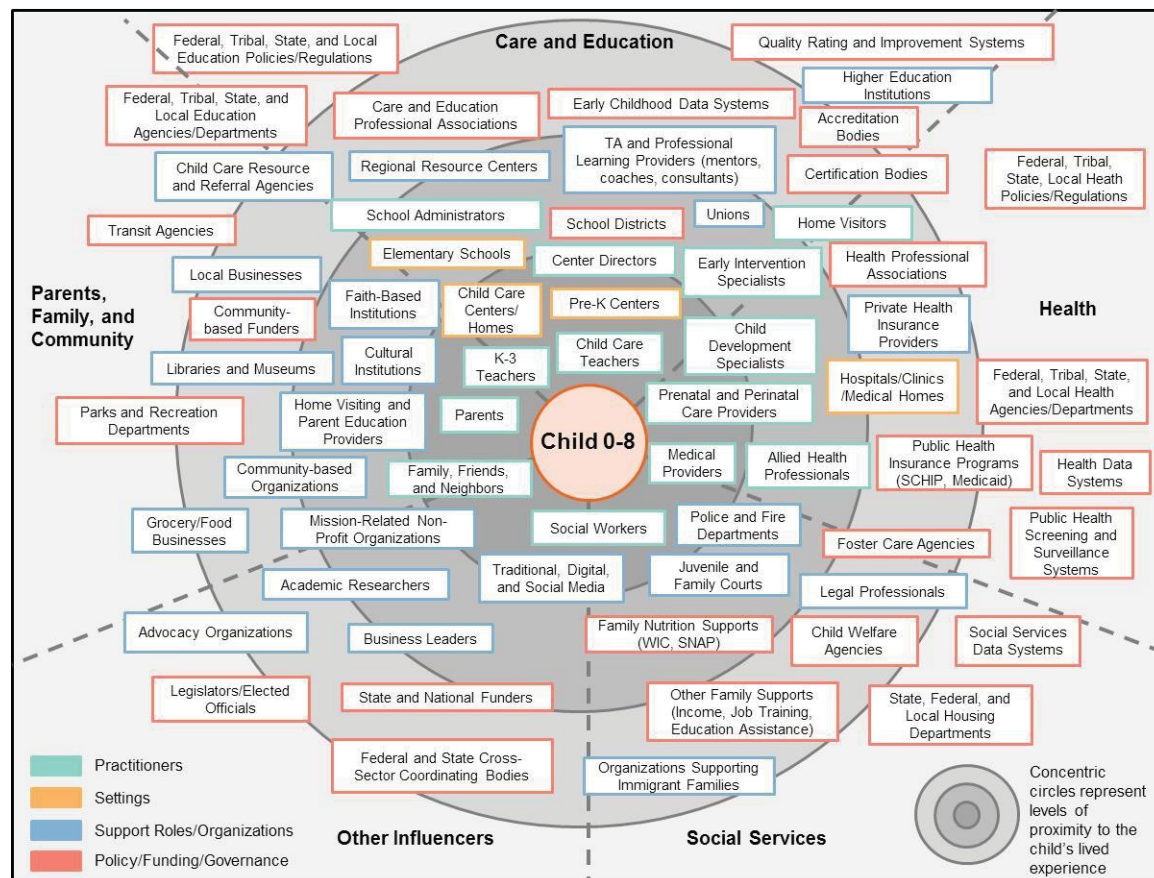
Step 3. Mapping Level of Engagement, Relationships, and Connections

In this step, participants identify levels of engagement of different actors, as well as relationships and connections among actors, organizations, and related systems.

- Guide participants through a 15-minute activity to map level of engagement, relationships, and connections among actors on the map. Choose among options below (could be a hybrid), based on the specific context and need.

Speaking Notes

Option A: Level of Engagement of Various Actors
- "Discuss the level of engagement in the initiative for each actor on the map. The level could be strong, moderate, weak, or no engagement."
- "Draw an S, M, W, or N on the relevant actors." (**Note**: These could also be depicted through colors and gradations if/when the map is transferred to an electronic format.)

Option B: Relationship of an Organization/Initiative to the Actors
- "Discuss your organization's/initiative's relationship with each actor on the map. Use the dot stickers to indicate your engagement with each actor. (Use different color dots, if needed, to represent the different departments/groups that have the relationship.)
- "Feel free to place multiple stickers on a single actor if multiple participants or departments hold relationships with that actor."

Option C: Connections Between Actors
- "Discuss relevant connections between actors on the map. Note these connections on the map by drawing lines between relevant actors. Use solid lines for strong or established relationships and dotted lines for weak or emerging relationships."
- "Write the type of relationship above the line. For example, is it a funding relationship? A partnering relationship on a key initiative?"
- "Again, we are not attempting to be exhaustive, but rather to capture the most important strong and weak relationships in the system."

Step 4. Identifying Momentum, Blockages, and Opportunities

In this step, participants identify momentum and blockages in the system based on their understanding of the relationships among actors, organizations, and related sub-systems.
- Guide participants through a 15-minute activity to identify momentum and blockages.

Speaking Notes
- "Now that we have a sense of the connections and gaps among key actors and organizations in the system, we can begin to understand momentum and blockages and think about opportunities for influence."

Areas of Momentum or Blockages in the System
- "For 5 to 6 minutes, review the connections among actors and discuss what parts of the system have positive energy and momentum. Place a green dot on those actors or clusters of actors."
- "Take the next five minutes to consider where the main blockages, challenges, or gaps are in the system. Place a red dot on those actors or clusters of actors."

Potential Opportunities for Influence
- "For the next 5 minutes, step back to take a bird's-eye view of the actor map. Based on where the green and red dots fall, draw amoeba-like shapes around different groups of actors that form clusters that indicate opportunity for leverage and influence. Name the clusters if possible (e.g., policy change)."

Step 5. Discussing Implications

The discussion of implications will vary, depending on the goals of the actor mapping exercise (e.g., strategy development, evaluation). Sample guiding questions are below.

Sample Questions (Strategy Development)
- What parts of the system are ripe for action? *If relevant: To what extent are we engaged in these areas?*
- What key opportunities are we poised to build on? To what extent are we ignoring obstacles that pose a risk to our strategy's success?
- What new people or organizations need to be involved moving forward? What is the best way to get them engaged?

Sample Questions (Evaluation)
- Where in the system has our organization/initiative had the most/least influence?
- To what extent did we bring the right people to the table to create the desired change?
- Where have we made progress on our intended outcomes, and where have we experienced challenges?

Small Group Discussion

Open the discussion using the speaking notes below, adjusting the time as appropriate.

> **Speaking Notes: Small Group Discussion**
> - "It is important that we dedicate time to bring out insights and questions about the system."
> - "For the next 20 minutes, each group will discuss a series of questions (sample questions above) posted on this flip chart and in your handout." (If a handout was provided.)
> - "Appoint one person in each group to take notes and report out to the large group after the discussion. You will be asked to report on key takeaways from your discussion."

Full Group Report-Out

In the remaining time, facilitate a full group report-out and discussion using the speaking notes below.

> **Speaking Notes: Full Group Report-Out**
> - [Open with a brief reflection about similarities and differences between the different groups' maps and discussions]
> - Going around the room, ask each group to please share:
>   - "What was your experience like with the actor mapping? What was easy about it? What was challenging? What did you learn?"
>   - "What are 1 or 2 of the major additions or changes you made to the actor map?"
>   - "What are 2 or 3 key takeaways from your group's discussion?"
> - Once each group has had a chance to share, ask the full group: "Based on your experience and what you have heard from the other groups, what additional interesting observations do you have about the maps? What questions have today's activity raised about the system? What initial implications are you seeing for future efforts toward [your goal]?"

Step 6. Review Next Steps

At the conclusion of the mapping session, it is helpful to provide participants with a clear overview of next steps. For example, you may wish to share the following.

- Information about if or when participants will have another opportunity work on the maps. (We recommend going through at least two iterations with each major stakeholder group.)
- Information about who else may have an opportunity to view and/or edit the maps.
- Plans regarding the final format of the maps (e.g., conversion to PowerPoint or online software?)
- Plans regarding how the maps will be used within and outside the organization.
- Information about whether the maps will be made publicly available, and if so, to what end and with what audiences.

Mapping Technologies: FSG's Experience

Over the past few years, several technology platforms have emerged to support system change leaders in visualizing actors and networks. FSG has used one of these tools, **Kumu** (www.kumu.io), to develop a series of detailed, interactive maps.

How we used Kumu

In one instance, we used Kumu's technology develop several maps that illustrate the complex landscape of systems that provide or support services for young children and their families, including the settings, professional roles, and other actors and organizations involved in supporting the development, learning, and health of children from birth through age eight.

How we used the maps

The maps provided a framework to help us and our clients explore, in a specific context, how to strategically engage stakeholders in strengthening supports for the early childhood workforce and identify potential levers of change in these systems, including what connections were already relatively strong and what connections needed to be strengthened.

Sample Kumu maps are included on the following pages.

Sample Kumu map: Relationships among key early childhood actors

Birth to Eight Practitioners and Settings
Education and Care Sector
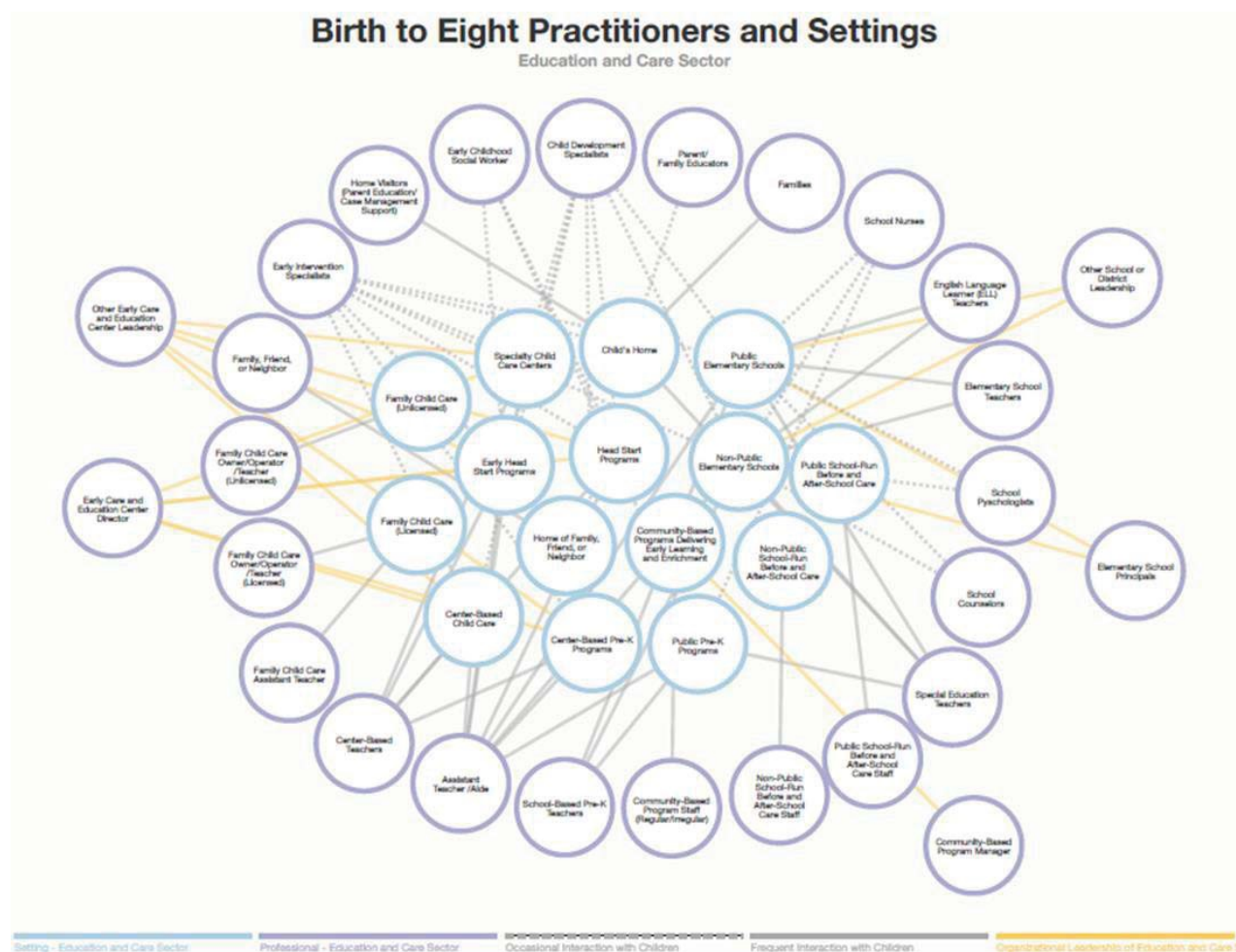
Sample Kumu map: Key actors by role
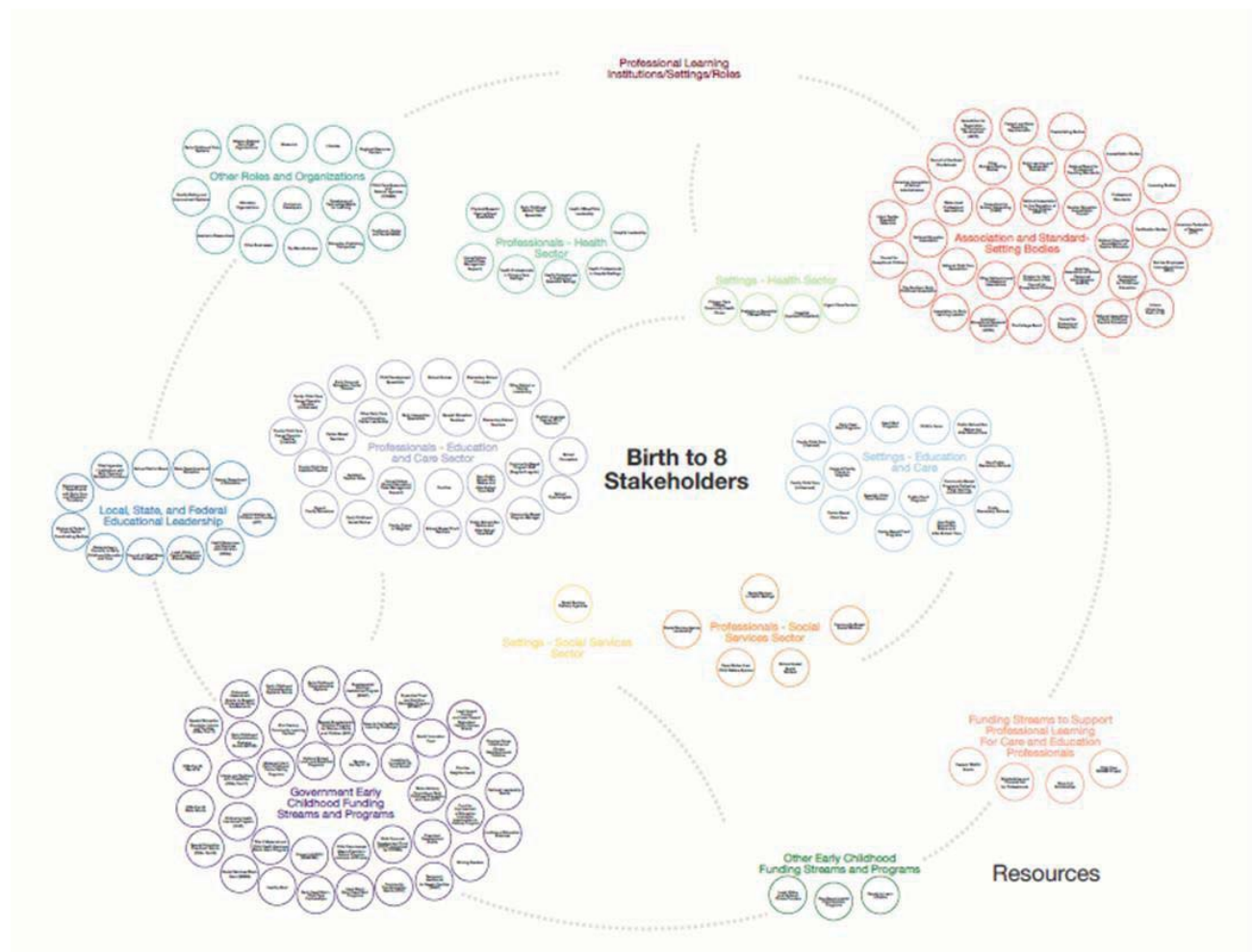
PART 3*: REFINING AND REVISING THE ACTOR MAPS*

In most cases, it may be necessary to revisit the actor map generated through the facilitation process above. (For example, some participants can benefit from additional time to reflect on the actor map or to conduct research; in other cases, it is important to socialize the map with key partners or stakeholders who did not participate in the original mapping session.) In these cases, we recommend beginning with Step 2 ("Refining the Actor Map") and continuing through the next steps of the process outlined above. Once there is a certain comfort level with the map, it can be transferred to an electronic format.

We would also suggest revisiting and updating the map at least every six months, or around key decision-making points. One approach might be to reflect on the map with members of the original stakeholder groups and/or new participants and discuss the ways the composition of actors, and their relationships, momentum, and blockages have changed. Depending on participants' depth of knowledge/immersion in the area, consider grounding these update actor mapping sessions in a series of external interviews and/or light-touch secondary research.

FINAL CONSIDERATION: EXPLICIT DATA VERSUS IMPLICIT KNOWLEDGE

One last consideration to keep in mind is how much we want the steps in the mapping process to be informed by explicit data, and to what extent we are comfortable using participants' implicit knowledge. We would certainly recommend, as much as possible, using data from evaluation reports, landscape assessments, and other sources, to, for example, identify level of engagement, type and nature of connections, and evidence of energy and momentum and/or blockages in the system. However, in our experience, this type of data isn't often readily available, and we have to rely more on the implicit knowledge and judgment of participants. This raises two implications: 1) ensuring that we have the *right* set of participants who bring expertise on different aspects of the system, and 2) utilizing the actor mapping process as *one*, but by no means the only, input into an overall evaluation or strategy development effort.

ADDITIONAL RESOURCES

- Introducing Systems Thinking. The Systems Practice team at the UK Open University.
  - Guide to Diagrams
- Systems Change: A Guide to What It Is and How to Do It. Guide authored by Ellen Harries, Rachel Wharton, and Rob Abercrombie. New Philanthropy Capital, June 2015.
- Introduction to System Mapping. Blog post authored by Joelle Cook. FSG, August 2015.
- System Mapping in Action. Blog post authored by Lauren M. Smith. FSG, November 2015.
- Learning to Love the Process, and Other Lessons in System Mapping. Blog post authored by Srik Gopal. FSG, December 2015.
- Resource List from the "System Mapping Made Simpler" workshop designed by Tanya Beer and Julie Coffman (Center for Evaluation Innovation), delivered at the 2015 Grantmakers for Effective Organizations (GEO) Learning Conference.

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