Organizational Network Analysis for Human Rights Programs and Campaigns

A Handbook for Practitioners

April 2019

With the collective experience successfully implementing hundreds of human rights projects in over 100 countries, the Human Rights Support Mechanism (HRSM) combines deep substantive expertise with the practical application essential to achieving the mechanism's objectives. HRSM, implemented by the PROGRESS consortium, is a USAID funded, five-year leader with associates (LWA) cooperative agreement aimed at implementing USAID's Democracy, Human Rights and Governance (DRG) Strategy, specifically objective #3: Protect and promote universally recognized human rights.

Pact is the promise of a better tomorrow for communities challenged by poverty and marginalization. We serve these communities because we envision a world where everyone owns their future. To do this, we build systemic solutions in partnership with local organizations, businesses, and governments that create sustainable and resilient communities where those we serve are heard, capable, and vibrant. On the ground in nearly 40 countries, Pact's integrated adaptive approach is shaping the future of international development. Visit us at www.pactworld.org.

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Abbreviations and Acronyms

AIDS	acquired immune deficiency syndrome
APEA	Applied Political Economy Analysis
CBO	community-based organization
CI	Collective Impact
CSO	civil society organization
CSP	Capacity Solutions Platform
HIV	human immunodeficiency virus
HRSM	Human Rights Support Mechanism
NECA	Network Capacity Assessment
NGO	non-governmental organizations
ONA	Organizational Network Analysis
OVC	orphans and vulnerable children
PEPFAR	U.S. President's Emergency Plan for AIDS Relief
USAID	United States Agency for International Development

Introduction

This Organizational Network Analysis (ONA) handbook is the third module in Pact's Network Strengthening Toolkit series, a set of educational publications that explores the theories, approaches, and step-by-step techniques for analyzing and strengthening networks. Pact's approach to network strengthening, mirrored in the ONA, follows a simple five-step process detailed in the image below.
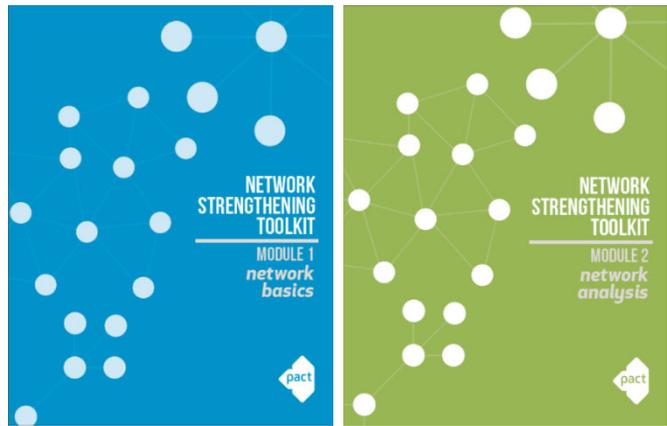
The ONA is one data-driven methodology to analyze a network, Step 2. Additional methodologies for Steps 1 and 2 are available in Module 2[1] of the toolkit.

Purpose of this handbook

This handbook is intended to help human rights practitioners, specifically those partners of the Human Rights Support Mechanism (HRSM), understand how to use and what can be achieved by Pact's ONA tool. The handbook provides the information needed to understand how the ONA works and how best to incorporate network analysis into a project. The materials in this handbook draw on an extensive literature review, surveys with 16 networks operating in 10 countries, in-depth case study research focusing on four very different but successful networks, and Pact's 40 years of experience in connecting people, places, and ideas and catalyzing the evolution of effective local structures to overcome challenges and support positive change.

Supporting a systems-based approach to development

Networks[2] exist everywhere, whether formal, recognized, latent, or emerging. They often naturally emerge when there is a need and a constituency. Any distributed system of individuals and organizations that come together to pursue a shared purpose is a network. By coming together in networks with other individuals and organizations, actors at the community and national levels can achieve far greater results than if they work separately. By working together, community members are able to:

- Optimize members' core competencies to maximize positive results
- Tackle multi-faceted, systemic issues that one actor alone could not adequately address, such as legal reform, stopping the spread of disease, or fighting corruption
- Increase the voice or clout of a group by speaking in unison

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[1] https://www.pactworld.org/library/network-strengthening-toolkit-part-2

[2] For more detailed information on the features and typology of networks, see Pact's Network Strengthening Toolkit Module 1, available at https://www.pactworld.org/library/network-strengthening-toolkit-part-1.

- Avoid duplication of efforts and services and identify gaps in coverage
- Scale up promising and proven approaches locally, nationally, or globally
- Foster sharing and learning around successes and challenges, speeding innovation and adaptation
- Deepen collective understanding and solidarity

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What is a network?

Definition: An inter-dependent system of relationships between individuals and groups connected by a common purpose

Characteristics: Exchange of information and resources, voluntary association, flexible or adaptive structures, fluid roles, reciprocal accountability

A high-functioning network should be characterized by:
- A diverse, dynamic membership
- Strong social capital
- Joint learning
- Mutually beneficial partnerships with other members and donors
- Widespread buy-in and organic leadership
- Effective governance and management
- A democratic decision-making process

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One level beyond networks is the **local system**, which incorporates all the individuals, organizations, institutions, and networks working on a specific challenge and bound by formal and informal rules, policies, relationships, and incentives. For example, a local health system would include the ministry of health, the local government health department, health centers, implementing NGOs, private sector pharmacies, health networks, and local champions, such as a chief or community leader. For the local system to function properly, each element or actor must function properly, including networks. Further, facilitating all of these actors to coordinate and/or work together for both an immediate objective and a long-term vision will create sustainable change in the health of that community.

Donors and implementing agencies increasingly recognize the value of a **systems-based approach** to development. This approach has emerged from a heightened awareness of the complexity of issues facing developing countries—fostering good governance, agriculture and rural development, private sector development, and overcoming the global AIDS pandemic—each of which necessitates a multi-sectoral and society-wide response. The development world's shift to a Capacity 2.0[3] approach that looks at systems change necessitates promoting the importance of connections, communication, social capital, and "best fit" approaches. This way, we can examine how an organization fits in with other elements that create the greater local system and strengthen how the overall system addresses human rights and related issues.

Additionally, the development community is learning that local systems and their influence, both positive and negative, play a significant role in the outcomes and longevity of results of all development activities. Therefore, many donors and international organizations (including Pact) are learning new ways to mobilize local systems to enhance and extend sustainable development impacts. As international development pursues systems-level impact, more institutions are seeking practical and field-tested methodologies that can help identify opportunities and improve network and system effectiveness. With this in mind, Pact developed this ONA handbook as a practical guide for human rights practitioners to analyze and strengthen networks.

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[3] According to USAID, Capacity 2.0 goes beyond the standard best practices model to improve organizations' compatibility with local systems. "Capacity 2.0 focuses on adaptive capabilities through nonlinear approaches, networking and strategic partnering, shared ownership, learning through experimentation and feedback, data-driven decision making, and a focus on leveraging and developing capacity at the systems levels, not just at the organizational ones." See more at https://usaidlearninglab.org/library/capacity-20.

Overview of the ONA

Purpose of the ONA

The Pact ONA is primarily a diagnostic tool designed to expand possibilities and empower a network to become stronger, as opposed to a prescriptive intervention with a set of uniform, predictable outcomes. The results of the ONA (including maps and network metrics) enable network members to visualize, analyze, monitor, and better understand patterns of collaboration and resource and information flows between individuals and organizations. Additionally, the ONA can be used to compare a network to similar networks and to monitor changes in the network over time.

Stronger networks are more effective. Network effectiveness depends on having the capacities necessary to achieve the network's common aim. However, common barriers to effective networks exist, including protection of information due to perceived competition from other members, members' sense of autonomy, lack of information and transparency, overreliance on a network member's or leader's reputation, not branding the network and its collective efforts as an entity separate from the individual members, poor communication or leadership, and lack of resources.

The ONA process addresses these barriers, enabling network members to maximize their impact, by:
- Bringing members together, developing trust, and opening up communication
- Mapping resource and information flows and other interactions between members
- Visualizing patterns of interaction
- Identifying bottlenecks, redundancies, underutilized resources, and gatekeeper or broker members that act as bridges between different stakeholders
- Seeing beyond current collaboration in order to involve more stakeholders or uncover underused potential
- Enabling members to ask better questions
- Developing strategies for network strengthening and joint action
- Comparing similar networks
- Monitoring changes in the network over time

What the ONA does

More than a diagnostic tool, the ONA is an approach to improving program impact and sustainability. It borrows from Social Network Analysis, stemming from many years of scientific research, and is adapted from global best practices. Pact took these methodologies and practically applied them to international development, specifically with local systems, community groups, and government agencies. The ONA goes beyond measuring a network's strength and composition to facilitating networks' abilities to achieve the results they define for themselves. This includes early engagement of all network members in designing and implementing the survey used to gather data for the ONA (see ONA process Step 2), thereby creating buy-in and local ownership. Such preliminary engagement means that when the network maps are generated, the stakeholders will be more interested, inquisitive, and engaged in devising ways to improve the network.

The discussion among network members that happens during participatory feedback and action planning (see ONA process Step 4) helps to draw out valuable qualitative observations about a network. These can form the basis of an action plan (also called a network strengthening plan) to increase network

effectiveness and strength, allowing it to function more efficiently with less external intervention. Further, networks must have leadership, and part of the ONA tool's success is its participatory process that engenders local ownership and the emergence of organic leadership. Finally, the ONA can be used to compare similar networks and to monitor changes in a network over time. Sample network maps can be found in Appendix 2.

How the ONA works

The ONA views interactions in terms of **nodes** and **ties**. Any network's structure is made of nodes (generally individuals or organizations) that are tied by one or more specific types of relations, such as information exchange, resource exchange, and collaboration around activities (the ties). When looking at a complex system, an ONA can help analyze a specific node and its role within the system. This analysis can help look for leverage points or key stakeholders who can serve as anchor organizations for efforts like Collective Impact (CI)[4] or determine who needs to be more engaged in the system for sustainable change.

The ONA can be used to:
- Track the exchange of information and resources, including funding, equipment, supplies, training, or intellectual capital, as well as the strength and quality of relationships and collaboration between stakeholders in a given network
- Analyze a specific organization and its role within the system (e.g., when identifying a backbone organization for a CI initiative)
- Analyze efficiency and effectiveness, density, reach, and several other measures, such as centrality, betweenness, degrees in, and degrees out
- Start discussions about network strengths and weaknesses as part of a planning process and as a monitoring and evaluation tool

There are five key steps to Pact's ONA methodology, which are described in more detail later in this guide:
1. Scoping and mobilization
2. Participatory survey design
3. Data collection and analysis
4. Participatory feedback and action planning
5. Network strengthening initiatives

The process begins with bringing actors together (either those in an existing or a potential network), developing trust, and opening up communication (Step 1). Together, these actors map their information flows and other interactions by designing and completing a survey that asks about such connections (Steps 2 and 3). After visualizing patterns of interaction based on the completed surveys, network members identify bottlenecks, redundancies, under-utilized resources, and gatekeeper or broker organizations that act as bridges between different constituencies (Step 4). This enables members to ask better questions and develop strategies for network strengthening and joint action (Steps 4 and 5).

As part of the ONA process, participants develop a visual representation of their network that will serve as a starting point for discussions about efficacy, objectives, and tactics. Network maps are generated based on the results of surveys that provide data on network connections and interactions among all network

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[4] CI is a formal approach to engaging multiple partners in a system to address complex social challenges, such as education, health, or economic development. For more information on CI, visit https://collectiveimpactforum.org/what-collective-impact.

members. These maps position organizations or individuals according to their connections with others, and network metrics act as a range of performance measurements that can be used to generate deeper understanding of interactions. The combination of network metrics and the discussions among network members on how they can strengthen their efficacy, objectives, or tactics form the action plans for network strengthening that are a key outcome of the ONA process. Appendix 2 contains examples of maps generated through the ONA process.

How to implement the ONA

Actors to engage

ONA can be used with virtually any group of stakeholders working towards a common purpose: local health care providers, CEOs and business coalitions, different departments within an organization, the public and private sectors, and NGOs. The half dozen Pact practitioners who have used ONA most frequently say that the most common participants are civil society organizations (CSOs; 67% of the time), community-based organizations (CBOs; 50% of the time), local government (33% of the time), and individual leaders (17% of the time). ONA participants do not need to be limited to a particular sector; instead, feel free to include a broad array of groups, organizations, agencies, and stakeholders who are a part of the network or local system.

Timeline and major milestones

Implementation can take anywhere from two days to two months, depending on the context and needs of the stakeholders involved. Ideally, an unrushed ONA process would take about a month to complete. Typically, the most time-intensive portion of the process occurs at the beginning, when identifying a network, mobilizing stakeholders, and designing the survey. Data collection and processing is relatively quick and typically occurs during a 2-4 day facilitated meeting with 15-50 participants. When working with a formal network that has regular meetings with all network members, this data collection and processing can happen then. The final step may include several network strengthening activities, and at some strategic point or regular interval, it may be desirable to conduct another ONA. The following recommended timeline is based on Pact's experience; however, the process may vary depending on the context, types of stakeholders, and resources available.

Remote and/or accelerated ONA application is possible, and the tool can be adapted to fit resource or time constraints. However, each adaptation has its drawbacks, so careful consideration should be taken. For example, Step 1 can be greatly accelerated if the network is already established. In some cases, only a brief orientation may be necessary to introduce the methodology to network members and decide on the ONA's focus (e.g., information, collaboration, resources). The orientation could be conducted remotely via conference or webinar platforms. The survey could be designed remotely as well (Step 2), then administered via an electronic platform (Step 3; e.g., email, web survey). Step 4 is the most critical to be conduced in person because the interpretation, feedback, and action planning builds network cohesion

and learning and establishes the strengthening initiatives the network will carry out. Finally, network strengthening initiatives (Step 5) can take many forms, some of which are possible via remote e-learning methodologies.

Resources required

The ONA is not a resource-intensive process; ONAs are relatively inexpensive and can often be included on the agenda of a larger workshop or meeting. The major expenses involved are for staff time, venue, and transportation costs. A sample budget is provided below. The main consideration is to have the technical capacity to facilitate the process in an optimal way. Ideally, an ONA process would be led by two experienced facilitators. They should be able to coordinate and manage the process, design a high-quality survey, facilitate learning presentations and group discussions, collect and analyze the data, and monitor and support the network action plan that the group develops. Pact's Capacity Solutions Platform (CSP)[5] has an ONA module that can be used to analyze and store the data and to generate maps. If interested in using this platform, please contact Pact staff. Other ONA software applications, including Gephi and Kumu, are increasingly available to download or use for free online.

Sample agenda for ONA workshops

Workshops are a commonly used platform to convene network members during the ONA scoping and mobilization phase (Step 1), to design and implement the survey (Steps 2 and 3), and to analyze and plan based on the survey results (as reflected in the network maps and metrics). The following sample agenda does not include the survey design process, which could be created through separate meetings with network members or by adding another day to the workshop. Depending on network members' availability, preferences, and geographic location, survey design and administration can be conducted remotely. However, it is critical to debrief the results and create network strengthening plans in person.

Day 1	
Time	**Activity**
8:30 - 9:00 am	Registration
9:00 - 9:15 am	Opening remarks and workshop objectives
9:15 - 9:30 am	Introductions and ground rules
9:30 - 10:00 am	Introduction to the ONA and why to use it
10:00 - 10:30 am	Tea break
10:30 - 11:00 am	Overview of ONA survey tool
11:00 am - 12:00 pm	Administration of survey
12:00 - 1:00pm	Lunch
1:00 - 5:00 pm	Facilitated debrief of survey results

Day 2	
Time	**Activity**
8:30 - 9:00 am	Arrival/registration
9:00 - 9:30 am	Review of Day 1
9:30 - 10:00 am	Guide to analyzing ONA maps
10:00 - 10:30 am	Map analysis (group work)
10:30 - 11:00 am	Tea break
11:00 am - 1:00 pm	Map analysis (group work)
1:00 - 2:00 pm	Lunch
2:00 - 3:00 pm	Creating recommendations
3:00 - 4:00 pm	Action planning
4:00 - 4:30 pm	Reflection and debrief
4:30 - 4:45 pm	Tea break

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[5] If you are interested in using the CSP, please reach out to Pact at csp@pactworld.org. You can also learn more about how to use the CSP via the partner manual at https://www.pactworld.org/library/capacity-solutions-platform-manual-pact-partners.

Best practices for implementing the ONA

Success factors

Key recommendations for designing and using the ONA process

- Integrate ONA and network strengthening into a systems-based approach to development that brings together all partners who are a part of the identified system.
- Co-creation and planning of the process and engagement with partners is critical to long-term success and true strengthening of networks.
- To ensure a more representative network map, comprehensive mapping of stakeholders prior to the ONA process is important.
- Engage partner organizations early to ensure they understand the purpose of the process, they are able to attend and actively participate, and the right people are engaged in the survey and ongoing network-strengthening activities.
- While the survey process, maps, and data gathered through the process are important for identifying gaps and tracking changes, the focus should be on resulting action plans and ways to strengthen the network to improve its effectiveness.
- Resource mobilization is crucial for sustaining networks. Whereas an ONA may get the conversation started, additional resources usually are required to support the activities needed to strengthen the network, including communication, exchange visits, and other collaborative activities.
- Presentation of the ONA map is just as important, if not more important, than the data collection. It is critical to ask good questions that spark conversation and reflection.

The ONA works best when...

- Participants are convinced early on of the importance of strong networks
- Stakeholders in the process have a similar level of interest and engagement, and no one group is seen to be single-handedly driving the process
- The parameters of the network being assessed are drawn clearly around a particular issue, need, service, or goal
- The survey questions are designed in a participatory way and reflect local knowledge, context, and issues
- Network maps and metrics are used to facilitate discussions between network members
- All interested stakeholders, even those potentially at odds, are included in the process
- Information is shared openly and transparently throughout the process

Mistakes to avoid

Not properly weighing the tradeoffs

The ONA process will look different in each context, depending on goals. For example, creating the most robust survey instrument might require working with experts to design the survey. However, this may come at the expense of buy-in from network actors. Or, to capture the full reach of a network, employ an open-ended survey in which participants report on the nodes they interact with outside of the network. This will capture breadth, but the map itself will lack complete data on ties (because those organizations not taking the survey cannot report their linkages with other organizations).

Lack of buy-in

Participants might not take the survey seriously at the start of your engagement with them. To ensure success, it is critical that participants understand why and how networks are important to helping them reach their aims. Networks are different and can range from very formal, structured bodies to groups of stakeholders who do not formally work together, but have overlapping work. When deciding to work with a network, you need to meet the members "where they are," working to strengthen how they already work together and basing interventions on their priorities. This includes the possibility that a group of interrelated actors (i.e., an informal network) does not want to or is not ready to create a formal, structured network. Additionally, when working with networks, the members might not see the relationships among partners as an actual network. It is important to use this engagement to help all partners understand the importance of collective action and systems-based approaches.

Incomplete data

Less-than-complete participation will affect results. If network members do not complete the ONA survey or participate in the discussions on how to strengthen the network, the process's effectiveness and data's integrity will be compromised. For best results, ensure that all participants are present for the full process.

High organizational turnover

Staff turnover at member organizations can have a negative impact because new participants, particularly in the case of a re-ONA, might not have adequate information or memory to participate effectively. Some change is inevitable, but for best results, seek consistent engagement from a static group of organizational representatives.

Unrealistic expectations

Expecting 100% network density is not only unrealistic, it is likely to be undesirable. Most networks can be improved with greater interaction, communication, and collaboration, but no network is working with every actor every step of the way and setting up that expectation can cause unnecessary disappointment.

Contextual considerations

Examples of past application

Pact's ONA is highly adaptable; it has been used in several different settings for a range of purposes, including:
- Analysis of community access to a continuum of healthcare services through the strengthening of referral networks between organizations offering a range of district-level health services in Malawi
- Fostering better coordination, a common sense of purpose, leveraging of resources, and the development of common advocacy messages across civil-society organizations and networks in Malawi and South Sudan
- Strengthening interaction and knowledge-sharing among communities of development practitioners both internally to Pact and in support of monitoring and evaluating climate change programs in Southeast Asia
- Assisting with program design by increasing understanding of the roles and interaction between different health sector organizations in Brazil, Nigeria, and Malawi
- Analyzing and supporting the development of advocacy networks and coalitions in Ukraine and Kenya
- Supporting strategic planning and improved decision-making in networked organizations in Nigeria, Kenya, and Southeast Asia

- Strengthening social service referral networks for orphans and vulnerable children (OVC) in Nigeria and Malawi
- Strengthening the consortium of organizations working in HIV/AIDS and children's issues in eSwatini

Politically and conflict-sensitive situations

The political, economic, and social situations in any given country or community can hinder data collection and visualization. In some instances, network members might object to using this methodology. Such objections may be because one of the most documented uses of this methodology is its role in assisting the U.S. Central Intelligence Agency to analyze potential terrorist networks. In countries with shrinking civil society spaces, where collective action, organizing, or networking are viewed as a threat to state or dominant power, implementing the ONA may put network members at risk. In other contexts in which a network convenes around a politically sensitive or illegal topic, such as HIV prevention and treatment among gay men in countries where homosexuality is a crime), some network members may not be able to participate due to personal safety. To a certain extent, such contextual considerations may be mitigated either by discussing the ONA's role and data use up front or by removing the names of individuals and/or organizations from network maps; the latter—creating anonymous ONA maps—is crucial in areas where security is a potential issue. Considering methodologies other than ONA is also pertinent to ensure a do no harm approach.

Reasons for network patterns

An ONA map will highlight patterns of interactions, but it will not explain the underlying reasons behind those patterns. For example, an ONA map may show an organizational leader as disconnected from her colleagues, but it won't identify whether it is because the leader recently joined the organization or because she is unapproachable. It is important not to jump to conclusions or make programmatic decisions without first attempting to understand the "why" behind the maps by sharing the maps with participants and asking for their interpretation. It can also be assisted by employing additional qualitative assessments, such as Pact's Network Capacity Assessment (NECA),[6] developed in Lesotho and Nigeria.

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[6] See more detailed information on the NECA in Pact's Network Strengthening Toolkit Module 2.

A Step-by-Step Process for Implementing the ONA

Step 1: Scoping and mobilization

As an important initial step, if the network membership is not formally known, conduct an actor mapping activity to identify key stakeholders who are a part of the network.[7] Pact's Applied Political Economy Analysis (APEA) is another option to consider during Step 1; the APEA is an approach for analyzing key power dynamics and social, political, economic, and other incentives operating within a given sector or locality.[8] Whether the network is formal or informal will determine the specific mobilization strategy. In the case of an informal network, project staff may convene the stakeholders identified via actor mapping to orient them on the project in general and the ONA process specifically. For more formal networks, project staff may choose to orient network leaders, then begin a collaborative planning process on when and how to implement the ONA.

Step 2: Participatory survey design

Project staff and network members collaboratively develop the survey tool to identify what areas of the network need to be analyzed and strengthened. This can be done during a meeting with network representatives to identify the focus of the survey questions.

A primary consideration when designing the survey is to determine whether it will be bounded or unbounded. **Bounded surveys** aim to understand interactions among a known group of stakeholders, and all collaborators (nodes) are listed on the answer sheet. A bounded survey is most appropriate when working with formal networks. **Unbounded surveys** aim to understand interactions between a group of stakeholders and with others in their external environment, and survey participants list the names of other network members/stakeholders on answer sheets. An unbounded survey is most appropriate when a network is informal and its membership is not known. Appendix 1 provides sample bounded and unbounded surveys.

Question categories

The survey can include questions about the flows of information, resources, and collaboration that are important to the network. The main categories typically covered through the ONA survey are outlined below. It is best practice to begin the survey with basic demographic questions to better understand the participating entities, such as on the length of membership in the network, types of services the organization provides, and organization name and location.

Category	Description
Communication	How often do you talk with the following people/organizations regarding <topic x>?
	How much do you typically communicate with each person/organization relative to others in the group?
	True or false: I would be more effective in my work if I were able to communicate more with this person/organization.

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[7] See more detailed information on mapping tools in Pact's Network Strengthening Toolkit Module 2

[8] For more information, see the HRSM APEA Handbook at https://www.pactworld.org/library/applied-political-economy-analysis-human-rights-programs-and-campaigns.

Category	Description
Information	How frequently have you acquired information necessary to do your work from this person/organization in the past three months?
	From whom/which organizations do you typically seek information related to <topic x>?
	To whom/which organizations do you typically give information related to <topic x>?
Problem solving	To whom/which organizations do you typically turn for help in thinking through a new or challenging problem?
	How effective is each person/organization in helping you to think through new or challenging problems?
	True or false: If I ask this person/organization for help, I can feel confident that he/she/it will actively engage in problem solving with me.
Innovation	How effective is each person/organization in helping you to think through a new or innovative idea?
Decision-making	Please indicate whom you turn to for input prior to making an important decision.
Task flow	Please indicate the extent to which people/organizations listed below provide you with inputs necessary to do your job.
	Please indicate the extent to which you distribute outputs from your work to the people/organizations listed below.
Knowledge awareness	True or false: I understood this person's/organizations knowledge and skills. This does not necessarily mean that I have these skills or am knowledgeable in these domains, but that I understand what skills this person has and domains they are knowledgeable in.
Access	True or false: When I need information or advice, this person/organization is generally accessible to me within a reasonable amount of time to help me solve my problem.
Safety	Please indicate the extent to which you feel personally comfortable asking this person/organization for information or advice on related to <topic x>.
Energy	People/organizations can affect the energy and enthusiasm we have at work in various ways. Interactions with some people/organizations can leave you feeling drained while others can leave you feeling enthuse about possibilities. When you interact with each person/organization below, how does it typically affect your energy level?
Value	Please provide an estimate for the typical time saved per month as a result of information, advice, or other resources received from each person/organization.
Time spent	Please indicate the typical amount of time you send preparing for and in interaction with each person/organization below.
Resources	From what sources do you currently obtain funding to implement programs or projects? To what entities do you currently grant funding?
Supplies	From what sources do you obtain supplies to implement <topic x> interventions?

Step 3: Data collection and analysis

Depending on the network members, data collection can be done through an online or written survey. To maximize understanding and data quality, all network members must complete the survey, either together as a group or individually before coming together to discuss the results. Pact has found that it usually works best to have network members come together for a half-day meeting about the ONA process and purpose that ends with all members filling out the survey at the same time.

After all members have taken the network survey, project staff generate network maps and metrics by analyzing survey data using a network analysis platform, such as the CSP, Gephi, or Kumu. Network maps position organizations or individuals according to their connections with others. Network metrics provide a range of performance measurements that can be used to generate a deeper understanding of interactions. Appendix 2 provides sample ONA maps that were generated using the different programs. Data generated by the ONA also informs the HRSM standard indicator *Number of supported networks or coalitions demonstrating increased efficiency and/or effectiveness*. Each project should determine what key characteristics it will use to assess effectiveness or efficiency and should consult the most updated HRSM indicator table.

Key data points generated by these network analysis platforms include the following network metrics, alongside their definitions. It is important to bear in mind that each metric requires interpretation and depends on the overall purpose or goal of a network. Also, some metrics describe the network as a whole, such as density and diameter, whereas other metrics analyze a specific network member, such as eccentricity and degrees in and out.

Metric	Definition
Number of nodes	The number of network members, which can be disaggregated by specific characteristics, including country, sex (if members are individuals), or type of organization. Represented in the map as dots.
Number of edges	The number of links/connections between nodes (network members). Represented in the map by directional lines, weighted based on the strength of the connection (i.e., thicker line signifies a stronger connection).
Density	The percentage of potential links/connections that currently exist in the network. This is calculated by dividing the total number of current linkages in the network by the total number of linkages that would exist if every node was linked to every other node.
Diameter	The shortest path between the two most remote nodes in the system. The bigger the diameter, the less connected the network is and the more time it takes for information to get from one organization to another. This metric can inform conversations about efficiency.
Betweenness	An index score that describes the extent to which one node acts as a bridge between different nodes. A node with a high score can be critical to collaboration and information-sharing, but can also be a bottleneck.
Closeness	The average distance from a given starting node to all other nodes in the network. Nodes with a high closeness percentage tend to be important influencers within their local network. They are often respected locally, and they occupy short paths for information spread.
Eccentricity	Measures the maximal distance from a given starting node to the farthest node in the network. Measures the speed at which information can reach each other node. This metric is critical to analyze one specific network member and its functioning within the network.

Metric	Definition
Degrees in and degrees out	The number of connections going to a particular node (degrees in) and the number of connections going from a particular node (degrees out). This metric is not automatically generated; rather, it is easily identified by counting during a debrief session on the ONA results. The higher the degrees in score, the larger the number of nodes that are approaching an organization for resources or information. The higher the degrees out score, the larger the number of linkages and the more actively the node is networking with others.

The platforms also generate unique network maps in response to each of the main questions included in the survey. The example maps below reflect the answers to different survey questions and demonstrate two different network typologies, **representative** on the left and **action** on the right.
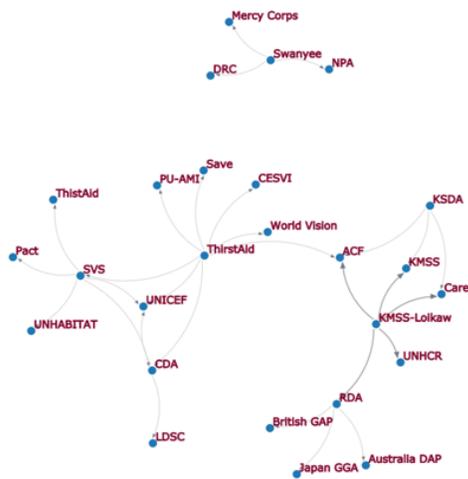
Map 1: Who do you go to for water, sanitation, and hygiene (WASH)-related issues?
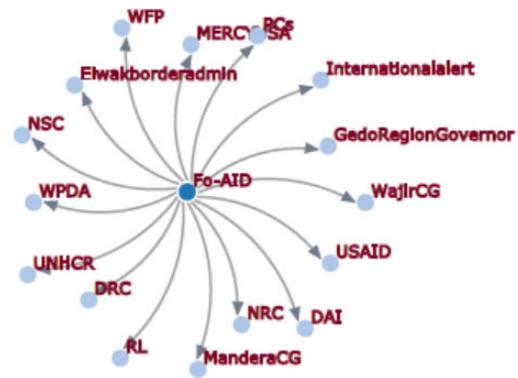
Map 2: Which organizations do you network with on peacebuilding work at the community level *after* engaging with the project?

Step 4: Participatory feedback and action planning

After generating network maps and metrics, share this information with the network members and guide them through a participatory process of data interpretation, feedback, and action planning. Visualization of the interactions among the network members helps participants ask the right questions and draw out valuable qualitative observations that go beyond the data; Appendix 4 describes four of these types of interactions. Discussions can include how to bring in new network members, leverage technology for greater reach and effectiveness, and improve opportunities for financial sustainability. Different facilitation techniques may be used to best manage the process depending on the size of the group of network members who are convened to debrief and interpret the ONA results; however, the discussion should progress from general interpretation and observations to conclusions to, finally, recommendations and actions. Below is a guide on how to potentially structure this discussion, written from the facilitator's perspective. In a two- or three-day ONA workshop, Step 4 generally occurs on the final day.

Sample facilitation guide for map analysis and action planning

Plenary Session

Introduce the maps and metrics, and further familiarize participants with map interpretation.

1. Interpret and facilitate discussion on the first ONA map by addressing key questions.
   - Present one map (either on a PowerPoint slide or a printed copy), noting the survey question that the map represents, explaining the coloring, and sharing other characteristics.
   - Hold a general discussion on key patterns. Record responses on flip chart paper titled "Highlights and Observations." Allow participants to ask clarifying questions.
   - Lead a more in depth discussion of the map and what it explains about the network using the illustrative ONA questions in Appendix 3.
2. Have the group discuss conclusions to the observations. Develop a list on another sheet of flipchart paper titled "Conclusions."

Small Groups

Interpret the remaining ONA maps and begin generating conclusions to be used for action planning.

1. Divide the larger group into small groups, one for each map that is generated based on analysis of the survey responses. Each small group should identify a chair and a note-taker. Each small group will engage in one round of conversation per map. Every 20 minutes, the small groups rotate to a different table to review a different map. The chair and note-taker will remain at their first table, welcome new guests, and briefly share the main ideas, themes, and questions already generated about this specific map. The note-taker lists the outputs of these discussions on the "Highlights and Observations" and "Conclusions" flipcharts.
2. Once the groups have rotated through all maps (or the designated amount of time for map interpretation has elapsed), invite the original groups to reconvene to reflect on the findings. Use the following questions to help discuss conclusions.
   - Based on the conversation we had on connectors in the previous session, how can you use this information to improve collaboration within your network?
   - If you see an organization that connects two major actors, why do you think this connection exists and how did the specific organization end up being a connector? How could we replicate this learning, namely get more organizations to play the role of connector?
   - How about those actors not connected with peers? What should be done to attract those actors that are loosely connected?
   - What conclusions could you draw by looking at the direction of the arrows on the map?
   - How can you use this information to change the current status of collaboration within the network so it can fully realize its potential?

Gallery Walk

Generate recommendations based on the analysis of each ONA map.

1. Write each map survey question on a separate note card, and place each note card on a different wall in the room as a "station." Then, put the corresponding maps, observations, and conclusions for each question on the wall with that specific question's note card. Add a blank sheet of paper titled "Recommendations and Action Points."
2. Form small groups, one for each station. Ask the groups to look over the existing discussions and to gather observations using questions such as the following.
   - What are similarities and differences in patterns of collaboration?
   - What are the similarities and differences in the key observations and conclusions?
   - What does this all tell us?
3. Ask each group to develop recommendations and record them on the "Recommendations and Action Points" flipchart paper. The groups should add only new recommendations and action points not already listed on the station's other flipcharts.

4. After 15 minutes, have the small groups rotate to the next station. Repeat the same process of developing recommendations until each group has completed all stations.

Plenary

Come to a consensus on action planning.

1. Together in plenary, go over the key recommendations for each map. Ask the group to develop consensus around 3-5 key action points per map that they can carry out in the next 3 months, and circle them on the flipchart paper.

2. Ask the participants which action points they could do within the year. Underline these on the flipchart paper. The distinction between actions to be accomplished in the short term (3 months) versus long-term (1 year or more) can be based on discussion of resources required to implement the action points and priorities of both the network as a whole and individual members.

3. Collate the action points onto a new piece of flipchart paper. Alongside each action point, list the timeframe in which the network will complete it, the responsible person(s), and the resources required. This list constitutes the **action plan**.

Step 5: Network strengthening initiatives

Based on the action plans designed with network members during Step 4, determine the most appropriate initiative to address the prioritized points. Depending upon the scope of the project, network strengthening initiatives can be incorporated into other capacity development activities planned for specific network members or they can be programmed as separate activities. There are a variety of activities and approaches that can be used to strengthen networks, led by project staff, by local experts, or through mentorship or exchange visits, to name a few.

Overview of network strengthening approaches

A high-functioning network exhibits several characteristics, some of which are listed in Pact's definition of a network in this handbook's Introduction. Another framework upon which to describe effective networks, or individuals and groups connected by a common purpose, is the CI approach. The approach's five conditions also can be understood as characteristics of effective networks. For example, effective networks have a clear shared vision or purpose (also a condition for CI). For each condition, there are several activities that can be implemented to support the network in achieving that characteristic. The table below describes some example initiatives for each of the conditions/characteristics.

Characteristic (CI condition)	Activities	
Shared vision (common agenda)	• Stakeholder mapping • Multi-stakeholder meetings • Appreciative Inquiry	• Memorandum of understanding or membership agreement • Future search
Joint action (mutually reinforcing activities)	Joint assessment and planning activities: • Resource mapping • Appreciative planning and action	Activities to strengthen collaboration • Working groups • Action research • Joint training • Communities of practice • Peer learning events • Learning visits

Characteristic (CI condition)	Activities	
Monitoring and evaluation (shared measurement)	Performance monitoring • Indicator dashboard • Shared technology platform	Synthesizing results • Standardizing tools • Peer learning events
Ensure open communication (continuous communication)	• Communications audit • Communications strategy	Activities to strengthen collaboration • Working groups • Developing a common IT platform • Newsletters, emails, and social media • Peer learning events • Public events
Strengthen the coordination mechanism (backbone)	Supporting organizational development • Network action/strengthening plans • Mentoring and coaching • Leadership development • Appreciative Inquiry Strengthening network collaboration • Peer learning events • Public events	Enhancing fundraising and sustainability • Donor fundraising • Income generation • Alternative fundraising Strengthening accountability • Governance forums • Network Performance Index • Network scorecards • Member surveys

ONA reassessment

Implementing network strengthening initiatives can continue for the desired amount of time, depending on several factors, including funding, network and organizational timelines, and the level of support required for a network to achieve its objectives. For planning purposes, networks generally need 6-12 months of dedicated support, after which it may be useful to conduct another ONA. At a minimum, conducting a baseline and endline ONA is recommended in order to track progress over time. The maps and metrics are very informative quantitative data points to share with funders, and continued measurement supports collaborative learning and adaptation of interventions. More frequent ONA measurement is possible should funding, time, and project considerations permit.

Just like with the original ONA, the reassessment would entail collecting and analyzing survey data and holding a participatory debrief and action planning workshop or meeting. The original survey is used, so there is no need to go through Steps 1 and 2 again. Because of this, it is much easier to remotely implement the ONA by disseminating the survey and sharing results via email or another internet-based platform. Debrief and action planning can even be facilitated via phone or internet-based platforms.

If the ONA reassessment is meant to simply provide an updated snapshot of the network, this process could be greatly accelerated by omitting the debrief and action planning (Step 4). However, if the project continues to implement activities through a network and if the network remains motivated to continue strengthening initiatives, the debrief and action planning step is critical to adapt and learn from progress to date. Ultimately, the aim is for the network to see the value of the ONA process and to incorporate it into its ongoing functioning. For example, ONA reassessments could be inexpensive if conducted through electronic means and as a part of an existing meeting.

Appendix 1: Sample ONA Surveys

Sample bounded survey

Zambia Community HIV Prevention Project
Programmatic Collaboration Survey of Participants

Thank you for taking the time to complete this survey. It should only take **about 10 to 15 minutes** of your time. Your answers will be confidential and collectively will provide important information to support a greater understanding of your networks.

1. General information

1.1. Your name: _____

1.2. Name of your organization: _____

2. Information received from stakeholders

2.1. In Column B, please check how frequently you *receive* information related to HIV prevention from the institution listed in Column A. Please check only one box per row.

Table 1: Frequency of key institutions you *receive* information from

#	Column A: Institution name	Column B: How often do you *receive* information related to HIV prevention?				
		Never	Once or twice a year	Once or twice a quarter	About once a month	About once a week
1	Ministry of Health					
2	National Aids Council					
3	UNICEF					
4	United Nations Population Fund (UNFPA)					
5	United States Agency for International Development (USAID)					
6	Network of Zambian People Living with HIV					
7	Planned Parenthood Association of Zambia					
8	Catholic Medical Mission Board					
9	Young Woman's Christian Association					
10	Marie Stopes Zambia					
11	Interfaith Networking Group on HIV/AIDS					
12	Health Education and Communications Trust					
13	Pact					
14	Non-Governmental Organizations Coordinating Council					

2.2. What are the two most important types of information you *receive*? Please check ONLY two boxes:

☐ Types of services provided by an institution

☐ Referrals of community members to other institutions including yours

☐ Community mapping to know where other institutions are working

☐ Challenges faced and lessons learned in project implementations

☐ Monitoring and evaluation data

☐ Funding opportunities

☐ Opportunities to collaborate on projects

3. Information sent to stakeholders

3.1. In Column B, please check how frequently you *send* information related to HIV prevention to the institution listed in Column A. Please check only one box per row.

Table 2: Frequency of key institutions you *send* information to

#	Column A: Institution name	Column B: How often do you *send* information related to HIV prevention?				
		Never	Once or twice a year	Once or twice a quarter	About once a month	About once a week
1	Ministry of Health					
2	National Aids Council					
3	UNICEF					
4	United Nations Population Fund (UNFPA)					
5	United States Agency for International Development (USAID)					
6	Network of Zambian People Living with HIV					
7	Planned Parenthood Association of Zambia					
8	Catholic Medical Mission Board					
9	Young Woman's Christian Association					
10	Marie Stopes Zambia					
11	Interfaith Networking Group on HIV/AIDS					
12	Health Education and Communications Trust					
13	Pact					
14	Non-Governmental Organizations Coordinating Council					

3.2. What are the two most important types of information you *send*? Please check only two boxes.

☐ Types of services provided by an institution

☐ Referrals of community members to other institutions including yours

☐ Community mapping to know where other institutions are working

☐ Challenges faced & lessons learned in project implementations

☐ Monitoring and evaluation data

☐ Funding opportunities

☐ Opportunities to collaborate on projects

4. Collaboration with stakeholders

4.1. In Columns B through F, rate how *effective* your collaboration is with the institutions in Column A around different topics by writing the most appropriate number:

- **0.** no tangible result from collaboration
- **1.** poor, very little outcome/impact from collaboration
- **2.** average, some outcome/impact from collaboration
- **3.** extremely effective outcome/impact from collaboration

Note: Please do not put information in boxes where you have not collaborated.

Table 3: Key institutions you *collaborate* with

	Column A Institution	How effective is your collaboration around the following?				
		Column B Referrals: People referred between your institutions	**Column C Reaching unique communities:** Ensuring that you're serving different people	**Column D Monitoring and evaluation data:** Sharing and learning from M&E data	**Column E Joint advocacy:** Advancing causes by working together	**Column F Resource sharing:** Such as personnel, office space, equipment, facilities
1	Ministry of Health					
2	National Aids Council					
3	UNICEF					
4	United Nations Population Fund (UNFPA)					
5	United States Agency for International Development (USAID)					
6	Network of Zambian People Living with HIV					
7	Planned Parenthood Association of Zambia					
8	Catholic Medical Mission Board					
9	Young Woman's Christian Association					
10	Marie Stopes Zambia					
11	Interfaith Networking Group on HIV/AIDS					
12	Health Education and Communications Trust					
13	Pact					
14	Non-Governmental Organizations Coordinating Council					

Sample unbounded survey

Organization's name: _____

Name of contact person: _____

Designation: _____

Gender: (circle one)　　　　Male　　　　Female

Type of organization: (circle)　　　NGO　　　FBO　　　CSO　　　Government office

　　　　　　　　　　　　Private health facility　　　Government health facility

Type of services offered by YOUR organization: (mark an X in all appropriate services)

HIV testing and treatment services		**Household economic strengthening**	
Education		**Psycho-social support**	
Social protection		**Gender-based violence**	
Health		**Nutrition**	
Child protection		**Legal protection**	

Please list other services for OVC provided by your organization:

1. In the past 12 months, my organization has REFERRED OVC clients to the following organizations for the specified services. Please write in the organization's name and mark an X in the appropriate box.

Organization name	HIV testing and treatment services	Education	Social protection	Health	Child protection	Household economic strengthening	Psycho-social support	Gender-based violence	Nutrition	Legal protection

2. In the past 12 months, your organization has RECEIVED REFERRAL OVC clients from the following organizations for the specified services. Please write in the organization's name and mark an X in the appropriate box.

Organization name	HIV testing and treatment services	Education	Social protection	Health	Child protection	Household economic strengthening	Psycho-social support	Gender-based violence	Nutrition	Legal protection

3. For the following organizations, do you have records of completed referrals that you have made to them during the past 12 months? Please write in the organization's name and mark an X in the appropriate box.

| Organization	Yes	No	Did not refer to this organization

Appendix 2: ONA Process Case Studies

Swaziland

Pact implemented a health-focused project that strengthened the capacity of the Coordinating Assembly of Non-Governmental Organisations in Swaziland (CANGO), the coordinating body of all the country's CSOs. It manages grants from The Global Fund to Fight AIDS, Tuberculosis and Malaria and PEPFAR/USAID and coordinates six consortiums around different thematic areas such as children's issues, HIV/AIDS, and environment. Each consortium is intended to be a hub for information and resource sharing, a platform for members to have a united voice on issues related to their mandate, and an avenue to influence policy. The ONA map below (produced by Pact's CSP) represents one of these consortiums' communication status at the time of the survey.

Survey question:

In the last 6 months, how often has your organization communicated with consortium members (via email, phone, face to face, etc.) around topics that help achieve your organization's objectives?
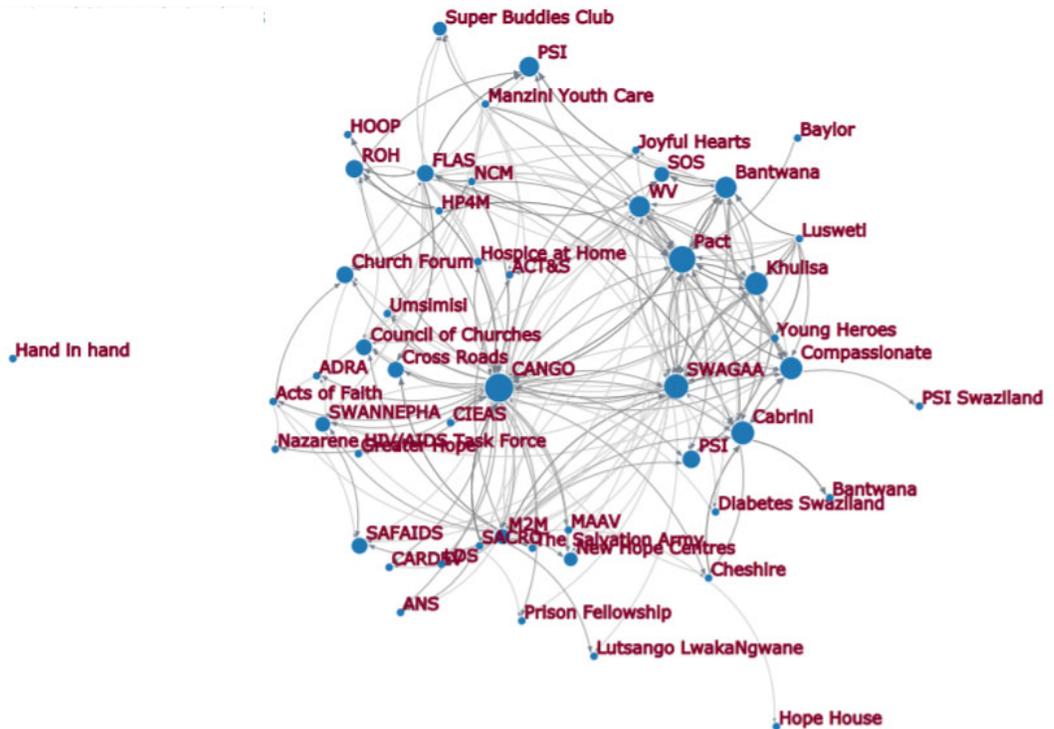

Nigeria

Through participatory feedback and action planning (Step 4), the consortium came up with the action plan described in the table below.

Recommendation	Activities	Timeline	Responsible
1. Identify and include relevant stakeholders in the referral network (e.g., SMoJ). 2. Develop a comprehensive referral directory for OVC services.	Hold an advocacy visit with the SMoJ to assess the available referral services.	November 2016	CPN (SMWASD and 4C)
	Develop an organization mapping tool.		
	Develop a directory for referral services.		
3. Strengthen SMWASD's coordination capacity in the areas of OVC service delivery, referral networking, and reporting systems.	Support the reactivation and functionality of the OVC Technical Working Group (TWG).	November 2016	CRF (CS-SUNN) and FAROF

| Recommendation	Activities	Timeline	Responsible
4. Create a platform for organizations to share best practices, challenges, and networking for OVC service providers.	Create a referral network WhatsApp group for service providers.	November 2016 (done)	CPN
5. Adapt national guidelines, tools, standard operating procedures, and documentation procedures for a referral system.	Use the TWG to disseminate and train on the use of the national referral tools.	February 2017	TWG (SMWASD)
6. Reposition the key OVC coordinating networks in the state to ensure that they are most effective in their coordination functions.	Follow up on network action plans (e.g., CPN, AONN).	Ongoing	4C
	Conduct a biannual seminar/workshop for child protection actors in the network as a refresher on referral channels and procedures.		TWG (SMWASD)
7. Include other relevant stakeholders in state-level OVC service provision.	Hold an advocacy visit with ITF, NDE, and SMoA on household economic strengthening services.	February 2017	TWG (SMWASD)

Malawi

Pact implemented a rapid response program for HIV/AIDS in Malawi. Pact conducted a baseline ONA and a follow-up assessment at midterm, a year after the baseline. The results showed increase in the network density, or total possible network connections, from 19% at baseline to 44% after one year. The ONA results below (produced by GEPHI) showed how and to what extent network nodes were interacting and facilitated analysis about how the network was functioning. Geography, common interest, and need to network were some of the reasons identified as hindering or improving networking. Local partners continued to seek linkages for technical and other resources and improved their referral system through knowledge and skills gained during the ONA.
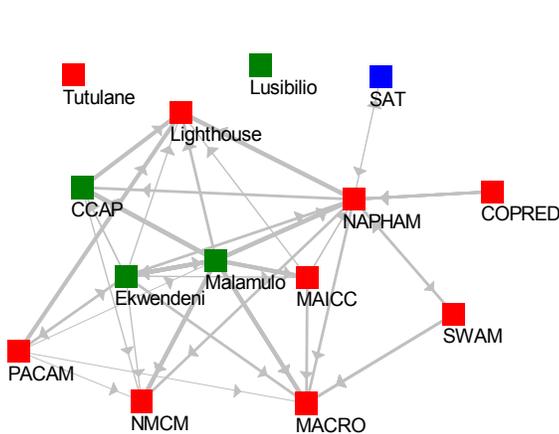
Pact Malawi baseline:
35 ties out of a potential of 182
Network density = 19%
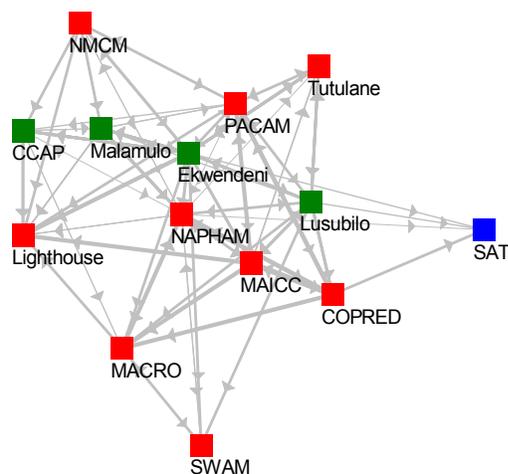
One year later:
81 ties out of a potential of 182
Network density = 44%

Appendix 3: Illustrative Questions for Facilitating ONA Interpretation Sessions
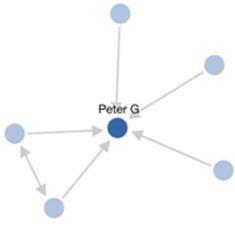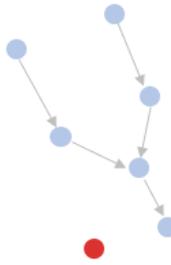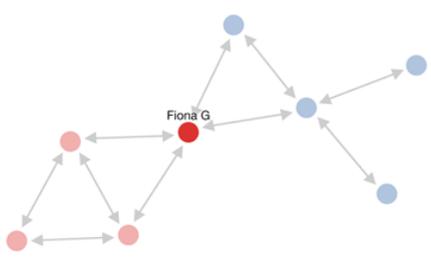
When preparing for an ONA feedback session, select the most appropriate questions from each category of the ORID framework; *ORID* stands for *objective, reflective, interpretive, decisional.* Do not use all the questions, but choose a set that will lead to a rich discussion. Adapt the questions to your inquiry topic so questions can be used for multiple topics, such as communication, collaboration, and information sharing.

ORID Framework	Illustrative Questions
Objective	• What do you see on these maps? What is your general impression? • What patterns do you see? For example, where do you notice hubs? Who appears to be brokers and connectors? Who are isolates? • What network type do you observe (network typology)? • What patterns of <topic x> do you observe? • Which actors appear to be most active in <topic x>? • Who seems to be most engaged? • Where do you see loose links? • Which members are keeping the network together? • Who in the map seems to be most invested, or who is acting as a major hub of information? Look at degrees out. • What do you notice about <topic x> patterns between government agencies / between NGOs / between government and NGOs / with the private sector / between policy organizations and service delivery organizations / between funders and implementers? • Who seems to be the most critical / influential member for <topic x>? Who seems to be the least critical / influential member?
Reflective	• What is your reaction to this map? • Is this what you expected to see? • What surprises you about this map? • What does this map mean for you (e.g., the role of the organization you represent within the network, your role within the network)? • What does this make you curious about? • Where are you surprised to find links / strong links / no links? • How does this reflect your own experience with <topic x> in this network?
Interpretative	• When discussing <topic x>, what actors or organizations are missing from this map? • Why do you think that the network members that frequently engage in <topic x> are interested in doing so? • If you see an organization that connects two organizations, why do you think this is so? What would be an explanation for being a connector? How could we replicate this learning to get more organizations to play the role of connector? • Why do you think these patterns have developed? • How do these patterns affect <topic x> within your network? What do they enable you to do? What challenges or blockages do they present? • Where do we see high and low density? How can we make this network denser? • What would the map tell us about the accessibility of the network to network members or of information, resources, and other flows within the network?

ORID Framework	Illustrative Questions
	• What patterns of behavior and types of collaboration that you observe in this map do you believe leads to successful <topic x>? • Do you see groups that communicate but do not implement projects together? Why do you think this is the case? • What if this organization disappeared? What would be the effect on <topic x> within the network? • What story does this map tells us? • What conclusions could you draw by looking at the direction of <topic x>? • Based on the conversations you have had so far, what additional insights does each of these maps give you? • What does this tell us? What does this mean for network development?
Decisional	• For the work you need to get done, does this map represent the ideal network? • Is this the center or are these the hubs we want? • To what extent does the overall map represent the ideal picture of your network? • How can you use this information to improve <topic x>? • If you could make any changes to the map that would have the greatest overall positive effect on <topic x> in this network, what would you do? • What links or connections would you strengthen? • What can be done to attract the network members that are not connected with their peers? • What specific recommendations can you make to improve <topic x>? • How can you use this information to change the current status of <topic x> with the network to fully realize its potential? • How can we strengthen <topic x> for better services for the community?

Appendix 4: Network Positions

Additional network characteristics describe specific nodes' positions within a network, which can help inform feedback and analysis during Step 4. It is useful to pay attention to the roles that nodes play by keeping the network together or preventing it from being more cohesive. The following network positions are the most common.

Network Position	Map Visualization
Hubs, also known as **connectors**, represent actors with many direct connections. They often appear in the middle of a cluster of nodes and will have high degrees-in and/or degrees-out. In some contexts, their network role can be due to popularity and in others due to overdependency.	
Isolates are actors with no connection or just a single connection. They are mostly positioned by the edge of a social network. An isolate can exist if an actor was included in an unbounded survey but did not participate in the survey itself.	
Brokers are nodes that connect otherwise-disconnected nodes. The broker either connects whole groups of nodes or isolates to the remaining network. It is a crucial position in the network and also is known as bottleneck, gatekeeper, and bridge-builder. A broker can be characterized by a high betweenness score.	
Influencers are closely connected to the remaining network. The role is closely related to that of a broker and, perhaps through others, can reach even peripheral nodes. The influencer can be identified by a high closeness score.	