Pact Organizational Network Analysis (ONA) Handbook

A PRACTICAL GUIDE TO THE ONA TOOL FOR PRACTITIONERS AND DEVELOPMENT PROFESSIONALS.

pact

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Purpose of this handbook

This handbook is intended to help development practitioners understand how to use and what can be achieved by Pact's Organizational Network Analysis (ONA) tool. It is now meant as a detailed technical guide (for this, please see Appendix 8: Links to other materials), however, and we assume that the reader has some familiarity with community development techniques and networks. This document will provide the Pact practitioner and manager with the information they need to understand how the Pact ONA works, and how best to incorporate it in their country strategy or program. While this document is designed for internal Pact purposes mainly, it can be shared with donors and partners when they need more information to make funding or partnership decisions.

The Pact ONA - Description & Overview

Why networks matter

Networks exist everywhere, whether formal and recognized or latent and incipient. 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, Pact believes that development actors at the community and national levels can:

- Tackle complex, multi-faceted, systemic issues – such as legal reform, stopping the spread of disease, or fighting corruption – that one actor alone could not adequately address.
- Increase the voice or clout of a group by speaking in unison.
- 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.

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

Characteristics: Exchange of information and resources, voluntary association, informal structures, fluid roles, reciprocal accountability, interdependence

Other names: Coalition, association, alliance, federation

Donors and implementing agencies are increasingly recognizing the value of a networked approach to development. This attitude has emerged from a heightened awareness of the complexity of issues facing developing countries—fostering good governance, improving agriculture, rural development, private-sector development, and overcoming the global HIV/AIDS pandemic—each of which necessitates a multi-sectoral and society-wide response.

The number of networks funded by the United States Government in 2010:

>500

Network mapping is one of the most important ways to begin assessing the current state of a network and its development over time. Many of the initial tools for network assessment were designed by consultants looking at the ways in which informal networks and less hierarchical management approaches could be used in modern corporations to drive profits. Pact's approach is adapted from tools that have been used extensively for strategic assessment and organizational strengthening by Fortune 500 companies such as American Express, BP, IBM, McKinsey, and Microsoft.

The Pact ONA - What is it?

Effectiveness depends on networks having the capacity to achieve their aims. This is where Pact's network strengthening approaches, including ONA, are particularly helpful. Pact's ONA is a diagnostic tool that can be used with and through local stakeholders to map a network, understand the relationships between different actors. It provides a forum for coordination, collaboration, and mutual goal-setting.

Organizational network analysis (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 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. It can be used to analyze efficiency and effectiveness, density, reach, and several other measures (centralization, between-ness, degrees in, and degrees out – for definitions of these terms see Appendix 1: Glossary). Functionally, it can be used as a discussion starter, as part of a planning process, and as a monitoring and evaluation tool.

Why is it needed?

Many networks struggle to achieve their full potential. Several barriers exist to effective networking, including:

- Protection of information due to perceived competition
- Sense of autonomy, not needing any help
- Lack of information and transparency
- Poor communication
- Poor leadership
- Lack of resources

The ONA addresses the aforementioned barriers, enabling network stakeholders to maximize their impact by:

- Bringing actors together, developing trust, and opening up communication
- Mapping resource and information flows and other interactions between actors
- Visualizing patterns of interaction
- Identifying bottlenecks, redundancies, under-utilized resources, and gatekeeper or broker organizations that act as a bridge between different constituencies
- Enabling members to ask better questions
- Developing strategies for network strengthening and joint action
- Comparing similar networks
- Monitoring changes in the network over time

Who does it engage?

ONA can be used with virtually any group of stakeholders working on a particular issue: local health care providers, CEOs and business coalitions, different departments within an organization, public, private, and non-governmental organization (NGO).

Potential participants

Individuals: change agents, development professionals, civil society leaders, entrepreneurs, advocates, media, traditional leaders, community volunteers, academics

Organizations: CSOs, CBOs, FBOs, INGOs, donors, government actors, businesses, peace committees, women's groups, district health offices, clinics

The half a 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).

Much like other Pact approaches (e.g. Local Governance Barometer, peace building approaches), it can be a goal merely to bring different actors into a room together to enter into reflective dialogue. It is often a good idea not to limit ONA participants to a particular sector (CSO, public sector, etc.), but to include a broad array of interested parties.

What makes it unique?

While its theoretical framework is adapted from global best-practice standards, the way in which Pact uses ONA is unique. Rather than simply measuring the strength and composition of a network, we engage stakeholders in the design and implementation of the survey, creating buy-in and local ownership. Such preliminary engagement means that when visual results are generated, the stakeholders will be more interested, inquisitive, and engaged in devising ways to improve the network.

The questions generated by analyzing the ONA results help to draw out valuable qualitative observations about a network. These can form the basis of a plan to increase network effectiveness and strength, allowing it to function more efficiently with less external intervention.

Where does it come from?

The Pact ONA methodology originated from Pact's Capacity Building Services Group, being initially proposed as a methodology for analyzing internal conversations around Pact's then-new platform sectors.

ONA was first applied with Pact partners as part of the Zambian HIV/AIDS Learning Initiative. The use of the methodology was localized and scaled up through Pact Malawi's Community Reach, Bridge and EBT Prev projects, Pact Ukraine's Uniter initiative and Pact Kenya's Kenya Civil Society Strengthening Program. Today ONA has been applied by Pact with organizational networks, governmental coordinating bodies, and communities of practice in approximately 15 countries across all of our regions of operation.

Pact projects where ONA has been used:

Ukraine (*UNITER, RESPOND*)
Belarus (*USAID*)
Kenya (*KCSSP*)
South East Asia Regional (*SEA Change*)
Ecuador (*USAID*)
Bolivia (*Landscape Conservation Program*)
Zambia (*ZHLI*)
Vietnam (*Community REACH*)
Brazil (*Community REACH*)
Malawi (*Community REACH, Bridge, EBT Prev*)
Nigeria (*ADVANCE, PPCD, Gates*)
Sudan (*CBO Excellence Initiative*)
UN Capacity for Disaster Relief Initiative

Key principles of the ONA

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

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.
- Network maps and metrics are used to facilitate discussions between network members.
- The survey questions are designed in a participatory way which reflects local knowledge, context, and issues.
- The parameters of the network being assessed are drawn clearly around a particular issue, need, service, or goal.
- All interested stakeholders, even those potentially at odds, are included in the process.
- Information is shared openly and transparently throughout the process.

How does it work?

The Pact ONA can be used in many different contexts and adapted for different types of networks.

It maps all the relevant stakeholders who are involved or engaged in activities around a particular issue, need, service, or goal and the existing linkages between them. This involves a survey of all relevant organizations and individuals, which asks about the flows of information and resources with others. Survey results are entered into network analysis software with built-in algorithms that generate network maps. The software is flexible, and can map both the frequency and quality of interactions between stakeholders.

The example below shows resource transfers between Pact, other local and international NGOs, donors, service providers, and the government in Zambia.

At the end of the ONA process, the participants will have developed a visual representation of their network that can serve as a starting point for discussions about efficacy, objectives, and tactics. Network 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.

A step-by-step process

A comprehensive ONA has five main phases: pre-ONA, survey design and data collection, data analysis, participatory feedback and action planning, and post-ONA.

Pre-ONA (Network Scoping and Mobilization)

- Local stakeholders and/or Pact practitioner identifies a particular network in need of strengthening
- Pact practitioner convenes local stakeholders who are involved or engaged in activities around a particular issue, need, service, or goal
- An analysis of network capacity may be performed using the Participant Engaged Capacity Assessment for Networks tool (PECAN)
- The Network Constituency Feedback Survey is helpful at this stage to determine how well the networks are serving their members and other beneficiaries and what changes are needed to increase its effectiveness

Step 1: Survey Design & Data Collection

- Survey tool is developed by facilitators, often in collaboration with participants
- Survey includes questions about the flows of information, resources and collaboration that are important to the network
- To maximize understanding and data quality, Pact facilitators implement surveys with full groups of participants

Step 2: Data Analysis

- Pact practitioners enter results into network analysis software with built-in algorithms that generate network maps and metrics
- 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

Step 3: Participatory Feedback & Action Planning

- ONA results help to draw out valuable qualitative observations about a network that can form the basis of a plan to increase network effectiveness
- Discussion of methods of "weaving" in new network members, leveraging technology for greater reach and effectiveness, and improving opportunities for financial sustainability
- The ONA maps discussion is rarely used as stand-alone process and normally combined with other planning activities using either regular strategic planning workshops, or more holistic methodologies such as Future Search, Scenario Planning, Open Space, Balanced Score Card, and others.

Post-ONA (Follow up)

- This phase may involve further Pact capacity development support using the Pact Network Strengthening Toolkit, which includes resources for: shared vision development, internal and external communication, resource mobilization, action planning, and results & measurement.
- The network may undergo a re-ONA periodically throughout the life of the intervention (quarterly, annually, bi-annually)

Timeline & 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 a relatively quick process that occurs during a 2 to 4 day facilitated meeting, typically with between 15 to 50 stakeholder participants). After an ONA, follow-up may include several network strengthening activities, and after an interval of six months to a year or more, it may be desirable to conduct a second ONA.
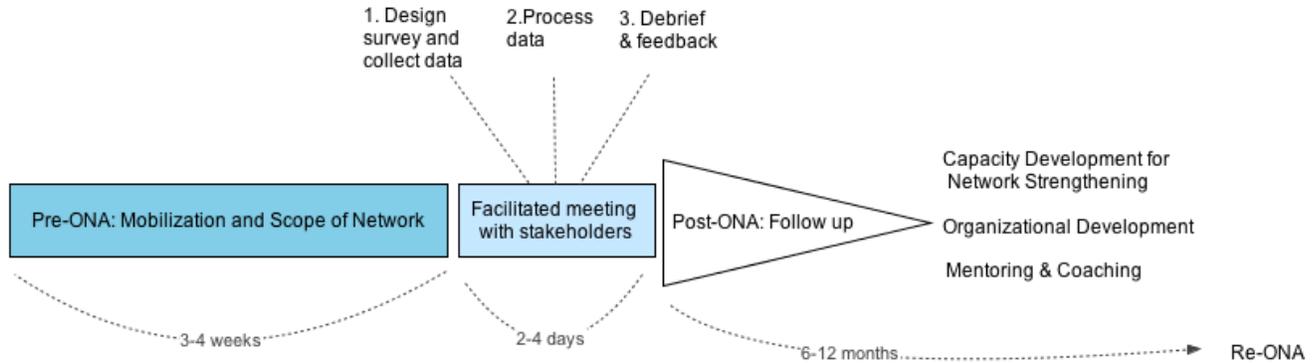

Figure 1: ONA timeline

Resources required

The ONA is not a resource-intensive process. The main consideration is to have the technical capacity to facilitate the process in an optimal way. For sample proposal language, see Appendix 2.

Staffing

Ideally, an ONA process would be led by two experienced Pact facilitators. In the past, trainings on the methodology were held in Madagascar, Tanzania, Kenya, Ukraine, Nigeria, Malawi, Washington D.C., and at Community of Practice meetings. If you or someone you know would like to receive ONA training, please contact Matt Reeves (mreeves@pactworld.org).

Budget

ONAs are relatively inexpensive and can often be included on the agenda of a larger workshop or meeting. Pact owns a small office license for InFlow ONA software, giving us access to 20 copies. However, ONA software applications (ORA, Gephi, Netdraw) are increasingly available for free online download. The major expenses involved are for staff time, venue, and transportation costs. A sample budget is included in Appendix 3.

Lessons learned

Results & efficacy data

The Pact ONA is primarily a diagnostic tool designed to expand possibilities and empower a network to become stronger, as opposed to a more prescriptive development intervention with a set of uniform, predictable outcomes.

The ONA has proven to be a powerful tool for increasing network density (the percentage of actual of the total potential linkages between network members). For example:

- In Sudan, members of the CBO Excellence Program who mapped "communication between members on areas important to each other's work" saw a change in network density from 7% to 22% between 2010 and 2011.
- In Malawi, 14 organizations recorded a baseline network density of 19% (33 of a potential 182 organizational ties) and one year later, a second ONA revealed that the network density had increased to 44% (81 of a potential 182 ties between organizations).

While some of this strengthening of network density may have occurred naturally, it is likely that the ONA process played a significant role. It is important to keep in mind that the ONA is a diagnostic tool that can lead to additional network strengthening activities.

Strong anecdotal evidence of the success of the ONA has also emerged. In Malawi, following an ONA process, Pact grantees are now conducting joint trainings; a greater number of referrals are being implemented; NGOs and health facilities are coordinating responses and notices to the government regarding stock-outs; and the quality of services have improved and the NGOs are organizing their own exchange visits to share lessons and best practices. ONA has also been adapted to strengthen collaboration and referrals between organizations, health centers, police and other government institutions depending on the type of referral. Participation with district government officials from has increased, which is good for leveraging resources and for advocacy. Some organizations formed a coalition to lobby the National AIDS Commission in Malawi to speed up funding disbursements, as illuminated further in the following case story.

Case story #1: Malawi REACH partners

In 2008, Pact Malawi convened a group of 15 REACH partners working with populations affected by HIV/AIDS for an initial ONA. These partners, which included CBOs, Faith-Based Organizations (FBOs), NGOs, and networks, had all received financial support from Pact, but were not well-integrated, communicating, or collaborating. Pact staff identified several hurdles to their better network integration:

- Local organizations viewed each other as competitors, not partners
- A cultural perception that seeking out information and collaboration appears weak
- Lack of staff motivation and buy-in to the idea of collaboration and networking
- The view that, as well-established organizations, they require little or nothing from others

The initial 2008 ONA revealed a network density of just 19%, meaning that out of all the possible relationships between these 15 organizations, only one in every five was actually connected in some way. Given that these organizations all share similar goals – disease prevention and better health outcomes – their network strength clearly had room for improvement.
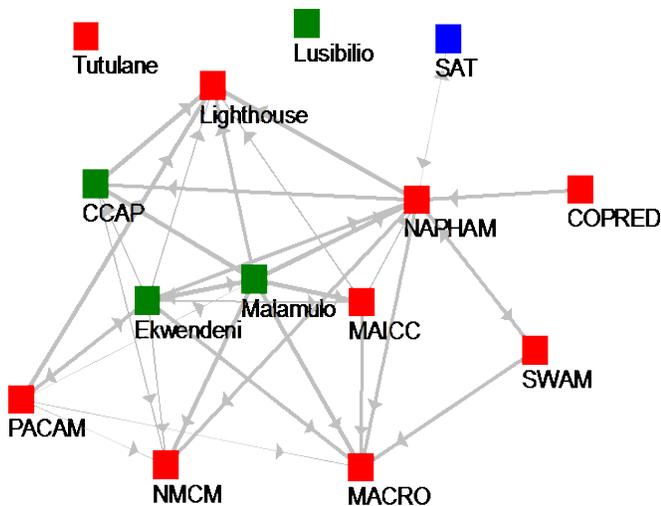
Figure 2: Preliminary ONA results

The presentation of the ONA map seems to have sparked some interesting debate and dialogue. Pact facilitators asked organizations questions like: "Tell us about your organization's position in this network", "Why do you think you have a relationship with organization x and z, but not organization y?" and "Which organizations have the most connections with other organizations and what have they done differently?"

One organization in particular, the Southern Africa Trust (SAT), had a reputation as a large, successful "go-to" organization in the community. However, the ONA map revealed a different reality; it was communicating and collaborating with just one other organization. It had become isolated by its own success and hadn't felt the need to reach out. Thus, presenting the ONA map in a room full of peer organizations acted as a wakeup call.

One year later, the Southern Africa Trust had significantly increased its connections within the network. Overall, the entire network had increased in density to 44%, meaning that out of all possible relationships between these 15 organizations, almost half were connected and collaborating somehow. One organization in particular, NAPHAM, had remarkable results, moving from the periphery to the center of the network in just one year. Furthermore, the two isolates, Tutulane and Lusibilo, had become integrated as full members of the network.

So what happened in the interim? Success can be attributed to a combination of several factors, many of which arose spontaneously without additional support from Pact:

- The perception of competition decreased as organizations became more familiar with one another
- Organizations began to save on costs and duplication by hosting joint trainings and activities together
- Sharing of technical expertise and information
- Pact-sponsored exchange visits and volunteer exchanges
- Health organizations gave more effective and consistent referrals to other network members
- Organizations found creative ways to leverage resources, and even began to advocate together
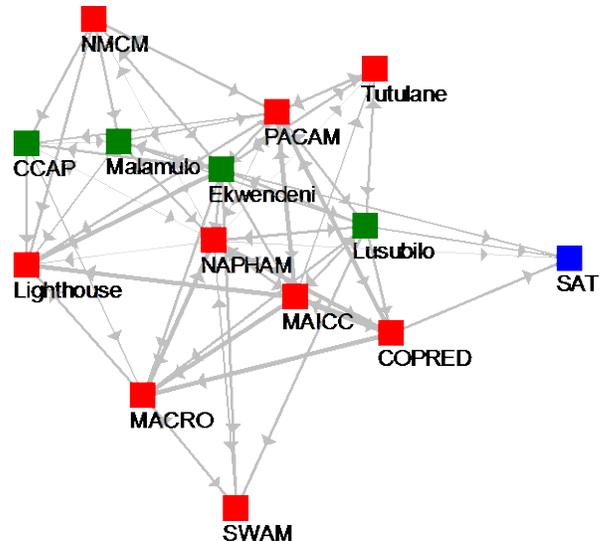
Figure 3: ONA results one year later

In one interesting twist of events, three Pact partners – NACC, MAICC, and MAICC – were all suffering shortages of health supplies which district authorities were supposed to be providing. This was quite common, and normally each organization would resign themselves to waiting and hoping for the best. But because these partners felt part of a larger network, they banded together to lobby the National AIDS Commission (NAC) and within days, rather than weeks, the needed supplies arrived.

By the third year, another ONA was conducted and revealed a decline in network density to 38%. Initially, members were greatly concerned that something had gone wrong in the network. However, upon further reflection, it was noted that many of the staff in the original 15 organizations had turned over and some survey participants were new. Also, a few organizations were not present to complete the final ONA, which would have caused a drop in density. On the other hand, the process begun with the initial ONA has undoubtedly resulted in enhanced networking among Pact Malawi REACH partners in ways invisible to Pact.

Case story #2: UNITER partners in Ukraine

Since 2008, Pact has led the Ukraine National Initiative to Enhance Reform (UNITER) program supported by USAID, which has the goal of supporting reform, improving the regulatory environment, and enhancing civil-society capacity using a sectoral approach. As networks often play a key role in this type of reform, Pact decided to apply the ONA in strategic planning sessions with three separate networks working in different sectors:

- An energetic, recently formed **youth advocacy network** with a unified vision, engaged in citizen activism
- A somewhat less unified, but highly motivated network of businesses, policymakers, and civil-society organizations working on **public procurement and anti-corruption** issues
- A loosely affiliated network of highly respected and established academics and policy experts working on "**Europeanization**"

To initiate the process, Pact worked with secretariats of each network to analyze the needs, prepare agendas, and co-develop the survey questionnaire. Within two weeks, all three networks underwent ONAs led by the same Pact facilitator. Yet, their results were dramatically different.

The first group of *youth advocates* embraced the ONA process. They enthusiastically questioned how they could develop an even stronger shared vision. The maps revealed four clusters of organizations linked together by 'connectors,' which fueled a valuable discussion about why certain organizations were playing a linking role, whether geography and history were major factors, and how they could better coordinate and communicate.

Figure 4 - Youth advocates read and discuss ONA maps

The second group of *anti- corruption advocates* was initially more skeptical of how ONA maps could help their planning. However, as they discussed the ONA results, the Pact facilitator began asking probing questions that sparked the interest of participants. In their small-group work sessions with sets of different maps, the network members discovered that business and policy network clusters were not communicating or collaborating with each other at the needed level. In addition, they recognized that their coordinating center (secretariat) was too overburdened, that it need not be the only dominant hub in the network, and that many other potential leaders within the network who could help decentralize the partnership.

The third group ONA experience with *academics and experts* was not successful even though, more broadly, the event achieved its goals and satisfied the organizers' expectations. The group questioned the methodology, its usefulness and ethics, and ultimately refused to participate in the discussion using the maps. As a result, other activities were introduced and the event was tailored according to the group's comfort level. This outcome, however, bears many instructive lessons, including:

- *Culture matters*: Ukrainian academics tend to rely heavily on quantitative data and lengthy reports rather than simple visual data. Participants questioned the statistical validity of the construct, as well as what could be gleaned from a visual representation. Some other ONA groups have had the same initial reaction, which changed once they began analyzing the maps and seeing their usefulness. In other, more visual cultures (many African countries, for example), ONA maps are usually grasped and valued much more quickly.
- *Be mindful of ethical considerations:* In Ukraine, academics from a certain period and context (in this case, the Soviet era) consider it unethical in any circumstance to require participants to identify themselves in a survey for fear of retribution and negative consequences. On the other hand, the youth activists (from another era altogether) saw no problem and were eager to participate. This illustrates an important – and potentially show-stopping – consideration.
- *Individuals behave differently than organizations*: Seeing your own name on the network map can be potentially more threatening and embarrassing than seeing the name of your organization, for which you likely feel less responsibility. Participants with prestigious pedigrees may resist any vulnerability to which ONA might expose them.
- *Engage early and often*: In this case, a few vocal and powerful opponents swayed others who were willing to engage to abort the ONA process. Had they been engaged and consulted earlier in the survey design, they might have been more supportive. In this case, however, the situation was complicated, as the network did not emerge naturally, but was created by a government that had lost its power to a new administration, and had a relatively weak secretariat that is only beginning to gain legitimacy from the leadership.

Success factors

1. *Adequate resources*: 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: communication, exchange visits, and other collaborative activities. As seen in the Malawi case study, this is one area where Pact may be able to provide additional support.
2. *Organic leadership*: Networks must have leadership. Part of the success of the ONA tool is its participatory process that engenders local ownership and the emergence of organic leadership, as seen, for example, with the three Malawian CSOs which stepped up to lobby the NAC. Part of the challenge with the group of academics in Ukraine was the lack of integrated leadership and the perception of standing alone as individual experts.
3. *Consider tradeoffs:* The ONA process will look different, depending on what you hope to accomplish. For example, if you want to have the most robust survey instrument, you might work with experts to design the survey. However, this may come at the expense of buy-in. Or, in order to capture the full reach of a network, you may want to have 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).

4. *A focus on dialogue:* The 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. Some to consider:
    - Who are key connectors/resources?
    - Who/which groups might be isolated and/or underutilized?

- Where might information/resource bottlenecks occur?
- How can we improve collaboration?
- How do different types of organizations interact with one another?
- Where are key information sources and resource hubs?
- Which organizations might make good partners?
- How might we strengthen local, regional, and global connections?
- Where are the missed opportunities?

Mistakes to avoid

1. *Lack of buy-in*: Participants might not take the survey seriously at the first point of participation. As illustrated in the example of the group of academics in Ukraine, it is absolutely critical that participants understand why and how networks are important to helping them reach their aims.
2. *Incomplete data*: Less-than-complete participation will affect results. If organizations are absent during the ONA survey meeting or presentation, the effectiveness of the process and integrity of the data will be compromised. For best results, ensure that all participants are present for steps 1-3.
3. *High organizational turnover:* Staff turnover at member organizations can have a negative impact, as 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.
4. *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.

Adaptations and sectoral applications

The Pact 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

Contextual considerations

As the case story from Ukraine highlights, political and ethical sensitivities can hinder the collection and visualization of network data. Such objections are not surprising, since one of the most documented uses of this methodology is its role in assisting the CIA to analyze potential terrorist networks. The problem can be mitigated either by discussing the role of ONA and the use of its data upfront, or by removing the names of individuals

and/or organizations from network maps. In areas where security is a potential issue, creating anonymous ONA maps is a must.

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 a more qualitative network assessment such as Pact's NECA (Network Capacity Assessment), developed in Lesotho and Nigeria.

Appendices and Resources

These appendixes are intended to provide additional information which the Pact manager or marketer may find useful in trying to understand more about the Pact ONA.

Appendix 1: Glossary

Network density: The percentage of potential linkages that exist in reality. This is calculated by dividing the total number of linkages in the network by the total number of linkages that would exist if every network member were linked to every other member.

Centrality: This score is for the entire network, based upon the *between-ness* scores of individual actors. Higher centrality is usually one sign that a network is vulnerable.

Between-ness: This is an index score that describes the extent to which an individual member acts as a bridge between different nodes, thus maintaining the viability of the overall network. These are powerful actors with the potential to make or break overall network effectiveness. They also can be bottlenecks, however, holding up the flow of resources or information.

Degrees in: The higher the degrees-in score, the larger the number of nodes that are approaching an organization for resources or information.

Degrees out: The higher the degrees-out score, the larger the number of linkages and the more actively the node is networking.

Step reach: The degrees of separation between different actors (e.g., 1 degree = connected directly, 2 degrees = connected through another actor, etc.).
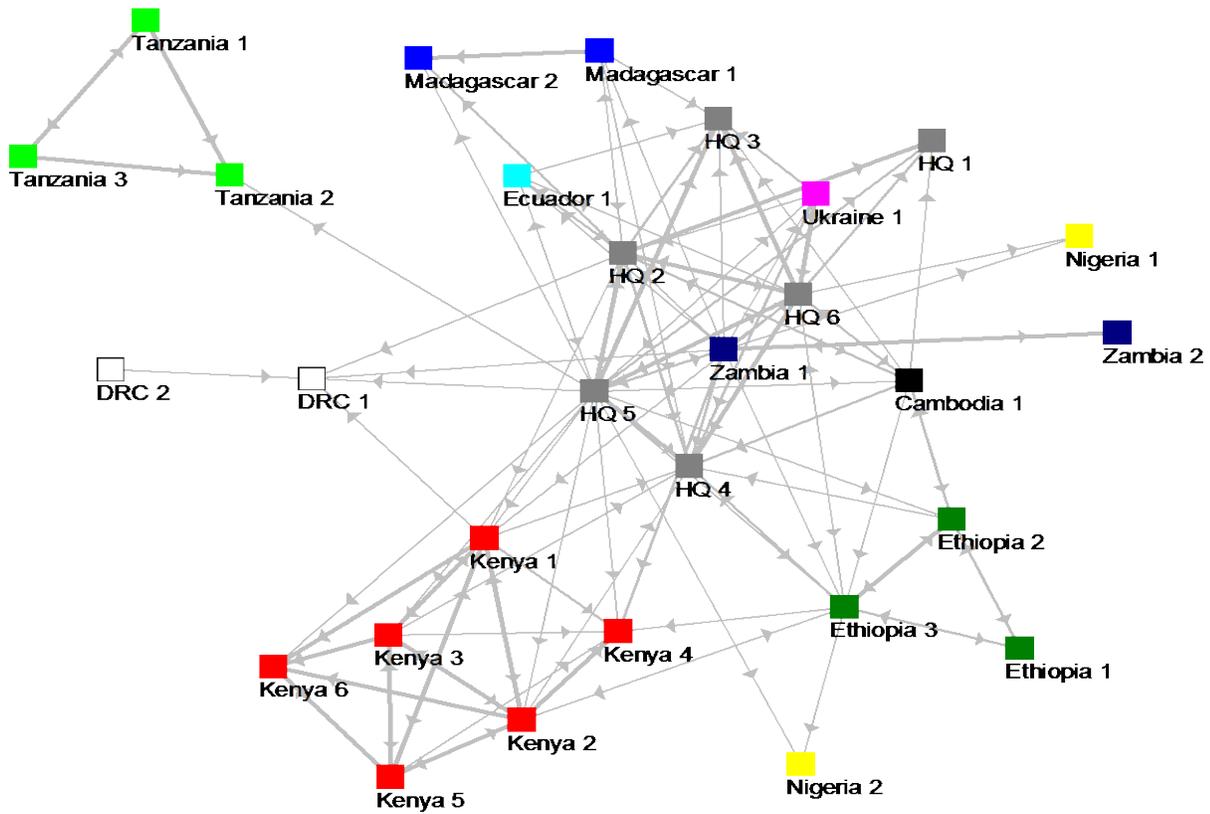
Nodes: The individual actors within the networks.

Ties: The relationships between the actors.

Appendix 2: Sample budget

Organizational Network Assessment Training		Year 1	Year 2	Year 3	Year 4	Year 5	TOTAL
Duration of the event (# of days)		0	**4**	0	0	0	4
Travel days (# days)		0	2	0	0	0	2
Number of Trainings		0	1	0	0	0	1
Number of Participants per Training with travel needs		0	18	0	0	0	18
Number of Participants per Training without travel needs		0	7	0	0	0	7
	Unit Cost	Year 1	Year 2	Year 3	Year 4	Year 5	
Venue Rental (per training)	$ 1,000	$ -	$ 1,050	$ -	$ -	$ -	$ 1,050
Participant Transportation (per trip)	$ 30	$ -	$ 567	$ -	$ -	$ -	$ 567
Participant M&IE (per day)	$ 10	$ -	$ 1,134	$ -	$ -	$ -	$ 1,134
Participant Accommodation (per day)	$ 15	$ -	$ 1,701	$ -	$ -	$ -	$ 1,701
Lunch and Refreshments per Participant (per day)	$ 15	$ -	$ 1,575	$ -	$ -	$ -	$ 1,575
Training Materials and Supplies per Participant (per training)	$ 3	$ -	$ 79	$ -	$ -	$ -	$ 79
TOTAL		**$ -**	**$ 6,106**	**$ -**	**$ -**	**$ -**	**$ 6,106**

Appendix 3: Sample ONA survey

NETWORK MAPPING SURVEY

Name: _____

Type of Org (circle one): CSO, INGO, Government, Academic, Other

Question 1. Which organizations do you go to for Community-Based Disaster Risk Management (CBDRM) training and/or materials?

How often do you go to these organizations for CBDRM training and/or materials? (Please enter the number that best reflects your level of contact.)

Level of Contact	Characteristics
3 = Frequently	"This is where I go most often when I am looking for CBDRM training and/ or materials."
2 = Occasionally	"This is where I go sometimes when I am looking for CBDRM training and/ or materials."
1 = Rarely	"I rarely go here when I am looking for CBDRM training and/or materials."

Name of Organization	Collaboration level (Score 1-3)	Resource type: Training, Materials, or Both?

Appendix 4: Network maps

Strategic communications between members of Sudan's CBO Excellence Program in 2010

Strategic communications between members of Sudan's CBO Excellence Program in 2011

Note: Line density indicates the volume of communication.

Frequency of interaction between members of a Community of Practice

Appendix 5: History and origins of the Pact ONA

- The Pact ONA methodology originated from Pact's Capacity Building Services Group (CBSG) being initially proposed as a methodology for analyzing internal conversations around Pact's then-new platform sectors.
- Pact first used the methodology was first used in a project setting in the action research project entitled "Building Dynamic Local Service Provider Communities: A Value Chain Approach."
- ONA was subsequently used in multiple CBSG Consultancies, including with UNCADRI, WBI, DFID in Latin America, etc.
- The methodology entered the larger Pact community through Community REACH in Malawi, Brazil, and Vietnam.
- With the success of the methodology, Pact began to build it into proposals such as SEA Change, Gates, EBT Prev, and JHU.
- Today, ONA has been applied by Pact in approximately 15 countries across all of our regions of operation.

Appendix 6: Contacts within Pact

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Appendix 7: Links to other materials

Several different software packages may be used for ONA, including:

License:

- Inflow software: http://www.orgnet.com

Free:

- ORA software: http://www.casos.cs.cmu.edu/projects/ora/software.php
- Gephi software: http://gephi.org/
- Netdraw software: http://www.analytictech.com/Netdraw/netdraw.htm

Some helpful Pact documents are included on our SharePoint, including:

- **PPT Presentation – Intro to ONA (generic)**. Gives a high-level overview of what the ONA is and how it works. It can be used during an ONA process or to train ONA facilitators.

  http://bit.ly/n8AeLE

- **Basic Commands in Inflow (revised)**. Prepares the ONA facilitator to use Inflow software.

  http://bit.ly/pS154u

- **Pact's Network Strengthening Brief for WBI_2008**. Discusses how organizational network analysis can promote network effectiveness, scale, and accountability.

  http://bit.ly/nMUgxJ

- **COP Kick-off meeting report (final)**. Provides helpful background and discusses how the ONA was used with the SEA Change community of practice.

  http://bit.ly/q3Pnkk

Additional Pact documents can be accessed at: http://bit.ly/r1Iy1o

Other resources:

- The Hidden Power of Social Networks, by Rob Cross and Andrew Parker
- Nexus: Small Worlds and the Groundbreaking Science of Networks, by Mark Buchanon
- UNIDO report - Networks for Prosperity: http://bit.ly/sp6XRH

Appendix 8: Two-page marketing materials

The ONA 2-pager can be downloaded from Pact's Intranet Storefront page here:

http://tinyurl.com/OCA-Two-Pager