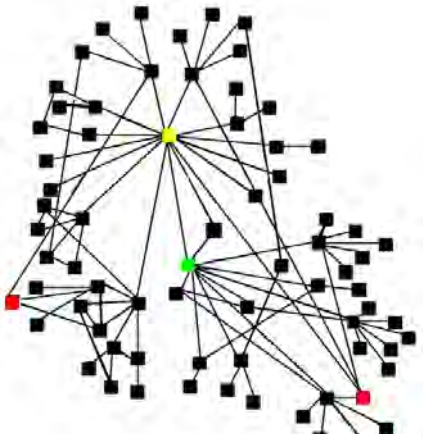
Team Network Mapping Tool

What is a Network?

A network consists of the web of relationships formed by every person and every organization. This web supports the many functions that people fulfill at work, from completing routine transactions to socializing, innovating, planning, learning, and developing their careers. These relationships are developed informally and may or may not include people related to an individual through the formal organizational chart or process.



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Most networks are informal: they are developed without designated authority, structure, or leadership. However, there have always been formal networks developed by like-minded individuals. The Elks, a Java users group, and MAQIN are all examples of more formalized networks.

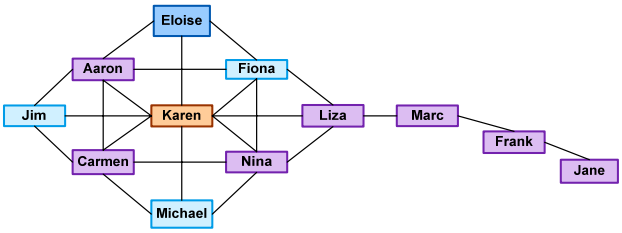
Recently, networks have received more attention as people begin to understand their power and impact on performance. A variety of web-based tools has begun to track social networks. Some social networking tools you may recognize include Twitter, LinkedIn, and Facebook.

Critical Connectors

Three critical positions emerge as “power roles” in informal networks (Stephenson, 1996). People in these roles have immense influence although they often don’t know it. Called *critical connectors,* these roles consist of only 5% - 10% of the total network. The three roles are hubs, gatekeepers, and pulsetakers.

Hubs are directly connected to many people. They’re the social butterflies of the company. They tend to know everyone and multitask effectively. They’re compulsive communicators. Tell something to a hub, and soon the entire organization will know about it.

In the figure to the right, Karen is a hub. Despite having no direct reports, she has more connections than anyone else: she links directly to Jim, Aaron, Eloise, Fiona, Liza, Nina, Michael, and Carmen.



Gatekeepers hold the keys to specific parts of an organization and groups of people. They must be accessed in order to receive certain information. Gatekeepers can be intense obstacles to change or tremendous supporters. In the diagram, Liza is a gatekeeper. Marc, Frank, and Jane all work through Liza to access the informal knowledge they need from the rest of the organization.

Pulsetakers are the most covert of the three roles. Their claim to fame is that they are indirectly connected to a great number of people in the organization. They tend to have their fingers on the pulse of the organization. Without much effort, they can filter through information to tell you what's really happening in the company. Fiona and Nina are pulsetakers.

When properly leveraged, hubs, gatekeepers, and pulsetakers can help an organization implement change faster, execute projects more effectively, and make better decisions. Taking the time to identify people in these key roles can make the difference between a successful and a challenged project, a finished and an incomplete change initiative, and a satisfied and a dissatisfied customer.

Important: About this Tool

This document provides an informal method for gathering network data. It is best suited for use on a 12 – 14 member team. It can help team members understand the silos, communication paths, knowledge sharing challenges, and collaboration patterns of the group. It is enough to have initial conversations and suggest actions to improve team interaction and knowledge sharing.

Because the data gathered through this method is informal and incomplete**, it cannot be used** for purposes such as succession planning, organizational change, mergers and acquisitions, or anything having to do with employee assignment, compensation, or performance review. If you wish to use network analysis to help with these issues or with groups larger than 14 members, please work with a professional and a software product that includes network algorithms. For referrals, contact Maya Townsend at maya@partneringresources.com.

Before You Begin

Think through how you're going to share and act on the data with the project team before you begin. Options include:

- Explaining that the entire process will be open. You'll gather the information, share it with everyone, and interpret it together.
- Explaining that the entire process will be anonymous and confidential. You will be the only one who will see the results. You will report on what you learned from the data (without mentioning names) and what you plan to do as a result of the data.

Remember that if someone has few connections, it does **not** mean that the person is anti-social, unliked, incompetent, etc. Be sure to stress this since people can misinterpret the results. Most often, people with few connections:

- Have recently joined the team,
- Work in another location or functional area,
- Have a job that doesn't require interaction, or
- Are quiet innovators busy on skunk works that they don't want to get shut down.

Team Network Mapping Process

Purpose

To develop a quick, informal map of a team's work, social, and expertise networks.

Process

1. Create three identical flipcharts with each team member's name written on them in a circle (see examples on next page). Label the flipcharts *Work, Social,* and *Expert.*
2. Create copies of the chart below. Ask each team member to use the chart to individually identify the ____ people (25% of the total team) that they interact with most frequently on an informal basis in order to complete their work.
3. Ask people to code each person on their list according to the purpose of the interaction: work, social, or expert (see "Why We Interact" key below). Contacts can have multiple codes. For example, Contact #1 may be approached for work transactions and for their expertise. On the other hand, Contact #2 may be approached for none of the three purposes used in this activity.
4. When finished, ask participants to draw their connections on the corresponding flipchart. Work contacts should go on the work flipchart, social contacts on the social flipchart, and expert contacts on the expert flipchart. Ask people to use arrows to show the direction of the connection.

My Informal Contacts	**Why We Interact** (mark with an X)		
	Work	**Social**	**Expert**
1.			
2.			
3.			
4.			
5.			
6.			

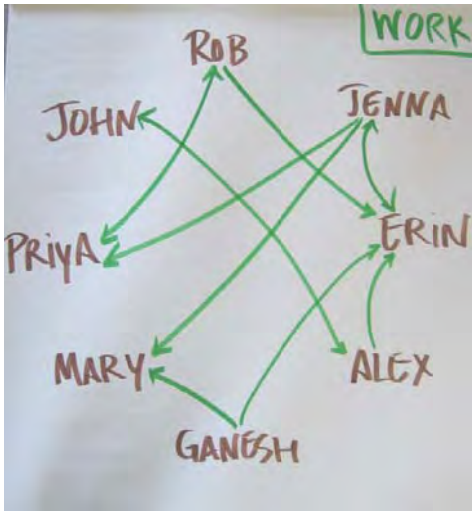
Key to "Why We Interact"

Work = Who you seek out in order to complete routine work transactions
Social = Who you seek out in order to find out what's happening in the organization or simply relax
Expert = Who you seek out in order to gain subject matter expertise

Exercise adapted with permission from Dr. Michael Ray, University of Arizona

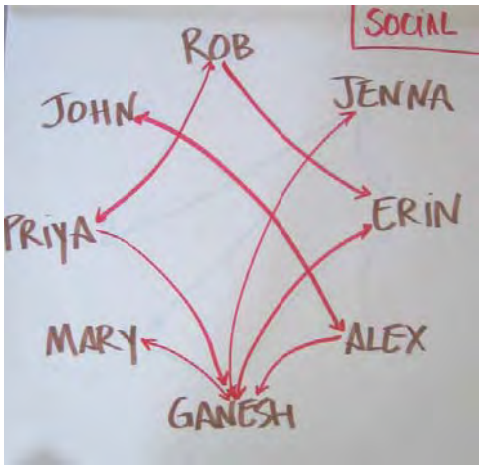
Examples of Team Network Maps

Here is an example of a completed set of team network maps. Note that all three charts include the same 8 team members whose names are written in the same order on each chart.



This **first map** shows work interactions. Some team members had fewer than three work contacts. That's fine. People can include any number of contacts—even zero—as long as the total number of contacts is less than 25% of the total group. There are a few interesting dynamics to note on this chart:

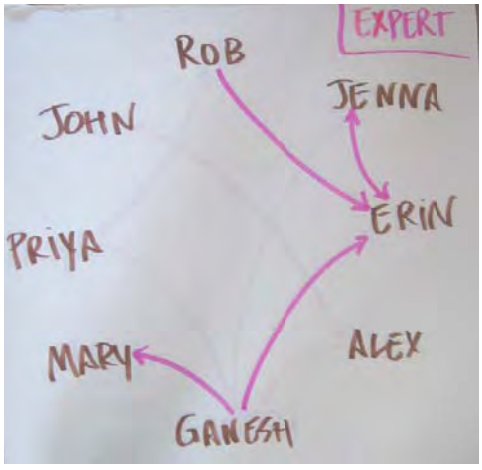
- John connects only with Alex. Is John new to the team? Does he have a specialized role that doesn't require interaction? Has the team not fully integrated him into its work?
- More people (4) connect with Erin than with any other team member. Is this natural given her role? Is she, for example, the project manager?



The **second map** shows social interactions. The social network represents social connections within the team and identifies who people seek out when they want to know what's going on. It serves as a shock absorber for stress and provides an outlet for people to express concern and diffuse tension.

This team's social network is about as dense as the work network: there are 13 social interactions compared to 12 work interactions. Again, there are interesting dynamics:

- John connects only with Alex again.
- Ganesh seems to be a social hub: five people go to him.



The **third map** shows expert interactions. In comparison to the previous two maps, this map is much sparser: there are only five interactions on the whole map.

- Why doesn't the team draw on each other's expertise more frequently? Is it due to the nature of the team? Geographic distance? Lack of knowledge about each other's skill sets?
- Erin again is a hub for activity. Would it be helpful for Erin to share her knowledge with others so she doesn't become a bottleneck on the team?

Analyzing Team Network Maps

After the team has completed charting interactions, take a step back and analyze what you see. Use the following questions to help with your analysis.

Overall Observations

- Density: How dense or sparse are the lines?
- Patterns: Are the connections skewed towards one side?
- Similarities: What similarities show up among the maps?
- Differences: What differences show up among the maps?

Individual Observations

- Who has many connections? In which network(s)?
- Who has few or no connections? In which network(s)?
- Who might be a hub? In which network(s)?
- Who might be a gatekeeper? In which network(s)?

Analysis

What do our maps tell us about…

- Who we need to integrate more effectively into the team?
- Who might be overworked and need relief?
- Who might be a bottleneck on our team and need assistance with critical path activities?
- How we work with differences such as geographical locations, functional area, expertise, and organizational tenure?
- How we can improve collaboration?
- How we can improve knowledge sharing?