Financial Services Case Study: Applying Network Analysis to Rapidly Build Effective Communities of Practice (CoP)
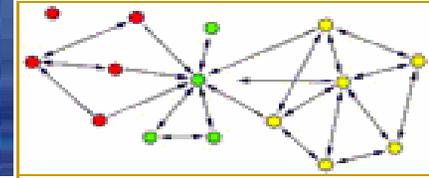
January 2006
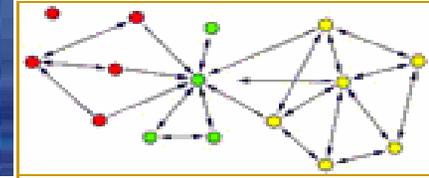
The NETWORK ROUNDTABLE *at the* UNIVERSITY OF VIRGINIA

Agenda

- Approach to Applying Organizational Network Analysis (ONA)

- Key Findings and Recommendations

- Critical Success Factors and Lessons Learned

- Appendix

  – How to Interpret a Network Diagram

The Network Analysis Project Ran for Seven Weeks and Resulted in Specific Recommendations

Plan
- create network survey
- define community members
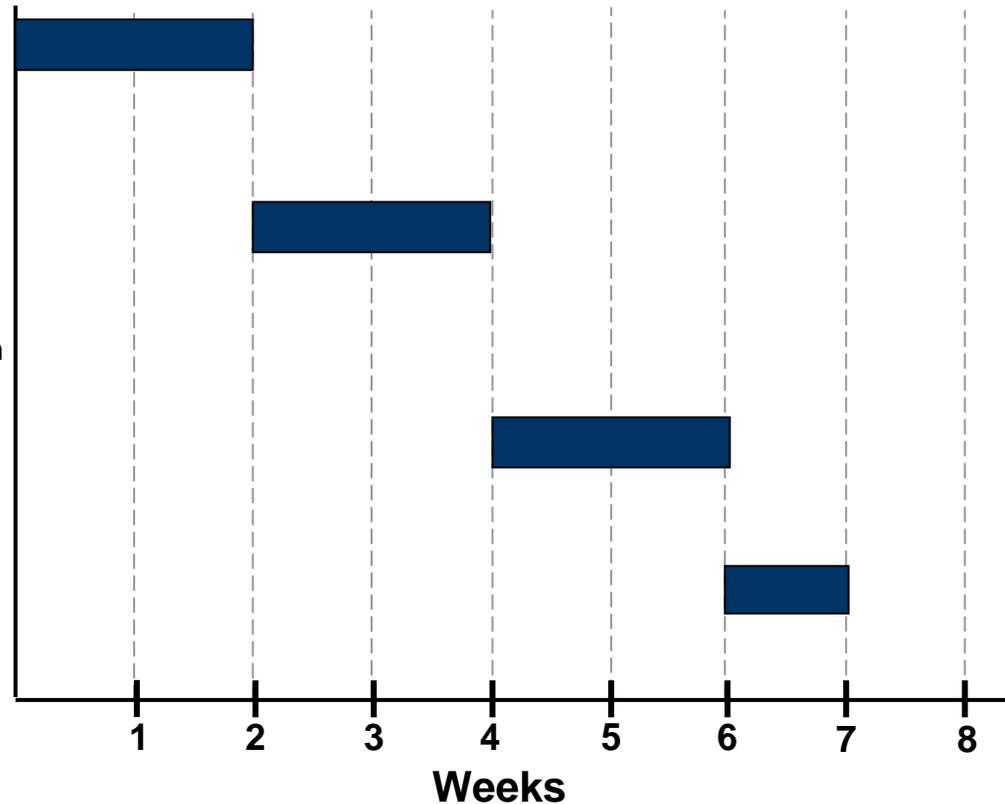- obtain senior sponsor

Run
- test diagnostic with small sub-group
- administer Web-based diagnostic
- send system-generated e-mails to obtain responses

Assess
- create recommendation report
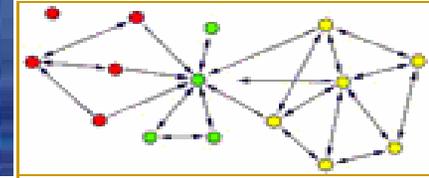- provide personalized Web sites

Apply
- develop and implement project plan
- take action on personal network results

Weeks (1–8)

In less than two months, network analysis provided important insights into the current state of selected communities and identified what actions would have the biggest impact.
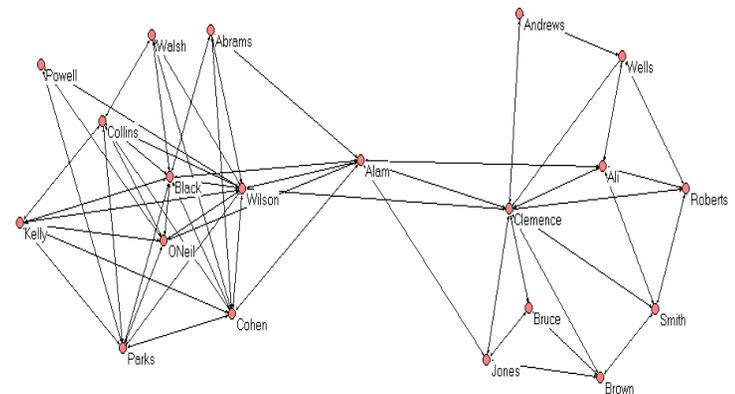
- **Network Analysis Helped to Build a Community**
  - Understand the current state
  - Establish a baseline of measurement
  - Produce and act on a handful of meaningful action items
  - Identify resources for launching a new community

Illustrative Network: Initial Analysis

- **Network Analysis Will Help to Track Progress and Target Future Efforts**
  - Plan to survey community members after nine months
  - Analyze impact of productivity interventions
  - Validate investment and expand scope as warranted

Illustrative Network: After Interventions
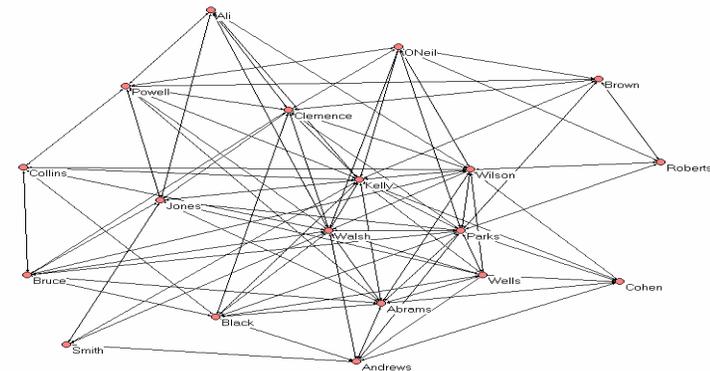
By taking a before and after snapshot of collaboration in the community, a leader can both improve effectiveness of their interventions as well as track progress over time.

This Company Began by Applying Network Analysis to Two Pilot Communities
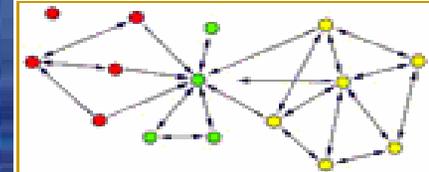

Community Pilot #1

Situation Overview:

- 100 potential members
- Single subject matter expert (SME)
- SME transitioning
- Desire to become less dependent on a single resource

Network Measures	Current State	Target
Density	5%	20%
Cohesion	3.1	2
Centrality	4	12

Community Pilot #2

Situation Overview:

- 600 potential members
- No defined leadership
- Critical competence with centralized methodologies
- Desire to connect employees, develop core competencies and replicate best practices

Network Measures	Current State	Target
Density	4.4%	9.4%
Cohesion	3.2	2
Centrality	6	15

This case will focus on the second pilot.

Network Measures Definitions

Density: Robustness of network. The number of connections that exist out of 100% possible in that network. More points connected often can mean quicker and more accurate information flow.

Cohesion (Distance): Ease with which a network can connect. Shows average distance for people to get to all other people. Shorter distances mean faster and more accurate transmission/ sharing.

Centrality (Degree): Identifies influential people (individual measure). Number of direct connections (ties) that individuals have with others in the group.

The Top Findings and Recommendations Pinpointed Specific Improvements
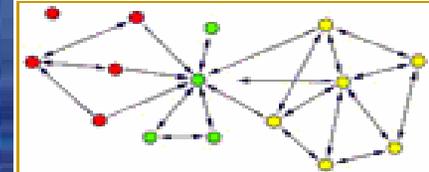
Findings

Connecting the right people within and across groups to create a tight-knit network is a critical success factor and can result in significant savings.

Improving awareness and advocacy of best practices will accelerate adoption of proven methods and spark innovation

Employees reported a desire to learn new, deficient competencies that were strategic needs for the company

Recommendations

- Connect brokers with peripheral members
- Identify individuals with ground-level credibility and peer respect to fill vacant community leadership positions
- Develop a core team made up of key community members (brokers)

- Interview top performers and document best practices in a common, accessible repository
- Review personal networks at an individual level and create an action plan to improve connectivity, which in turn should improve performance
- Interview members in other departments where there is significant collaboration and replicate best practices across departments
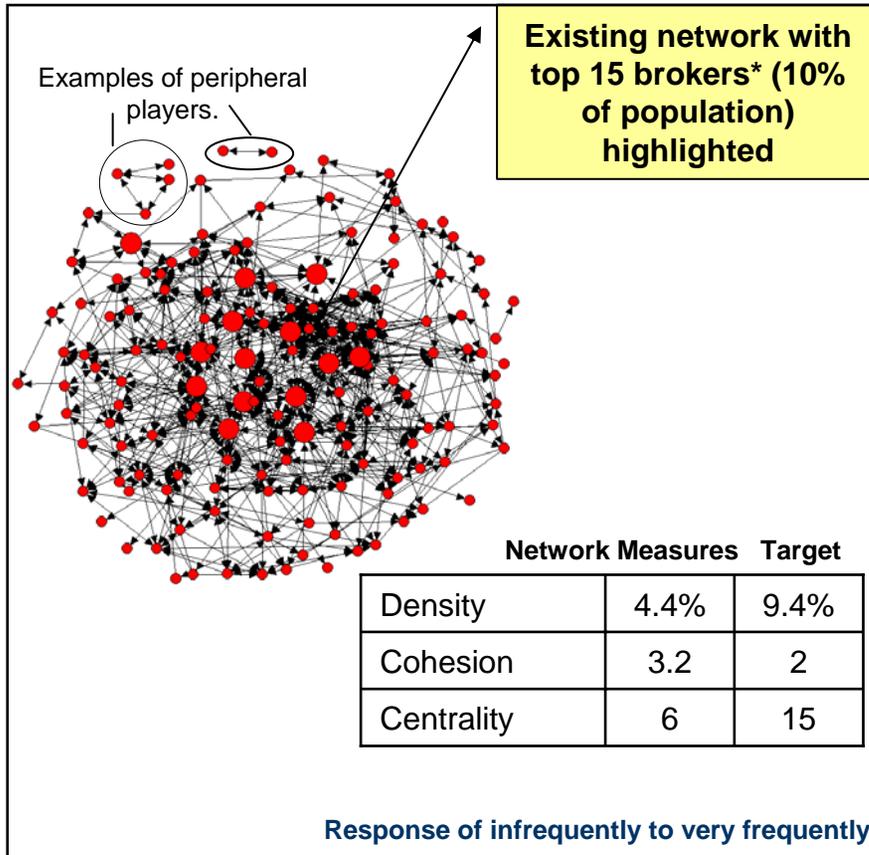
- Give experienced members in deficient areas opportunities to teach others
- Ensure CoP strategy includes educational activities (i.e., webinars, external speakers) focused on deficient competencies
- Leverage CoP website to post common issues and hold discussions regarding deficiencies

Brokers Are High-Leverage Points to Improve Collaboration Across Sub-groups
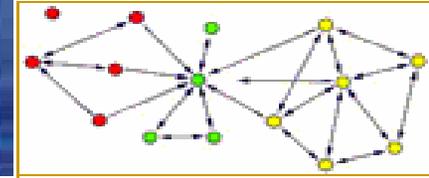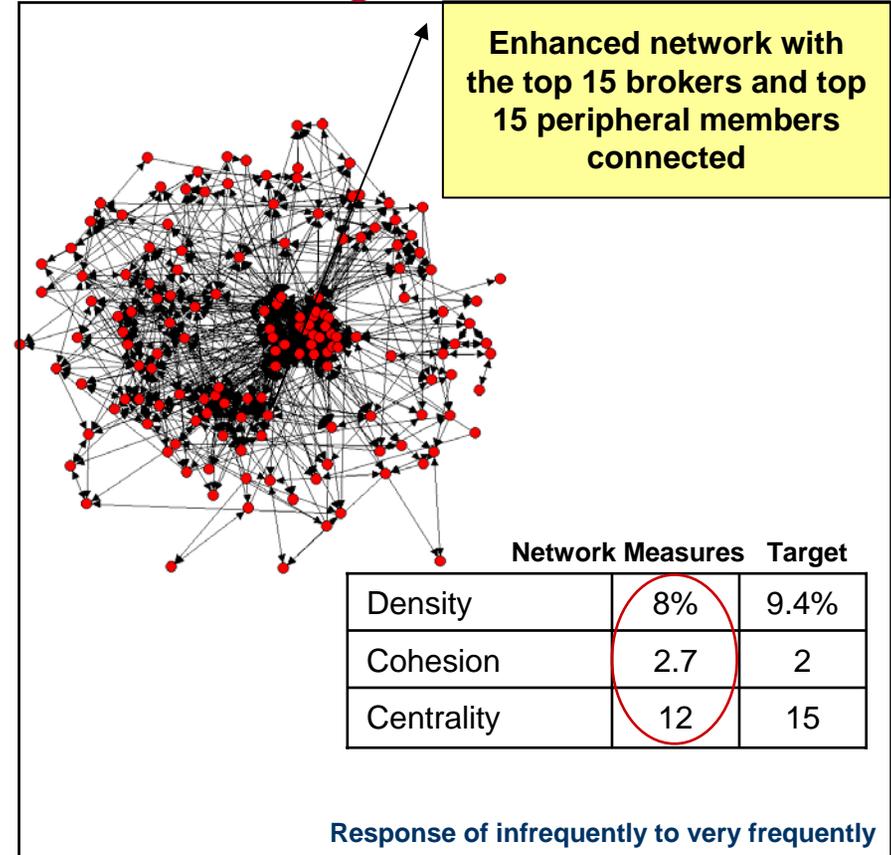

Using bi-weekly calls to connect key brokers and having them draw in one peripheral member each has a significant impact on information sharing effectiveness within the Community.

Current State

Examples of peripheral players.

Existing network with top 15 brokers* (10% of population) highlighted

Network Measures		Target
Density	4.4%	9.4%
Cohesion	3.2	2
Centrality	6	15

Response of infrequently to very frequently

Target End State

Enhanced network with the top 15 brokers and top 15 peripheral members connected

Network Measures		Target
Density	8%	9.4%
Cohesion	2.7	2
Centrality	12	15

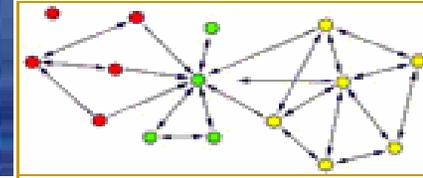*Response of infrequently to very frequently*

Definitions

Brokers: People who sit on the shortest path between several other individuals.

Peripheral Players: New employees, untapped expertise, people who are not connected.

By Improving Collaboration Within and Across Departments, Silos Will Disappear

Target collaboration within groups (on diagonal) is 15-40%.
- improve mentoring programs by connecting peripheral members (often less experienced) with brokers (experienced and well-connected members)
- provide a forum and expectation that *all* members can contribute (with a less formal, more democratic structure)

Information Providers

|	Group 1	Group 2	Group 3	Group 4	Group 5	Gruop 6	Group 7	Group 8
Group 1 (n=6)	17%	0%	0%	0%	0%	0%	0%	0%
Group 2 (n=7)	0%	10%	4%	0%	0%	0%	2%	2%
Group 3 (n=8)	0%	2%	23%	0%	1%	17%	1%	2%
Group 4 (n=4)	0%	0%	0%	0%	4%	0%	1%	1%
Group 5 (n=18)	0%	2%	3%	3%	10%	0%	1%	3%
Group 6 (n=3)	0%	0%	8%	0%	0%	33%	1%	2%
Group 7 (n=31)	0%	0%	3%	2%	1%	1%	7%	4%
Group 8 (n=76)	2%	1%	4%	2%	2%	1%	4%	9%

Information Seekers

Target collaboration across groups (off diagonal) is dependent on strategy; the goal is typically 10-30% in critical areas.
- share best practices across boundaries via a persistent online Community space
- bring external insights to the Community in order to generate new innovation

Chart Interpretation

Each cell reflects the percent of information seeking ties out of 100% that could exist if everyone were connected to everyone else at that juncture. Smaller groups typically have higher percentages. We see that in Group 1, 17% of the possible collaborative relationships existed whereas in Group 6, 33% of possible ties were there. The table is read from row to column when assessing who seeks info from whom.
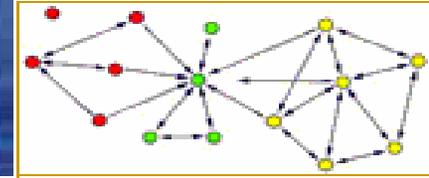
Social Network Analysis estimates time savings per month –
"Please provide an estimate below for the typical time saved per month as a result of information, advice or other resources received from each person."
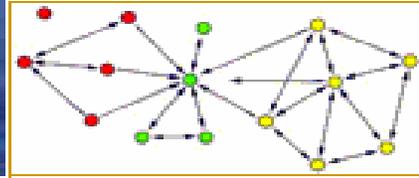
Converts time savings into $ value

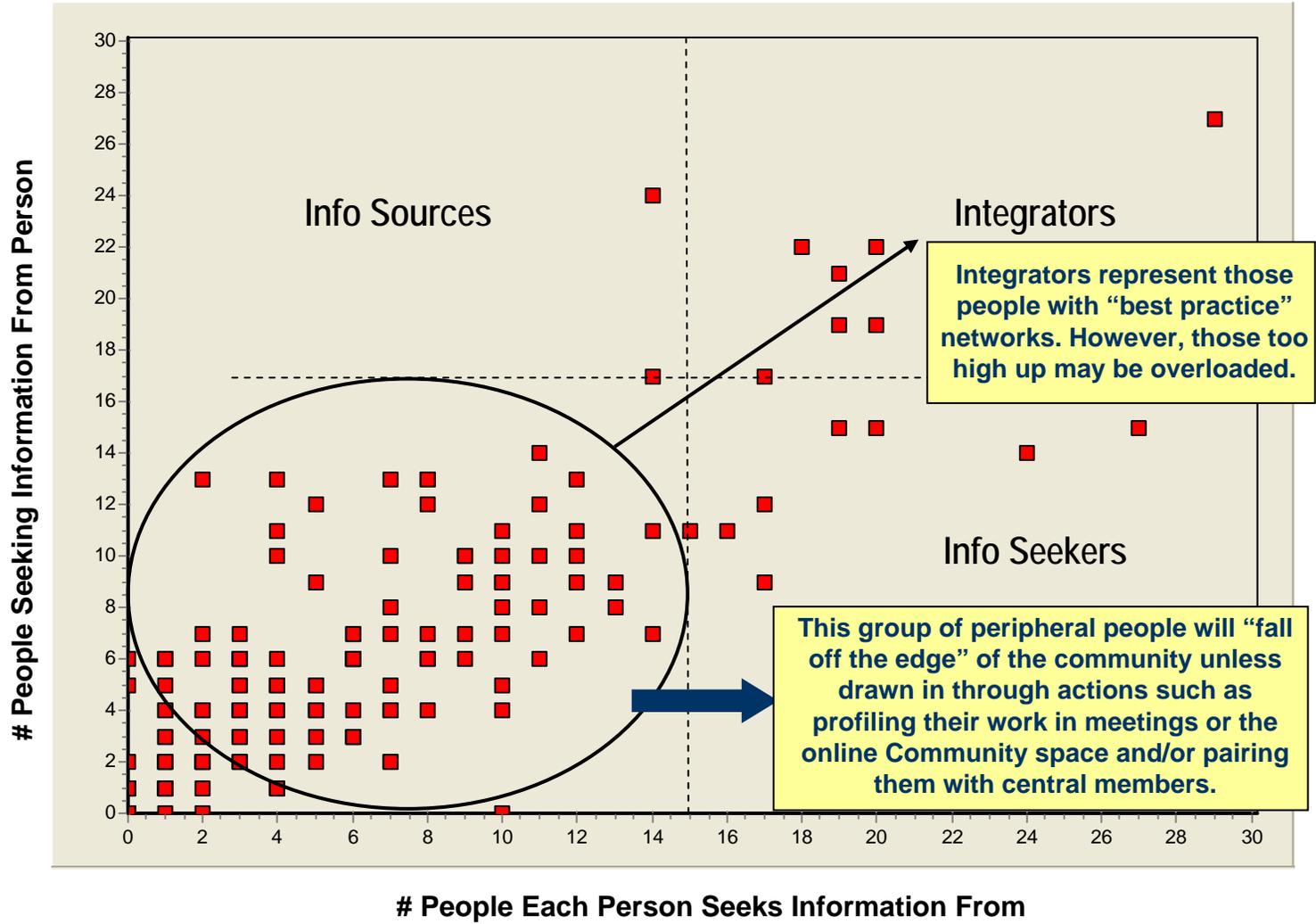Improving collaboration between departments holds the greatest potential for cost savings.

PM Community	Current Savings/Year	Potential Savings/Year
Within departments	$1,780,020	$1,920,124
Between departments	$810,005	$1,676,664
Total	**$2,590,250**	**$3,596,788**

Note: The hourly rate is the weighted average of respondents' personnel cost.

Engaging peripheral people (in the lower left quadrant) by building out their network appropriately, will optimize the skills and talents of the work force. Network analysis helps a community leader know who these people are.


 # People Each Person Seeks Information From

Info Sources

Integrators

Info Seekers

Integrators represent those people with "best practice" networks. However, those too high up may be overloaded.

This group of peripheral people will "fall off the edge" of the community unless drawn in through actions such as profiling their work in meetings or the online Community space and/or pairing them with central members.

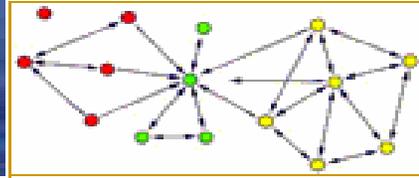**# People Seeking Information From Person**
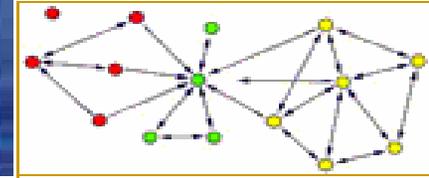
Each participant in the Network Analysis received a detailed 15-page profile, which allowed them to assess their own connectivity and ways to improve it, based on the dimensions that research has shown matter for high performance.
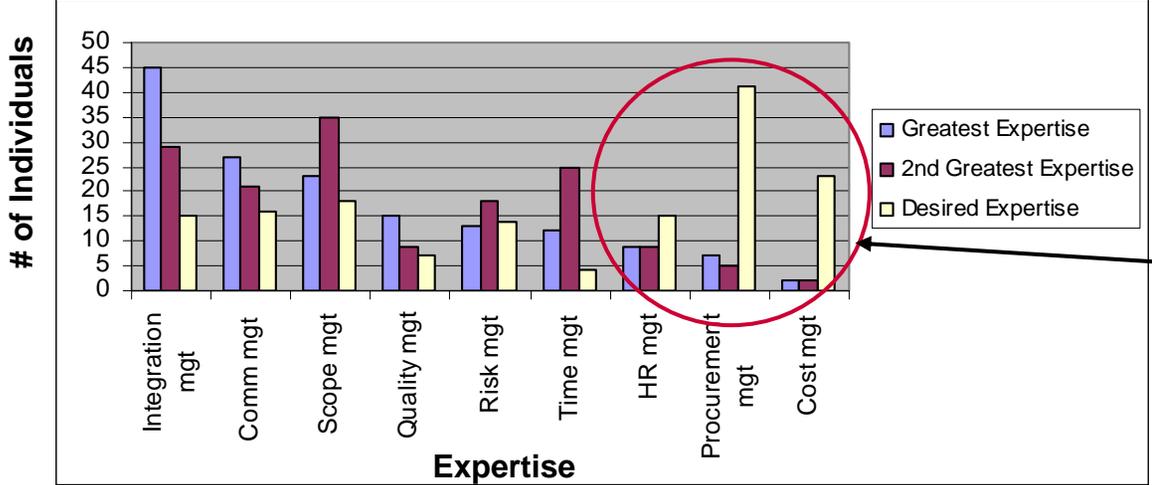
– Personal action plans are an important vehicle to improve leader and "go to" person effectiveness at the individual and team level.

– Broader actions taken community-wide can leverage these profiles to drive grass roots change that accumulates into substantial improvement in network effectiveness.

Enhancing Cross-Function Ties

Connecting with 2 Brokers

Building Ties Across Sites
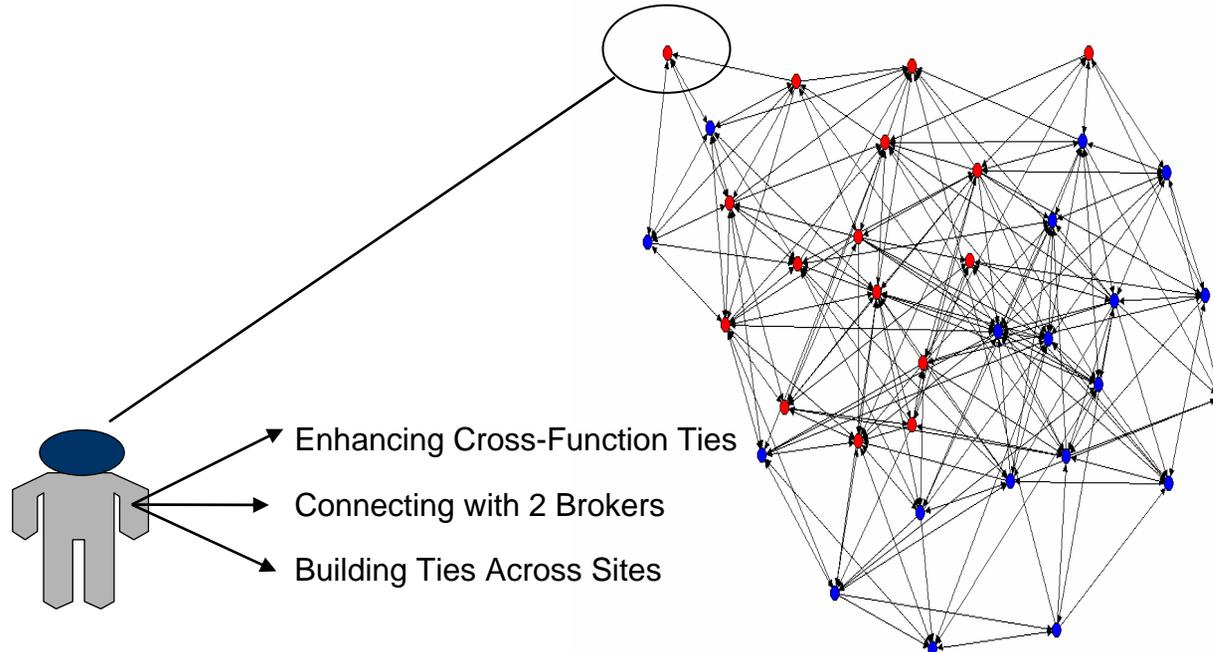
Expertise Assessments Combined with Individual Network Profiles Identified Growth Opportunities

Current and Desired Expertise

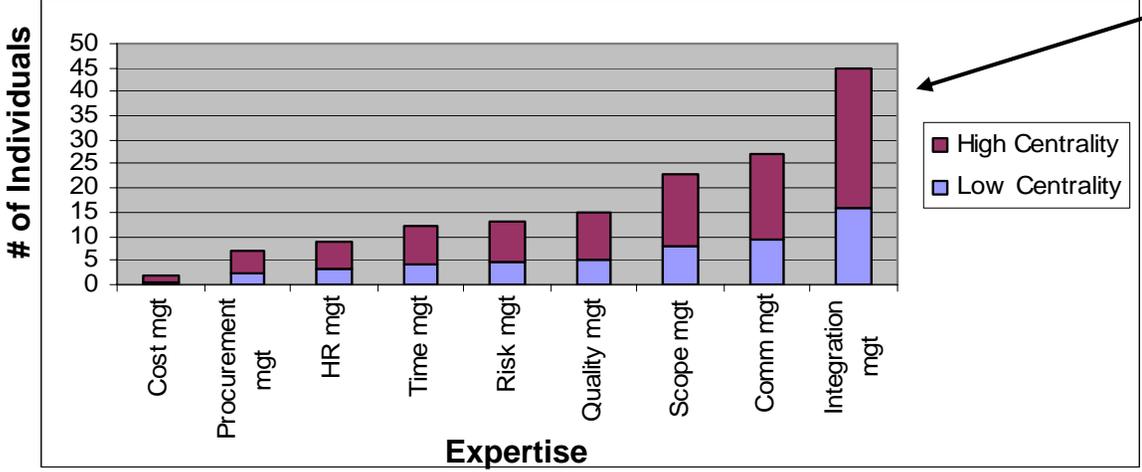**# of Individuals** (y-axis, 0–50)

Legend:
- ☐ Greatest Expertise
- ☐ 2nd Greatest Expertise
- ☐ Desired Expertise

Expertise (x-axis): Integration mgt, Comm mgt, Scope mgt, Quality mgt, Risk mgt, Time mgt, HR mgt, Procurement mgt, Cost mgt

Participants reported opportunities in HR, Procurement and Cost Management; key areas of strategic focus for this community.

Current Skill Distribution and Dominance

# of Individuals (y-axis, 0–50)

Legend:
- ☐ High Centrality
- ☐ Low Centrality

Expertise (x-axis): Cost mgt, Procurement mgt, HR mgt, Time mgt, Risk mgt, Quality mgt, Scope mgt, Comm mgt, Integration mgt

Network analysis identified the centrality of individuals who possessed specific expertise. Where expertise is limited, it becomes more important to tap into peripheral members.

In those cases where many peripheral people possess critical expertise, a major barrier to change and innovation is created, often resulting in an innovator's dilemma trap—where central voices, often with expertise good for past purposes, overshadow different perspectives.

Factors Critical for Successful Network Analysis Projects at This Financial Services Company
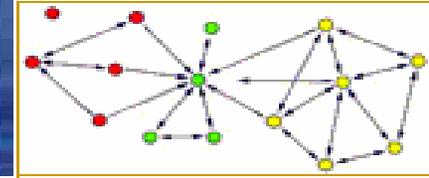
- **Early socialization with Executive Sponsor**

- **Collaboration with Community Core Team to understand unique insights desired and hypotheses to prove via survey questions**

- **Survey a broad cross-section of members from across the enterprise**

- **Heads up email to target respondents a few days before survey message with rationale, benefits and expected time commitment (15 min max); sending an actual calendar event for the target audience may help to squeeze this "discretionary" activity into full schedules**

- **Thank the respondents and share a handful of most powerful and actionable next steps with entire Community shortly after survey is analyzed**
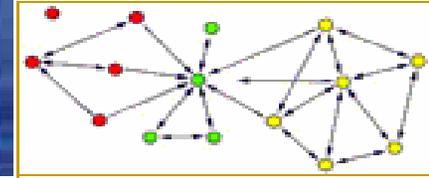
Key Stakeholder Comments

- "This is great. I know exactly how we can integrate these recommendations into our current plans."
- "Now that we know what has the biggest impact, we can solicit resources."
- "This assessment by our Community members of what they *want* to learn is exciting and powerful. We will tailor our training attention on these discipline areas."

Appendix

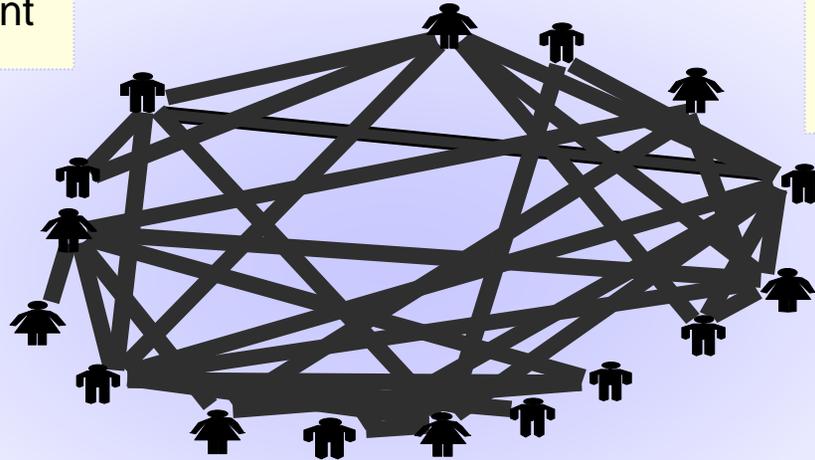## Key Reasons Why Organizational Networks Are Important

Where Work Happens
- Lack of boundaries
- Informal networks increasingly important

Where People Engage
- Join and commit to people
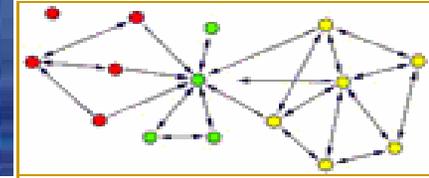- Trust accrues in networks of relations

Where Knowledge Lives
- Rely on people for information
- People can provide more than databases

BUT…
- Invisible
- Complements formal structure

How to Interpret a Network Diagram

- **Central People**
  - Are an important source of expertise
  - May become bottlenecks

- **Peripheral People**
  - Are underutilized resources
  - Feel isolated from the network
  - Have a higher likelihood of leaving

- **External Connectivity**
  - Provides balanced and appropriate sources of learning
  - Holds relevant influence with key stakeholders

- **Brokers**
  - Are critical connectors between diverse information sources and specific kinds of expertise. High leverage points.

- **Fragmentation Points**
  - Affect information flow across boundaries (e.g., cross functional, hierarchical, geographical, or expertise)
  - Provide targeted opportunities

- **Personal Connectivity**
  - Improves community leader effectiveness
  - Enables grass roots network development efforts