Measuring the Intangible

How the National Braille Press Evaluated Culture, Collaboration, Morale, Impact of Restructuring and More

There are many ways to evaluate culture, collaboration, employee morale, team performance, and the impact of restructuring. But it's difficult to measure all five at once without over-stressing the organization. The National Braille Press successfully used organization network analysis to evaluate its progress and identify simple but effective improvement actions.

The National Braille Press (www.nbp.org) is a Boston-based, nonprofit, braille publishing house. Founded in 1927, its mission is to promote the literacy of blind children. By printing over 15 million pages each year, NBP is a world leader in braille publishing.

After 31 years on the job, Bill Raeder decided to retire in 2007 as the Executive Director of NBP. He left a strong organization, but one that was used to his style, process, and preferences. His successor, Brian MacDonald, sought to update and professionalize the organization.

MacDonald discovered some surprises upon taking on his new position. One member of his leadership team, a long-term employee, has assumed responsibilities that exceeded her skill set. Beloved in the organization, she had stayed on despite several significant snafus.

Another surprise was the degree of insularity in the organization: people stuck to their functional areas and rarely collaborated with other functions. As a result, the organization failed to capitalize on several promising opportunities.

MacDonald took decisive and radical action. He encouraged the underperforming executive to leave the company. He lost a few solid employees who refused to stay after her dismissal. He restructured the organization, redefined departments, and instituted a team-based structure. In what was, perhaps, his most counter-cultural move, he promoted a low-profile director onto his leadership team.

The changes seemed to be working, but MacDonald didn't want any more surprises. He wanted an objective, reliable way to measure the impact of the changes he had instituted.

There are many ways to evaluate culture, collaboration, employee morale, team performance, and the impact of restructuring. It's difficult to measure all five at once without over-stressing the organization. MacDonald turned to organization network analysis.

A Simple Technique for Complex Measurement

Underneath the organization charts and process maps is a hidden web of relationships that people use to improve processes, solve problems, and complete work. All employees are connected through relationship networks. Network quality, shape, and strength affect how well organizations share knowledge, collaborate, learn, improve, and implement.

These relationships collectively function as an organizational circulatory system. When the circulatory system isn't healthy, companies lose opportunities and experience performance problems. By assessing the organization network, MacDonald would be able to gauge the health of NBP; measure culture, collaboration, morale, performance, and impact of restructuring; and see if his changes had been effective.

In addition, the organization network analysis (ONA) identifies three key positions—called *critical connectors*—discovered by Dr. Karen Stephenson as a result of over 30 years of research into the dynamics and behavior of organizational networks (see Stephenson, 1998). The critical connectors consist of:
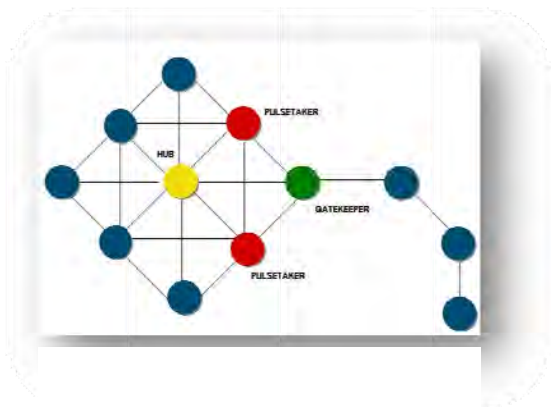
- *Hubs*: Highly and directly connected with many, Hubs communicate and disseminate knowledge through the organization.
- *Gatekeepers*: Links between people, departments, and customers, Gatekeepers act as information gateways and broker knowledge exchange between critical parts of the organization.
- *Pulsetakers*: People who have maximum influence using minimum number of direct contacts, Pulsetakers are often low profile, high performers who implicitly understand and influence the organization.

Together, critical connectors comprise the culture shapers of the organization. They disproportionately influence the organization: they touch most innovation, improvement, decision making, and strategy conversations in the organization. Yet, only 10% of people in networks fill these roles. By understanding the topology of NBP's network map—and location of the three critical connectors on it—MacDonald would be able to measure the organization's culture and intervene in order to maximize its effectiveness.

Culture, Communication, & Collaboration

Culture was MacDonald's first area of interest. He wanted to shape a collaborative, team-based culture in which people communicated freely across boundaries, shared information, and solved problems together.

To understand NBP's culture, we looked first at how work gets done. These exchanges, collectively called the "work network," represent the resting pulse of the organization and depict routine traffic within the organization: who goes to whom to exchange information in order to get a job done.

NBP's work network turned out exactly as MacDonald had hoped (Figure 2). The diagram clearly shows significant activity between departments and within departments.

By looking at this diagram, MacDonald had the answer to one question: people were working cross-functionally. However, a deeper look at the network maps revealed challenges and areas for improvement.

Figure 3 shows cross-functional interactions undertaken on a daily and weekly basis in order to solve problems, share expertise, and innovate. It excludes the routine exchanges shown on Figure 2.
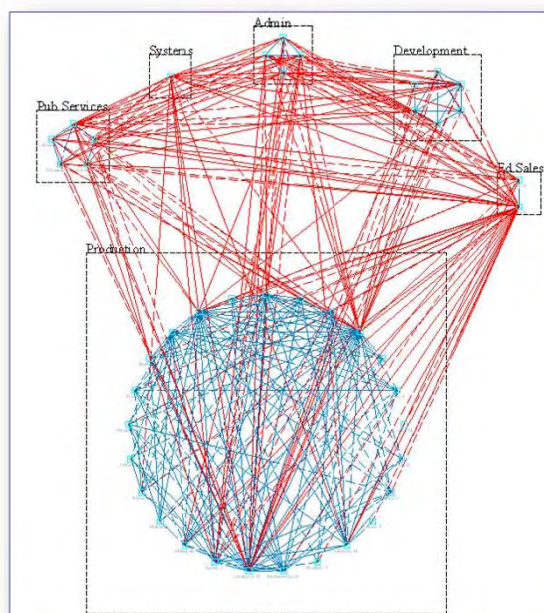

Figure 2: The work network.

The diagram shows each of the six departments in its own separate box. The points within each box represent individuals. For example, there is only one point within the Systems box (top left) since there is only one employee assigned to Systems. The Production box (bottom) includes over 20 points since there are 20+ employees working in that department. Blue lines represent exchanges that occur within a department. Red lines represent cross-functional exchanges.

Through this lens, NBP appears to interact less frequently across departmental lines. Development shows few ties to other departments. Upon further investigation, the reasons for this gap became clear: Development was more focused on the external world of funders and grant makers than the world

inside NBP. While it was Development's job to connect externally, some opportunities were missed. The stories that Development needed in order to raise support for the organization came from Education Sales and Publication Services—yet Development was disconnected from those areas.

Another gap had formed between Publication Services and Production. These two departments needed to work together in order to align products with customer needs. Yet, there were no innovation, expertise, or improvement exchanges between the two departments.
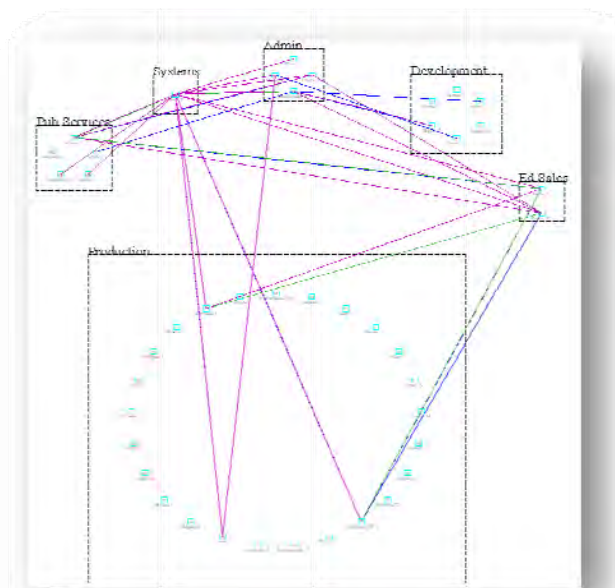

Figure 3: Cross-functional interactions performed to innovate, solve problems, and share expertise

A third red flag arose in relation to two critical connectors. Figure 4 shows all cross-functional exchanges as does Figure 3, but removes the two critical connectors: one in Education Sales, the other in Systems. Without these individuals, interactions between areas erode dramatically:

- Development exchanges information only with Administration—no other departments.
- Publication Services and Development connects only through the Executive Director.
- Publication Services and Production connects only through Education Sales.

In essence, without these two critical connectors, NBP loses the cross-functional glue that holds it together.

This picture was a wake-up call. Action was needed in order to protect and sustain organizational culture and collaboration. Both critical connectors needed to mentor others in order to extend their knowledge and share their cultural shaping activities. The Executive Director needed to make sure that the critical connectors were happy in their jobs and not planning to leave—at least not at the same time. Finally, departments needed cross-functional goals in order to force collaboration.
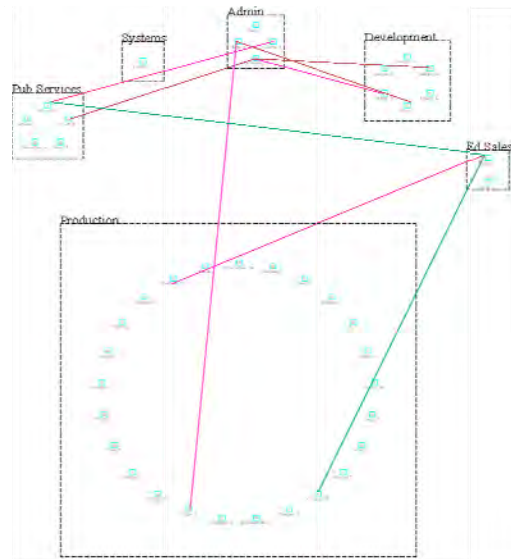

Figure 4: The same cross-functional exchange as in Figure 3 but without two critical connectors

Team Performance

MacDonald introduced cross-functional teams into the organization in order to encourage collaboration, communication, and better performance. The ONA looked at how well those cross-functional teams functioned.

The first team, the Business to Business team, is responsible for forging connections among NBP, customers, and partners. The ONA clearly showed that this team was still forming. It had not yet gelled.

The integrated map of Business to Business team interactions—displaying how the team worked, innovated, shared expertise, socialized, solved problems, and made decisions—showed a limited amount of traffic between team members (Figure 5). Each member interacted with only two other team members. Key interactions were missing: Elise and

Betty weren't linked, nor were David and Carl (not their real names). Clearly, work was needed to transform the B2B team into a functioning entity.
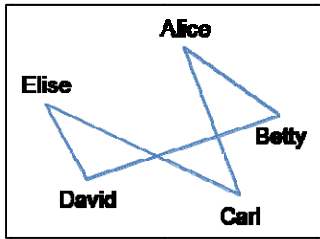
Figure 5: Business to Business team interactions related to routine work, social exchange, innovation, expertise, and improvement

The other group, the Center for Braille Innovation Team, was in better shape (Figure 6). The ONA showed robust interactions among team members, particularly in innovation and improvement—just the issues that team needed to tackle. There was one interesting dynamic: the team seemed to have formed a core group consisting of Alice, Allie, Amy, Carl, and David. Those individuals were responsible for the majority of informational, creative, and problem solving activities on the team. The other members seemed to serve more as bystanders than active participants.
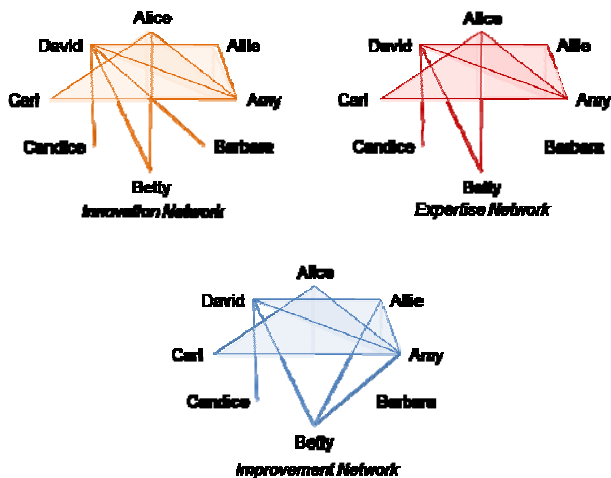

Figure 6: Center for Braille Innovation team interactions in relation to innovation, expertise, and improvement

The Leadership Team

One of MacDonald's most significant actions upon arriving at NBP was to replace one long-term member with one of her direct reports. He wanted to know how this change had impacted the leadership team.

Figure 7 shows interactions on the leadership team. The executive's departure did not seem to leave a lasting scar: all members were well connected, with one exception. That exception was Carl, the new member of the team. Often, new members show fewer connections because it takes time for them to integrate into the team. Was Carl's lack of connection due to his newness? Or was it indicative of skill gaps, low performance, or exclusion from the leadership team?
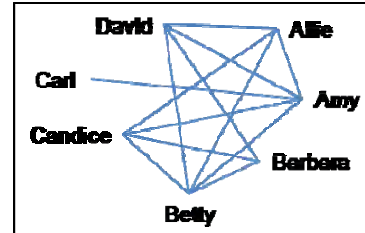

Figure 7: Leadership team interactions

To answer this question, we looked at Carl's placement across all of the organization's networks: work, social, innovation, expertise, improvement, and decision making. Carl emerged as a pulsetaker—one of the three critical connectors—in every network. In addition, he served as a gatekeeper in the work, improvement, and decision making networks. His role as a critical connector, specifically as a pulsetaker, signified that he is deeply trusted and respected by his colleagues in the organization.

Pulsetakers often serve as informal leaders, behind-the-scenes influencers, and high potentials. In this case, MacDonald saw Carl for what he was—a trusted, respected, informal leader—and did the right thing by promoting him. In time, Carl would be integrated into the leadership team.

Morale & the Impact of Restructuring

The ONA showed MacDonald much of what he needed to know:

- People were working cross-functionally. However, the organization was over-reliant on two individuals who did much to sustain collaboration.
- Teams were forming—as hoped—yet more work was needed in order to transform them into high functioning teams.

- His leadership team was collaborating and communicating. It had not been hurt by the executive's absence. Although the new member had not yet integrated into the executive team, all signs pointed to his success since he was highly trusted and respected in the organization.

In other words, the changes he had implemented were starting to work. But what about the broader impact of those changes? Had morale suffered?

To answer this question, we looked at the social network. This network represents social connections within the organization 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.

Strong social networks are not always positive; they can mean that people are doing more chatting than working. However, NBP's social network presented the opposite challenge. People weren't connecting frequently (Figure 8).
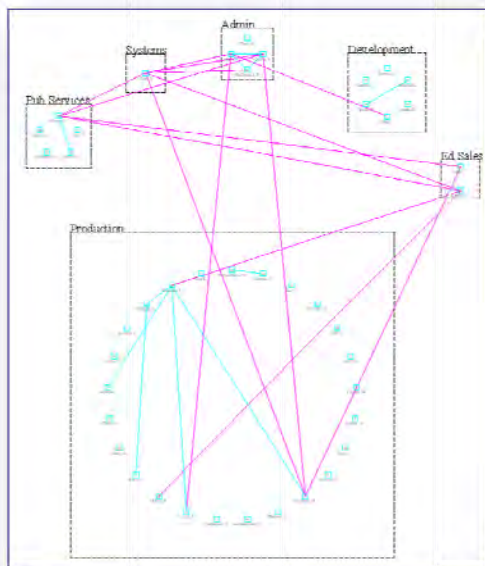

Figure 8: The social network

MacDonald interpreted this to mean that, after the tumult of the last few years, people had turned inward. The danger of this coping mechanism was that NBP didn't have much of a buffer against stress. Additionally, people without friendships at work are more likely to be dissatisfied and under productive

(Gallup, 2006). If the organization continued down this path, work at NBP ran the risk of becoming drudgery.

Luckily, this situation had not progressed far enough to be a problem and the solution was a happy one: sponsor events designed to help people relax, build ties, and remember that work can be fun.

In the End

It took just 20 minutes of staff time, 3 executive director meetings, and one executive team meeting to obtain the answers to MacDonald's questions. Using organization network analysis, he took the pulse of the organization; measured intangible issues such as culture, morale, and impact of restructuring; and identified simple yet potent next steps.

Organization Network Analysis Tools

Numerous tools are available for those wishing to conduct a robust, quantifiable, reliable organization network analysis. A directory of network analysis freeware exists on Wikipedia. Most of these tools require statistical expertise.

Several tools have been created specifically for businesses and nonprofit organizations. All figures in this document were created using the NetForm™ Connectors methodology and software. The Connectors tool contains proprietary algorithms developed over 30+ years of research and study with a variety of organizations. These algorithms identify hubs, gatekeepers, and pulsetakers. Connectors is available only to licensed, certified, professional consultants. For more information about NetForm™ and Connectors, see www.netform.com or www.partneringresources.com.

References
Harter, J.K., & Wagner, R. (2006). *12: The Elements of Great Managing.* Gallup Press.
Stephenson, K. (1998). "Networks." *CRC Handbook of Technology Management.*

About the Author
Maya Townsend, founder and principal consultant at Partnering Resources, builds aligned, focused organizations that achieve their goals more effectively. For more information, visit www.partneringresources.com.