

Intellectual Capitalism

TURNING KNOWLEDGE INTO PROFIT

Mapping the Invisible Workplace

Forget org charts. How work really gets done depends on the efficiency of your company's social network.

BY CAROL HILDEBRAND

EVERY COMPANY HAS THEM: PEOPLE WHO KNOW things. And most of us know who they are. It could be Harry in the office down the hall, who talks to just about everybody. Or maybe it's Georgia in distribution, who controls access to the shipping database. Organizations function courtesy of a social network of employees giving, hoarding, influencing or accumulating information. From this network sprout the innovations that will produce the next money-making product or service. Although no company can survive without such a network, some companies are beginning to realize that they can profit by analyzing these invisible communication links.

"When you think about it, very little of the working knowledge necessary to make products or deliver services lies in the formal, procedural policies of a company," says Karen Stephenson, professor of management at UCLA. "Real working knowledge lies in the relationships between employees."

Many companies confuse hierarchical structure with the social network, but Stephenson says that a hierarchical tool such as an org chart reflects procedural, not social knowledge, and that the two are completely different. In fact Stephenson, a corporate anthropologist with a PhD in anthropology, a master's in mathematical modeling in anthropology and a bachelor's in chemistry, has developed

algorithms that quantify the value of a social network. And her work isn't just ivory-tower academic noodlings. Stephenson spent 14 years in the corporate world prior to her present incarnation. It was there, she says, that she became fascinated by corporate social networks.

Most people mistakenly think of social networks as soft and fuzzy with no backbone, but Stephenson says they're actually rather rigid. "When I was a manager at NIOSH [the National Institute of Occupational Safety and Health] in Salt Lake City, I began to notice the same patterns in networks as in the chemical world," she says. "Social networks have a pattern, and the underlying structure is the same across all cultures. There are patterns of interaction that are the same whether you're Japanese, French or American." For example, she says that all networks contain people who play the roles of hubs, gatekeepers and pulse takers (see "Test Pattern," Page 20).

So what's the point of codifying a corporate social network? Maria C. Leo, first vice president of human resources for Merrill Lynch & Co. Inc. in New York City, says that such work helps her get at the nub of what needs changing in her company. "It captures the relationships in our organization and looks at how work is actually accomplished—who is communicating with whom on an organizational level, and whether the right relationship



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links exist," she says. "It's a diagnostic tool at a very high level."

Mike Duff, a vice president at Telecommunications Techniques Corp., a manufacturer of communications test products, systems and software in Germantown, Md., says he used the maps to help turn around a "slightly dysfunctional" marketing communications department. "If you have a marketing communications department, there's a great need to communicate among the different groups, like trade show people, technical publications, graphics and corporate communications. We did that on a selected basis. But there were groups, such as technical publications and direct marketing, that were disconnected from the rest of marketing." Duff instituted new communication procedures, and the performance of the department improved, he says.

It's also a far better way to manage change than by sending a new policy down the official corporate ladder. Smart managers tune in to the invisible social network to send messages; they know where the hot points are on the network, and who's connected to whom.

"If you're interested in incremental change, use the hierarchy," says Stephenson. "But if you want rapid, radical change, use the network."

Stephenson developed software that creates a visual and scientific "network

map" by analyzing thousands of data points gathered from surveys that she conducts at each client site. "Essentially, we ask people who they communicate with the most," she says. Stephenson then runs the numbers through mathematical models she created, coming up with a graphic representation of a corporate social network. The final product looks like a spiderweb with nodes connected by skeins of multicolored lines, some thicker than others (see "A Social Network," below). Some of the busier nodes pulse onscreen, highlighting network cruxes inhabited by key communicators. The map identifies the invisible influencers in each company—those people who may not have heavy-hitting job titles, but still carry institutional clout.

"This isn't for academics or consultants," says Stephenson, of her software called Mercator and marketed by NetForm, a Norwegian-based company she founded. "We built the software to give managers and business executives the ability to do this for themselves." Stephenson trains workers on how to use the software and helps them build an initial network map.

Managers can use maps of their social

TEST PATTERN

KAREN STEPHENSON, PROFESSOR OF MANAGEMENT at UCLA, says the following three roles recur consistently across social networks:

Hubs are people who are socially connected to the nth degree. With the highest number of what Stephenson calls "direct ties," they hold a lot of face-to-face conversations.

Gatekeepers function as human way stations on critical pathways between parts of an organization or between hubs. When information must funnel through one person on the way to another, you've got a gatekeeper. If this person likes you, he can act as a valuable information broker. If, however, the gatekeeper takes an aversion to you, he can really slow the process by withholding information.

Pulse takers have the most indirect ties. Stephenson says that they are "almost the opposite of hubs. They're unseen but all seeing." These people carry a lot of influence, but it tends to be subtle. Stephenson's favorite famous pulse taker: Machiavelli.

—C. Hildebrand

networks in a wide variety of ways, says Stephenson: to develop teams, increase communication, build customer supplier relationships and facilitate and accelerate mergers and acquisitions. "You can actually see tacit knowledge and anticipate where you're going to have innovation in your organization," she says. "It helps executives get an early start on what knowledge is growing and developing inside organizations."

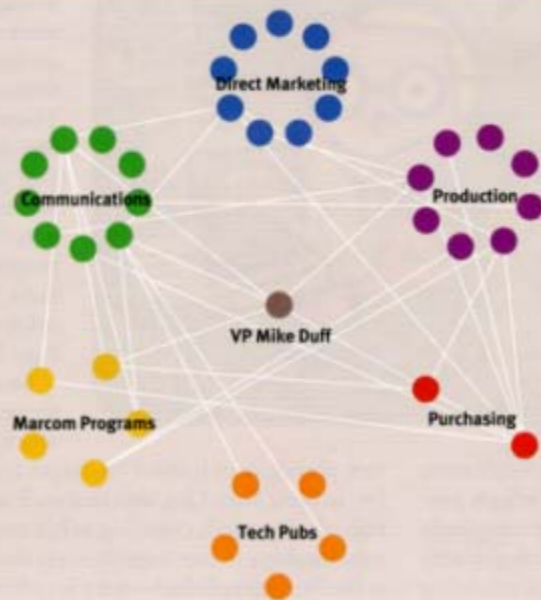
Leo, for example, says that her group used a network map to make sure that HR was functioning globally rather than in regional stovepipes. "The graphic showed that some of our groups needed to do a bit more reaching out across different parts of the globe," she says. "Once we saw the map and communicated these recommendations, they did reach out." She particularly likes the graphical format of the results. "A lot of times, a picture says a thousand words," she says. "Just the fact that it's a visualization makes it much more effective. It's like the difference between taking a wedding picture and writing a description."

Well, that's getting into another social network altogether, but we get the picture. **CIO**

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A Social Network

Analysis of the TTC marketing communications department's social network revealed that the technical publications and direct marketing groups needed to beef up their cross-departmental communication.



SOURCE: KAREN STEPHENSON