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At many companies, employees form groups to share knowledge and attack common problems. These communities of practice can be a powerful management tool. by Richard McDermott and Douglas Archibald

Harnessing Your Staff’s Informal Networks

If your smartest employees are getting together to solve problems and develop new ideas on their own, the best thing to do is to stay out of their way, right? Workers can easily share insights electronically, and they often don't want or appreciate executive oversight. Well, think again. Though in-house networks of experts—or “communities of practice”—were once entirely unofficial, today they are increasingly integrated into companies’ formal management structures. Independent, off-the-grid communities have proliferated in recent years, and many companies have counted on them to deliver creative solutions to challenges that bridge functional gaps. But in the past few years, outside forces—technological advances, globalization, increased demands on employees’ time—have begun to undermine communities’ success. Consider the rise and fall of an in-
formal group of experts at a large water-engineering company located just outside London. Starting in the early 1990s, they began meeting weekly to discuss strategies for designing new water-treatment facilities. The gatherings were so lively and informative that they actually drew crowds of onlookers. (The company can’t be named for reasons of confidentiality.)

The community initially thrived because it operated so informally. United by a common professional passion, participants would huddle around conference tables and compare data, trade insights, and argue over which designs would work best with local water systems. And the community achieved results: Participants found ways to significantly cut the time and cost involved in system design by increasing the pool of experience that they could draw upon, tapping insights from different disciplines, and recycling design ideas from other projects.

Too much attention from management, went the thinking, would crush the group’s collaborative nature. But the very informality of this community eventually rendered it obsolete. What happened to it was typical: The members gained access to more sophisticated design tools and to vast amounts of data via the internet. Increased global connectivity drew more people into the community and into individual projects. Soon the engineers were spending more time at their desks, gathering and organizing data, sorting through multiple versions of designs, and managing remote contacts. The community started to feel less intimate, and its members, less obligated to their peers. Swamped, the engineers found it difficult to justify time for voluntary meetings. Today the community in effect has dissolved—along with the hopes that it would continue generating high-impact ideas.

Our research has shown that many other communities failed for similar reasons. Nevertheless, communities of practice aren’t dead. Many are thriving—you’ll find them developing global processes, resolving troubled implementation, and guiding operational efforts. But they differ from their forebears in some important respects. Today they’re an actively managed part of the organization, with specific goals, explicit accountability, and clear executive oversight. To get experts to dedicate time to them, companies have to make sure that communities contribute meaningfully to the organization and operate efficiently.

We’ve observed this shift in our consulting work and in our research. This research was conducted with the Knowledge and Innovation Network at Warwick Business School and funded by the Warwick Innovative Manufacturing Research Centre and by Schlumberger, an oil-field services company. To examine the health and impact of communities, we did a quantitative study of 52 communities in 10 industries, and a qualitative assessment of more than 140 communities in a dozen organizations, consisting of interviews with support staff, leaders, community members, and senior management.

The communities at construction and engineering giant Fluor illustrate the extent of the change. Global communities have replaced the company’s distributed functional structure. While project teams remain the primary organizational unit, 44 discipline- and industry-focused communities, with 24,000 active members, support the teams. The communities provide all functional services—creating guidelines for work practices and procedures; publishing technical documents; and offering career development, access to expert advice, and help with technical questions. They are the first and best source for technical knowledge at Fluor.

Here’s one example of how this works: Not long ago, a Fluor nuclear-cleanup project team had to install a soil barrier over a drainage field once used to
Informal employee networks, or communities of practice, are an inexpensive and efficient way for experts to share knowledge and ideas. But communities work best if they have clear accountability and management oversight.

Effective communities tackle real problems for senior management. At Pfizer, for instance, communities are responsible for helping developers make tough calls on drug-safety issues.

Communities are like teams but focus on the long term. Pfizer’s safety communities are assigned organization-wide goals—such as ensuring that safety research uses the latest science—which project teams, focused on specific deliverables, could never meet.

Technology makes global collaboration possible, but successful communities also depend on the human systems—focus, goals, and management attention—that integrate them into the organization.

Dispose of radioactive wastewater. But environmental regulators mandated that Fluor first locate and seal a 30-year-old well, now covered over, to prevent contamination of the groundwater table. Poor historical data made it impossible to tell if the well really existed, and ground-penetrating radar also failed to discover it. Simply removing the contaminated soil to find the well would have been costly and risky for workers.

When the team posted a request to Fluor’s knowledge communities, one of the experts suggested using an alternative technology from a different industry. The team tried it and found the well. In fact, within two months, Fluor went on to use the same method to locate—or prove the nonexistence of—more than 100 wells and suspected wells. Without the community’s help, the project teams may have had to employ expensive, hazardous, and possibly ineffective methods. Any engineer can consult his colleagues, but Fluor’s communities offer its engineers a worldwide network of expertise and connections no one person could build or maintain.

**Setting Up Communities Strategically**

Unlike the independent and self-organizing bodies we saw years ago, today’s communities require real structure. Though we once envisioned few rules, we have since identified four principles that govern the design and integration of effective communities.

**Focus on issues important to the organization.** Sustainable communities tackle real problems that have been defined by senior management. At pharmaceutical firm Pfizer, one such issue is drug safety. The company has about 200 active drug development projects, all in different stages, in different countries, focusing on different disease areas, and using different processes. To advise teams on safety, two types of communities work across these projects—councils and networks. About 20% of Pfizer’s safety staff are involved in one or the other.

The nine safety councils focus on major organs of the body, such as the liver or the heart, or on key issues such as pediatric safety. On average, each has a dozen members, representing individual areas of expertise, with deep knowledge of toxicology, clinical development, chemistry, and disease categories. Councils are responsible for helping development project teams make difficult judgment calls on potential safety issues. Their members can be volunteers or appointed by management. They are, as Tim Anderson, Pfizer’s head of Drug Safety R&D, told us, “the most elevated form of advice-giving body on safety.” Membership in a council is a major recognition of expertise.

The dozen or so networks have voluntary, open membership and focus on disciplines or practices, such as lab functions or techniques; or on emerging technologies, such as nanotechnology. When the demand for advice rises high enough, a network can be elevated to council status.

Because they cross the entire development organization, safety councils and networks can take
Communities of practice are different from teams, though less so than we originally thought. Like successful teams, successful communities have goals, deliverables, assigned leadership, accountability for results, and metrics. But they are distinct from teams in four ways:

**How Communities Differ from Teams**

**1. Communities of practice communicate to potential safety issues—comparing data, tests, and results on similar compounds being developed in different therapeutic areas.** Sometimes they use tests and data from one team to support decisions by another, saving months of development time. The Kidney Safety Council, for instance, suggested that new biomarker tests could help assess whether a recent safety finding in an animal model had relevance for humans, which allowed one project to move to initial clinical trials much more quickly. Because the clock on patents starts at the beginning of development, shorter development time has a significant impact on product life span and business results.

**2. In the nonprofit world, the United Nations has established a set of 12 communities that address serious social and economic problems in India. Solution Exchange is composed of people from governmental and development agencies and nongovernmental organizations (NGOs). Addressing issues like nutrition, education, and HIV/AIDS prevention, these practitioner communities now comprise 3,000 to 4,000 members each. They enable grassroots workers to share what they’ve learned about implementing programs with government agencies, policy makers, and other program implementers. The members’ practical insights are increasingly influencing policy design and helping create more effective programs.**

“We reach more people through Solution Exchange than any other program because it cuts across institutional barriers and allows people to connect regardless of source of funding, organization, or location,” notes Maxine Olson, the former resident coordinator of the UN India team.

**3. The communities also function like a research service, collecting and distilling timely suggestions for solutions to important problems.** In one instance, members of the Food and Nutrition Security Community helped a midday meal program in the nation’s schools by working with local growers to supply a steady stream of vegetables. In the rural south, one NGO created school kitchen gardens, where children were trained to grow vegetables on their own. The community spread these successful ideas to practitioners throughout the country. Since the typical Indian diet provides only 10% of the minimum required vitamins and minerals, the additional vegetables in school lunches led to real improvements in children’s health.

**4. Establish community goals and deliverables.** Rather than inhibiting the exchange of ideas and information, formal goals and deliverables energize communities. They provide a focus—a reason to meet and participate. More important, they establish the contribution of communities to the organization.

At ConocoPhillips, communities report to functional teams, which are responsible for stewarding improvements in specific areas, such as oil and gas production. The functional teams, typically staffed by eight to 10 senior managers, have aggressive, measurable goals, like reducing the number of unrecovered barrels of oil. Each community owns part of the overall goal and tracks its progress toward achieving it. For example, when the company sought to improve the performance of its well operations globally, the functional team formed a well-optimization community, which then figured out how to reduce unplanned losses related to equipment impairment by 10% a year.

Explicit goals make communities operate more like teams on a day-to-day level, but community goals generally differ from team goals in that they’re...
tied to long-term needs. Pfizer’s safety councils assume organization-wide goals, which the project teams, with their focus on specific deliverables, could never meet. Pfizer’s kidney council goals include developing a high-level, long-term strategy for research related to kidney toxicity; finding ways to share resources among kidney research projects; and evaluating external opportunities in kidney research, like strategic alliances.

**Provide real governance.** To be well integrated into the organization, communities, like teams, need strong, formal relationships with the organization’s top leadership.

Companies often identify a senior manager to sponsor each community. This can turn out to be a dismal form of governance if those tapped for the role don’t understand the purpose and value of the community and don’t have the bandwidth to support its leaders. But if senior managers guide communities in a way that matches their long-term perspective, they can be very effective.

Pfizer’s communities are sponsored by two senior managers, the heads of Drug Safety R&D and Safety and Risk Management, the two larger organizations the safety councils span. Both executives are highly engaged and meet semiannually with the community leaders to review goals, provide feedback, and understand the communities’ impact and needs. For example, when one council proposed developing spreadsheets to mine 10 years of patient data that might reveal patterns of biomarker responses in clinical subpopulations, the sponsors suggested a more rigorous approach: creating an interactive relational database. The sponsors also ensured that the councils had the operational resources they needed, by providing them with two project managers who would help schedule meetings, track action items, maintain a website, and develop communications materials and training programs.

**Set high management expectations.** However intangible, management’s expectations have a strong influence on communities, just as they do on teams. Senior managers’ sponsorship is useless if they’re not genuinely engaged with the communities. In India, where each Solution Exchange community is sponsored by a local UN agency office, participation dropped when engaged agency heads were replaced by less engaged ones. Communities continued to thrive only when new agency heads were committed to them.

In Schlumberger, an oil-field services provider with 77,000 employees in 80 countries, each community has a management sponsor. Most sponsors are highly engaged with their community leaders.
and activities. The sponsor of a geosciences community, for instance, set six challenges for it based on the division’s business goals. One was to publish a series of articles about Schlumberger’s research in outside journals, focusing on topics that hadn’t been adequately covered in the literature—a major undertaking for the community. At Fluor, management expects communities to be the technical resource for the organization and create its standards and procedures. In the words of John McQuary, vice president of knowledge management, “The community leader is the highest technical authority in the company.”

Maximizing Communities’ Impact

Traditionally, organizations paid little attention to the operations of communities because they saw participation in them as a marginal activity, intended to benefit the members and not necessarily the company. But our research reveals that companies can increase the operational effectiveness of communities in four ways.

Set aside real time for community participation. Community leaders’ biggest complaint is that they don’t have enough time to execute their duties. When community leadership is a “spare time” activity, it can easily be squeezed out by more pressing priorities. Many companies have now made community leadership a formal component of job descriptions and performance appraisals. In our research we found that community leaders spend one half-day to one day a week on community management, or about 17% of their time on average. In a few organizations, community leadership is a full-time job. The UN’s Solution Exchange communities each have a full-time facilitator and research associate.

Some companies link discretionary bonuses to community contributions; others make community leadership a necessary step toward promotion. At Schlumberger, part-time community leadership is one of employees’ job objectives, reviewed quarterly with their managers.

Train community leaders in their role. Leading a community is different from leading a team. Communities, our research shows, provide greater value when companies systematically train their leaders. In Schlumberger’s communities, leaders are elected by the members annually. New leaders take a one-day course covering the aspects of communities that are different from teams—such as understanding how to find pockets of knowledge and expertise, how to engage volunteers in activities, how to grow membership, how to work with members external to the company, and how to influence operating groups when you don’t have direct authority.

ConocoPhillips requires all new community leaders to attend a boot camp that outlines what management expects from them.

Hold face-to-face events. A decade ago many organizations thought communities were a free way to develop knowledge. All the staff had to do was participate in an occasional meeting. But today most communities of practice include employees in remote locations. While they typically use collaborative software to link remote staff, the most effective communities also hold face-to-face meetings, which usually focus on specific goals. Face-to-face contact fosters the trust and rapport members need to ask for help, admit mistakes, and learn from one another.

Schlumberger enlivens its annual community meetings with competitions for the best examples of how the company’s tools improved a customer’s performance. Judges are drawn from the community’s field, and the criteria for winning are clearly known: technical depth, business relevance, innovativeness of approach, and overall impression. Winners of local competitions participate in regional competitions, and the winners of the regionals com-
pete in a global competition, for which they also write a paper. Last year 36 community representatives presented ideas at this small global event of about 100 people. The winning presenters received a monetary prize and an award from the CEO and chief technology officer.

**Use simple IT tools.** Most communities don’t need complex tools. Typically they use only a few functions, such as discussion forums, document libraries, expertise locators, on-demand teleconferencing, and online meeting spaces where members can edit documents as they discuss them. We found that simplicity, ease of use, and familiarity are far more important than functional sophistication.

**WHEN COMMUNITIES** of practice first began to appear, we hailed them as a dirt-cheap way to distribute knowledge and share best practices. We thought they would be relatively self-organizing and self-sustaining, flying below the radar of organizational hierarchy. We thought they would flourish with little executive oversight—a notion that seemed to work well at the time. But as life and business have become more complex, we began to see that to make a difference over the long term, communities needed far more structure and oversight.

Despite this, communities remain more efficient and cheaper than other organizational resources and demand less oversight. In times when budgets have shrunk and managers are overwhelmed just dealing with the downturn, communities can be a valuable resource for coordinating work across organizational boundaries, whether across geography, as at Schlumberger and Fluor; across operating groups, as with Pfizer and ConocoPhillips; or down the value stream as at the UN in India. But communities are not as informal as was once thought, nor are they free. Though IT systems make global collaboration possible, successful communities need more. They need the human systems—focus, goals, and management attention—that integrate them into the organization. And they need to operate efficiently enough to respect experts’ scarce time.

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“*We’re like one big family here. That’s why I’m giving you an allowance instead of a salary.*”

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