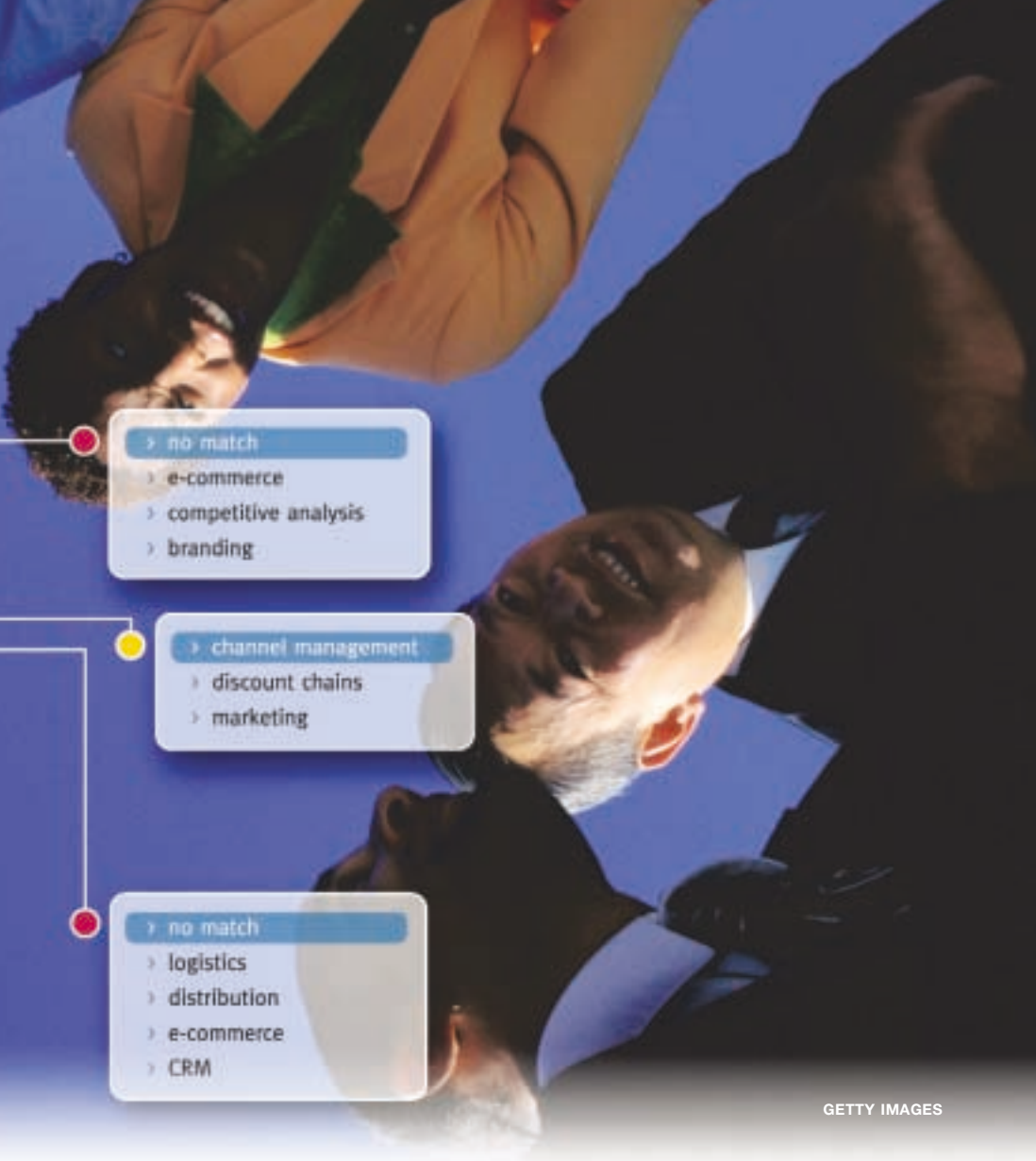


Do you know who your **experts** are?

Michael Idinopulos and Lee Kempler

Companies need a new approach to finding their elusive experts.

Expertise can be surprisingly difficult to find, even in institutions that have spent millions to attract and retain world-class experts. Take the experience of one manager at a biotechnology company.



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“Early in the project, it needed someone with deep technical knowledge of a particular protein. We spent weeks looking for an expert—calling HR, asking around the office, scanning personnel records. Finally, we concluded the expert didn’t exist. Three days later, I’m in an elevator complaining about this to a colleague, when the woman next to me turns and says, ‘I wrote my doctoral thesis on that protein. What do you need to know?’”

Such inefficiency and reliance on chance would normally be unthinkable for corporate resources. Project managers don’t find cash lying around in elevators. Store managers don’t idly speculate on the whereabouts of their inventory. IT managers don’t spend weeks rummaging through offices for spare computer terminals. Companies, after all, follow well-established processes to connect valuable resources (cash, inventory, equipment) with the people who need them.

The same can’t always be said of expertise. In some instances a formal process hasn’t been necessary. For companies with small, simple organizational

structures, informal social networks have been reasonably effective at putting experts in touch with those who are in need of their services. “Around here, people know one another” is a common refrain. “If I need help, I know whom to call.”

But the days of knowing whom to call may be over. Mergers, growth, globalization, and employee turnover have diminished the ability of informal social networks to ferret out experts. As a result, many companies are no longer willing to let serendipity dictate how their experts interact. A growing number of companies, including BP and IBM—afraid that their productivity may fall, their time to market slow, or their competitive position erode—have adopted more systematic approaches to both finding and leveraging expertise.

Unfortunately, there has never been a good way to get the job done. Until recently, companies had two primary ways of capturing their expertise: docu-

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ment repositories and expertise databases. Neither can help seekers of expertise very much. Written documents reflect only a fraction of what an expert knows, while expertise databases suffer from inadequate classification schemes and tend to be out-of-date almost from

the moment of inception. (One large high-tech company spent tens of millions of dollars developing a state-of-the-art expertise portal, which it rarely uses and even more rarely updates.)

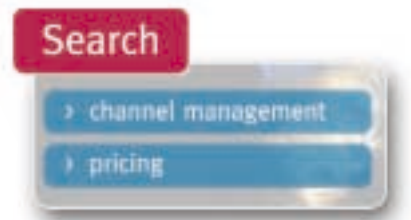
A new approach, however, can change all this. The typical company already tracks information about the experience of its employees—what projects they are working on, what papers they have written, what they studied in school. It can therefore use search technologies to mine this information and find expertise in a way that it simply can’t do using document repositories or static directories. And depending on the state of a company’s data systems, the solution can be surprisingly affordable and easy to implement.

Context is king

Expertise is difficult to find largely because it can be difficult to pin down. Suppose a colleague asked you to describe your expertise. How would you respond? If the question came from a stranger in a distant corner of your company, you might give a general answer such as “market research” or “clinical-trial design.” But if the question came from the next desk, you would probably be more specific, giving your area of specialization within

market research or mentioning the clinical trials you managed. To a colleague in another country you might give a geographic answer, while you would tell a local about your product expertise. And so it goes.

That is because the answer to “What expertise do you have?” depends on who is asking and why. The question, by itself, is too abstract to invite a meaningful reply. People looking for expertise are doing so within the context of specific problems. Cash, inventory, and equipment are always the same, but expertise is defined by its context. That makes it an unusually difficult asset to identify.



Moreover, in most cases, finding an expert is less about identifying the world’s leading authority on a recognized topic and more about reaching the person who happens to fit the demands of a particular situation, as our biotech case shows. Sometimes, the expertise wanted can be very narrow—the call might be for someone who has launched a product in a particular geography or worked for a potential customer. This type of expertise can be the most valuable of all. But it is often the most elusive because those who have it might not think of themselves as experts.

The problem of context befuddles most of the expertise directories that are in use today. Such directories contain short, context-free summaries of a person’s areas of expertise. These summaries have their benefits—especially in small companies that have relatively few experts, so informal social networks can complement the directories. But the abstracts generally are not up to the challenge of identifying the large amount of highly specialized expertise that is available in large companies with tens of thousands of employees.

So companies must characterize expertise in ways that are sensitive to different contexts. How can these companies do so?

Actions speak louder than words

What matters in seeking expertise is not what people say they have done but what their achievements say about them. Consider a related challenge: hiring. Here too a company, constrained by certain organizational needs, is operating within a particular context. Companies generally evaluate candidates first by looking at what they have done, screening résumés with an eye to the specific needs of the job. Those who pass the first screening advance to more subjective types of evaluations, such as interviews and reference

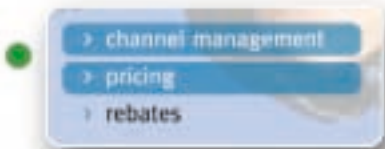
checks, which give the company a more complete understanding of whether and how a candidate's experience satisfies the contextual requirements.

All other things (basic qualifications, salary requirements, fit with the company's culture) being equal, the person with experience relevant to the specific context of the job is more likely to get hired. A packaged-goods company about to introduce a salty snack to a new market might see two candidates with general product-management experience, but the one who had just successfully launched a potato chip in that same region would attract the real interest.

Internal expertise searches can work in much the same way. Seekers of expertise want to know what qualifies a person for internal "hire" to an expert "position," so they examine a candidate's track record: background, work experience, and references. Armed with this information, expertise searches tend to be highly effective. In an external search, descriptions on résumés are subject to interpretation and spin by the candidates, but descriptions in internal databases can usually be assessed with considerable precision. Companies have a set of norms—shared meanings, processes, and roles—that allow considerably more, and more reliable, information to be extracted from a given data point. On a résumé, for instance, the statement "led a project team" raises questions: how big a project, for how long, with what success? But a comparable description in a company record will be imbued with a higher level of contextual knowledge, since the details and outcomes of the project, and even the role played by its team leader, are better understood.

Although this type of information seldom appears in expertise directories, it can often be found distributed across a company in various databases, such as those used in human resources, accounting, and patent registration. But trawling through that information can be time-consuming and haphazard; it involves getting access to these different databases, triangulating

among them, and using a number of processes (intranet searches, phone calls to peers) to search for the right person, who even then may not be found.



Today's search engines, by contrast, can retrieve and rank thousands, indeed millions, of records in seconds. Everything that makes up the collective experience of the company and its employees can be found almost instantly. Rather than settle for the simplifications required to force-fit expertise into a static directory, companies will have a greatly enhanced expertise locator tool—something like Google.

Google for experts

A small but growing industry is trying to improve the whole process of locating expertise by devising enterprise-software-based solutions, many of which combine new search technologies, profiling capabilities, and unique user interfaces. Several products use natural-language parsing technologies, for example, to distill an individual's areas of activity and interest by automatically combing through e-mails, instant messages, and other types of self-refreshing content.

In many respects, such products represent a real advance over the usual expertise location methods, including static expertise directories. Especially in industries where expertise needs are deep and narrow (software development, for instance), the products can extract helpful descriptions of what people have worked on without exposing personal or classified information. Some products also codify frequently asked questions (FAQs) and can thus greatly reduce the time experts spend answering them.

Companies **need to understand** what they want the technology to do before they can decide which, if any, software solution suits them

But as with most vendor-driven enterprise solutions, companies need to invest time and effort in understanding exactly what they want the technology to do before they decide which, if any, vendor solution suits them. Some companies abandon their discussions with vendors after realizing the privacy implications of mining their employees' private correspondence. Others have been disappointed to find that the software returned a high number of false positives. Depending on a company's particular expertise needs, professional vocabularies, and methods of communication, vendor technologies just might not deliver the right information in the right ways.

Companies should start by understanding their specific needs. Successful companies have found that the best way to do so is to bring together a cross-functional team from IT, knowledge management, and line functions to ask three fundamental questions: What specific expertise-related needs do employees have? What information will enable them to meet these needs? How will that information be delivered to them? Only when the questions are answered can companies implement an effective expertise search system, with or without a third-party solution.

Format follows function

Mapping out specific business processes and knowledge needs is the first step. Whose productivity is suffering from limited access to expertise? In

which situations is expertise needed? People looking for expertise may share certain characteristics: seniority, function, geographic location, or specific activity (for instance, responding to a service issue, starting a new project, or preparing for a stage-gate review). And the reasons for wanting experts—to provide quantitative data, to share high-level insights, to join a team, to attend a client meeting—also tend to be limited.

This analysis typically teaches companies which groups have their own definition of what they mean by “expert” and what sort of experience qualifies a person to be one. A pharmaceutical company, for example, might learn that project leaders have trouble finding relevant technical knowledge during early-stage research design. Enabling them to search quickly and easily for experts by looking at the education, research experience, white-paper authorship, and patent filings of the company’s employees could significantly reduce the difficulty. A consumer products company wanting geography-specific expertise might look no further than where its employees were educated or had previously worked.

From the source

Companies have a great deal of information about their people stored in HR, accounting, knowledge-management, intellectual-property, and even recruiting systems. Most is captured for other purposes, but it can be precisely what expertise seekers need. Before companies invest in new software or ask their employees to fill out lots of new forms, they should see what they already have in their systems.

They may be disappointed. Most databases have been designed for a limited purpose—storing documents, tracking time, reimbursing expenses—and have little or no extraneous information. But companies shouldn’t necessarily be discouraged by these gaps in individual databases. By integrating them, companies can offset gaps in one with data from others.

If an employee of that packaged-goods company needed help launching a salty snack in Ohio, for example, he or she might search a traditional expertise directory and find several people with general product-launch experience. But if the employee could triangulate among the company’s various databases, they would quickly reveal one particular person’s geographic familiarity with Ohio (college in Dayton) and product experience with salty snacks (a previous internship at Frito-Lay). Thus rather than finding several general experts, the employee would uncover a single person uniquely qualified to help with the product launch (exhibit).

Where gaps are a problem, companies can improve the quality of their databases by selectively introducing mechanisms to capture more information

about what their workers are doing. Unlike traditional expertise surveys, which collect data outside normal business processes, databases of experience can be upgraded within the flow of existing work. An updated project description can, for instance, be a required part of the documentation for stage-gate reviews. A summary of a conference presentation might be required for travel reimbursement.

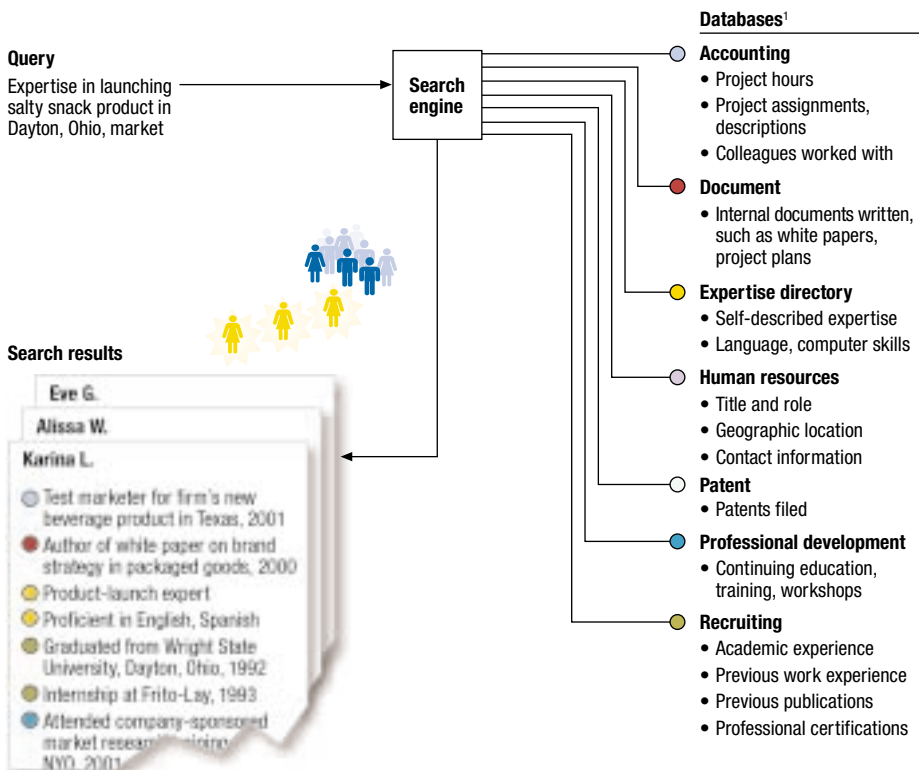
The more an expertise locator system can use existing data and existing processes for data collection, the greater the likelihood of success. Using existing data lets the system deliver value from the day of rollout. And because the information, as part of the everyday flow of work, is constantly updated, the system isn't in danger of growing stale—a problem with expertise directories that can be “refreshed” only with new rounds of surveys.

Build and buy

The final question is what technology should be used for the search. Many IT departments approach this choice as a question of “build versus buy.” The

EXHIBIT

In search of expertise



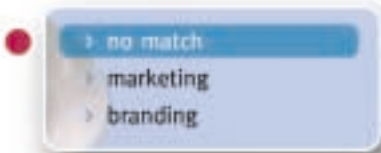
¹Some databases (such as human resources) may already exist, while others (such as professional development) may need to be created.

optimal answer is likely to involve a bit of both. From an IT standpoint, an expertise locator has three distinct pieces: a user interface, a search engine, and database integration facilities.¹ Most companies will want to take different approaches to each of these three components.

Generally, companies will want a custom-designed user interface. Depending on the specific expertise they require, their users might need to manipulate results in very different ways. In a large high-tech company with data from many sources, for instance, tech-savvy users might want to “slice and dice” results using a number of filtering and sorting criteria. In a global corporation, geography and even time-zone information might play a prominent role in the display and manipulation capabilities of the system. So even if the work of developing it is outsourced to a contractor, companies should think twice about relying on vendor templates to display their search results.

The search engine itself is another matter: with the availability of off-the-shelf products from Google, Verity, and the like, companies have little need to develop their own. Many have already licensed these products for other purposes (document databases, for instance) and can use them for expertise locators. Depending on the exact needs of the company, customization could be minor (a few days to tweak priority weightings) or more significant (weeks of customization by a seasoned developer to optimize the engine for searches of a number of databases). Alternatively, companies could negotiate with

vendors to buy just the search component of a larger solution optimized for expertise searches.



Database integration is likely to be the most labor-intensive aspect of implementation.

Some companies have already created enterprise data warehouses to track all their data in a single, easily accessible repository. For those companies, implementation should be relatively straightforward—a three- to four-month effort. For other companies, migrating enterprise-wide data to an integrated, centralized data warehouse might demand extensive resources. (A company of 10,000 employees could expect to spend up to \$500,000 on servers and data-migration software.) Setup is likely to take three months for a team of four to six full-time employees. The act of migrating information and tagging it with the Extensible Markup Language (XML) can take at least three months more for each database migrated.²

¹Companies that must capture new content need a fourth component, which allows experts to create new descriptions of their expertise.

²The ability to find experts is just one benefit of data warehousing, which is used mainly to facilitate enterprise-wide reporting, analysis, and decision making.

Whether a company decides to invest this much time and money will depend on how well it understands its expertise problem and on the nature of the opportunity to be had from the solution. A pharmaceutical company whose blockbuster drug launches were constantly plagued by delays partly attributable to the challenge of finding expertise would probably view millions of dollars in potential new revenue as sufficient justification.

Expertise should be identified through experience, its frequent companion. While many point out that the two should not be confused, there is nonetheless a strong correlation between them. By letting the employees' experience speak for itself, companies can quickly find experts when and where they are needed. **Q**

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Michael Idinopulos is a consultant and **Lee Kempler** is a principal in McKinsey's New York office. Copyright © 2003 McKinsey & Company. All rights reserved.