Spotlight

ARTWORK Jules de Balincourt
Untitled (Merging Kissers)
2011, oil on panel, 78" x 58" x 2.5"

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Redesigning Knowledge Work

How to free up high-end experts to do what they do best *by Martin Dewhurst, Bryan Hancock, and Diana Ellsworth*

EXPERTS WITH PRIZED skills are too rare to squander on jobs others can do. That's why some organizations are relieving their valuable talent of those responsibilities so that they can spend more time on the tasks only they can perform—by redesigning job roles within the company or by turning to external providers of specialized expertise. Consider these examples:

• Orrick, Herrington & Sutcliffe, a San Francisco–based law firm with nine U.S. offices, shifted routine discovery work previously performed by partners and partner-tracked associates to a new service center in West Virginia staffed by lower-paid attorneys.

• The Narayana Hrudayalaya Cardiac Hospital in Bangalore has junior surgeons, nurses, and technicians handle routine tasks such as preparing the patient for surgery and closing the chest after surgery. Senior cardiac surgeons come to the operating room only when the patient's chest is open and the heart is ready to be operated on. This approach helps the hospital provide care at a fraction of the cost of U.S. providers while maintaining U.S.-level mortality and infection rates.

• In the United Kingdom, a growing number of public schools are relieving head teachers, or principals, of administrative tasks such as budgeting, human resources, facilities maintenance, and community relations so that they can devote more time to developing teachers.

In today's knowledge economy, competitive advantage is increasingly coming from the particular, hard-to-duplicate know-how of a company's most skilled people: talented (and highly paid) engineers, salespeople, scientists, and other professionals. The problem is that across the private, public, and social sectors there aren't enough knowledge workers to go around. And the situation promises to get worse: Recent research by the McKinsey Global Institute suggests that by 2020 the worldwide shortage of highly skilled, college-educated workers could reach 38 million to 40 million, or 13% of demand.

In response, some firms are taking steps to expand the talent pool—for example, by investing in apprenticeships and other training programs. But a number of companies are going further: They are redefining the jobs of their experts, transferring some of their tasks to lower-skill people inside or outside their organizations, and outsourcing work that requires scarce skills but is not strategically important.

Such moves aren't new, of course. Firms have long been carving off repeatable, transactional work—such as call center services, payroll, or IT support—and either shifting it to lower-cost locations or outsourcing it. What is new is that companies are now doing this with knowledge-based jobs that are core to the business.

In the past five years, we have worked with or studied more than 50 companies in a wide range of industries on talent management issues. We found that redefining high-value knowledge jobs not only can help companies address skills shortages. It also can lower costs and increase job satisfaction.

Some organizations are already familiar with ways to break work into highly specialized pieces. In this article, we'll show how to do that for high-end knowledge work. The process involves several basic steps: identifying the gap between the talent your firm has and what it will need; creating narrower, more-focused job descriptions in areas where talent is scarce; choosing from various options for filling the skills gap; and rewiring processes for talent and knowledge management.

Identify the Skills Gap

The first step in redesigning knowledge work is to conduct an inventory of skills and create a detailed estimate of the kinds and amounts of skills your firm will need to execute its strategy over the next five years or more. This will require a thoughtful discussion among top managers, leaders of business units, and HR team members, and should be part of the strategic-planning process.

We've found that many companies don't have this conversation. They simply reuse the job descriptions already embedded in their organizational chart, year after year, and become alert to the need for new skills only when they find themselves having to play catch-up to more-prescient competitors.

Companies must be explicit and precise in defining their must-have skills. Here are some illustrations:

• A multichannel retailer may determine that to beat online competitors, it will need not only consumer-insight experts with the analytical skills to mine vast amounts of consumer data but also marketing specialists who can build a brand using social media.

• A professional services firm may require deep expertise in certain industry-specific niches to address the needs of its clients—for instance, capabilities in credit-risk modeling for financial institutions or patent law for semiconductor manufacturers.

• A consumer goods company may discover that it needs a cadre of general managers and marketers

Idea in Brief

A worsening shortage of high-skill knowledge workers is one of the biggest challenges facing organizations. These talented and highly paid experts—doctors, lawyers, engineers, salespeople, scientists, and other professionals—are companies' most valuable assets.

In response, some firms are redefining the jobs of their experts, transferring some of their tasks to lower-skill people inside or outside their organizations, and outsourcing work that requires scarce skills but is not strategically important.

Redesigning jobs in this fashion involves several basic steps: identifying the gaps between the talent your firm has and what it will need; creating narrower, more-focused job descriptions in areas where talent is scarce; choosing from various options for filling the skills gap; and revamping talent- and knowledge-management processes to accommodate the new way of working.

with proven track records in emerging markets to maximize its potential in geographies projected to account for more than 50% of world economic growth over the next decade.

• A pharmaceutical firm, in light of the intensive data analytics now involved in that industry, may need more bioinformatics experts with both scientific and technology expertise.

After identifying the critical skills your strategy will require, create a detailed inventory of how many people in your organization possess them. Then estimate how those numbers will change over the next five years given the current pace of hiring, training, moves, and retirement. This analysis typically demonstrates that demand is higher than expected—and that the likely supply (at least internally and potentially externally) will fall short without significant action. Such skills gaps can put key strategies at risk. For example, one global construction company we worked with discovered that it had only a third of the experienced leaders it needed to execute its strategy in China.

Unfortunately, many companies do not rigorously document their employees' specialized skills in either hiring or annual performance-management processes. One financial services firm whose market position was slipping wanted to staff its marketing department with people who could think strategically. It suspected that such strategic thinkers already worked in different parts of the organization, but that skill was not explicitly listed in job descriptions. HR staffers realized that to identify credible candidates they would have to comb through every employee's performance evaluations and read between the lines.

Precision in identifying the must-have skills is crucial. An airline may underappreciate its current talent pool if it defines its scarce skill as "revenue management" rather than "generating insights from large data sets." The latter is likely to be an underlying skill present in many areas of the company, including marketing and operations planning. One mining company we worked with developed detailed descriptions for every key role, specifying not only job responsibilities but also the required skills ("ability to understand financial models"), competencies ("leadership courage"), and mind-sets and behaviors ("strong sense of purpose in initiating difficult conversations").

Some companies now focus on competencies rather than tasks in employee evaluations. Two people in the same role, when evaluated solely on tasks, could both be high performers but might have different underlying competencies; conversely, two people in very different roles might have the same underlying competencies. Their competencies have implications for what their career paths could be and where the organization could best use them today and five years down the road.

Analyze How Skills Are Utilized

Once your company has identified its talent gaps, it must then determine the workforce implications: Should current and future roles be restructured? How should recruitment, hiring, and training change? What new talent sources, if any, should be considered?

Begin by assessing how effectively your company is leveraging existing talent. That will provide insights into how it might better utilize scarce experts. A number of tools can be used to do this:

Time allocation surveys, in which people document how much time they spend on tasks, can produce eye-opening results. Companies often find that highly skilled people are spending significant amounts of time on general management or administrative activities that don't require their scarce skills. A retail bank, for example, discovered that its salespeople were spending a mere 25% of their time

About the Spotlight Artist

Each month we illustrate our Spotlight package with a series of works from an accomplished artist. We hope that the lively and cerebral creations of these photographers, painters, and installation artists will infuse our pages with additional energy and intelligence to amplify what are often complex and abstract concepts.

This month we spotlight the work of **Jules de Balincourt,** a French-born painter now based in Brooklyn, New York. Using stencils, tape, and spray paint in his work, he reflects on the social, environmental, and political tensions of a world made smaller by technology. "The Earth is still in some ways Edenic but is also part Hieronymus Bosch," he has said. "My work is inspired by these dualities."

View more of the artist's work at **julesdebalincourt.com.**

selling and the rest on administrative work, such as rewriting contractual documents and processing orders, and other activities.

Social network analysis, a quantitative method for surfacing and depicting informal interactions among people in an organization, can show which individuals are sought out for different types of expertise and how they are connected to others in the company who need their skills. A professional services firm we worked with discovered that only three people in one of its largest divisions controlled access to experts whom many in the firm relied on, constraining them from working effectively with the broader business.

Tasks that require scarce skills but do not depend on in-person interaction can be shifted to people in less costly locations.

Analysis of outcomes or value can be used to quantify the effectiveness of any given contributor or process. Some companies use assessment surveys to determine whether experts feel their skills are well matched to their current roles and to understand how colleagues perceive experts' performance. Other companies evaluate the process for getting to an end product. (For a marketing department, an end product could be a brand plan.) The analysis involves mapping the current process and figuring out the time it takes and its cost; assessing the actual versus aspired-to quality of the end product; identifying the people deployed at each step of the process; and using that information to identify opportunities to simplify the process and ensure a good match between skills and tasks.

Redefine Jobs

Using the results of a skills-gap analysis, your company can redefine jobs to ensure that experts devote almost all their time to tasks that require their specialized skills.

One organization that has embarked on an ambitious program to do this is the division of the United Kingdom's National Health Service that serves London. In its quest to make the most of scarce resources, NHS London took a close look at the entire "patient journey" through its system, including the locations where patients receive care, the practices that have led to the best patient outcomes, and the skills required to deliver high-quality care. Through interviews, observations, and time allocation surveys, the leaders of the effort identified opportunities to redesign roles. For example, to ensure that specialist doctors and general practitioners at independent providers could focus more on the tasks that they alone could do, NHS London recommended that the local NHS trusts shift some of their clinical and administrative responsibilities to nurses, paramedics, and assistant practitioners. To smooth transitions into the redesigned roles, NHS London created new training programs for both clinicians and the senior managers who would lead the change.

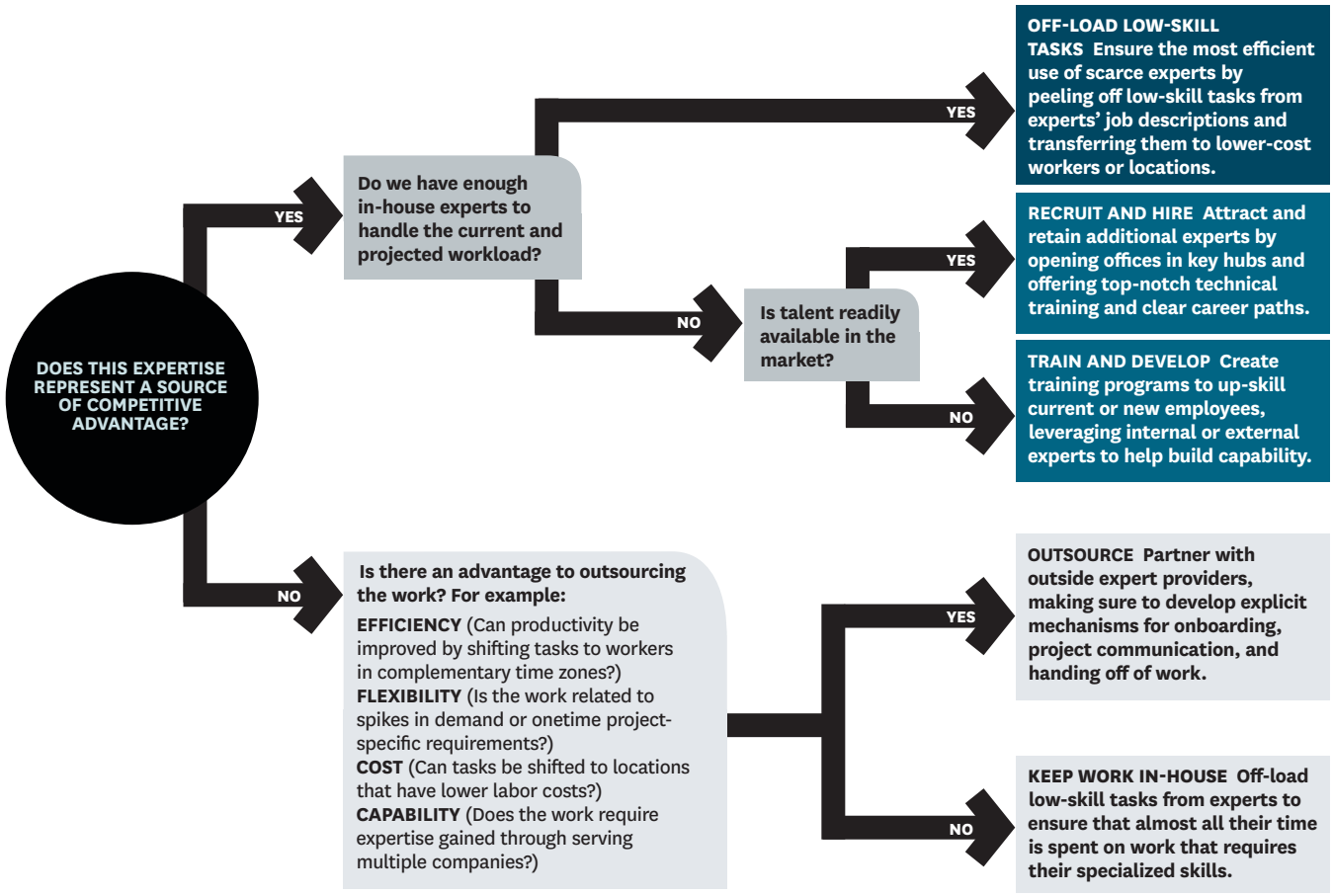
In redefining jobs, companies should also consider technological advances that make it easier to perform work remotely. Companies and employees today have more choices for where work is done and by whom. In cases where in-person interactions and sophisticated judgment are core to value delivery—performing medical procedures, sales, and giving financial advice fall into this category—the goal is to redesign the role so that people are spending all their time at the high end of their skill set.

If tasks are appropriately segmented, a lower-cost solution shouldn't mean inferior quality work. When a provider of data storage and management solutions we worked with separated sales and post-sales support tasks, it freed up key personnel to spend more time selling—and it allowed the company to provide better customer service after the sale, increasing customer satisfaction. Consider the following options for disaggregating tasks:

Virtualization. Tasks that require scarce skills but do not depend on in-person interaction or physical proximity—screening mammograms or conducting complex pricing analytics, for example—can be shifted to people in less costly locations.

This is happening in the U.S. legal industry, where clients are increasingly questioning the traditional full-service model of lawyers who charge $300 an hour or more for their time, regardless of the task. For instance, fewer companies are willing

What Knowledge Work Should You Outsource?



to pay high hourly fees for routine discovery work. In response, more law firms are shifting such tasks to lower-cost employees, some of whom are located remotely. As we mentioned above, Orrick shifted discovery work to a service center staffed with salaried attorneys who aren't on a partner track, which has allowed the firm to significantly lower costs without sacrificing quality. Other law firms send discovery-related tasks to attorneys who are employees but work from home and charge lower rates in exchange for flexibility.

Regardless of how a company chooses to virtualize work, a performance management system is crucial to success. Performance of individuals who work remotely should be regularly reviewed. Managers may need training to do this effectively. A U.S.-based cable company, for instance, created a program for supervisors of remote employees that teaches them how to manage results, not activities.

Outsourcing or contracting. When a company has a onetime or infrequent need for expertise (an oil company needs a certain type of engineer for a specific project or an auto parts firm needs specialized expertise to develop a pricing model) or when a firm experiences periodic surges in demand for certain skills, hiring an external provider could be the best option. In recent years, the availability of highly capable "knowledge professionals on call" has increased.

In making the decision to outsource, organizations should consider strategy as well as cost: Does having direct ownership of the work confer any competitive advantage? If so, keep that work in-house and make sure that those responsible for the work are freed from lower-value tasks that others could accomplish.

If a company does decide to outsource, it must take pains to connect its external providers to the broader organization. This starts with an orientation or onboarding program that gives contractors an insider's understanding of the firm and provides them with points of contact. The company must facilitate frequent interaction and communication between contractors and internal experts and decision makers, and establish a well-thought-out process for the handoff of work to internal owners.

Without those mechanisms in place, external providers may produce work that is technically accurate but lacks company-specific nuance or the internal buy-in necessary for it to stick. A case in point: A midlevel executive at a large retailer contracted with an analytics firm in India to run detailed analyses to inform the retailer's pricing strategy. The firm produced high-quality technical work, but when the results were shared with senior management, they fell flat; they were seen as "interesting" but disconnected from the overall sales strategy—especially since an internal group at the retailer had undertaken similar but less sophisticated analytics and reached different conclusions. Had the executive linked the analytics firm more closely to people in the business who had historically set pricing strategy or had he briefed the contractors about the company's broader business strategy and objectives, the project would have delivered much greater value.

Aggressive companies are shaking off conventions about where, how, and by whom knowledge work is done.

Rewire Processes for Talent and Knowledge Management

The solutions we've described will be effective only if an organization also retools its processes and culture to support the new ways of working. In particular, firms must learn how to manage specialists and external providers and integrate them into the business.

First, companies must excel at attracting, motivating, and retaining specialists. Some large retailers such as Walmart and Staples are luring tech talent, for instance, by opening offices in technology hubs like Silicon Valley and Cambridge, Massachusetts, and by offering top-notch technical training and clear career paths.

Second, companies must develop mechanisms for cultivating specialists who have the potential to take on broader roles or become leaders in the organization. A telecommunications firm we worked with created a job-rotation program that allows high-performing specialists in remote offices to spend a few months at corporate headquarters, where they can get exposure to senior executives and expand their knowledge of the company. A U.S.-based financial firm monitors the performance of analysts at low-cost offshore locations who produce basic reports for its traders at company operations in the U.S., Europe, and Asia. Top performers are identified and developed to take on higher-skill trading roles.

Third, companies must capture the knowledge of internal and external specialists so that others in the organization can benefit from it. This requires robust, easy-to-use knowledge management processes and systems. Some companies categorize each project up front according to the insights it is likely to generate (for example, "distinctive," "proprietary," or "common") and create a road map for how insights should be documented and shared. The road map specifies templates for codifying knowledge, lists of people and groups within the company who might find the knowledge useful, and suggested schedules for knowledge-transfer meetings.

Fourth, companies should ensure that specialist employees working remotely engage with both the employees who use their work and business leaders. Ways to make this happen include inviting them to join cross-functional teams, having company leaders meet with specialist groups regularly, and embedding specialists in business units.

As with any major workforce change, it's often best to start small: Move one subset of work to specialists or external providers and expand that base over time. This allows a company to test new talent pools and management processes and build stakeholders' confidence in them.

AGGRESSIVE COMPANIES are shaking off conventions about where, how, and by whom knowledge work is done. But as traditional roles are redefined, workers are bound to struggle with uncertainty. It's crucial that leaders redouble their efforts to ensure that key managers are fully engaged. All employees must understand how the transformation is connected to them, know what is expected of them, and be clear on how their success will be evaluated. In this way they can unlock both increased productivity and personal satisfaction.

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