

Open-Market Innovation

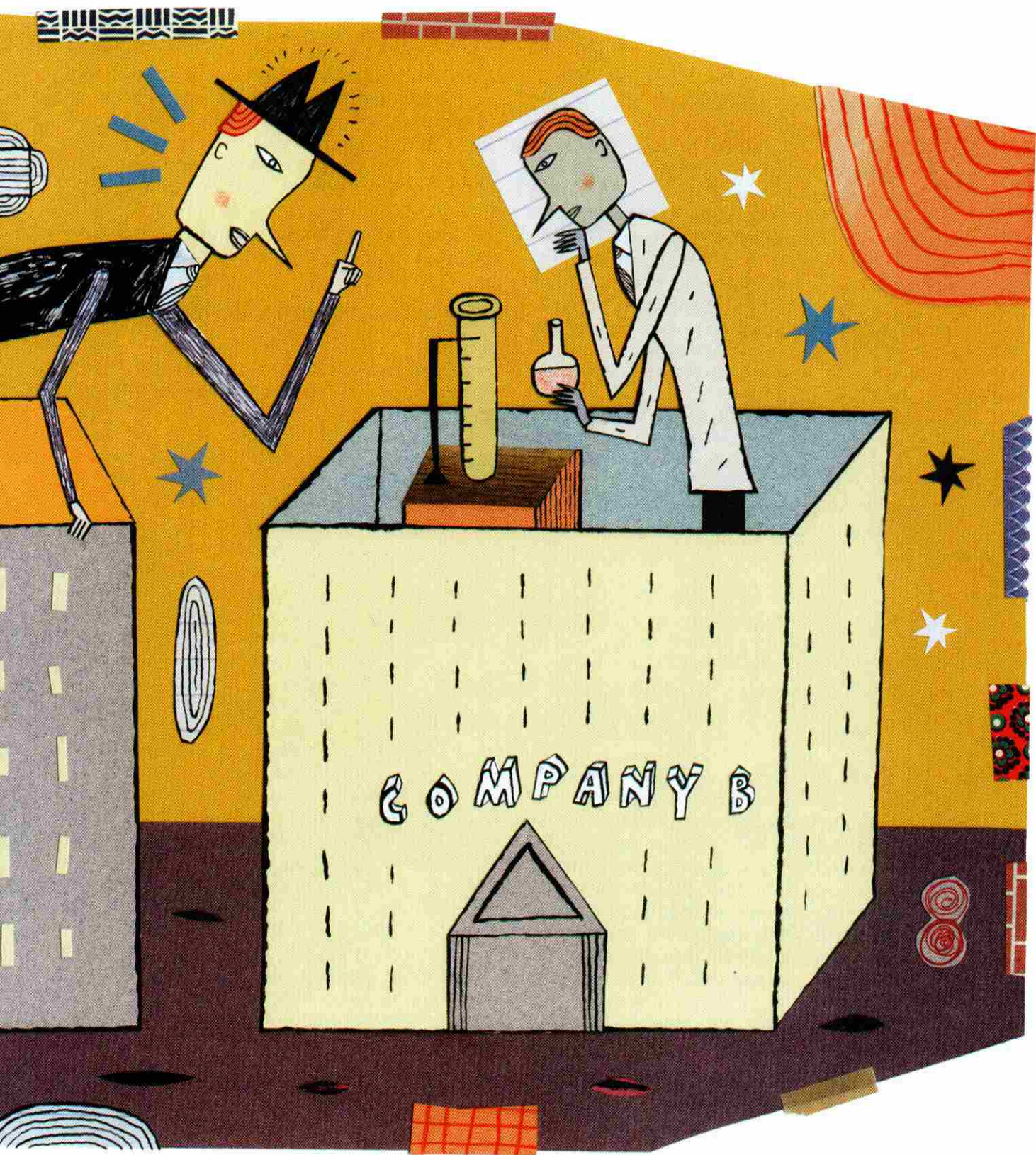
by Darrell Rigby and Chris Zook

Plenty of companies have tried – and failed – to increase innovation. Here’s how to apply the lessons of free trade to the market for new ideas.

WHEN PITNEY BOWES LEARNED A YEAR AGO that envelopes tainted with anthrax had spread infection and death through the U.S. postal system, executives at the company realized that both their customers and their core business were under attack. Overnight, the world’s largest provider of mailing systems was flooded with desperate requests from corporations and postal services seeking a solution – any solution – that could protect people from the deadly spores. Pitney Bowes’s core competence was in the area of secure metering systems that protected postal revenue; the \$4.1 billion market leader had nothing in its pipeline to shield clients against a biological threat as unexpected as anthrax.

The company decided that the only way it could respond fast and effectively to the market’s sudden shift was to look outside for ideas. Within a few weeks, a special team of Pitney Bowes engineers gathered 82 promising concepts from fields as diverse as food handling and military security. These were quickly whittled down to a dozen ideas worth developing, ranging from low-tech solutions – such as a downdraft table that sucks up the air around letters and packages as they are opened – to





expensive, high-end systems. With help from the outside inventors, Pitney Bowes was able to introduce new products and services to secure the mail against bioterrorism. These include specialized scanners and an imaging system that can alert a mail center, intended recipients, or security personnel to suspicious letters and packages.

The crisis at Pitney Bowes offers a time-lapse example of a problem more and more businesses are confronting: “How can we reach outside our own four walls for the ideas we need?” A growing number of companies are exploring the idea of open-market innovation—an approach that uses tools such as licensing, joint ventures, and strategic alliances to bring the benefits of free trade to the flow of new ideas. By systematically opening their innovation borders to vendors, customers, and even competitors, businesses are increasing the import and export of novel ideas. As they do so, they are improving the speed, cost, and quality of innovation. What’s more, open-market innovation lets companies set realistic market values for their internal ideas, helping them to better define their core business.

The results of a recent Bain & Company survey of more than 200 global senior executives suggest there is pent-up desire to pursue open-market innovation. Even in the throes of a global recession, when executives’ thoughts often turn to restructurings and cost reductions, 80% of the respondents rated “becoming more innovative” among their top three priorities for achieving company

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success. Nearly two-thirds of the executives admitted their businesses were not close to realizing their full potential in tapping outside ideas; they deemed such action a “big opportunity.” Perhaps most surprising, 91% of executives across all industries surveyed called increasing their company’s capacity for innovation “critical to creating future competitive advantage and earning profits.”

Despite this wellspring of enthusiasm for reaching outside the company for great new ideas, the poll also revealed

Darrell Rigby is the founder and director of Bain & Company’s multiyear survey on management tools and trends, practicing out of the Boston office. This is his fourth HBR article. Chris Zook directs Bain’s global strategy practice out of Boston and coauthored, with James Allen, Profit from the Core: Growth Strategy in an Era of Turbulence (Harvard Business School Publishing, 2001).

another side of the quest to innovate: Two out of five executives surveyed admitted that their companies suffered from not-invented-here syndrome. Only about one-third of the respondents were satisfied with the quality of their innovations or the frequency with which they came up with new products and services for key customers or changes to their business model. And 57% of the executives polled found their companies too internally focused.

The survey results indicate that conventional methods to spark corporate innovation are falling short and that global executives know the best ideas are not always coming out of their own R&D labs. Our case studies show that some of the fastest growing and most profitable industries are finding open-market innovation to be a critical new source of competitive advantage.

Why Innovate with Outsiders?

Open-market innovation is fostered by several complementary business and technology trends (see the sidebar “The Coming Boom”) and offers companies four distinct advantages.

Importing new ideas is a good way to multiply the building blocks of innovation. If those responsible for innovation have more ideas to choose from and different kinds of expertise available to them, then the cost, quality, and speed of innovation improve. It should come as no surprise that companies that collaborate with

outsiders on their R&D reap a higher percentage of their total sales from new products than companies that don’t collaborate, according to global think tank the STEP Group.

The experience of Tetra Pak, one of the world’s largest suppliers of packaging systems for milk, fruit juices, and other food products, illustrates the wisdom of importing expertise. Several years ago, Tetra Pak was attempting to develop a radical food-packaging innovation that would compete with metal cans as well as glass and plastic containers. Engineers worked for some time

on their own and then, recognizing the limitations of their expertise, decided to work with outside partners. The breakthrough product that resulted from this collaboration, Tetra Recart, makes it possible for Tetra Pak customers to sterilize paperboard containers filled with pet foods, soups, sauces, fruits, and vegetables. The packages are lightweight, and their rectangular shape—easy to hold and pour—increases the number of packages that can be displayed on a shelf by as much as 50%.



Tetra Pak was already familiar with some of its partners in this venture: Paper and polymers suppliers helped the company fashion the paperboard package capable of withstanding high temperatures, humidity, and the rigors of commercial sterilization. Other partners were less familiar: Tetra Pak found a company with expertise in sterilizing hospital equipment to help it figure out how to sterilize the food inside the packages. The company depended on internal experts to develop new lamination techniques and “form, fill, and seal” processes; those were Tetra Pak’s traditional areas of expertise. Exposure to outsiders’ ideas helped executives realize how much faster they could move by outsourcing crucial elements of the new product. The process shaved years off the development time.

Exporting ideas is a good way to raise cash and keep talent. In 1980, the market for patent licensing was about \$3 billion. Today, it is about \$110 billion and growing rapidly. IBM earns nearly \$2 billion a year in royalties from the patents it exports. But the money may be less important than what the patent exports signal to the organization: Act fast on promising ideas, or risk seeing them offered to outsiders, even competitors. (For more on IBM’s experiences with open-market innovation, see

John D. Wolpert’s “Breaking Out of the Innovation Box,” HBR August 2002.) Exporting ideas adds urgency to the innovative enterprise and improves motivation and loyalty among employees. Creative people are more likely to stay on board when they know their good ideas won’t get buried but instead may find a home in the outside world.

BellSouth’s faith in the power of exporting innovation runs so deep that it sells its technologies to competitors. The telecommunications company set up BellSouth Intellectual Property Marketing (BIPMARK) in 1998 to both manage and market the results of its innovation programs. The company has generated substantial revenues through dozens of deals. For instance, in January 2002, BIPMARK tested the interest of a large competitor in licensing its state-of-the-art billing system. A combination of computer network architecture and software, the system gives the telecom company a consolidated view of a customer’s calls and summarizes the person’s total phone use rather than listing a series of unrelated service accounts. While critical to BellSouth’s business, the billing system was not a major source of unique competitive advantage. BIPMARK calculated that competitors would invest to create similar systems of their own in a matter of months if they couldn’t buy them from BellSouth. So

The Coming Boom

We’ve heard for years about the dangers of the not-invented-here syndrome, so in one sense, the idea of open-market innovation is not new. But because of five powerful, complementary trends, it’s being practiced more often.

Availability of Venture Capital. Even in the current downturn, venture capital is far easier to come by than it was 30, or even ten, years ago. There’s a strong correlation between venture capital funding and successful innovation: A recent study from the National Bureau of Economic Research found that small companies supported by venture capital produced six times as many patents per dollar of R&D spent as traditional companies did.

Interdependencies of Products. A lot of innovation today is cumulative. Indeed, just consider that the number of strategic alliances between biotech firms and large drug companies has increased by 80% in the past five years. Product complexity, specialization, and shorter product life cycles make it increasingly unlikely that one company can release world-class products by itself.

Innovation Exchanges. It used to take 12 months to 36 months to find a buyer for a promising innovation, and technology transfers generally happened only within an industry. Now innovation exchanges are sprouting up all over the Internet. TechEx, for example, grew out of Yale University to become an active site for buyers and sellers of biomedical technology. The site, www.techex.com, has more than 700 companies registered as users. Innovation

exchanges are still unproven, but they have the potential to be huge.

Innovation Agents. Along with electronic exchanges comes a new form of venture firm designed to capitalize on the inefficiency of the markets for ideas by seeking out, developing, and channeling innovations to the most suitable owners. One such company is the Big Idea Group, founded in July 2000. BIG links independent inventors with idea-driven companies in industries where a fresh flow of new ideas is critical – for example, in the toy industry.

Accessible Innovation Databases. In December 2000, the U.S. Patent and Trademark Office made information on 6.5 million patents available through a searchable on-line database. International patents have also become more completely available on-line. New search engines are emerging to allow powerful analysis of information on not only the patents but also the inventors and the nature of the innovations themselves.

These trends in technology, business practices, and funding will provide a rocket boost to the phenomenon of open-market innovation. Companies that lower their innovation barriers will be able to test the quality of their own thinking. They will be able to quickly determine where to innovate for themselves and where to outsource innovation to others. And they will build advantage for years to come over their internally focused competitors.

management decided to license the system to maximize returns while creating industry standards that favor Bell-South's technology platform.

Exporting ideas gives companies a way to measure an innovation's real value and to ascertain whether further investment is warranted. As the flow of exports grows, managers can look at their innovation initiatives through market-hardened eyes that often reveal where the business is headed and where the company holds advantages over its rivals. Pharmaceutical company Eli Lilly routinely offers licenses for some compounds under development, when the therapeutic and business value of the drugs is still unclear and the competition for the resources to develop new products is keen. If outside labs aren't intrigued enough to bid, Lilly resets its sights. "We believe more and more that the free market tells you what a product or technology is really worth," says Dave Thompson, vice president of corporate strategy at Lilly. "We've gone through great angst over whether to [license out] a project that we thought was really good. Then we take it to the free market and find out nobody wants it. That's actually positive."

Exporting and importing ideas helps companies clarify what they do best. Companies often delude themselves into thinking that their core business is broader than it really is. A sustainable core must have economic advantages that will let the business produce something at a lower cost, or with higher quality, than other companies in the open market can. When a company starts collecting actual market data about its capabilities relative to competitors, executives often discover that they are stronger in some areas and weaker in others than corporate lore had led them to believe.

When Boeing CEO Phil Condit took over in 1996, he urged his managers to increase the return on every R&D dollar by focusing more intently on innovations they could develop better than anyone else. As Boeing executives began testing what they could profitably buy, sell, and trade with others, they found that their true comparative advantage was not in manufacturing but in systems integration. The company's innovations in manufacturing yielded low returns because large parts suppliers were more efficient at them than Boeing was. But no one understood the design and integration complexities of Boeing's airplane components better than Boeing did. So unlike its chief rival, Airbus, Boeing became the designer and systems integrator not only of its planes but also of many of the systems that go in them—for instance, flight controls and landing gear. This changed Boeing's understanding of its core business, as well as its investment patterns. The company sank less money into manufacturing activities and increased its investments in design and integration services. In fact, its vanguard R&D unit, Phantom Works, was explicitly charged with enhancing Boeing's systems integration skills, and the divi-

sion employs a variety of open-market innovation techniques—for instance, joint ventures and strategic alliances—to do just that.

Considering the Competitive Risks

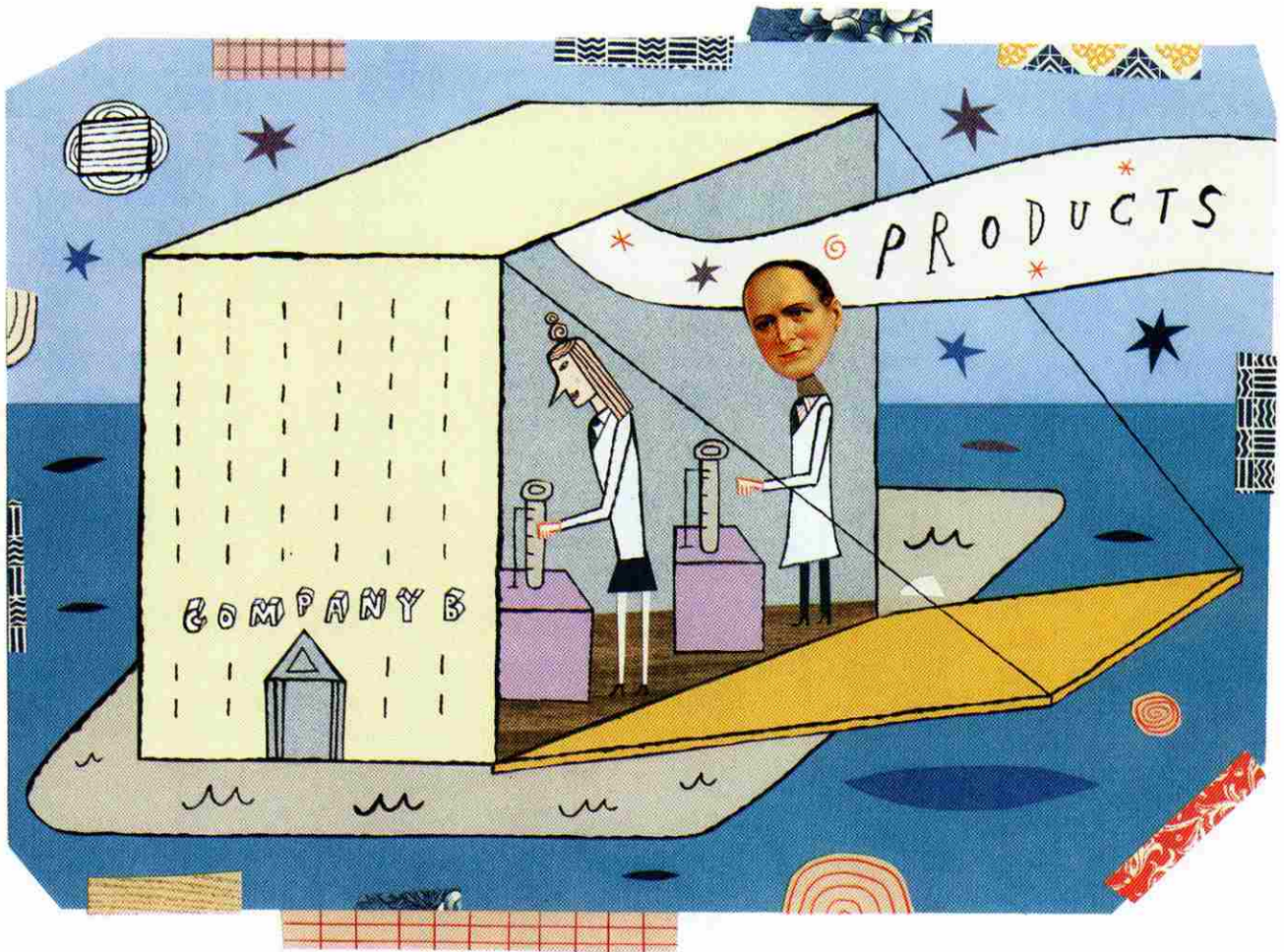
Despite the advantages that open-market innovation offers, skeptics of this approach to creating breakthrough products and services like to cite valid examples of companies that missed the boat because they shared their innovations with current or potential competitors. Xerox virtually gave away a stream of innovations—everything from the computer mouse to the graphical user interface and laser printer—then stood by while other companies capitalized on them. And TRW is a very successful innovator, but some of its biggest breakthroughs were undervalued inside the company and wound up being exploited by others. Qualcomm's, Broadcom's, and Texas Instruments' digital-signal-processing businesses are all built on technologies developed at TRW—and all three companies' market caps dwarf TRW's.

The dangers of sharing innovations are real, but they are manageable. Generally, the greatest danger lies not in the transfer of the innovation but in the structure of the deal. Furthermore, selling or renting innovations poses fewer competitive risks than most people think. This is true for three reasons.

First, innovation transfers take time. Buyers and sellers need to find one another and negotiate agreements. Sellers must package and transport their innovations. Buyers need to customize the innovations to meet their specific purposes. The innovations will likely require the purchase, installation, and debugging of new manufacturing equipment, as well as the development of customer service processes to support them. Companies must figure out how to deliver new products to their distribution channels and how to market and sell those products. In the meantime, the original innovator is forging ahead. If the product life cycle is sufficiently short, the seller often has time to introduce the next generation of an innovation by the time competitors get the original version to market.

Second, buyers may never capture the full value of innovation transfers. Consider, for example, Disney's competitive advantage in its theme park business, where it has developed a service model that exceeds everyone else's in the industry. Disney is so confident that its system for delivering service cannot be replicated by competitors that it makes money by sharing its innovations, charging other companies to learn how Disney does it.

Third, managers tend to underestimate the strengths of suitable substitutes. They believe that if they choose not to share their innovations, they can keep them from competitors. Rarely is this true. Companies have become remarkably good at tearing down and reverse engineer-



ing competitors' products. A tweak here and there minimizes the risk of patent infringements, an enabling license from an obscure company overseas provides some sizzle to the product, and then your rival is off to the races. At the right price, an innovator will usually make more money and build more mutually beneficial relationships by licensing an innovation to other players than by suing and countersuing them in the courts. Furthermore, partnering can help a company accelerate the growth of its own concept and impede the growth of competitively equivalent innovations. The result is a larger share of a larger pie.

David Ricardo got it right in his 1815 essay opposing the British Corn Laws, which protected English landowners from imports of overseas grain. Ricardo argued that businesspeople benefit when they yield to others who are better at certain things and concentrate instead on the things they do best. If Xerox and TRW had structured their transactions to share adequately in the upside of their innovations, they could have reinvested that money in additional research. The truth is, you will make more money by ceding parts of your business, as long as the deal is structured properly.

Should You Reach Out?

Once companies have considered the risks of open-market innovation, they should pay attention to the business conditions that make it conducive to engage in this process. For instance, when the economies of innovation are fairly low—if a few people working independently can produce innovations as good as or better than your corporate R&D lab—it's critical to start looking outside for new ideas. Call it the *garage effect*. The dot-com bell curve has made many companies wary or even dismissive of the business potential of small-scale (or garage) entrepreneurs. But in some industries—including software, network technology, and financial services—the capacity for innovation has long been widely distributed among big and small. Linux is a good example. By being easily available on the Internet, the Linux development effort drew 100,000 independent software writers to its cause. Within a few years, they had created a product with functionality comparable to Microsoft's operating system, which was developed over decades. IBM was one of the first computer companies to embrace Linux and to build products based on the new software platform.

The open-market approach also offers companies a strong recourse when unpredictable situations arise that require new competencies fast. Sometimes, the need for innovation can burst upon a company from out of nowhere, as Pitney Bowes discovered with the anthrax scare. More often, companies will find themselves in turbulent industry conditions that require them to adapt and innovate without knowing exactly which direction to take. In this environment, companies can use open-market innovation as a hedge, exploring multiple product strategies with outside partners until one emerges as the most likely. Cisco Systems, for example, has used this approach to help it navigate the volatile market for optical switching equipment.

Another instance in which open-market innovation makes sense is when innovations from disparate sources must come together to bring a promising idea to market. This kind of cumulative innovation is driving Cargill Dow, a \$500 million joint venture between Cargill Incorporated and Dow Chemical that has figured out how to make plastic from renewable crops such as corn, wheat, and cassava. For at least a decade, Cargill scientists had been chipping away at the basic chemistry to build a new family of plastics that could be made from the leftover starch extracted from corn and other grains. “We believed we had a very

compelling product based on its biodegradability—a product for which there should be a high demand,” says Jim Haymaker, Cargill’s corporate vice president of strategy and business development. “While we had developed the first new polymer in a decade with very interesting attributes, we were having difficulty finding enough customer interest. In short, we didn’t know best how to take it to market.” Cargill turned to Dow to supply the technical know-how for processing natural plant sugars to create a stable polymer. In addition to its skills in polymer manufacturing, Dow understood the kinds of attributes the new plastic would need to meet customers’ requirements. “It’s not sufficient just to have a good idea,” Haymaker says. “The idea has to be converted into a product or service—and that sometimes requires more than one company.” (For a detailed look at when open-market innovation makes the most sense, see the sidebar “When Is Open-Market Innovation Most Valuable?”)

Throwing Open the Doors

Opening your borders is not necessarily easy; some companies that deploy the tools of open-market innovation without a strategy and a system can wind up getting burned. For instance, when Disney decided to seek ideas

When Is Open-Market Innovation Most Valuable?

The propensity for open-market innovation varies across industries. As the exhibit at right demonstrates, companies can determine whether it is favorable or unfavorable for them to pursue open-market innovation by considering the business environment they are operating in, along five key dimensions. Let’s compare the differences between security software companies and tire makers along those five dimensions:

Intensity of Innovation. In the security software industry, 14% of sales revenue was cycled back into R&D in the past three years compared with 3% of sales revenue in the tire industry. Security software companies filed 338 patents in the past decade compared with 58 patents filed by tire manufacturers, even though the tire-making industry is five times the size of the security software industry. Software cycle times are shorter, so innovations in security software can become obsolete in a matter of months. Tire makers roll out major product innovations every three or four years.

Economies of Innovation. Software start-ups are everywhere. It takes little or no money to launch a software company, and venture capital is available. Software as an industry accounted for about 19% of venture capital investments from 1997 to 2001. For tires we could find no such investments; only 4% of venture money flowed to the industrial and energy sector.

Need for Cumulative Innovations. Security software must work effectively with a variety of hardware and software systems. Software coalitions and alliances can encourage universal standards, facilitate add-ons and complementary products, and accelerate customer acceptance. Tire makers seldom need to build others’ innovations into their own products.

Applicability of Innovations Across Companies or Industries. Software innovations have potential value to many users—hardware and software companies, video game makers, manufacturers of personal digital assistants, telecommunications and cell phone companies, and even automobile and car rental companies. Many of these potential users pose little or no competitive threat to the innovator. By contrast, tire innovations are rarely useful to anyone but other tire makers.

Market Volatility. The security software industry is growing at an annual rate of 18% and has encountered repeated upheavals in the past five years with the advent of the Internet. The tire industry is growing at 3% annually, and the last big change for tires was the shift from bias to radial tires 20 years ago.

Sources: PricewaterhouseCoopers/Venture Economics/National Venture Capital Association’s Moneytree Survey; U.S. Patent and Trademark Office; industry annual reports; and analysts’ reports.

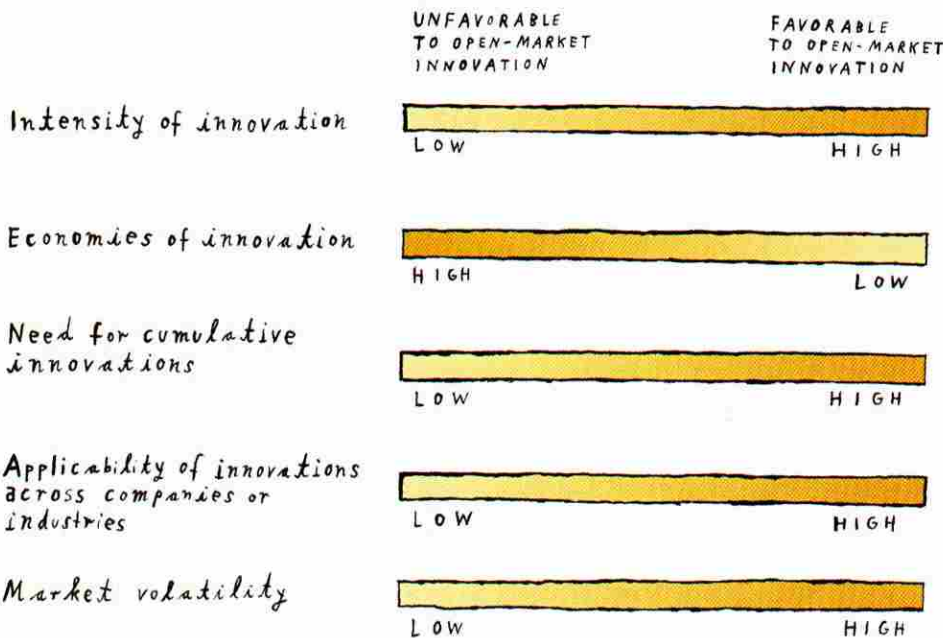
from the outside, it got hit with some eye-popping lawsuits. In August 2000, a jury awarded \$240 million to All Pro Sports Camps, which had accused Disney of entertaining then stealing its ideas for a sports-themed entertainment complex. That kind of legal threat, which resulted from Disney's ad hoc approach to the situation, can lead to protocols that discourage employees from even listening to proposals from outsiders.

A misguided innovation strategy may also have played a role in Enron's collapse. We're all too familiar with the company's reputation as a pioneer, expanding into businesses that collectively provided more than 90% of Enron's market capitalization by 2001. To move beyond energy services and into trading operations, Enron sought out new financial structures and used open-market innovation tools such as joint ventures to reduce the burden of carrying assets, which would slow its theoretical financial growth. The risks mounted as Enron moved aggressively into more and more businesses adjacent to its core operations.

The problems at Enron run deeper, of course, than mere overproliferation of business units. But Enron's plight is a useful reminder that the tools of open-market innovation are pointless – indeed, dangerous – if they're not used to support a coherent strategic goal.

Few, if any, companies have completely mastered open-market innovation. But some have started to assemble cohesive systems that boost the flow of ideas into, out of, and around their businesses. Although it might sound counterintuitive, the approach seems to take root best when companies seed efforts within a strong central organization. When John Tao took over as director of corporate technology partnerships at Air Products and Chemicals in 1995, he moved quickly to bring the company's many outside research projects under central control. "We didn't have a process for working with universities," Tao says. "It was an ad hoc buddy system. I wanted to put some discipline and structure into that." He identified one academic partner to begin with – Imperial College in London – and gradually included two more universities in the United States. As his confidence grew, Tao took a radical step and cast halfway across the globe for untapped expertise: About 50 scientists in a research lab in the former Soviet Union, who once worked on weapons systems and spacecraft, now contribute their ideas to Air Products' core technology for gas separations.

The amount Air Products spends on research – \$130 million, or about 2.4% of last year's revenues of \$5.5 billion – is par for the chemical industry. But by running the company's collaborative research programs through a directive

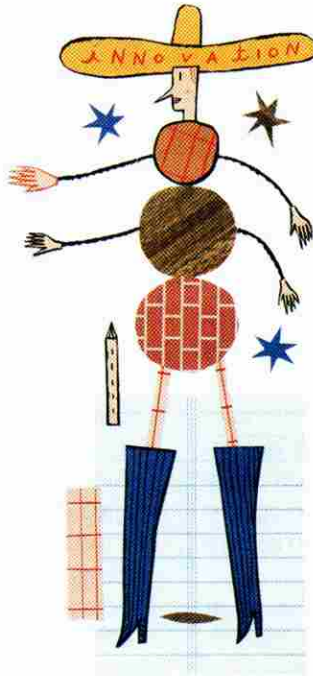


central office, Tao has managed to extend Air Products' capacity for innovation. Less than 10% of the company's R&D is conducted by outside partners, but those projects have disproportionate benefits: Each collaboration saves an average of two years of internal effort. Most external projects save the company hundreds of thousands of dollars in net research costs. And the average external research project generates tens of millions in potential revenues and millions in potential profits.

In addition to establishing strong central direction, companies need to develop experts who can handle the transactions that enable open-market innovation. Their expertise may come from the fields of law, licensing and patents, venture capital, alliances, research agreements, or some combination of these. For some companies, this expertise already exists inside; for others, it, too, will be imported.

Open-market innovation also seems to require formalized decision processes that demand outside data. Indeed, open-market innovation becomes part of a company's soul when nobody can approve a strategic plan or a budget without talking about what's going on in the outside world. Cargill is moving in that direction: The company has established a coordinated, three-tier approach that speeds up the decisions made about outside deals and alliances. Commitments at the scale of the Cargill Dow initiative are driven and managed from the top. Deals of a few hundred million dollars, once approved by the corporation, are handled by special teams at each of the 13 business platforms that make up Cargill. For smaller ventures, up to \$15 million, the business units take individual responsibility for completing the deal. A corporate transaction desk serves as the nerve center and traffic cop, offering an expert review of all the deals and overseeing decisions about alliances. Since every deal at Cargill passes through this corporate transaction desk, it has become a critical resource for knowledge about assessing, structuring, negotiating, and integrating transactions. "We work to make decisions very fast," Cargill's Haymaker says. "If we're going to help managers be more entrepreneurial in looking outside Cargill, we don't want to bind their hands." The corporate transaction desk works because it shares the information it gathers. Indeed, besides removing barriers to ideas flowing into and out of companies, open-market innovation also aims to improve the flow of ideas within a company.

Lilly is another one of the companies furthest along in institutionalizing the practice of open-market innovation. In 1997, the drugmaker moved its business development staff into the same space as its scientists and created a new



The tools of open-market innovation are pointless – indeed, dangerous – if they're not used to support a coherent strategic goal.

organization within the company to source innovation. The Find It team comprises about 20 research scientists charged with searching the world for innovative opportunities: new compounds, molecules, and technologies. The Get It team of business developers works elbow-to-elbow with the scientists to capitalize quickly on the opportunities they uncover. Together, they reviewed more than 1,000 opportunities in 2001, signed 300 confidentiality agreements, conducted 100 negotiations, and

formed 40 new partnerships – critical numbers that keep Lilly's pipeline of innovation flowing. That approach alone would not single out Lilly among big pharmaceutical companies. It's the third group, the Create Value team, that holds the key to the company's growth as an open-market innovator and helps Lilly burnish its reputation as a solid innovation partner. The Create Value team focuses solely on managing Lilly's relationships with its innovation partners. "They help manage cultural differences between the two partners, without bias toward the Lilly way of doing things," Dave Thompson explains. Lilly's partners, which include small biotech outfits, other big pharmaceutical companies, and university research teams, feel trusted. As a result, the pace and scale of innovation that flows between Lilly and its partners are growing.

A Free-Trade Agenda

If you suspect open-market innovation may work for your company, you need to gather data to support that intuition. That means looking in the mirror, without flinching, and comparing your company's capacity for free trade in ideas to that of your peers. It sounds easier to do than it is. There are plenty of absolute data available about companies' costs or profitability. But in the case of innovation, the data are open to broad interpretation. Managers often engage in groupthink and collectively distort reality. That's hardly surprising – the benefits of open-market innovation can threaten managers, especially when internal innovation forms a big part of a company's identity. Consider the situation at Polaroid, which recently filed for

bankruptcy protection and held a fire sale of its assets. The pioneer in instant photography lost everything because its longstanding bias for inventing at home caused managers to discount digital photography substitutes.


Data gathering should include the following steps:

- Start with the company's business objectives. Which activities will be central to the company's future and must be strengthened? Which are less critical?
- Analyze the company's innovation projects and categorize how those efforts support the main business objectives. Which innovation areas are core, adjacent, or distant? Where has the company's track record in open-market innovation tended to succeed or fail? Ask yourself: "Were we the barrier to success? Why?"
- Map the hot spots for relevant innovation around the periphery of the business. Ask yourself: "How many innovations burst on the scene from the periphery and surprised us?"
- Survey people inside the company about what they think are the barriers to innovation. Do the same with important vendors and customers to gauge how working with your company compares to working with others. Ask yourself: "Where are the main bottlenecks in my organization? Who can offer solutions?"
- Define, with numbers, the gap between what you expect your company to achieve with its innovation initiatives in the next three to five years and what you think competitors will achieve. How many key enabling technologies could be sourced more efficiently or effectively from outside of the company?
- Identify the ten most important innovations in the company and in the industry in recent years. Understand the origins of these ideas. Ask yourself: "Could any open-

market techniques have given me greater access to these external innovations?"

Once you have conducted this kind of innovation audit, you can begin building the basic infrastructure for open-market innovation. You can set up systems for capturing and circulating ideas inside and outside the company. You can set up the rules for the innovations that are being imported and exported – which technologies will be imported or exported, for instance, and under what time frames will they be released? You can start licensing out and selling your ideas. Most important, you can measure and reward your progress with open-market innovation; common metrics might include the contribution of open-market innovations to revenues and profits and the time it takes to reach certain milestones.

Putting a system in place to ensure the free flow of ideas and crafting a strategy based on open-market innovation may sound like major undertakings. They are. But, as Pitney Bowes discovered, companies can move swiftly to improve their market position when necessity demands it. Challenged by the anthrax threat, Pitney Bowes was able to turn out prototypes of crucial new products in record time. It was able to hard wire cooperation across its businesses, pooling knowledge and dispensing with institutional barriers. The rapid response "showed us that we could go from concept to marketable solution faster than we have ever done before," says Michael J. Critelli, Pitney Bowes's chairman and CEO.

At that pace, there's no turning back. 

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"So, to sum up, it appears that my gut reaction was simply indigestion instead."

