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by Henry W. Chesbrough

Reprint F0307A

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In a world of abundant knowledge, not all smart people work for you. The next big idea may spring from a maverick start-up or a researcher working for a competitor. For many companies in the innovation business, the response to these threats has been to circle the wagons tighter still, walling off their own R&D effort to keep competitors from stealing their best ideas.

These companies are enslaved by obedience to the old paradigm of closed innovation—the notion that the only good idea comes from within, that "if you want something done right, you've got to do it yourself." Closed innovation embraces a strategy of vertical integration and exclusive control. For most of the twentieth century, this paradigm worked, and worked well. One has only to think of the Edison and Bell laboratories. But increasingly this isolationism stifles innovation. Information now flows cheaply and instantaneously over the Internet; smart people are more widely dispersed but more closely connected than ever before. Ideas bubble up in organizations of all kinds

Company	Open Innovation Experiments	Rationale and Results
Importing Innovative Ideas		
Intel	Intel has opened four small-scale research laboratories, or "lablets," adjacent to universities in the United States and Britain to promote cross-pollination. A university professor bankrolled by Intel runs a lablet for two years, then returns to teaching so another faculty member can rotate in.	Intel gains informal access to a wide variety of faculty networks in a systematic way; faculty running the labs gain insight into Intel's R&D process. Products have yet to be developed by the newly opened lablets.
Eli Lilly	Lilly recently launched InnoCentive (www.innocentive.com), an on-line knowledge broker. Lilly and other firms post R&D problems on the site and solicit solutions from individuals and companies worldwide.	Lilly has received over 200 proposed solutions from visitors around the world, including scientists in China and Russia. The company has paid more than a dozen "solvers" for their proposals.
Toy makers and retailers	Mattel, Wal-Mart, and other toy manufacturers and retailers use idea brokers like Big Idea Group (www.bigideagroup.net) to scout on their behalf for new toy ideas. Big Idea Group invites inventors to submit ideas and then refines and pitches the promising ones.	Big Idea Group has placed a number of toys with companies like Basic Fun – which bought Tiny Totes, a line of miniature fashion handbags – and Gamewright – which bought the games Snap and Fowl Play.
Exporting Intellectual Capital		
Schlumberger	Schlumberger sells innovative ideas pertaining to oil field services to both customers and competitors. These ideas include ways to reduce drilling costs and increase data on reservoir characteristics collected during drilling.	Schlumberger once sold oil field technology innovations only to customers that used its services; selling to competitors now allows the company to profit from its ideas in any oil well anywhere in the world.
IBM	IBM uses excess capacity in its semiconductor fabrication facilities, or "fabs," to manufacture chips for other companies. Recently, IBM also started offering design services and now designs and manufactures some competitors' chips.	Renting out excess fab space lowers IBM's fixed costs for its own chips. IBM's intellectual property (IP) portfolio also offers IP insurance for its fab customers: IBM's extensive cross-licensing agreements reduce its customers' risks of being sued for IP infringement by another semiconductor company.
Dreyer's Grand Ice Cream	Dreyer's sells the use of its logistics and distribution system to competitor Ben & Jerry's. This system tracks retailers' inventory at the checkout scanner, automatically places restocking orders, and bills the retailer.	Sharing its system with another supplier spreads overhead costs across more volume. This increased volume also helps defray retailers' investments in scanners that use the Dreyer's system, encouraging additional retailers to adopt it.

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and sizes, not just in large research labs. And knowledge workers are ever more mobile, willing to take their ideas and talent to whatever firm will develop them.

In this world, companies must become nimble at "open innovation"—at accessing and exploiting outside knowledge while liberating their own internal expertise for others' use. Not only can they benefit from ideas they harvest from outside, they can profit from sharing their ideas with others, even competitors.

Consider the story of Lucent's battles with Cisco over telecom R&D. In the breakup of AT&T, Lucent inherited the lion's share of Bell Laboratories and, along with it, a wealth of R&D expertise. Flexing Bell Labs' muscle, Lucent launched many successful new products. But rival Cisco, lacking anything like a Bell Labs, managed to keep pace with Lucent and even occasionally beat it to market. How? It scanned the world for start-ups, investing in some, partnering with others, some of which it later acquired. In this way, Cisco matched the R&D output of perhaps the finest industrial research organization in the world without doing much internal research of its own. It simply looked beyond its own four walls.

The following table illustrates open innovation experiments that are already under way in a variety of industries to import innovative ideas and export intellectual capital. It's too early to gauge the ultimate success of these efforts and others like them. But they show how forward-thinking companies are throwing wide their doors, even to rivals, and leveraging the power of external ideas.

Open innovation experiments, already under way in a variety of industries, show how forward-thinking companies are leveraging the power of external ideas.

Henry W. Chesbrough is an assistant professor and Class of 1961 Fellow at Harvard Business School. He is the author of *Open Innovation: The New Imperative for Creating and Profiting from Technology* (Harvard Business School Press, 2003). He can be reached at henry@chesbrough.com.

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