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By Barry Jaruzelski and Rick Holman

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Casting a wide net: Building the capabilities for Open Innovation

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Many companies have embraced open innovation, only to discover that it is not for them. In fact a good number of those companies are not right for open innovation, mainly because they lack the capabilities needed to promote and leverage collaboration – within the company and with external partners. These authors identify and describe three strategies for open innovation, and explain what an organization must do to build the right capabilities needed for it to succeed.

Where do the best ideas in corporate research and development come from? Some of them emerge full-blown from the laboratories and research parks of major companies. Some are carefully formed in partnership with universities and other external research organizations. Still others are picked up along the way, from listening to and observing consumers, technology entrepreneurs and others outside the company with a “good idea.”

Finding and developing good ideas is what corporate innovation is all about. Yet all too many companies set arbitrary limits on the source of their ideas. The “not invented here” syndrome is all too common, and many companies simply don't have a process for capturing and developing ideas that originate outside their own organizations. But many companies are beginning to come to terms with the often-arbitrary limits they place on the ideation process. That's why the concept referred to as “open innovation” has dominated so many discussions of corporate innovation in the past decade.

However, open innovation is already at risk of becoming over-hyped as the cure for all kinds of innovation ills. That's not because good ideas can't be found outside the R&D lab, but because putting in place the processes needed to find, capture and commercialize ideas, and creating a corporate culture that promotes and protects these processes, is no easy task. Two core elements are needed to make this work: a culture open to the ideas of outsiders, and robust processes to capture and act on these ideas. Successful open innovation is about having the right capabilities needed to capture and act on ideas. Generating ideas is comparatively easy; executing them, as this article will describe, is the real challenge.

The virtues of openness

The logic behind the concept of open innovation is unassailable: Every company, and every line of business within a company, can benefit from looking outside their organizational boundaries for innovative ideas, for help in developing those ideas, and for validating those ideas in the real world of consumers. It is a truism that it is nearly impossible to be consistently smarter than the

rest of the world, so tapping into new sources of ideas can be a powerful exercise for overcoming this challenge.

The key to successful open innovation lies in establishing strong relationships with outside partners — whether they be universities, other companies, or even independent inventors and consumers — and developing systematic processes for surfacing and vetting ideas. Adequate intellectual property (IP) policies must be agreed on, policies that allow for the proper licensing of external ideas and make clear the conditions under which external partners can use that IP. But it is critical to make sure that such protections are not allowed to become restrictive legal handcuffs that stifle opportunities through an excessive aversion to risk.

Promoting open innovation within a company presents a different set of challenges. Here, success depends on creating a culture that expects and rewards the free exchange of ideas across divisions and geographies. Companies that do this well have typically established a team for managing the process and making sure that all of the company's R&D centers have a common set of tools for disseminating their own ideas throughout the company and for gaining access to ideas being developed by other groups.

The benefits of actively pursuing open innovation have been clearly demonstrated. Booz & Company's own research has shown that companies with robust open innovation capabilities — including strong technology-scouting practices — are seven times more effective than firms with weak capabilities, and twice as effective as those with moderate capabilities, in terms of generating returns on their overall R&D project investment portfolio.

Anecdotal evidence is equally strong. Procter & Gamble, for instance, has maintained its leadership in consumer packaged goods innovation in part by ensuring that its more than 9,000 R&D employees maintain formal contact with each other. And they maintain relationships with external resources such as customers, inventors, academics and other companies, often creating joint development and licensing deals. This systematic approach is how new products, like Crest White Strips, collaboration between P&G's personal care and bleach groups, are invented. P&G also looks further afield for good ideas, as it did in the case the Spinbrush, an idea it bought from a group of entrepreneurs (and later sold to Church & Dwight).

Strategies and capabilities

The resources that companies like Apple and P&G allocate to their open innovation efforts are not insignificant, however, and some companies' innovation strategies will require a more robust open innovation capability than others. So, innovation executives need to carefully determine whether such a capability is actually required to help achieve their strategic goals. How can they best approach this issue?

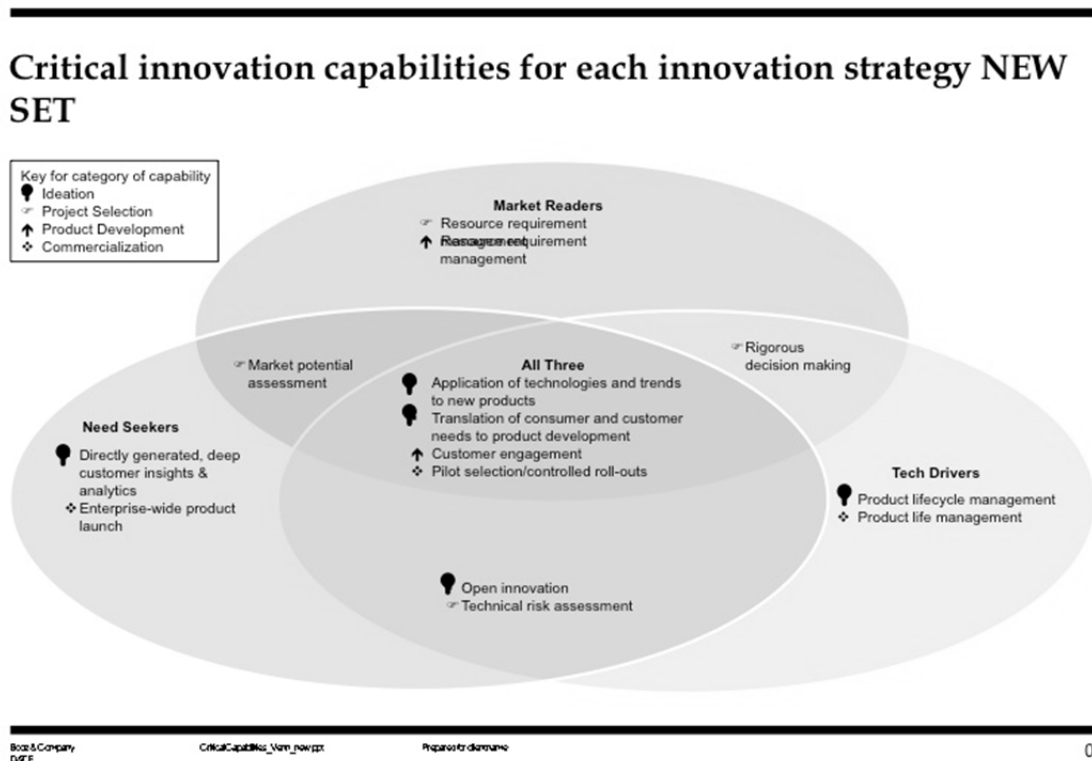
As part of our annual Global Innovation 1000 study, we identified three fundamental and distinct innovation strategies: Need Seekers, Technology Drivers and Market Readers.

- **A Need Seeker strategy** actively and directly engages current and potential customers to better capture their unarticulated needs, shapes new products and services, and strives to be the first to market with those new offerings.
- **A Technology Driver Strategy** follows the direction suggested by the company's technological capabilities, leveraging its investment in research and development to drive both breakthrough innovation and incremental change, often seeking to solve customers' unarticulated needs with new technology.

- **A Market Reader Strategy** monitors customers and competitors with equal care, but the company maintains a more cautious approach, focusing largely on creating value through incremental change and being “fast followers” of proven concepts.

Our research shows that any of these strategies can deliver comparable financial success if tightly aligned with a company’s overall business strategy. But it also demonstrates that each of these innovation models requires a distinct set of innovation capabilities to succeed. As Exhibit 1 shows, open innovation is a critical capability only for Need Seekers and Tech Drivers, both of which rely on being early to market, with the latest innovations rooted in either the latest technology or new customer insight. In the case of Need Seekers, they are continuously looking for ideas, often from customers, to drive incremental improvements in their products as well as entirely new offerings. Tech Drivers depend heavily on developing new, often untested, technologies that can be converted into products. Their success is highly dependent not just on importing fresh ideas from a wide variety of sources, but also on ensuring that the products that they do go on to develop will ultimately succeed in the marketplace.

Exhibit 1.



In light of these findings, companies that develop the appropriate innovation strategy align it with the overall corporate goals and assemble a cohesive set of capabilities to gain a clear financial advantage. We call this the “Coherence Premium” as such companies significantly outperform their rivals in both profit margin and market-cap growth over time.

The key isn’t to be good at everything, but rather to excel at what matters most to your success. That’s why open innovation only matters for some companies, namely those whose strategy is

dependent on finding and testing as many ideas as possible, and bringing the good ones to market first. Companies that have built their strategy around a fast-follower model should focus on being strong in other capabilities, particularly in the product-development and commercialization stages.

Establishing a program

Reaping the full benefits of open innovation is no easy task, especially for companies that have yet to venture into this often complex and tricky domain. We typically divide the effort into four steps: organization, processes and tools, culture and incentives.

Organization. No open innovation effort will succeed without the involvement of a senior-level executive to champion the program. An innovation office with access to a dedicated innovation fund should be established under his or her auspices; the office's mission should be to seek out new ideas, and it should put together two kinds of teams: some dedicated to developing and managing relationships with external partners, and others, chosen from different business units, to organize cross-functional innovation processes.

Culture. Of all the reasons companies struggle to innovate, the wrong corporate culture is frequently high on the list. The "not invented here" syndrome is common, especially among Tech Drivers, as is the lack of a truly collaborative cross-functional environment. Companies must learn the importance of focusing on consumer needs while embracing ideas generated outside the firm. A collaborative culture that extends across divisions and functions can help companies become more open to new ideas and experimentation.

Processes and Tools. Companies that make open innovation work do so by being highly disciplined. They communicate frequently and use consistent processes, backed up with simple, flexible IT tools, to track new ideas, select the best, and manage the development stage. Some companies are turning to social-media tools to promote internal and external collaboration.

Incentives. Once discovered, good ideas need to be captured effectively. Creating win-win solutions that benefit you and your partners are critical to successfully developing external ideas. Internal budgets for divisions and functions should be tied in part to their innovation efforts, as should individual incentives. This will require a process for developing and tracking key innovation metrics.

The Innovation Imperative

Few companies have the wherewithal to develop enough new products and services to keep growing in an increasingly competitive business climate. One thing is certain: a scattershot approach to open innovation will not succeed. Companies need to establish a systematic process for capturing the best ideas, whether from within or without, and focus on the specific set of capabilities needed to capture, develop and commercialize the good ideas that surface. Open innovation, like any key capability of a company, can keep you one step ahead of the competition, but only if it is approached with rigor and seriousness of purpose.

SIDEBAR

No boundaries or barriers

As part of our most recent Global Innovation 1000 study, Booz & Co conducted a survey in which we asked senior innovation executives to vote for the world's most innovative company. 3M was the third most frequently cited, right behind Apple and Google. That came as no surprise, given 3M's well-deserved reputation for smart new products.

3M's ability to keep churning out new innovations is very much dependent on the company's long-standing commitment to open innovation, both internal and external. We recently spoke with Fred J. Palensky, 3M's chief technology officer, who discussed the many ways his company creates and develops ideas through open innovation, and why its highly collaborative culture is essential to the process.

Can you describe how 3M's open innovation processes are organized?

The reason 3M is what it is today—a company that has developed organically across consumer, electronic, transportation, industrial, safety, security and display and electronic markets — is our shared, leveraged technology and innovation model. We assume that technologies and technological capabilities have no boundaries or barriers. Any product or manufacturing technology is available to any business in any industry in any geography around the world.

As the company's senior technology executive, I'm responsible for the corporate research laboratories. I represent the entire technical community at 3M, which includes about 10,000 R&D people in 73 labs around the world. About 15 to 20 percent of those people work in corporate research, which is responsible for developing, transmitting and supporting technologies throughout the company. I also head up the Corporate Technical Operations Committee, or CTOC, which ensures the development, health, sustainability and transmission of 3M's tech capabilities across all the businesses, geographies, and industries in which we operate.

3M has 63 full-scale operating businesses in dozens of industries in more than 70 countries around the world. Each one of those businesses conducts its own research, while maintaining connections with all the other R&D operations throughout the company.

What enables the cross-pollination of ideas?

We believe that no one business has everything it needs to conduct business in its marketplace without leveraging the rest of the company. So every single technical employee in the company has dual citizenship—they're part of a particular business, lab or country, and part of the 3M global technical community. We don't restrict people from moving from one business to another, one industry to another, or across country boundaries. Most of the people who run the businesses, the countries and the labs have been in five or six or ten different parts of the company before. They've grown up inside the 3M culture. I myself have been at 3M for 34 years, and I've had 14 different jobs in five different industries and three different countries. I like to think of it as a movement of people and ideas that's unofficial but officially endorsed.

3M also has an active external open innovation program. Can you describe it?

Our corporate labs are continually bringing in new employees and technologies from universities and other sources. And we collaborate closely with customers. We have 30 customer technology centers around the world, where our technical and marketing employees meet with customers, and expose them to the full range of 3M technology platforms. We ask them what their technical

issues, problems, and opportunities are, and whether any of 3M's many different technologies can help them. The constant technical interaction is critical in creating new innovations.

Can you discuss a specific product that arose out of 3M's open innovation process?

Really, all of them. Just to take one example, we just introduced an entirely new kind of sandpaper—shaped, fine-grained, self-sharpening, oriented structured abrasives. The mineral technology came from the abrasives division, some of the shape technology came from optical systems, coating technologies came from the tape division, and mathematical modeling and fracture analysis came from the corporate research center. Altogether, the abrasives division used seven different technologies to create the product, only two of which came from the division itself.

What role does culture play in sustaining open innovation at 3M?

I think our success is driven much more by culture than it is by structure or organization. We've been practicing open innovation at 3M throughout our history. The company started out making sandpaper, and our salesmen sold our products to all kinds of people. When they visited auto body shops, they watched workers struggle to paint fine lines and borders. So the salesmen went back to the office and talked about the problem. That was the beginning of our masking tape business. That's the culture that has sustained us ever since.

But we also actively support that culture. All of our technical people at the corporate labs dedicate about 15 percent of their efforts towards programs, interactions, learning and teaching, in areas outside their particular responsibilities. In addition to the various programs we're developing at the corporate labs, we are working on more than 300 joint programs with various divisions and businesses. So, in addition to their corporate responsibilities, everyone is also a member of a team that is working alongside division members in either technology transfer or new product-development projects.

All of this creates a community of collaboration and it ensures that everybody has some skin in the innovation game. And because our senior leaders have grown up in this culture, they continue to nurture and protect this highly collaborative, enterprising environment. Cultures are unique and extraordinarily difficult to duplicate. And it takes a real effort to sustain them.