Open innovation: From its beginning to today

Ed Bernstein, President, Industrial Research Institute

In our constantly changing world, corporations find themselves continually adapting to new trends and technologies, and often reinventing themselves to remain relevant. In fact, with our changing global business environment, staying the course is not an option if today's businesses want to remain viable and competitive.

One of the most dramatic corporate shifts we have seen over the last decade is on the innovation front. As recently as the early 2000s, innovation was solely derived from within an individual corporation's walls through its internal R&D departments. However, as the pace and intensity of competition around the globe increased, it was widely becoming recognized that to maintain and increase a competitive edge, R&D strategies were going to have to change.

In 2003, Henry Chesbrough wrote about a new collaborative innovation theory and coined it "open innovation," which he defines as "the use of purposive inflows and outflows of knowledge to accelerate internal innovation and expand the markets for external use of innovation." He further explains that the open innovation paradigm can be understood as the antithesis of the traditional vertical integration model in which internal innovation activities lead to internally developed products and services that are then distributed by the firm.[1]The roots of this concept date back almost a decade prior to Chesbrough's research, to discussions and meetings at the Industrial Research Institute with members like Procter & Gamble (P&G) and General Electric (GE) sharing best practices on how to succeed in R&D's ever-changing environment .

It is not a coincidence that at the same time our innovation model was beginning to change, the Internet and emergence of social media were enabling society as a whole to be more connected and helping to facilitate collaboration across geographies. In the same year as Chesbrough, the widely-regarded founding father of open innovation, presented his theory, LinkedIn was introduced; Facebook debuted a year later and at the end of June 2012 was reporting an astounding 955 million monthly active users; Twitter launched in July 2006 and today has more than

500 million active users.

Not surprisingly, leaders at major corporations in various industries were recognizing that the world was becoming increasingly connected and perhaps the most effective and efficient path to innovation was no longer through internal channels and limited company resources. The concept of open innovation progressively began to infiltrate corporate R&D practices and today has claimed a prominent position in our corporate culture as a compelling and effective force behind creating new concepts and products.

Procter & Gamble was one of the first companies to explore using external sources for innovation. Its approach, Connect + Develop, was first presented in 2000 at a fall meeting of the Industrial Research Institute, and would become P&G's open innovation program.

Gil Cloyd, P&G's Chief Technology Officer from 2000 until his retirement in 2008, reflected on and shared his innovation experiences while at the company in the July/August 2012 issue of Research-Technology Management (RTM), the journal of the Industrial Research Institute.

"In early 2000, P&G had just missed two earnings projections. The company lost about half of its market capitalization. As a company that prided itself on innovation, a company that had a tremendous research and development organization, and a company that was investing significantly in research and development, we saw that we needed to make major changes."

Today the company – creator of Swiffer dusters, Bounce, Crest, and more – attests that more than half of its new product initiatives involve significant collaboration outside company walls.P&G has an external website completely dedicated to its innovation approach where they encourage sharing of ideas through a submission portal and tout that they "partner with small companies, multi-nationals, individual inventors, and in some cases, even our competitors, to bring game-changing innovations to market."[2]

General Electric is another company widely accepted as a successful innovator. GE's technologists are constantly benchmarking, scanning the competitive landscape to assess whether and how externally developed technology can be adapted or acquired to provide competitive advantage.[3]

One of GE's most recent successes has been its open innovation challenges. "The ecomagination Challenge began as an experiment to find and fund the best new ideas related to powering the grid and the home. With a judging panel of roughly a dozen GE leaders, venture capital partners, and independent experts in place, GE announced the challenge, expecting a few hundred submissions at most. What came next was a deluge: 4,000 ideas from inventors and entrepreneurs in 160 countries."[3]

As a result, GE created a $20 million ecomagination Innovation Fund and selected five start-ups for $100,000 innovation awards, invested in 14 companies and

acquired one company that entered the ecomagination Challenge. In addition, a new healthymagination Challenge was launched last fall, with the first five winners selected in June, for promising innovations in breast cancer detection and diagnostics.[3]

P&G and GE are just two examples of the thousands of corporations implementing some model of open innovation in their research and development strategies. The concept continues to evolve and take different form from industry to industry and company to company.

Despite its form, the fact remains that the ability of companies to innovate is one of the key factors to future economic success. Therefore, companies across industries, universities and the government need to work together and continue to be flexible and creative in their management of innovation to keep moving forward.

Ed Bernstein is president of the Arlington, Virginia-based Industrial Research Institute (IRI), the nation's leading association of companies and federal laboratories working together to improve their research and development capabilities. IRI is the only cross-industry organization creating innovation leadership solutions and best practices in innovation management developed through collaborative knowledge creation. More than 200 industrial and service companies, including General Electric, Chevron, Lockheed Martin and Procter & Gamble, are among its membership. IRI will mark its 75th anniversary in 2013.

[1]"Open Innovation: Where We've Been and Where We're Going," Research-Technology Management, July-August 2012 http://www.iriweb.org/Public_Site/RTM/Volume_55_Year_2012/July-August_2012/Open_Innovation_Where_We_ve_Been_and_Where_We_re_Going.aspx [1]

[2]Connect + Develop website, http://www.pg.com/connect_develop/index.shtml [2]

[3]"GE's Open Collaboration Model," Research-Technology Management, July-August 2012

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