

CONNECT AND DEVELOP MODEL IN P&G

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Connect and Develop model in P&G

"We needed to move the company's attitude from resistance to innovations "not invented here" to enthusiasm for those "proudly found elsewhere." And we needed to change how we defined, and perceived, our R&D organization—from 7,500 people inside to 7,500 plus 1.5 million outside, with a permeable boundary between them."¹

A.G.Lafley, CEO, P&G

"Open innovation is the use of purposive inflows and outflows of knowledge to accelerate internal innovation, and expand the markets for external use of innovation, respectively. This paradigm] assumes that firms can and should use external ideas as well as internal ideas, and internal and external paths to market, as they look to advance their technology."²

Henry Chesbrough, Executive Director, Center for 'open innovation'

Till the 1980s, organizations adhered to 'closed innovation' model which was based on a philosophy 'successful innovation required control'. Most of the companies invested heavily on a 'closed innovation' model called 'invent it ourselves' for developing their products and preferred not to assimilate information from outside of their own R&D labs.³ In the early 2000s, when a 'closed innovation' failed to yield the desired results, companies like IBM,⁴ Dell,⁵ Cisco⁶ and Xerox⁷ adopted the 'open innovation' model.

P&G, a \$40 billion company with 1,60,000 employees had been selling around 300 brands in more than 80 countries. Till the 1990s, P&G used 'invent it ourselves' model to achieve growth. In 2000, its products failed in the market and P&G experienced decline in its sales. To leverage its business, P&G adopted a new model known as 'open innovation' in the year 2001. With P&G adopting the 'open innovation', few analysts wondered whether it would become a universal model for companies, which were struggling to control their businesses.

¹Henry Chesbrough, "open innovation": The New Imperative for Creating and Profiting from Technology' www.innovationenterprise.com

²www.openinnovation.net/index.html

³"open innovation" www.quickmba.com/entre/open-innovation/

⁴International Business Machines Corporation is an American computer technology corporation headquartered in Armonk, New York. The company is one of the few information technology companies with a continuous history dating back to the 19th century; it was founded in 1888. <http://en.wikipedia.org/wiki/IBM>

⁵It is an American computer hardware company based in Round Rock, Texas, which develops, manufactures, supports, and markets a wide range of personal computers, servers, data storage devices, network switches, personal digital assistants (PDAs), software, computer peripherals, and more. http://en.wikipedia.org/wiki/Dell_Inc

⁶An American manufacturer of telecommunications equipment based in California. The company originally manufactured only enterprise routing equipment, but it now sells a variety of devices for both enterprises and telecommunications carriers.

⁷Xerox Palo Alto Research Center was a flagship research division of the Xerox Corporation, based in Palo Alto, California, USA. It was founded in 1970, and spun out as a separate company (still wholly owned by Xerox) in 2002. It is best known for essentially creating the modern personal computer graphical user interface. http://en.wikipedia.org/wiki/Xerox_PARC

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Shift from closed innovation to open innovation model

Closed innovation

In 'closed innovation' model, companies like IBM, Cisco invested in large central research labs to generate their own ideas, develop, manufacture and market the products developed through these ideas internally. Most innovating companies kept their discoveries highly secret and made no attempt to assimilate information from outside of their own R&D labs. It helped them to create value-added products with their technology and to reinvest their returns in more research to create a virtuous cycle (Annexure I). Though this internally focused approach to R&D remained well-suited to managing innovation in industries in which the protection of intellectual property⁸ was very tight, regulatory restrictions were very high, start-ups seldom arose and in which little investment was required⁹, it became obsolete in the software, pharmaceutical and retail industries.¹⁰

In the late 1990s, competition from foreign and over-the-counter markets became intense and the globalized marketplace induced the incubation of new ideas in far-flung arenas to which the organizations often had little access. With pools of knowledge beginning to be distributed among many avenues, companies, customers, universities, industry consortia, and start-ups, the knowledge monopoly broke down in most of the industries. Moreover, the growing mobility of experienced personnel from one company to another made it nearly impossible to retain the 'ideas' as a secret. Rival firms could access their extensive experience and capabilities at a fraction of their true cost by simply hiring away "the best and the brightest." This created a hazard for the previous employer, which jeopardized that firm's ability to continue to invest in R&D. Companies lost their revenue due to inefficiency in sales, efforts wasted on targeting the wrong segments and high customer attrition. In order to leverage their businesses, organizations wanted to harness outside ideas to advance their own businesses, while leveraging their internal ideas outside their current operations (Annexure II).

Open innovation

The central idea of 'open innovation', a concept promoted by Henry Chesbrough,¹¹ was that in a world of widely distributed knowledge, companies couldn't afford to rely entirely on their own research, but instead should buy or license ideas (i.e. patents) from other companies (Exhibit I). In addition, internal ideas not being used in a firm's business, should be taken outside the company (e.g., through licensing, joint ventures, spin-offs). In order to control and succeed in their businesses, companies like IBM and Dell started working on 'open innovation' model (Annexure III). These companies managed to restrain their businesses and also could achieve a drop in their R&D investment. Witnessing their success, P&G decided to adopt it.

⁸ It is an umbrella term for various legal entitlements which attach to certain types of information, ideas, or other intangibles in their expressed form. http://en.wikipedia.org/wiki/Intellectual_property

⁹ The firms had the ability to store their technologies on the shelf, until they were ready to take their discoveries to market, without fear of significant leakage of that technology out of the company and into a start-up or another rival company.

¹⁰ Henry Chesbrough, "open innovation": The New Imperative for Creating and Profiting from Technology', www.powerhomebiz.com

¹¹ www.answers.com/topic/open-innovation

Exhibit I

Open innovation

Open-Market Innovation requires corporations to:

- *Focus resources on core innovation advantages.* Allocate resources to the highest-potential opportunities in order to strengthen core businesses, reduce R&D risks and increase innovation capital.
- *Improve innovation circulation.* Build information systems to capture insights, minimize duplication of efforts, improve teamwork and increase the speed of innovation.
- *Increase innovation imports.* Access world-class ideas, complement core innovation advantages and strengthen the company's cooperative abilities and its reputation.
- *Increase innovation exports.* Establish incentives and processes to objectively assess the fair market value of innovations, raise incremental cash and strengthen relationships with trading partners.

Uses

Companies use Open-Market Innovation to:

- Clarify core innovation competencies;
- Maximize the productivity of new product development without increasing R&D budgets;
- Decide quickly whether to pursue or sell patents and other intellectual capital;
- Increase the speed and quality of new product introductions.

Source: www.openinnovation.net

Innovation in P&G

P&G was a global corporation based in Cincinnati, Ohio that manufactured a wide range of consumer goods (Annexure IV). It created most of its phenomenal growth by innovating from within—building global research facilities and hiring and holding on to the best talent in the world.

Till the late 1990s, P&G succeeded in witnessing growth in the market by using its 'invent it ourselves' model to generate ideas internally (Exhibit II). But in 2000, the explosion of new technologies created more pressure on P&G's innovation budgets. Its R&D productivity leveled off, and its innovation success rate had stagnated at about 35 %.¹² Squeezed by nimble competitors, flattening sales, lackluster new launches and a quarterly earnings miss, P&G's stock slid from \$118 to \$52 a share.¹³ It witnessed sales decline to \$39.2 billion in 2001, from \$40 billion in 2000 (Exhibit III).¹⁴ P&G realized that its invent-it-ourselves model was not capable of sustaining high levels of top-line growth. It studied the performance of a small number of products it had acquired from outside its labs and found that these external connections produced profitable innovations. Betting that these connections were the key to its future growth, CEO, Alan Lafley, adopted the Connect and Develop (C&D) model and decided to acquire 50%¹⁵ of its

¹² 'Proudly Found Elsewhere': the move to distributed R&D'

<http://bulletin.sciencebusiness.net/ebulletins/showissue.php3?page=/548/art/5020>

¹³ 85% of P&G's new products failed in 2000 and in 2006, the company has succeeded in marketing 60% of its products, www.dallasnews.com

¹⁴ www.pg.com

¹⁵ opcit 'P&G's New Innovation Model'

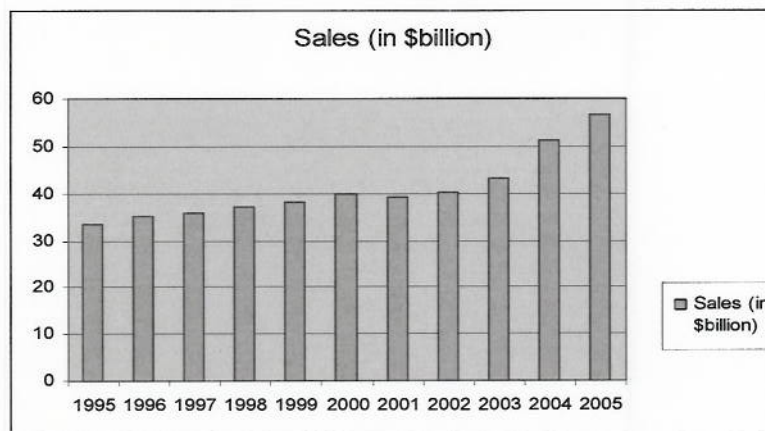
innovations from outside the company. The strategy wasn't to replace the capabilities of its 7,500 researchers and support staff, but to better leverage them. Lafley remarked, "It was clear to us that our invent-it-ourselves model was not capable of sustaining high levels of top-line growth."¹⁶

Exhibit II
Innovation in P&G

Closed Innovation	Mass Customization	Customer Co-Design	Open Innovation
Traditional mass production and process improvement, slow customer feedback cycle (e.g. according to sales), customer surveys, market potential, variety of products	Flexible manufacturing, modularity, variety of modules, customizable changeable elements, direct customer interaction when defining the product, high customer involvement	Flexible manufacturing capacity, some core solutions like manufacturing methods can be predefined, otherwise customers are offered tools to design products, customer creative contribution and high customer participation	Customer creative contribution, design of core solutions, no ownership (or customer ownership), returns on implementation and attached services, multiple stakeholders, high customer commitment

Source: www.typepad.com

Exhibit III
P&G's Sales Decline in 2001



Source: www.pg.com

¹⁶ Jim, 'P&G's Connect & Develop Innovation model', Jun 2006, www.advancesight.com

Connect and Develop model

In 2003, P&G developed the "Connect & Develop" model to generate ideas from scientists, engineers, inventors, entrepreneurs and individuals outside the company (Annexure V). Lafley said *"The internet allowed us to exploit the entrepreneurial spirit and the tremendous intellectual capability that exists outside the company. We've now got a palette of virtually unlimited colors."*¹⁷ P&G used these ideas to improve its existing products and to launch new ones in the market. For example, P&G compared its products with its competitor's and expanded its Crest brand (oral care) to include whitening strips, flosses and power toothbrushes. It created a network of technology solutions in the name of technology entrepreneurs and open solutions.

Technology Entrepreneurs

P&G relied on proprietary networks to facilitate connect and develop activities which included Technology entrepreneurs and Suppliers. P&G used the network of 70 technology entrepreneurs around the world to develop and identify consumer needs and the technology and to create adjacency maps¹⁸. These entrepreneurs worked through six C&D hubs located in China, India, Japan, Western Europe, Latin America, and the US by finding products and technologies as per the specialties of the region. For example, the China hub specialized in new high quality materials and cost innovations whereas the Indian hub served to seek local talent in the science field and to solve problems in the manufacturing process. Using its 50,000 R&D staff, P&G developed an IT platform to share technology and information with its suppliers. By the joint effort of P&G and its suppliers, P&G witnessed a 30% increase in its innovation projects in 2003.¹⁹

Open networks

It included four major connect and develop resources-NineSigma, InnoCentive, YourEncore and Yet2.com.

NineSigma: P&G created NineSigma to identify and disseminate problems to several solution providers worldwide. These solution providers were required to submit their project proposal to P&G and those which were beneficial to P&G were selected and NineSigma was used to connect the company and the solver by proceeding with the project. Through NineSigma, P&G distributed technology briefs to 7,00,000 people and completed 100 projects, out of which 45% led to further collaboration.²⁰

InnoCentive: Innocentive was similar to NineSigma but provided solutions to more narrowly defined scientific problems. For example, for problems related to industrial chemical reactions, it took five steps to identify an answer but InnoCentive accomplished it in three steps. Using this, P&G managed to solve one third of its problems.

YourEncore: This came into existence in 2003. It connected about 800 high-performing retired scientists and engineers from 150 companies with P&G's client business. It brought in experiences and new thoughts from other organizations and industries.

¹⁷ At P&G, It's "360-Degree Innovation" www.businessweek.com/magazine/content/04_41/b3903463.htm

¹⁸ P&G used the new products to take the advantage of existing brand equity. For example P&G asked which baby care items such as wipes and changing pads were adjacent to Pampers' disposable diapers and then tried to come out with a new emerging product in those categories.

¹⁹ Connect and Develop Inside Procter & Gamble's New Model for Innovation' <http://doi.contentdirections.com/mr/hbsp.jsp?doi=10.1225/R0603C>

²⁰ ibid