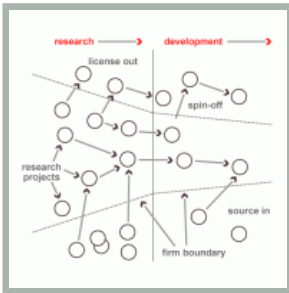


open innovation



characteristics

author:	Chesbrough, Henry W.
country:	United States
period:	2003
type:	model
role:	change agent and manager
activity:	analyse and design
topic:	strategic management, innovation & risk and technology & operations
abstr. level:	environment
perspective:	learning
status:	for review
module:	innovation
comments:	1

related models

business ecosystem
stage-gate innovation process

description:

Open Innovation offers a philosophy on organising innovation processes at corporate R&D departments. Organisational structures can be devised that increase the innovative capacity of firms by (1) better integrating external sources in their internal development efforts and (2) better monetizing internally created technologies by selling them to the market.

Henry W. Chesbrough's built a successful business career in Silicon Valley as a product planner and strategic marketing manager. He spent seven years at Quantum Corporation, a hard disk drive manufacturer, before joining the academic world. He wrote his book at a time when companies found it harder to justify innovation investments because of rising development costs and shorter product-life-cycles. Chesbrough was motivated by his strong desire to address these negative economic forces on R&D expenditure. He based his study on field research, primarily within the IT-sector, but also on blue chip firms such as Proctor & Gamble. Strategy & Business Magazine awarded Open Innovation the Best Business Book of 2003.

Chesbrough noticed that companies excel at innovating within their current market, but encounter difficulties identifying and exploring potential new markets that fall outside the business scope of their current market. He also observed a broadening diffusion of domain knowledge caused by a sharp increase in knowledge intensive start-up firms and the increasing productivity of applied research at universities. He concluded that the 1930's concept that new knowledge be exclusively developed by corporate R&D and protected inside big firms was no longer applicable. Chesbrough recognized the opportunities for organisations to innovate in an open world where boundaries between firms had become more porous.

Open Innovation is based on two core ideas:

1. companies should *use external knowledge and technology* to strengthen their own innovations
2. companies should *create value from internally developed innovations* that are not immediately applicable in their own business.

1. USE EXTERNAL TECHNOLOGY IN INTERNAL R&D EFFORTS

Chesbrough suggested options for large companies to apply external knowledge within their own innovation processes. Promising ideas developed by small companies and research institutes could be internalised by organising lead-user innovation, cooperation with universities, formation of alliances or the establishment of joint ventures.

He gave special attention to technology start-ups as a valuable source of new knowledge since these firms often experiment with new technologies or technological combinations in markets that are not yet attractive/big enough for larger firms. Blue chip companies should continually monitor these developments. When promising opportunities arise, they can either adapt their own technology strategy, cooperate with start-ups, or even acquire those that are most promising and strategically interesting.

Companies can also decide to foster the creation of useful start-ups by establishing their own venture capital departments and investing in these experiments at an early stage. The internal innovation process should be structured to allow the incorporation of external ideas at each stage of the innovation funnel. Although many new technologies can be obtained externally, internal R&D remains critically important for innovation in larger companies since this department determines the firm's absorptive capacity. The task of the internal R&D department is to oversee the system architecture and determine where pieces of external knowledge can be blended in with existing internal R&D efforts.

2. CREATE VALUE FROM INTERNAL

R&D Since firms generally acquire what they need and do not possess, it is more natural for companies to in-source external knowledge and less natural to sell ideas that they perceive have little to no value. Internal innovations can be used as a source of value in three ways:

1. *Incorporating the technology* in a company's existing business;
2. *Selling or licensing newly created knowledge or technologies with no fit* in the company's current business. The recipient company must have a business model and mindset in order to integrate the newly acquired knowledge or technology;
3. *Launching a new venture that exploits the new technology in a new business area* if a recipient company cannot be found such as an internal venture, a joint venture or a spin-off.

By forming smart combinations, firms can substantially decrease the number of "false negatives" and ease the constraints to justify investments in innovation. False negatives are projects that seem unpromising inside a company since they do not fit in the company's business model, but promise potential high value creation outside the company.

The Open Innovation model provides a mindset in dealing with a business environment where relevant ideas are generated by internal and external sources. Value is created by continuously synchronising internal & external R&D efforts.

assets:

	open innovation defined ProvenModels • editor PM • version 0.2 • 74 KB
	open innovation metrics

 **Open Innovation Metrics**
ProvenModels • editor PM • version 0.2 • 31 KB

 **the logic of open innovation**
ProvenModels • editor PM • version 0.2 • 56 KB

pros:

- The model proposes a philosophy on innovation processes within a business environment where usable ideas are increasingly created outside a single organisation.
- Business challenges from a world where knowledge is diffused are made explicit; i.e. the need to integrate external ideas and technologies within a firm's own innovation process.
- The model makes practical suggestions on managing false negatives and making money from these R&D efforts by leveraging alternative development and commercialization paths.
- The philosophy can be used by both top management responsible for the definition of innovation strategies as well as by technology managers responsible for the day-to-day running of corporate R&D departments. To apply open innovation, technology managers have to familiarise themselves with a larger variety of business models, find new ways to access external knowledge, and apply new methods to take technology to market.

cons:

- The organisational members need to both embrace a doctrine for the model to have a practical effect and change their mentality in order to develop a more open approach to innovation. External partners must also have a similar mindset to be able to effectively work together.
- The frequent not-invented-here syndrome at corporate R&D centres is not naturally overcome by the application of Open Innovation. Top management support and reward schemes are crucial in fostering a positive attitude towards the adoption of external ideas.
- A company might focus too much on external developments and forget that it needs internal R&D in order to integrate and build on these external ideas.
- Companies that start Venture Capital departments to fund relevant start-ups tend to shut down these initiatives when the economy deteriorates, sacrificing the slow development of new technologies and markets for a short-term benefit.
- Open Innovation stands or falls by the presence of a properly enforced legal system that requires an awareness of regional and national differences in legal systems. Underregulated systems risk the non-payment of licence fees. Overregulated systems favour patent hunters who cherry pick firms product portfolios by legally attacking successful products with obscure patent claims with the intent of exacting financial settlements.
- Although Open Innovation is generally applicable, a successful implementation is dependent on company characteristics such as sector, size and culture.

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