Innovation: A Unique Opportunity for CIOs

Introduction

A report[1] by the Economist Intelligence Unit defines innovation as 'the application of knowledge in a novel way, primarily for economic benefit'.

Experts have identified two main types of innovation – disruptive and sustaining – a division that is compatible with the above definition. In his book 'The Innovator's Dilemma', 1997, Clayton M. Christensen defines disruptive innovation as 'a technological innovation, product or service that eventually overturns the existing dominant technology, service or product in the market place'. A sustaining innovation, on the other hand, adds incremental improvements to what already exists, without having a significant impact on user behaviour.

Industry Context

As well as becoming the new 'Holy Grail' of the business world, innovation has also undergone an image change in recent years. Once seen as the sole responsibility of the corporate R&D facility, innovation is now regarded as being open to all parts of an organisation including all its employees, suppliers, partners and customers. This approach more accurately reflects reality. As early as 2000, PricewaterhouseCoopers reported that only nine per cent of innovative ideas actually came from R&D, while 29 per cent came from employees and 46 per cent from external sources.

[1] 'Innovation: Transforming the Way Business Creates', May 2007

An extensive 2007 survey, carried out by the Economist Intelligence Unit and sponsored by Cisco, identifies that 72 per cent of companies use customers and market research to generate innovative ideas while 41 per cent use competitors. Additionally, only 21 per cent of innovative ideas wholly or partly come from scientific breakthroughs, while changes in industry or market structure and process inadequacy provide the commonest drivers for innovation. The full report, entitled 'Innovation: Transforming the Way Business Creates', can be found at: http://tools.cisco.com/dlls/tln/page/research/detail/rs/2007/innovation

These statistics show that for innovation to succeed, a culture must exist which encourages collaboration across boundaries both within and outside an organisation; Cisco believes that the IT group is central to providing tools that enable effective collaboration.

A Structured Approach

Business leaders are recognising that in today's global economy, with its emphasis on corporate agility, innovation does not just apply to the development of new products and services, or to sectors that are traditionally research-intensive such as technology or pharmaceuticals. It extends to all types and sizes of organisation and encompasses areas such as strategy, business processes, brand mastery and the customer experience.

'Vision without execution is hallucination', as Albert Einstein said, and it is essential to provide an environment in which innovative ideas, once generated, can be cultivated until they develop into successful business propositions. Instead of seeing innovation as an activity that is too amorphous and unpredictable to manage, more and more businesses are adopting a structured approach that focuses on the desired economic benefit.

Statistics suggest that companies must search widely and work tirelessly in order to translate innovation into bottom-line benefits. One cross-industry study (Stevens and Burley, 1997) estimates that out of every 3,000 initial ideas, only 125 develop into fully-fledged projects, only 1.7 products are launched and only one product succeeds in the market. The ratio is even higher (1 in 5,000) in the pharmaceuticals industry.

Innovation on its own is not a guarantee of commercial success, but it nevertheless has a beneficial effect on corporate performance. The Economist Intelligence Unit reports[2] that, among firms where innovation is identified as critically important, 46 per cent perform better than their peers, compared with 32 per cent of firms that do not think innovation is critically important.

CIO as Catalyst for Innovation

Although CIOs are unlikely to be leading the organisation-wide innovation agenda, they are uniquely well placed to act as both a catalyst and an enabler for innovation. This is because of the end-to-end view that CIOs tend to have of their organisations, which gives them an insight into the business functions as well as the underlying processes and the IT infrastructure. In addition, leading CIOs have insights into the future direction of technology and the opportunities that may bring to the organisation and its customers.

CIOs are well positioned to play a leadership role in the creation of a more innovative environment by:

· Ensuring that the IT platform enables collaboration, supporting a broad and geographically distributed community, both internally and externally, including as many people and groups as possible, and pervading all aspects of an organisation's activities (the Economist Intelligence Unit report[3] identifies good collaboration as one of the vital characteristics of an environment in which innovation can thrive)

· Putting in place tools and processes that enable the company to gather ideas, to analyse them and to identify potential winners

· Ensuring that the IT architecture is flexible, robust, secure and primed for rapid evolution as new business opportunities emerge

· Helping to ensure that the IT organisation has the necessary business agility to react fast to opportunities that arise or to changes in the market

[2] 'Innovation: Transforming the Way Business Creates', May 2007

[3] 'Innovation: Transforming the Way Business Creates', May 2007

· Devoting time to researching new technology trends and the potential opportunities they bring to the business, and providing a structured process for partnering with business leaders to explore these opportunities.

Contributing to the innovation agenda is one way in which CIOs might increase their participation at the business level of their organisation, thereby furthering their own aspirations and those of their department. An innovation role might also help CIOs to shift the balance of IT investments away from 'keeping the lights on' and towards innovative projects that support business growth.

According to Gartner, up to 70 per cent of IT budgets are currently spent on maintaining and improving existing systems and applications. By supporting a culture of innovation, CIOs are helping to encourage a range of improvements that might potentially reduce the budget required for keeping the lights on. They are also helping to build an environment in which disruptive innovations – ideas that could provide a competitive advantage and drive business growth – are proactively sought and supported. In such an environment, the business and IT agendas are likely to be closely aligned, helping the CIO to invest more of the IT budget in projects that support innovation.

Finding New Ways to Innovate

Companies such as Proctor & Gamble (P&G), Eli Lilly and Boeing have adopted innovative collaborative models that have yielded impressive results. Until 2000, for example, P&G relied on its internal R&D operations for all consumer product developments. CEO A. G. Lefley recognised that P&G's global innovation model, devised in the 1980s, could no longer meet the company's growth objectives, and he decided to look for external sources of innovation.

The result was P&G's 'Connect and Develop' innovation model which encourages external connections and leverages expertise far beyond the company's internal capabilities. By 2006, more than 35 per cent of P&G's new products had elements that originated outside the company, compared with about 15 per cent in 2000. P&G has also increased its R&D productivity by nearly 60 per cent and more than doubled its innovation success rate.

At the other end of the scale, Cisco has worked with Silver and Goldie Productions, a small video production company that is expert in the 'machinima' technique of creating movies in virtual worlds. During this collaboration, which resulted in the creation of a Second Life[4] demo, no physical meetings took place. Thus small companies can achieve global reach by using collaboration technology in innovative ways.

Cisco's Perspective

Cisco invests over $3.2 billion annually in R&D and has traditionally relied on its R&D capability to develop enhancements to existing product areas, while using acquisitions as a means of entering new markets. This approach is now evolving as part of Cisco's strategy to maximise all opportunities and sources of innovation. Although Cisco continues to invest in R&D and acquisitions, the company is also exploring different ways of bringing innovation to the marketplace quickly and effectively.

For example, Cisco has changed the model it uses for moving into adjacent markets from a uniquely acquisitions-led approach to one that also encompasses 'internal venturing', which involves nurturing start-ups inside the company instead of buying them. This reduces both the time it takes to integrate acquisitions and the associated risks.

In January 2006, Cisco created an Emerging Technologies Group (ETG) whose mission is to cultivate a steady stream of new businesses with billion dollar potential and to act as a growth engine for the company's existing foundation and advanced technology businesses. There are currently four business units in the ETG: Safety & Security Systems, Digital Media Systems, Physical Security and TelePresence Systems. All four business units have launched products and are booking orders.

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4. Second Life is an Internet-based virtual world

The ETG develops a focused go-to-market strategy for each emerging technology to help maximise the chances of success at market entry. This is a new approach for Cisco that requires everyone involved to collaborate and communicate on a new level. ETG found from its TelePresence launch, for example, that a cross-functional board was needed for every business unit to strengthen governance and ownership. The ETG remains responsible for its products or solutions until they are ready to transfer into the care of the mainstream advanced technology teams.

Using figures from the venture capital sector, Cisco is assuming a 75 per cent success rate in new product areas in which Cisco makes an investment following the initial analysis process, meaning it needs to make 20 investments to get to its goal of 15 business units. If ETG funds only two per cent of all projects it reviews (another figure adopted from venture capital), it needs to consider 1,000 ideas – an undertaking that requires a formal process using collaboration technology.

To ensure that ideas are translated into successful products, Cisco has developed an Innovation Framework (see Figure 1) which it sees as an important competitive advantage. The Innovation Framework consists of five key steps: Find, Filter, Initiate, Accelerate, Graduate/Eliminate. These steps provide the structure and processes for internal venturing. One of the processes introduced to support 'Find', for example, is a wiki called I-Zone where all Cisco employees can contribute ideas for a potential new business. The power of collaboration is essential to the process: 135 ideas submitted to the I-Zone in August/September 2006 received almost 800 updates from colleagues who added to, or changed, an idea to make it better.
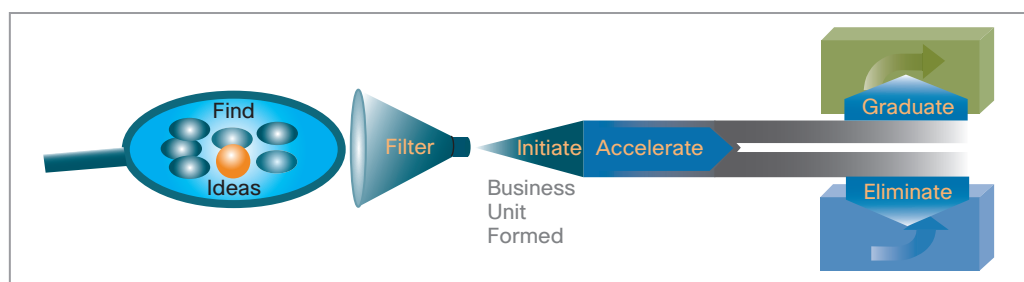

Figure 1: The Innovation Framework provides the structure and processes for internal venturing

Cisco has recently extended this approach outside the company with a concept called I-Prize where innovators can pitch an idea, collaborate globally with other entrepreneurs and ultimately win prize money. More information is available on I-Prize at: http://www.cisco.com/web/solutions/iprize/index.html

The ETG is already being hailed a success by experts such as Geoffrey Moore, author of 'Dealing with Darwin', who said in Forbes magazine, 23rd October 2006: "The absolute best-in-class implementation of innovation is what Cisco is doing with its Emerging Technologies Group."

Maximising Opportunities to Support Business Growth

There are several ways in which CIOs can orchestrate and support the innovation agenda in their organisations, including:

· Taking advantage of their bird's-eye view of the company, in particular its cross-functional processes, to support the culture of innovation

· Helping drive business growth by reducing the level of IT investment that is allocated to 'keeping the lights on', in favour of innovative projects

· Facilitating the effective integration of acquisitions and providing business process and technology expertise

· Deploying the tools needed to foster a collaborative environment within the organisation and also, critically, with external sources of innovation – for example, by taking advantage of Web 2.0 technologies, using video technologies such as TelePresence, and ensuring a collaborative and rigorous way of collecting, analysing and progressing innovative ideas from whatever source.

Americas Headquarters
Cisco Systems, Inc.
170 West Tasman Drive
San Jose, CA 95134-1706
USA
www.cisco.com
Tel: 408 526-4000
800 553-NETS (6387)
Fax: 408 527-0883

Asia Pacific Headquarters
Cisco Systems (USA) Pte. Ltd.
168 Robinson Road
#28-01 Capital Tower
Singapore 068912
www.cisco.com
Tel: +65 6317 7777
Fax: +65 6317 7799

Europe Headquarters
Cisco Systems International BV
Haarlerbergpark
Haarlerbergweg 13-19
1101 CH Amsterdam
The Netherlands
www-europe.cisco.com
Tel: +31 0 800 020 0791
Fax: +31 0 20 357 1100

Cisco has more than 200 offices worldwide. Addresses, phone numbers, and fax numbers are listed on the Cisco Website at **www.cisco.com/go/offices.**