

Sharing Your Innovations Is Potentially Profitable

By Peggy Anne Salz

Innovations that once germinated in the R&D departments of large companies are now flourishing in a variety of settings. From garage start-ups in California's Silicon Valley to cutting-edge facilities in Bangalore, India, the world supply of knowledge is bigger and better than ever.

And so is the reward for companies that can connect to and leverage this wealth of good ideas. In this active global market for knowledge, companies must become the active buyers, as well as active sellers of innovation. More important, they must involve universities, entrepreneurs, suppliers, customers and even competitors in the innovation process.

In the past, conventional wisdom dictated that companies should hoard their technology. Today, companies are learning the opposite, observes Eric von Hippel, head of the Technological Innovation and Entrepreneurship Group at the Massachusetts Institute of Technology's Sloan School of Management.

He believes companies can achieve breakthrough innovation if they involve in the development process the individuals who know their products and services best: users.

According to Mr. von Hippel, a user-centered innovation process — one that is open to input from entrepreneurs and small firms, and, more importantly, takes it seriously — offers great advantages over the manufacture-centric innovation model that has been the mainstay of commerce for hundreds of years.

His milestone book, "Democratizing Innovation," is the first to document the impact of user input on product innovation and quantify the results. Of the dozens of novel products he and his colleagues studied over the past several years, 80% were prototyped by users first.

For example, windsurfing is one niche market users developed long before companies took notice. Users prototyped the first equipment and by 2003, the market for commercially produced windsurfing equipment exceeded \$100 million annually.

Generating Value

"Instead of making money by restricting access to innovation, companies are learning they can generate value by sharing it with users," Mr. von Hippel says. "Advances in computing and communication technologies are enabling users with custom needs to design and build what they want for themselves."

His research shows 26% of library IT users customize their systems, and a whopping 37.7% of extreme sports enthusiasts modify their equipment.

Because users are often ahead of the curve, what they develop is likely to be in demand by many users later. Mr. von Hippel calls these highly motivated individuals "lead users," and has developed a systematic model for companies to tap into the innovation potential of their lead-user communities.

And with good reason. These user groups often begin trends and create markets. Moreover, they share their knowledge freely with other users, who, in turn, make improvements. The result is often a flawless product with a fine future.

A prime example of this is Linux, an open-source software developed from the ground up by a global network of users. Today, Linux is a world-class operating system that competes head-on with Microsoft. The concept of open source comes from the software industry where the software source code was literally open to all

the programmers to read, redistribute and modify. Now it refers to any type of knowledge where the community that creates it continually adapts, improves and ultimately perfects it.

Looking ahead, a more user-centric approach to innovation could also potentially solve many of today's global problems.

This is the vision of Richard Jefferson, the brain behind BIOS (Biological Innovation for Open Society), a global initiative that aims to extend the concepts of open source to biology and biotechnology. Last month, BIOS announced a milestone in this effort and launched BioForge, a pioneer online collaborative research platform for biological innovation.

BioForge will function as a discussion forum, information resource and repository of data, code and software tools. It will also provide templates of licensing agreements for scientists who want to make their discoveries freely available.

Open-Source Systems

Such open-source systems will enable entrepreneurs and small businesses in poor communities throughout the world who have so far been excluded from the innovation process to contribute, says Mr. Jefferson speaking from Canberra.

Similar to open-source software, the techniques and components to create innovations are open to all; the products that result are proprietary. "BIOS is not about patent-busting — it's about problem-solving," Mr. Jefferson says.

Discouraged by the web of patents and overwhelmed by the enormous barriers to entry, scientists, entrepreneurs and public institutions often lack the tools to tackle local problems.

Larger companies, on the other hand, often lack the interest.

Multinationals tend to ignore these markets because the margins are unattractive, Mr. Jefferson says. While they tinker with biotechnology to create blockbuster lifestyle foods like low-carb wheat, millions are starving because farmers can't grow enough to eat, he adds.

Rather than feed the world, society should free up access to technology that will allow the world to feed itself, Mr. Jefferson argues. Moreover, it should empower talent in the public and private sectors to make a contribution and help farmers breed their own food, suitable to their climate and conditions. "This isn't antibusiness; it's in favor of developing practical business models that can encourage and empower small enterprises to address neglected market opportunities."

Another champion in the democratization of science is InnoCentive, the world's largest virtual laboratory based in Andover, Massachusetts.

InnoCentive — an online forum that allows scientists and science-based companies to collaborate on innovative solutions to complex challenges — acts as a knowledge broker, bringing together companies with problems and scientists with solutions.

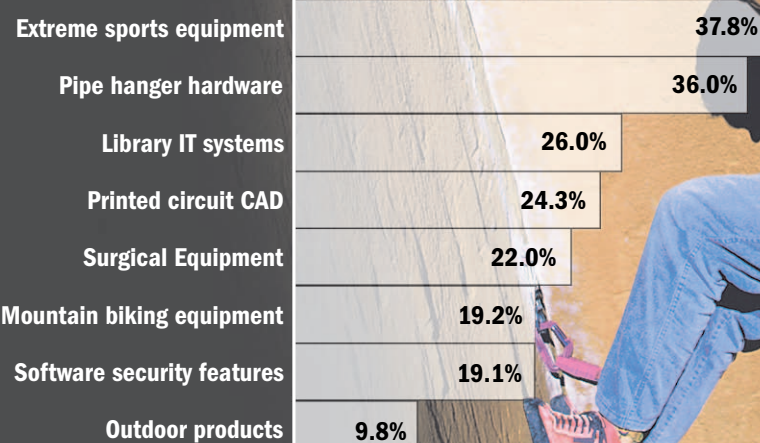
But unlike open source, InnoCentive has developed a business model that is gaining traction even among the most hard-nosed senior executives.

Client companies such as Dow Chemical, DuPont and Procter & Gamble pay InnoCentive an annual access fee of \$80,000 to post their problems on the site anonymously. Over 80,000 scientists and 40 research institutions across 44 disciplines and more than 165 countries, who are members of InnoCentive's online community, can submit answers.

The scientist with the best solution can win a cash prizes of up to \$100,000. InnoCentive receives a commission on the rewards companies pay out to the problem-solvers.

User Innovation

By product



Source: Democratizing Innovation (Author: Eric von Hippel)