



## Building an Innovation Factory

**The best innovators aren't lone geniuses. They're people who can take an idea that's obvious in one context and apply it in not-so-obvious ways to a different context. The best companies have learned to systematize that process.**

by *Andrew Hargadon and Robert I. Sutton*

Ask any CEO in the world to write a top-five wish list, and we guarantee that “more ideas—better ideas!” will show up in some form. Most likely it'll be right at the top. CEOs know that ideas and innovation are the most precious currency in the new economy—and increasingly in the old economy as well. Without a constant flow of ideas, a business is condemned to obsolescence.

We've spent the last five years studying businesses that innovate constantly, and we have good news for business leaders. The best of these innovators have systematized the generation and testing of new ideas—and the system they've devised can be replicated practically anywhere, because it has everything to do with organization and attitude and very little to do with nurturing solitary genius.

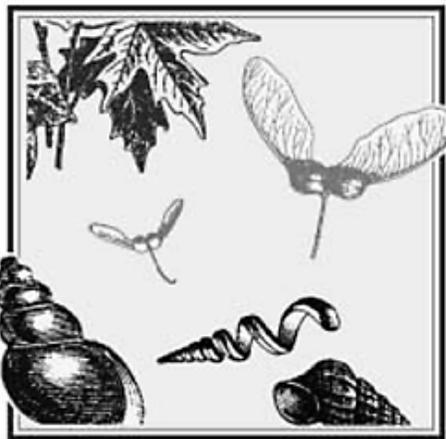
We learned two big things. The first is that the **best innovators systematically use old ideas as the raw materials for one new idea after another.** We call their strategy *knowledge brokering*; companies that do it serve as intermediaries, or brokers, between otherwise disconnected pools of ideas. They use their in-between vantage point to spot old ideas that can be used in new places, new ways, and new combinations.

Taking an idea **that's commonplace in one area and moving it to a context where it isn't common** at all is not a new way to spark creativity, of course. The history of technological innovation is filled with examples. The **steam engine**, for one, was used in mines for 75 years before Robert Fulton thought deeply about the original innovation, wondered how it could be used to propel boats, and developed the first commercial steamboat. Nobody had done what Fulton had with that particular local, specific knowledge: he made the leap of applying it to the altogether different problem of powering boats and implemented it in a way that was accepted by the marketplace.

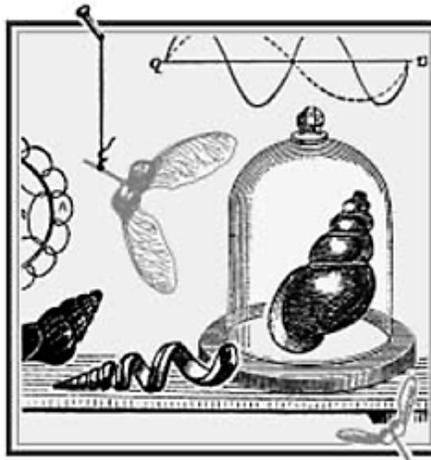
**The companies we studied have found out how to make that leap again and again** (which is the second big thing we learned). We call their approach the knowledge-brokering cycle. It's made up of four intertwined work practices: **capturing good ideas, keeping ideas alive, imagining new uses for old ideas,** and putting promising concepts to the test. We'll show how innovators execute this strategy and what other companies can learn from them about innovation.

## Brokering Cycle

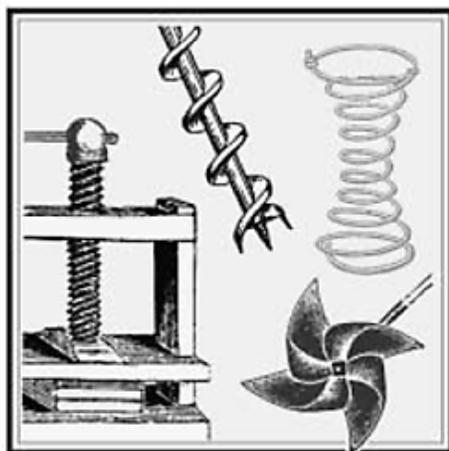
### The Knowledge-



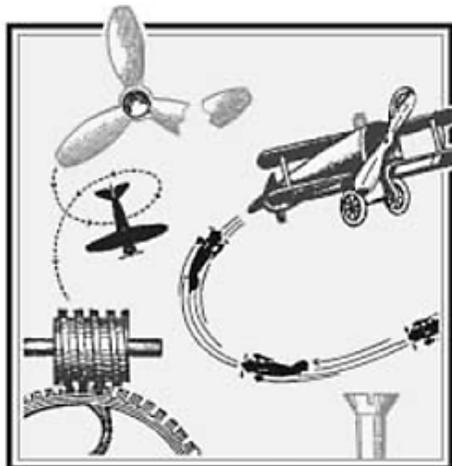
**1** Capturing good ideas. Knowledge brokers scavenge constantly for promising ideas, sometimes in the unlikely places. They see old ideas as their primary raw material.



**2** Keeping ideas alive. To remain useful, ideas must be passed around and toyed with. Effective brokers also keep ideas alive by spreading information on who knows what within the organization.



**3** Imagining new uses for old ideas. This is where the innovations arise, where old ideas that have been captured and remembered are plugged into new contexts.



**4** Putting promising concepts to the test. Testing shows whether an innovation has commercial potential. It also teaches brokers valuable lessons, even when an idea is a complete flop.

## The Knowledge-Brokering Cycle

We found systematic innovators in all kinds of settings. There were product design firms like IDEO Product Development, business model inventors like Idealab!, knowledge traders inside consulting firms, and brokers such as Hewlett-Packard's supply-chain consulting group working inside huge corporations. Their markets and settings were diverse, but their approaches were not. Indeed, the four intertwined processes we observed were remarkably alike across companies and industries.

### Capturing Good Ideas.

The first step is to bring in promising ideas. **Brokers**—companies that innovate by engaging in knowledge brokering—tend to span multiple markets, industries, geographical locations, or business units. They keep seeing proven technologies, products, business practices, and business models, and they recognize that old ideas are their main source of new ideas—even when they are not sure how an old idea might help in the future. When brokers come across a promising idea, they don't just file it away. They play with it in their minds—and when possible with their hands—to figure out how and why it works, to learn what is good and bad about it, and to start spinning fantasies about new ways to use it.

Designers at IDEO, which is based in Palo Alto, California, seem obsessed with learning about materials and products they have no immediate use for. At lunch one day, we watched two engineers take apart the napkin container to look at the springs inside. Another time, we brought a new digital camera to a brainstorming session, and the meeting was delayed for ten minutes while engineers took apart our new toy to see how it was designed and manufactured. IDEO designers visit the local Ace Hardware store to see new products and remind themselves of old ideas, and they take field trips to places like the Barbie Hall of Fame, an airplane junkyard, and a competition where custom-built robots fight to the death.

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