

**CIO**  
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OVERVIEW

# INNOVATION GENERATION



This year's CIO-100 honorees stay ahead of the pack by creating breakthroughs in Products, Relationships and Processes

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**Innovation**—easy to say, hard to do. As we labored to compile 100 innovators for this year's CIO-100 list, we kept stopping to ask, Wait a minute, just what is innovation? A lot of people use the word glibly—the business equivalent of "I woke up this morning and had tea instead of coffee. Wasn't that innovative of me?" So we would pause and reaffirm that to us, innovation meant turning one's knowledge or capabilities into money by creating new products, processes or relationships that yield competitive advantage.

Then we'd reimmerse ourselves in the topic of innovation and think ourselves into circles until we'd ask, Wait a minute, why does innovation matter? When we lifted our heads, our vision would clear and we'd remember the answer: business success.

Innovation is an essential nutrient for growth. That's particularly true in lean economic times. As many have cleverly said, you can't downsize your way to growth or save your way to prosperity. Organizations may find it tempting to the point of necessity to trim R&D and other innovation initiatives when times get tough, but that is a dubious path to success (see "[Hard Times Are the Best Times](#)").

Not every invention can be as momentous as the wheel or the internal combustion engine or the Internet (thank God—imagine the chaos). Smaller developments can have lifesaving effects for businesses too. For example, using integrated map and data software as well as a wireless LAN was enough to give CIO-100 honoree **Southwest Gas** a huge boost in productivity, and therefore profitability. Those smaller scale innovations raise an intriguing question: What actually constitutes innovation, as opposed to simply change or

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improvement? This is a topic tackled by thought leaders, academicians and practitioners—and recently by our CIO-100 editorial team in selecting this year's 100 companies. When is an upgrade just an upgrade, or when does it open whole new vistas? Predictably and inconveniently, there's no quantitative and agreed-on answer. For instance, even incremental change can be innovative, when it seeks to do more than just fix things that should have been done right the first time around.

### Achieving Innovation

As the CIO-100 honorees can attest, true innovation is an attainable goal. For instance, one good piece of advice is for companies to maintain a balance of blue-sky, really out-there ideas and of readily attainable, less risky ideas that are under investigation. That "balanced portfolio" approach recommends always having both incremental changes and radical, breakthrough ideas in the works. Our story "[Quick Change Artists](#)" describes how to implement certain innovations in 90 days or less. The balanced portfolio approach offers the same opportunities for gains with a reasonable amount of security that a balanced stock portfolio offers an investor.

For our purposes in selecting the CIO-100, to distinguish simple improvement from real innovation, we looked at each case unto itself and then considered it against its industry or the world at large. We opted not to focus strictly on IT innovation, because although IT products and practices are definitely a hotbed for change and growth, IT has become so deeply integrated into other realms of most enterprises that it's hard to imagine a sizeable organization innovating without IT. We looked for developments that showed a notable departure from past practice with a promise of significant benefits. We also bore in mind company culture and history to recognize companies with a venerable tradition of innovation, such as **3M**, **Capital One Financial**, **Enron** and **Intel**.

#### Methodology

Choosing 100 innovative companies was no easy task. Here's how we did it.

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We were looking for more than just product innovation too. We wanted the scope of innovation we considered to encompass products as well as business processes and relationships in and among organizations. We've profiled companies illustrating each of those arms of innovation, though there are many fine representatives of each. We track **International Paper's** tale of product innovation in "[Twist and Spout](#)," profiling the development of its now familiar drink containers' Spout-Pak. Our list

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teams with companies that have brought to market innovative products, from **Honda's** hybrid car to **SBC Communications'** "technician of the future." We portray a stellar business process innovation in the story of **Cemex** (see "[Concrete Ideas](#)"), which is keeping good company with other process innovators such as the **American Red Cross**, **The Mitre Corp.** and **Zara**. The subtlest of innovations, those pertaining to relationships, are exemplified by **8th Continent** (see "[Got Soy](#)"), the feisty offspring of General Mills and DuPont. Other relationship innovators include **Autobytel.com** and **Starbucks**, to name a few.

## Real-World Solutions

For our honorees, innovation initiatives must solve a real problem or answer a significant question. For example, CIO-100 honoree **Quantum Magnetics** saw the need for landmine and explosives detection in this dangerous world, and realized magnetic resonance technology could be used to satisfy that need. When **Patagonia** foresaw energy difficulties in California, it designed breakthrough energy-saving warehouses in that state. (See "[Green Lights](#)" for other innovations responding to environmental issues.) Making sure an innovation responds to a real-world need helps avoid pursuing a dead end in the excitement over something new just for newness' sake. Not answering a question or solving a problem is a quick road to a short shelf-life for any innovation. In his book *Innovating the Corporation*, one of our special issue advisers, Thomas Kuczarski, points out, "Notable innovation failures like Miller Clear Beer...resulted from a lack of understanding of customers and their problems. Miller Clear Beer was introduced as part of the 'clear craze' that swept the United States in 1992. The product failed because it didn't offer any meaningful benefit to consumers."

Of course, you've got to tackle innovation initiatives in a judicious and organized way wherever possible. Political, economic, personal and organizational obstacles lie in wait like snakes and sudden chasms in an *Indiana Jones* movie. As CIO-100 honoree **NetForm International** CEO and former archaeologist Karen Stephenson observes, "Modern corporations are more dangerous than anything I've ever seen in the rain forest." To see close-up how two CIOs from very different organizations face their challenges, check out "[What Makes Sheila Run](#)" to read about the CIO at **Martha Stewart Living Omnimedia**.


Different experts offer different models for how to organize your business for maximum innovation success. For example, some say innovation should be a separate business discipline but all agree that it must include top

management's total support and ways to get around risk aversion—the biggest barrier to innovation. Universally, experts advise offering rewards and recognition for successes, and safety for reasonable failures. As Anita McGahan, another CIO-100 expert says in our roundup of expert views (see "[How Things Change](#)"), "The only true failures are experiments in which nothing is learned."

### The Experts

The 2001 CIO-100 panel of distinguished experts includes academicians, analysts and consultants, who have expertise in a broad range of industry and technology areas with a special focus on innovation.

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Read on to learn how some of the CIO-100 honorees are tackling the daunting challenge of making innovation central to their products, processes or relationships. 

Where does innovation fit in the picture at your organization? Share your company's experiences with Departments Editor Sandy Kendall via e-mail at [skendall@cio.com](mailto:skendall@cio.com).

Illustration by Campbell Laird

### [Hard Times are the Best Times](#)

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