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Under New Management

Here's an Idea: Let Everyone Have Ideas

By WILLIAM C. TAYLOR

LIKE many top executives, James R. Lavoie and Joseph M. Marino keep a close eye on the stock market. But the two men, co-founders of Rite-Solutions, a software company that builds advanced — and highly classified — command-and-control systems for the Navy, don't worry much about Nasdaq or the [New York Stock Exchange](#).

Instead, they focus on an internal market where any employee can propose that the company acquire a new technology, enter a new business or make an efficiency improvement. These proposals become stocks, complete with ticker symbols, discussion lists and e-mail alerts. Employees buy or sell the stocks, and prices change to reflect the sentiments of the company's engineers, computer scientists and project managers — as well as its marketers, accountants and even the receptionist.

"We're the founders, but we're far from the smartest people here," Mr. Lavoie, the chief executive, said during an interview at Rite-Solutions' headquarters outside Newport, R.I. "At most companies, especially technology companies, the most brilliant insights tend to come from people other than senior management. So we created a marketplace to harvest collective genius."

That's a refreshing dose of humility from a successful C.E.O. with decades of experience in his field. (Mr. Lavoie, 59, is a Vietnam War veteran and an accomplished engineer who has devoted his career to military-oriented technologies.)

Most companies operate under the assumption that big ideas come from a few big brains: the inspired founder, the eccentric inventor, the visionary boss. But there's a fine line between individual genius and know-it-all arrogance. What happens when rivals become so numerous, when technologies move so quickly, that no corporate honcho can think of everything? Then it's time to invent a less top-down approach to innovation, to make it everybody's business to come up with great ideas.

That's a key lesson behind the rise of open source technology, most notably Linux. A ragtag army of programmers organized into groups, wrote computer code, made the code available for anyone to revise and, by competing and cooperating in a global community, reshaped the market for software. The brilliance of Linux as a model of innovation is that it is powered by the grass-roots brilliance of the thousands of programmers who created it.

According to Tim O'Reilly, the founder and chief executive of O'Reilly Media, the computer book publisher, and an evangelist for open source technologies, creativity is no longer about which companies have the most visionary executives, but who has the most compelling "architecture of participation." That is, which companies make it easy, interesting and rewarding for a wide range of contributors to offer ideas, solve problems and improve products?

At Rite-Solutions, the architecture of participation is both businesslike and playful. Fifty-five stocks are listed on the company's internal market, which is called Mutual Fun. Each stock comes with a detailed description — called an expect-us, as opposed to a prospectus — and begins trading at a

price of \$10. Every employee gets \$10,000 in "opinion money" to allocate among the offerings, and employees signal their enthusiasm by investing in a stock and, better yet, volunteering to work on the project. Volunteers share in the proceeds, in the form of real money, if the stock becomes a product or delivers savings.

Mr. Marino, 57, president of Rite-Solutions, says the market, which began in January 2005, has already paid big dividends. One of the earliest stocks (ticker symbol: VIEW) was a proposal to apply three-dimensional visualization technology, akin to video games, to help sailors and domestic-security personnel practice making decisions in emergency situations. Initially, Mr. Marino was unenthusiastic about the idea — "I'm not a joystick jockey" — but support among employees was overwhelming. Today, that product line, called Rite-View, accounts for 30 percent of total sales.

"Would this have happened if it were just up to the guys at the top?" Mr. Marino asked. "Absolutely not. But we could not ignore the fact that so many people were rallying around the idea. This system removes the terrible burden of us always having to be right."

Another virtue of the stock market, Mr. Lavoie added, is that it finds good ideas from unlikely sources. Among Rite-Solutions' core technologies are pattern-recognition algorithms used in military applications, as well as for electronic gambling systems at casinos, a big market for the company. A member of the administrative staff, with no technical expertise, thought that this technology might also be used in educational settings, to create an entertaining way for students to learn history or math.

She started a stock called Win/Play/Learn (symbol: WPL), which attracted a rush of investment from engineers eager to turn her idea into a product. Their enthusiasm led to meetings with [Hasbro](#), up the road in Pawtucket, and Rite-Solutions won a contract to help it build its VuGo multimedia system, introduced last Christmas.

Mr. Lavoie called this innovation an example of the "quiet genius" that goes untapped inside most organizations. "We would have never connected those dots," he said. "But one employee floated an idea, lots of employees got passionate about it and that led to a new line of business."

The next frontier is to tap the quiet genius that exists outside organizations — to attract innovations from people who are prepared to work with a company, even if they don't work for it. An intriguing case in point is InnoCentive, a virtual research and development lab through which major corporations invite scientists and engineers worldwide to contribute ideas and solve problems they haven't been able to crack themselves.

InnoCentive, based in Andover, Mass., is literally a marketplace of ideas. It has signed up more than 30 blue-chip companies, including [Procter & Gamble](#), [Boeing](#) and [DuPont](#), whose research labs are groaning under the weight of unsolved problems and unfinished projects. It has also signed up more than 90,000 biologists, chemists and other professionals from more than 175 countries. These "solvers" compete to meet thorny technical challenges posted by "seeker" companies. Each challenge has a detailed scientific description, a deadline and an award, which can run as high as \$100,000.

"We are talking about the democratization of science," said Alpheus Bingham, who spent 28 years as a scientist and senior research executive at [Eli Lilly](#) & Company before becoming the president and chief executive of InnoCentive. "What happens when you open your company to thousands and thousands of minds, each of them with a totally different set of life experiences?"

InnoCentive, founded as an independent start-up by Lilly in 2001, has an impressive record. It can point to a long list of valuable scientific ideas that have arrived, with surprising speed, from faraway

places. In addition to the United States, the top countries for solvers are China, India and Russia.

Last month, InnoCentive attracted a \$9 million infusion of venture capital to accelerate its growth. "There is a 'collective mind' out there," Dr. Bingham said. "The question for companies is, what fraction of it can you access?"

That remains an unanswered question at many companies, whose leaders continue to rely on their own brainpower as the key source of ideas. But there's evidence that more and more top executives are recognizing the limits of their individual genius.

Back at Rite-Solutions, for example, one of the most valuable stocks on Mutual Fun is the stock market itself (symbol: STK). So many executives from other companies have asked to study the system that a team championed the idea of licensing it as a product — another unexpected opportunity.

"There's nothing wrong with experience," said Mr. Marino, the company's president. "The problem is when experience gets in the way of innovation. As founders, the one thing we know is that we don't know all the answers."

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