

## **Putting quirks to work**

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At Corning's research facility in Sullivan Park, New York, a visitor roaming the halls will likely see the latest in high-energy lasers and electronic wizardry common to research institutions like this one. But there's a room nestled among the labs that doesn't fit the landscape; it's adorned with plush leather chairs, coffee tables, a television, and a white board that frequently has jokes or questions scrawled on it.

The "creativity room", as it is called, has been part of Corning's research culture here since 1996. That's when Lina Echeverria, research director of inorganic technologies at Corning, helped spearhead it as a place where scientists could informally collaborate. It speaks to a passion of Ms. Echeverria's, which is to help inspire new ideas and sustain innovation. "What we've been trying to do is provide the ability for people to communicate like friends", says Ms. Echeverria.

The idea of the room came from the hope that it could help foster greater interaction between scientists and encourage the kind of cross-fertilization of ideas that leads to breakthroughs. Ms. Echeverria is a strong advocate for improving interaction among scientists. She's learned from personal experience that greater collaboration improves the overall research environment. "There's a high level of interaction, much better than it was 20 years ago when I first arrived here", says Ms. Echeverria.

Ms. Echeverria joined Corning research in 1983; since then, she's been involved with several major research projects. Today, she matches up researchers to projects in which they can be passionately engaged and willing to take risks. "I think if we do one thing right, it is we assign people to areas they are highly energized about", Ms. Echeverria says.

Even then, the odds of success are still slim. Joseph Miller, chief technology officer, says that out of roughly 4,000 ideas, there are one or two major commercial successes. And a typical pipeline timeframe from idea to major commercial event is something like 8 to 10 years.

Corning has been in the invention business for a long time. The company was founded in 1851, and 28 years later it produced the glass envelope for Edison's lightbulb. But it wasn't until 1908 that Corning officially formed its research lab. That was a time in the U.S. when there were only four other corporate research labs in operation, including General Electric.

Today, the company manufactures fiber and cable, optical hardware and equipment, and flat glass used in television screens and computer monitors, as well as photonic components and networking devices for the telecommunications industry.

With the market conditions still weak in the telecom industry, Corning is looking out for the products and technologies that will be used when telecom carriers begin to reinvest in new fiber and photonic equipment to upgrade their networks.

Even in a time of excess fiber capacity, Corning and other photonic research labs are investing millions of dollars into new projects like its hollow fiber effort. The fiber is designed to carry 100 times more information than the solid fiber glass cores of today's networks. What researchers will have to do is figure out how to manufacture the material reliably and in a cost-effective way. The aim is to make fiber that permits the signal to travel further without requiring an additional boost from an amplifier. If perfected, hollow fiber could enable light to be pumped down thousands of miles of glass.

As companies grapple with tougher market conditions, there's likely to be greater pressure placed on researchers to create the novel products to improve companies' bottom line. Corning's creativity room is one of those places where researchers will find some place to clear their heads and harness the creative force that Ms. Echeverria believes in so passionately.