

The Goal: Innovate Everything; Your Products, Your Processes, Your People

If you examine nearly every industry, you can find who planted the seeds for innovation and you can trace their growth. Often, it's not what we thought. For example, when the American automobile industry struggled to compete with the onslaught of Asian and European imports, a delegation was sent to Japan to try and understand the country's success formula. What they witnessed surprised them in more ways than one. The actual assembly line process used by the Japanese automakers appeared to be both more efficient and more effective than the one invented by Henry Ford and still used by American automakers up until the 1970's. The big surprise came when the Americans inquired how the process originated. In fact, the brains behind the process was none other than an American named W. Ernst Deming. American industry had, up to that point, largely ignored Deming's work. Shame on us!



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The American photographic industry all but gave away its market share to overseas competition. While Rochester, New York based Kodak® should have been the heir apparent of digital photography, the company failed to embrace the new technology. Camera manufacturers from Asia flooded the U.S. market with their products and consumers loved them. The last camera made in the U.S. was manufactured by plastics fabricator Berkey-Keystone of Clifton, New Jersey; its plant shuttered years ago.

In the plastics industry, we have found breakthrough new processes and new materials in unlikely places. For example, the now popular Reaction Injection Molding (known as RIM) involves mixing two different chemicals in exact ratio under pressure to form a thermoset polymer. Where did it originate? From Bayer®, the maker of aspirin! While the process itself was innovative for years, the materials used remained the same. There has been little advancement in polyurethane chemistries, which had their limitations. As a result, RIM remained primarily attached to polyurethane. However, there have been recent innovations. For example, Proxima® by Materia is moving in to fill that space. Processors like our company are finding new market applications in advanced materials markets. While many

designers gravitated to and embraced thermoforming, which appeared to save money at the outset, they soon found that both tolerances and detail were limited, requiring additional parts that in turn, added to costs. The cosmetics with these processes have limitations, as well. Certain markets like medical devices, for example, demand a more refined appearance. For those manufacturers requiring large and complex parts, RIM proved more cost competitive in the long run.

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We kept exploring and we tried several other technologies along the way that proved unsatisfactory. Staying the same is a recipe for getting smaller. We were already a small player in a small niche, which is not a scalable situation. So, how does one continue to grow? By finding new solutions. Where do you look for them? Ironically, start with your competitors. I found that meeting with them led me to answers I was seeking. For example, I became friendly with a competitor who eventually left his company to work in a similar industry with new and different chemistries.

His new employer sought to diversify their client base beyond the volatile oil and gas industry that used their product. This ultimately led to the discovery of a new material with higher potential. The new material, a Nobel Prize winning chemistry, had superior properties including far greater strength and lighter weight. By becoming an early adopter and investing in new

equipment to process this material, we have been able to open up new verticals including robotics, military, fitness equipment and even space exploration.

The bottom line: don't be content. Always look for something new. Sometimes you must be willing to do some pioneering as part of that growth process. There were no established business models for us to follow in a fragmented industry. We had to figure out pricing and hope it would fly with our customers and our prospects. Take the time to visit your suppliers, your competitors and those with complementary technologies. Sniff around, ask questions, probe and press them for information. Look for win-win relationships for collaboration when you can't provide all of the solutions your customers require. Most important, before venturing into new territory, call your customers and see if there is sufficient demand. In short, ask your old (existing) market about your new market. Educate yourself. Make educated decisions and be confident in your choices. Know when you need help and search until you find good advisors and associates to help move into new areas and innovate. Create your foundation of teams and a support structure including your employees, your advisors, professionals and trade associations.

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