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Building a Successful Company

by James A. Cusumano, Ph.D.

Editor's Note: *What makes a company successful? World Business Academy Director* ***James A. Cusumano*** *surely knows: he grew a two-person startup into a 1,700-employee venture that ultimately sold for close to $1 billion, and more importantly in his scale of values, makes a difference in the world.*

In this Viewpoint *article, the former Director of Research for Exxon and successful entrepreneur refines the ingredients for venture success down to seven items. Anyone who has launched a business will read them and say, "I wish I'd known that back then!" This issue is literally invaluable for anyone starting or running a business: any one of these factors will likely be the difference between success and failure.*

Viewpoint

There is nothing quite so rewarding as building something new, something that truly makes a difference in this world.

In the late 1970s, my partner and I left comfortable, well-paying jobs at Exxon and formed Catalytica Associates, Inc., a consulting company focused in the area of catalytic technologies. Located in Palo Alto, California in the heart of Silicon Valley, "good vibrations" for innovation emanated from everywhere—from bankers, lawyers, investors, venture capitalists, and many others. Using these assets, we built a leading global consulting and research company. Within a short time, we were a profitable privately-held enterprise with 100 employees and annual revenues of more than $20 million.

We addressed a large, growing global market. As it turns out, catalysis is critical to our modern industrial economy, with more than 25 percent of the developed world's Gross Domestic Product requiring catalytic technology. This includes the manufacture of fuels, pharmaceuticals, food products, plastics, polymers, and much more. It is nanotechnology at its best. We designed molecular catalysts at the nanometer scale, long before the word was a popular catchphrase on Wall Street.

The definition of a catalyst tells a good part of the story. *A catalyst is a substance that accelerates a chemical reaction without itself undergoing change. Under ideal conditions, a highly **selective** catalyst produces **only** the desired product.*

This definition has important economic and environmental implications. If you produce only the product you want, you have no waste, no polluting by-products. Also, since a catalyst accelerates a chemical reaction, the energy requirements are always much less than for the same process carried out non-catalytically. This saves manufacturing costs and preserves the environment. For example, pharmaceutical companies often develop non-catalytic processes to manufacture the active ingredient for a new drug, and such a process can require 10 steps or more. Even if each of the 10 steps provides a 90 percent yield, the final yield to the desired product is only 35 percent. This means that 65 percent of expensive raw materials are converted to undesirable byproducts, often toxic substances requiring costly procedures to safely remove and eliminate them.

A properly designed catalyst can reduce the number of steps to as few as three. Even if the yield for each of these three new process steps were no greater than the original 90 percent, the final product yield would be 73 percent, providing large cost savings and often an environmentally-friendly process. And this is exactly what we accomplished many times over. For example, we developed a process for the manufacture of Pfizer's Aricept®, a drug effective for treating Alzheimer's disease.

Over a decade, we built a financially successful, socially conscious company. Our teams worked on more than 200 projects for over 100 companies in 25 countries, companies such as Pfizer, Johnson & Johnson, General Electric, Mitsubishi, Elf Aquitaine, Norsk Hydro, Snamprogetti, Exxon, and many more. We saved them time, money and environmental costs—and at the same time we became knowledgeable of emerging critical industrial problems, and where important

business sectors were headed in the future.

In the late 1980s, we decided to change our strategy. We wanted to move into manufacturing to leverage our skills and knowledge in catalytic science. We settled on two growing market sectors that we knew would benefit from our technological know-how—pharmaceuticals and energy generation.

To address these markets, we formed two business units—Catalytica Energy Systems, Inc. (CESI) and Catalytica Pharmaceuticals, Inc. (CPI). At CESI, we developed catalytic systems that enable the production of low-cost energy with minimal or no pollution. Catalytica was one of the first companies to foster the concept of pollution prevention. CESI focused on pollution prevention technology for diesel engines and for gas-fired turbines for electric power generation. In CPI, we helped large pharmaceutical companies like Pfizer develop low-cost, environmentally-friendly processes, using safe raw materials. And then we manufactured many of these drugs under contract.

To launch CESI and CPI, we raised more than $80 million in venture capital, and went through an initial public offering and two subsequent public offerings. CPI was a huge success. Catalytica became one of Silicon Valley's fastest growing companies. In less than five years, we built CPI from three people and no sales to more than 1,700 people and nearly $500 million in revenues. We acquired three state-of-the-art pharmaceutical plants, and raised Catalytica's market capitalization to more than $1 billion. CPI manufactured more than 50 major drugs for the international pharmaceutical community. For example, we produced most of the world's supply of AZT for treating AIDS, Wellbutrin for depression, Zyban for smoking cessation and numerous other drugs for companies such as GlaxoSmithKlein, Pfizer and Lilly.

In 2002, one of our competitors, DSM Pharmaceuticals from the Netherlands "made us an offer we couldn't refuse." We sold Catalytica Pharmaceuticals, Inc. for more than $800 million and made a lot of shareholders very happy. Catalytica Energy Systems, Inc. is still a public company on the NASDAQ Exchange.

In building these companies we made some mistakes. Fortunately, none was significant. Most importantly, we learned how to create a successful enterprise. Looking back, it is easy to summarize the prescription, but it certainly was challenging to implement.

Interestingly, these success criteria appear to be culturally independent. It makes no difference whether you apply them to building a company in the U.S., the Czech Republic or China. In my view, the key requirements for a successful company are:

1. Hire the *right* people in the *right* positions at the *right* time—and graciously exit those that are mistakes (We all make them!) *as soon as possible*.
2. Focus, focus, focus!
3. Have an early commercial success—it need not be large.
4. Have a skilled leader at the helm.
5. Address a growing market—better yet create one!
6. Provide strong, consistent, supportive capabilities to your customers.

7. Have a plan, but stay flexible.

All seven elements are necessary for success, but the first four are critical, and often the ones on which most companies falter.

The number-one critical challenge is hiring the right people for the right positions at the right time. In the early stages of new companies, entrepreneurs may hire friends, relatives or others who no longer fit the company as it grows larger. The CEO and his team often do not face up to working with these employees to help them find more effective, personally rewarding positions outside the company. Usually, a crisis occurs, and then it becomes an even greater problem to deal with. Everyone benefits by taking care of these issues sooner rather than later.

Focus can not be overstated. Along the way, numerous "opportunities" present themselves. With limited resources and stringent time constraints, the company cannot follow them all and succeed. The management team must pick its best opportunities and put all of the energy of the company behind them.

Having an early commercial success brings incredible benefits to a new company. Using the baseball analogy, hit a few "singles" instead of trying for all "home runs." Early successful commercialization provides management with greater credibility, and the company with higher valuations. A successful enterprise often must raise money for growth. With greater credibility and higher valuations much less of the company is given away with each round of financing.

Having a skilled leader may seem an obvious requirement for a successful company. But what are the key characteristics of such an executive? In my view, there are five, and taken together they create the **spirit** and **integrity** of a company, the two most important value elements for long-term success.

Compelling vision & realistic strategy: First, the CEO must actively lead the company in the creation of, and commitment to, a **compelling vision** and a **realistic strategy** for its implementation.

Passion: The CEO must consistently demonstrate his or her **passion** for following this vision. Nothing galvanizes people more, nothing sells a product better, and nothing attracts more positive attention then pure unbridled passion.

Tenacity: The CEO must be **tenacious** to a fault. Recall Winston Churchill's caution to the Allied Armed Forces, "Never, never, never give up!"

Discipline: Personal **discipline** is a key attribute for all successful leaders, especially when it comes to generating excellent returns for all stakeholders—not just for investors—but also for employees, the community, and the planet.

Compassion: And fifth, great leaders are **compassionate**. They will "walk through fire for their people." And believe me, there will be more than one time that they will be asked to do so.

Yes, the coals in that fire can be very hot at times, but there really is nothing quite so rewarding as building something new, something that truly does make a difference in this world.

About the Author: Dr. James A. Cusumano is a founder and retired Chairman of Catalytica, Inc., a public company comprised of two businesses based on catalytic technologies—pharmaceutical development and the discovery and manufacture of clean power systems (**Catalytica Energy Systems, Inc. CESI—NASDAQ). Catalytica Pharmaceuticals grew in less than five** years from four people and no sales to more than 1,500 people and nearly $500 million in revenue. It was sold in 2002 to DSM Pharmaceuticals. Dr. Cusumano is a former Research Director for Exxon, with numerous publications and patents and is currently Vice Chairman of the World Business Academy (www.worldbusiness.org).

He maintains residences in California and in Prague, where he and his wife are renovating a castle that will serve as an international executive training center that provides training in body, mind, and spirit. The castle will also be home to a new foundation that brings together talented thinkers from around the world to explore the potential and value of creating productive linkages among science, technologies, business and the needs of humanity.