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Business May Be Your Life - But - Life Is Your Business



James A. Cusumano, PhD

"Your profession is not what brings home your pay-check. Your profession is what you were put on this earth to do - with such passion and such intensity that it becomes a spiritual calling." Vincent Van Gogh

KEY CONCEPTS:

■ Seven elements can lead to the long-term success of a business:

1. An inspirational leader.
2. Hiring the right people at the right time for the right job and graciously exiting mistakes.
3. Focus, focus, focus!
4. Targeting an early commercial success.
5. Addressing a growing market - better yet, creating one!
6. Supporting key constituents - customers, employees, shareholders, community.
7. Having a plan, but staying flexible.

The Journey

There is nothing quite so rewarding as building something new, something that truly makes a positive difference in this world. In the late 1970s, during the last major recession in the U.S., a close friend 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 every direction - from bankers, lawyers, investors, venture capitalists, and many other sources. 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. Life was exciting and very comfortable.

We addressed a large, growing global market. Catalysis is critical to our modern industrial economy, with more than 25 percent of the developed world's Gross Domestic Product requiring catalytic technologies. This includes the manufacture of fuels, pharmaceuticals, food products, plastics, polymers, and much more.

Part VI: Creating A Successful Business^{A,B}

Catalytic technologies are also responsible for eliminating or minimizing most environmental issues. Examples include automotive catalytic converters, industrial emissions abatement, and many other cleanup applications. In fact, no organism on this planet - human beings included - could function without the precise power of enzymes, molecular catalysts, often called "the life force." They orchestrate our every activity, whether it is playing piano, fighting disease, or making a baby. Catalysts are nanotechnology power at its best (**Figure 1**).

The definition of a catalyst tells a good part of the story behind their power and potential. A catalyst is a substance that speeds up a chemical reaction without itself undergoing change, and 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, there is no waste, no polluting by-products. Since a catalyst accelerates a chemical reaction at lower temperatures than when no catalyst is present, the energy requirements are always much less than for the same process carried out without a catalyst. All of this saves manufacturing costs and preserves the environment.

For example, pharmaceutical companies often develop non-catalytic processes to manufacture the active ingredient for a drug, and such a process can require 10 organic chemical steps or more. Even if each of 10 steps in a production process provides a 90 percent yield to the desired product, the final yield after all 10 steps are completed is only 35 percent. This means that 65 percent of expensive raw materials are converted to undesirable byproducts, often toxic substances requiring expensive procedures to safely remove and eliminate them.

With a properly designed catalyst, a process with far fewer steps, e.g., three steps, can be designed. Even if the yield for each of these three steps were no greater than 90 percent, the final product yield would be 73 percent, providing large cost savings and a much more environmentally-friendly process. This is exactly what Catalytica accomplished many times over. For example, we developed for Pfizer part of the process to manufacture Aricept, the drug of choice drug for treating Alzheimer's disease.

Over a decade, we built a financially-successful, socially-conscious company - a leading global enterprise for the development and commercialization of catalytic

technologies. Our teams worked on over 200 projects for more than 100 companies in 25 countries, companies such as Pfizer, Johnson & Johnson, General Electric, Mitsubishi, Elf Aquitaine, Norsk Hydro, Snamprogetti, and Exxon. We saved our clients 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. "However," we wondered, "Were we selling our knowledge and expertise too cheaply? Was there a more effective way to use our technologies in the commercial sector?"

In the late 1980s, we changed our strategy. We opted to move into manufacturing to leverage our skills and knowledge in catalytic science. We settled on two growing markets that we knew would benefit from our technologies - pharmaceuticals and power generation. We formed two separate 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 electrical power with minimal or no pollution. Catalytica was one of the first

Figure 1: Catalytic technologies affect 25% of our global GDP and have the potential to significantly cut costs and eliminate environmental challenges



UNLEASH THE POWER OF TECHNOLOGY

companies to foster the concept of pollution prevention. CESI focused on diesel engines and natural-gas-fired turbines for clean electric power (**Figure 2**). In CPI, we helped large pharmaceutical companies like Pfizer develop low-cost, environmentally-friendly processes,

^{A)} EDITOR'S NOTE - This is Part VI in a series of articles based on the author's experience as an entrepreneur, having founded several successful businesses, including Catalytica Pharmaceuticals, Inc., a billion-dollar public company. His business experience base spans "5 lives" - A multimillion record sales recording artist; R&D Director for Exxon; Chairman & founder of 2 public companies; CEO, founder and Executive Producer for Chateau Wally films; Chairman & Owner of Chateau Mcely, an international award-winning luxury hotel & SPA. This article is extracted from his latest book, presently in preparation and entitled, "My Little Book of Business - Tales of Purpose, Passion & Enterprise." Parts I-V of this series dealt with "Creating A Fulfilling Life." The current series addresses "Building A Successful Business," and the final series will focus on "Inspirational Leadership™ - The Secret To Lasting Fulfillment In Life And Business."

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TO BE CONTINUED...

Figure 2: Catalytica's James A. Cusumano and Ricardo B. Levy announce their NOOX® system for elimination of pollution from gas-fired turbines for generating electric power



using safe raw materials, and often we were contracted to produce their drugs for them.

To launch CESI and CPI, we raised more than \$80 million in venture capital, and went through an IPO and two subsequent public financings, raising more than \$200 million. CPI was a huge success, and became one of Silicon Valley's fastest growing companies. In less than five years, we built CPI from four people and no sales to more than 2,000 people and nearly \$500 million in revenues. We acquired three state-of-the-art pharmaceutical plants in North America, and raised Catalytica's market value to \$1 billion. CPI manufactured more than 50 major drugs for the international pharmaceutical community (**Figure 3**). For example, for GlaxoSmithKline we produced the world's supply of AZT (Zidovudine) for treating AIDS, Wellbutrin for depression, Lanoxin for heart disease, Zyban for smoking cessation and numerous other drugs for this industry.

In 2002, one of our competitors, DSM Pharmaceuticals from Holland "made us an offer we couldn't refuse." We sold Catalytica Pharmaceuticals, Inc. for \$840 million and made our shareholders very happy. Catalytica Energy Systems, Inc. remained a public company on the NASDAQ Exchange (CESI) until 2007, when it merged with Renergy, as a privately-held, sustainable-alternative-energy firm, producing clean electrical power from waste-wood biomass at its 24 megawatt plant in Snowflake, Arizona.

Our Way

In building these companies, sure, we made mistakes, but fortunately none was critical. 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. I believe that these criteria are culturally independent. It makes no difference whether you apply them to building a business in the U.S., the Czech Republic or China. In my view, the key requirements for a successful company are:

1. Have an inspirational – not necessarily charismatic – leader at the helm.
2. Hire the right people for the right positions at the right time – and graciously exit your mistakes – we all make them – as soon as possible.
3. Focus, focus, focus!
4. Target an early commercial success – it need not be large.
5. Address a growing market – better yet create one!
6. Provide strong, support to key constituencies –

customers, employees, shareholders, community, and suppliers.

7. Have a plan, but stay flexible.

Seven Guiding Lights

The number one critical challenge is to have an inspirational CEO, not necessarily a charismatic personality, but an inspiration to those around him or her. One might ask, "What are the key characteristics of such a leader?" There are several, and together they facilitate formation of the **spirit, integrity, and culture** of a company, the three most important elements for long-term success.

First, the CEO must actively lead the company in the creation of, commitment to, and implementation of a **compelling vision** and **realistic strategy**. This results in the "**corporate dream**." The company cannot succeed and cannot become a great lasting enterprise without one. The "corporate dream" galvanizes employees to do all they can to make the company vision and mission a reality. Second, the CEO must be inspirational and consistently demonstrate his or her **passion** for following this vision. Nothing excites people more, nothing sells a product better, and nothing attracts more positive attention than pure unbridled passion. Third, the CEO must be **tenacious** to a fault. Recall Winston Churchill's caution to the Allied Armed Forces, "Never, never, never give up!" Fourth, personal **discipline** is a key attribute in order to

generate excellent returns for all stakeholders – employees, customers, suppliers and the community. And finally, great leaders are **compassionate** and see themselves as serving all of their stakeholders. They will "walk through fire for their people." And believe me, there will be more than one time that you will be asked to do so.

The next critical criterion for a successful enterprise is hiring the right people for the right positions at the right time, and graciously exiting those that are mistakes as soon as possible. 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 must face up to the challenging task of helping these employees find more-effective, personally-rewarding positions outside the company. If you wait until a crisis occurs, it becomes a greater problem to deal with. Everyone benefits, especially the employee, by taking care of these issues sooner rather than later.

Focus cannot be overstated. Along the way, numerous "opportunities" often 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. Minimize distractions!

Having an early commercial success brings incredible benefits to a new company. Using the baseball analogy, it is best to hit a few "singles" instead of trying for all "home runs." Early successful commercialization provides management with greater credibility, and the company

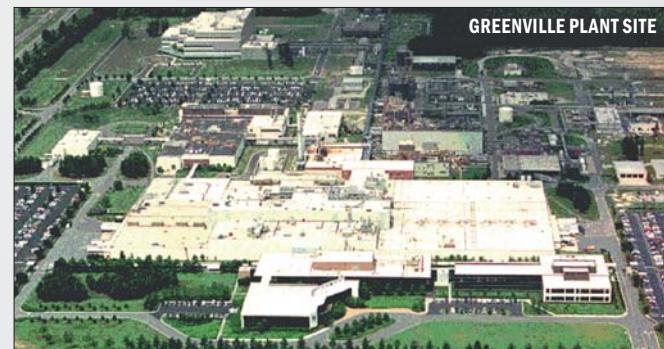
with higher valuations. A successful enterprise often must raise money for growth. With greater credibility and higher valuations much less of the company is given away with each round of financing.

When it comes to markets, creating a new one far surpasses the opportunities in an existing market. Being the first mover has incredible leverage. Consider marketing a product that is simply a modest improvement on the Sony Walkman® versus launching the Apple iPod®.

Providing strong, consistent support to your customers, employees, shareholders, suppliers, and community is imperative to differentiate your company from others. This always leads to significant benefits.

Having a committed strategy, yet being flexible played an important role in Catalytica's growth. In our pharmaceutical business, our initial strategy was to produce only the active ingredients for drugs, not the final dosage form that you buy in the pharmacy, e.g., pills, lotions, and injectables. However, when GlaxoWellcome's world-class pharmaceutical manufacturing plant in North Carolina went up for sale, we changed our strategy to include the final dosage product in our manufacturing capabilities. We were successful in acquiring the plant, which brought Catalytica instantly from 100 people to 2,000 people with nearly \$400 million in annual sales. We became the world's leading outsource manufacturer of pharmaceuticals. This led to successes and opportunities for all of our constituencies – customers, employees, shareholders, investors, and vendors. It was a marvelous success for all!

Figure 3: Catalytica Pharmaceuticals acquires Glaxo's 300-hectare modern pharmaceutical plant in Greenville, NC.



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

James A. Cusumano, PhD ■

About the Author: James A. Cusumano is Chairman and owner of Chateau Mcely (www.ChateauMcely.Com), chosen in 2007 by the European Union as the only "Green" 5-star luxury hotel in Central and Eastern Europe and in 2008 by the World Travel Awards as the Leading Green Hotel in the World. He is a former Research Director for Exxon, and subsequently founded two public companies in Silicon Valley, one in clean power generation, the other in pharmaceuticals manufacture via environmentally-benign, low-cost, catalytic technologies. While he was Chairman and CEO, the latter – Catalytica Pharmaceuticals, Inc. – grew in less than 5 years, to a \$1 billion enterprise with 2,000 employees. He is co-author of "Freedom from Mid-East Oil," recently released by World Business Academy Press (www.WorldBusiness.Org) and can be reached at Jim@ChateauMcely.Com.

