

Building an International Legend

Choosing Leaders for Leading Technology

By Casey Jacobus

“The future of the world is based on wise decisions. Those decisions are based on information. NuTech can accomplish enormous things in supplying that information. This is important to the entire world in the 21st century.” - Lech Walesa

At a time when most of the dot-com world has already dot-bombed, one Charlotte-based technology company has been amassing a name for itself – well, quite a few names in fact.

NuTech Solutions, Inc. www.nutechsolutions.com, a provider of advanced predictive analytics and profit optimization software products for large companies around the world, has not only raised \$11 million in private equity since its inception in 1999, acquired a client list of almost 100 Global 1000 companies, and grown from three founding partners to 133 employees worldwide, but, in the past year, it has also attracted Bill Gaither, former CEO of Heafner Tire Group in Lincoln, Hugh McColl, former CEO of Bank of America, and Lech Walesa, Nobel laureate and former president of Poland, to its board of directors.



Daniel Cullen, vice president of investor relations, Matthew Michalewicz, CEO, Lech Walesa, board member, and Zbigniew Michalewicz, chief scientific officer.

“It is the people that make the business and this company is no exception,” says President Matthew Michalewicz. “Not having any outside board members was a detriment to growing the business. We undertook a big initiative to expand both the management team and the board.”

When Gaither joined the board of NuTech in the spring of 2001, he knew immediately that the company was not the typical start-up. “When you combine such a powerful product with a tremendous work ethic and limitless passion, you have the makings of a world class company.”

Michalewicz says it was immediately obvious that Gaither was going to make a significant and needed contribution to the company. But he didn't stop there. Believing that a stronger board would mean a stronger company, Michalewicz set about wooing McColl, the icon of economic strategy in Charlotte. He first approached McColl a month before he retired from Bank of America.

“Although we became a client of McColl Partners [the investment company founded by McColl],” Michalewicz says, “we also asked for his personal involvement. We knew McColl could add unique insight and vision.”

The NuTech partners met with McColl at the Bank of America building early on the morning of September 11th. They watched the events of the day unfold in New York and Washington together on television. That day McColl agreed to join the board of directors of the young company.

“NuTech Solutions has brilliant people that can think outside the box. I’m very impressed with the company,” McColl says. “It’s a solid company that has made progress each quarter.”

“McColl is a legendary figure in economics and we want to be a legendary technology company,” says Michalewicz. “It’s a good fit.”

Having achieved that amazing coup, Michalewicz set out on another quest. He wanted to add Lech Walesa, the former president of the Republic of Poland and Nobel Peace Prize laureate, to the board.

Walesa, the charismatic former shipyard electrician who led the Solidarity Labor movement that helped topple Communism in Eastern Europe, was the first democratically elected president of Poland. In 1990, he won more than 74 percent of the vote, and during his subsequent five years in office set the country on the path to become a free-market democracy. For his work, Walesa was awarded the Nobel Peace Prize, the U.S. Presidential Medal of Freedom, the Award of the Free World, and was named Man of the Year by Time Magazine, The Financial Times and The London Observer. Since leaving office, he has worked to promote the Lech Walesa Institute, which he founded to support free-market reforms.

Michalewicz and his father, Zbigniew Michalewicz, who founded NuTech with partner Dan Cullen, were born in Poland, and several other executives of NuTech have Polish roots as well. The company maintains an office in Warsaw and counts the Polish National Air Force among its clients and has a contract with the Polish Ministry of Energy to coordinate power plant operations to reduce pollution.

Michalewicz worked through the Walesa Institute to awaken Walesa’s interest in the company. He prepared a 15-page question and answer background paper for Walesa. Still, everyone was surprised by Walesa’s willingness to come on board after just one face-to-face meeting with the NuTech partners in April. NuTech is his first corporate venture.

“All my life I have been working in the field of economics,” says Walesa. “I have accomplished all that I can. Now I want to do something significant in another field—technology. NuTech can accomplish enormous things with its breakthrough technology and software applications. I have always associated myself with big things and this company represents big things.”

“At our first meeting, I became enthusiastic about what NuTech could accomplish,” continues Walesa. “I share the same vision. This company is capable of creating the new economic and political programs that are necessary for the 21st century. I will do everything in my power to make it happen.”

Walesa’s participation in NuTech, along with that of McColl and Gaither, demonstrates just how far the young company has come in a short time.

“It shows the world that we don’t just have a good business idea, but that our business is real, it’s happening, and it’s very successful,” says Michalewicz.

Real-World Adaptive Business Intelligence

While talking about intelligent computer life may sound like something out of a sci-fi novel, NuTech’s mission is to develop software products that can evaluate dynamic variables in real time, identify and adapt to new trends and learn from previous experiences so that future performances can be optimized. These software products can help companies avoid production bottlenecks, missed deliveries, bad credit decisions, network crashes and missed marketing opportunities.

The world of adaptive technology in which NuTech thrives is a world of genetic algorithms, neural networks, evolutionary programming, ant systems, DNA computing and quantum computing understood by only a few brilliant scientists, some of whom work at NuTech. Currently the company employs 35 Ph.D. scientists and more than 40 Master of Science graduates, who collectively have authored thousands of research publications, and written hundreds of books on the various aspects of Business Intelligence. Several of these people have been responsible for some of the largest IT projects in the world, such as the development of the Internal Revenue Service expert system and the bank modernization project of Eastern Europe.

Matthew’s father, Zbigniew Michalewicz, has had an instrumental role in the company’s scientific development. Zbigniew graduated from the University of Warsaw with a master’s degree in applied mathematics and went on to receive his Ph.D. in computer science from the Polish Academy of Science. Before co-founding NuTech, Zbigniew was chairman of the Computer Science Department at the University of North Carolina at Charlotte. With more than 25 years of academic and industry experience, he has worked with several international corporations, including IBM Teledyne, as an expert database consultant. He has published more than 200 articles and 15 books and currently serves on nine editorial boards of international journals on Evolutionary Computation.

“Science is the kernel of our business,” affirms his son, Matt Michalewicz. “It’s the critical piece of the process. Our scientists invented algorithms. That’s the market difference. We have something that can’t be replicated.”

The staff of NuTech Solutions has successfully deployed predictive analytics and optimization software for logistics optimization, risk management, and predictive marketing for hundreds of clients. One of NuTech’s scientists was responsible for developing a system that

could be used for bridge management and damage detection for the Road and Bridge Planning and Management Bureau for Shanghai. Another developed a system for the IRS that decides which tax returns to audit and why, created an improved securities trading program for evaluating stock and bond market data, and designed a system to predict pilot performance for NASA.

Many of NuTech's adaptive systems have saved clients substantial sums of money. NuTech developed a program for a major agricultural producer based on evolutionary algorithms that could "evolve" the best allocation of corporate resources that saved the company \$7 million in the first year and \$14 million in the second year. NuTech optimized the distribution of off-lease vehicles for Ford Credit Company, saving Ford Motor Company \$20 million dollars a year. NuTech has also created a retention optimizer program that is expected to save the Polish National Air Force more than \$18 million annually.

Today, NuTech has 26 Fortune 500 companies on its client list, including all three top American carmakers and BMW, several financial institutions including Bank of America, and the US Navy, NASA, and the U.S. Department of Defense.

"We do a lot of government work," says Michalewicz, "It is, after all, the most complex and complicated organization in the country."

Consolidated and Controlled Growth

During the past year, NuTech has made a conscious shift from being a technology provider of software to focusing on several successful software products.

"Everyone in the company is now focused around specific products, instead of on a broad array of technology," says Michalewicz. "Our software is based on leading edge technology, it's patented, it makes clients money and it's easy to sell."

Each product has its own development team, sales team and marketing team. NuTech is focused on three areas: logistics, predictive marketing and risk management operations. The company has also developed a value-pricing model for its software that provides a steady stream of revenue.

Instead of selling a company a software product that will save them \$10 million for a one time fee of \$1 million, NuTech sells it for a yearly fee that lasts as long as the company continues to use the product.

"Instead of making one time sales, we're creating revenue streams that last forever," says Michalewicz. "After we demonstrate the product to the client, we ask how much is saving several million dollars a year worth? We negotiate a number between a few hundred thousand and a few million dollars a year, and this creates a recurring revenue stream for the company."

While NuTech is growing quickly, it is reinvesting its profits in the company to maintain stability while it continues to grow. Michalewicz says that when the company makes money; it hires new people or invests in further research and development.

“Quick growth has killed a lot of technology companies,” says Michalewicz. “We’re trying to grow in a very calculated and controlled way. Over the past year, we’ve won some new clients and hired some key people.”

As well as expanding its Board of Directors, NuTech is expanding its management team. During the past twelve months, it has added vice presidents for products, product research, sales, and marketing, as well as a general counsel.

The Future

During the past year, NuTech has begun to receive some media attention and recognition for its accomplishments. The company won recognition from the Information Technology Council of the Chamber of Commerce, the Blue Diamond Award, for the Most Innovative Use of Information Technology in 2001. And Michalewicz himself was selected as UNC Charlotte’s 2002 Young Alumnus Award Winner, and as one of the Charlotte Business Journal’s 40 under 40 Winner. Michalewicz was also recently named to the Business Advisory Council of the Belk College of Business Administration at UNC Charlotte, and to the Board of Advisors of the College of Applied Artificial Intelligence (CAAI) at the Polish-Japanese Institute of Information Technology.

Michalewicz, who believes in the American Dream as lived by Bill Gates and Sam Walton, says there is no limit to what NuTech can accomplish.

“The object is growth,” he says. “The vision is to be all that we can be. In ten years, NuTech can be in 40 countries with 100 patents and have 80% of the Fortune 500 companies as customers. People like McColl and Walesa can really help us reach the highest level.”

Casey Jacobus is a Charlotte-based freelance writer.