

Member Profile

Member Profile: FALA Technologies, Inc.

Location: Kingston, NY

Founded: 1946

Member since: 1993

Product: New equipment technologies for the semiconductor and nano-scale industries.

Darwin's theory of survival of the fittest certainly applies to the evolution of manufacturing. Many companies founded in the last century were started because a need arose during a time of difficulty in our country. As times and circumstances changed, the companies that survived were the ones that adapted to the changing needs of the customer. FALA Technologies, Inc. is one of these.

The company was conceived in the 1940's by Frank Falatyn Sr., (father of FALA's current president Frank Falatyn Jr.). While Frank Falatyn Sr. was still in high school, during World War II, he began working in local factories making items for civilian and war use. Falatyn and some classmates worked after school in a shop in Kingston, NY, making wooden toys. One day they noticed large machines being hoisted outside the building to one of the upper floors of the building. A large machine shop was opening above them, and given the shortage of skilled machinists and toolmakers during the war, Falatyn and some of his friends went to work for this new company making metal machine parts for the war.

During the war, manufacturing was in high gear and the machine shop would receive stacks of drawings of parts to be made. The machinists would pick out a drawing and start manufacturing it. Once the part was finished, they would go back to the pile to find another one to work on. These shops had kids like Falatyn and older men working side by side. Falatyn had a natural gift for being a skilled toolmaker and was soon running all the various machines in the shop.

Once the war ended, two of the older men from the machine shop decided to start their own shop, and recognizing Falatyn's talents, they asked him to be a partner.



Since he was still in high school, he had to get permission from his father who agreed but with the condition that Frank would first go to college to earn an engineering degree.

In fact, because he was so young, Falatyn's older sister had to sign the incorporation papers in his stead.

Falatyn and his partners choose to call their company Ulster Tool and Die because at that time, tools and dies were the most accurate types of metal parts one could make. After graduating from high school, Falatyn was accepted at Pratt Institute in Brooklyn, NY. Because the war had just ended, Falatyn had to delay college a year to give returning service men a chance to attend first. For that first year and on weekends and summers afterward, Falatyn machined precision parts and built machines for customers while attending Pratt during the week. Designing and manufacturing precision parts, subassemblies and complete machines are still a core business of FALA Technologies.

During the next few decades Ulster Tool and Die went through some changes. Once IBM and other computer related companies took root in the Hudson Valley, many companies, including Ulster Tool and Die, started to invent, design, and manufacture the products needed to help create this new emerging information age. Ulster Tool and Die developed a broad set of engineering and manufacturing services specific to the semiconductor industry.

There were several large computer related companies besides IBM in the Hudson Valley at this time such as Ferroxcube, National Micronetics, and G.E., which were in need of precision machining and engineering. During the 1960's, Ferroxcube, located in Saugerties, NY, started making first generation computers based on early technology involving a wired electromagnetic grid. The grid looked like a window screen except at each junction where the horizontal and vertical line intersected there was a magnetic ferrite core. This early computer required an extremely precise, difficult to make "frame strip" which accurately positioned the ferrite cores. Falatyn invented a special manufacturing process to make these frame strips and the company worked day and night to keep up with orders for this product. This helped establish the company.

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The “frame strip” business was soon replaced by other opportunities with IBM. During the 1980’s and 90’s Ulster Tool and Die offloaded precision machining work from IBM’s internal Machine shop. Each project for IBM involved working with their engineers and scientists to invent the first version of every new technology later adopted by the semiconductor industry. IBM led the way and Ulster Tool and Die, as well as other small companies in the Hudson Valley, continued to advance



their manufacturing and engineering skills to help create these new cutting edge technologies.

Change came again in the late 1990’s when the computer industry migrated away from the core main frame computers and the

personal computer became more popular. IBM closed its Kingston plant and down-sized in several other Hudson Valley locations. This contraction of IBM’s hardware business caused a severe challenge to all of IBM’s vendors and contractors, causing many to go out of business. FALA struggled for a time,, but decided to reinvest in their business and adapt to IBM’s new demand for outsourcing of complete equipment design and build programs. Instead of having local machine shops make and machine parts and components designed and engineered by IBM engineers, they now required that the equipment be completely designed and built by outside contracting firms. It was during these changes that Ulster Tool and Die became FALA Technologies, Inc. in 1996. The name change more accurately reflected the technology development work which was now FALA’s main business. The changes didn’t stop there, though; FALA built a new 60,000 square foot facility that was four times the size of the old machine shop. The new facility’s equipment work flow and processes were structured in accordance with Lean Manufacturing principles. FALA also invested heavily in expanding their engineering department to provide IBM and other semiconductors companies with complete equipment design and build services.

Currently, FALA provides their design and build services for many companies other than IBM, which is less than 4% of their business; over 85% of their customers are located outside of the Hudson Valley. The core busi-

ness is still designing, manufacturing and systems integration of precision tools and instrumentation for the semiconductor industry. The focus is on helping customers develop their new technologies into products.

FALA has also developed a series of their own semiconductor products centered on ultra-clean handling of wafers and lithography reticles used to make computer and microdevice chips. One of FALA’s product divisions manufactures a series of specialty bearings used to rebuild robots and much of this product is exported to semiconductor chip factories in Asia.

During the last ten years, FALA has provided design and engineering services to customers in the medical industry. FALA is also expanding into the renewable solar energy field with the founding of The Solar Energy Consortium (TSEC). In fact, recently FALA launched a new subsidiary business called PVI Solar to nationally market and sell solar signs and lighting products. The microprocessors, electronics and energy storage technologies used in the solar sign and lighting products are an extension of FALA’s semiconductor equipment building knowledge. FALA has developed an energy management system that efficiently harvests solar energy collected from photovoltaic panels to light LED products custom developed by FALA for solar signs and lighting. Looking towards the future, FALA is working on adapting these energy management technologies to new forms of solar lighting products and are partnering with many of the new solar energy manufacturing companies that TSEC is attracting to New York State.



The story of FALA, like that of many other successful small manufacturers here in the Hudson Valley, is one of adaption. FALA adapted to fulfill the needs of the industrial society, growing and transforming from machining parts and tools to semiconductors to the emerging solar technology. According to Darwin it is only those species that are willing to adapt that will survive, based on the story of FALA Technologies, this applies to the manufacturing industry as well.