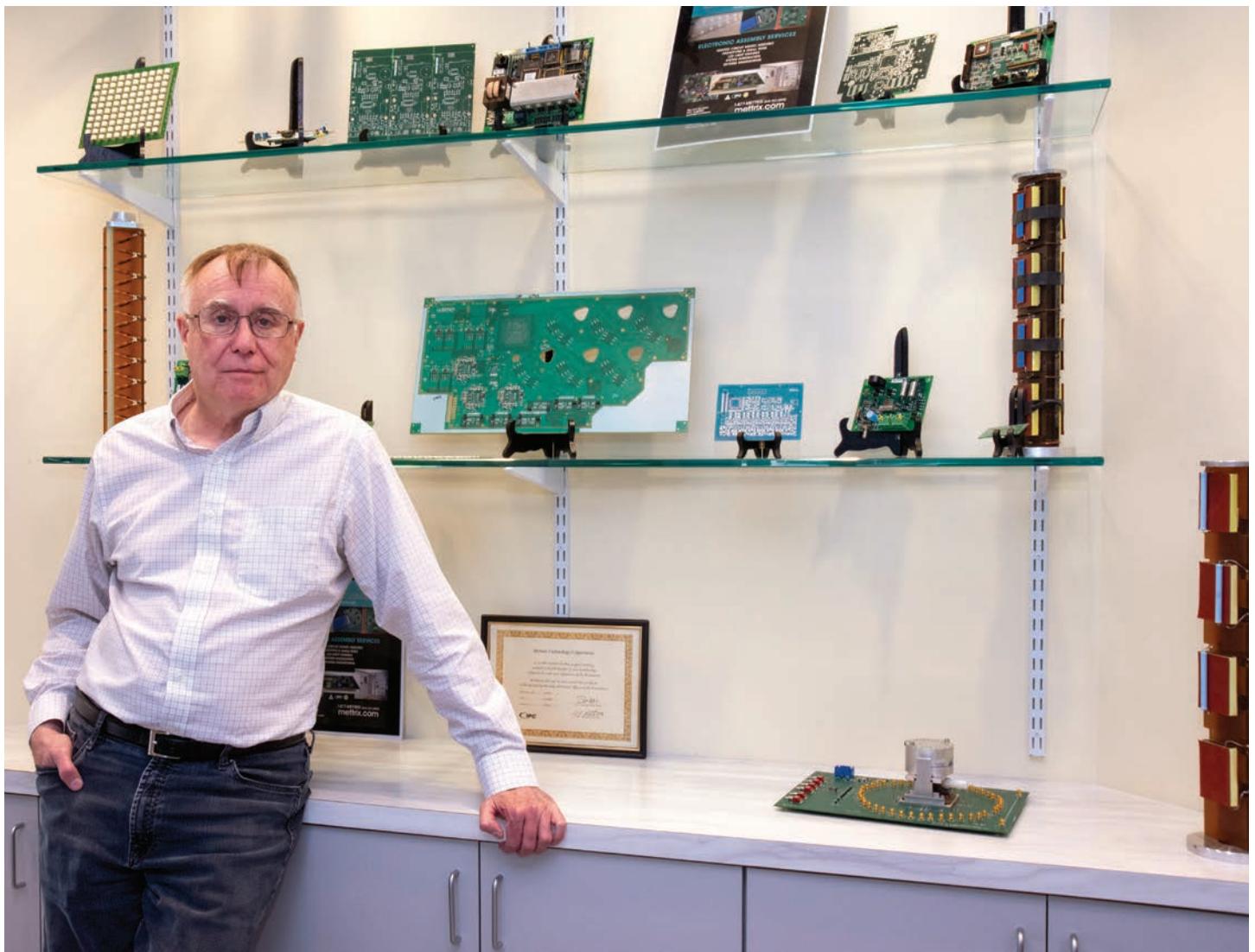


COMPANY PROFILE

METTRIX TECHNOLOGY | BY HV MFG STAFF

A HIGH TECH HIDDEN TREASURE



Oliver Engel standing in the company lobby in front of a display case of a small subset of the many assemblies the company has built for its customers in the 26 years it's been in business.

Tucked away in an office park off route 376 in Wappingers Falls, not far from the Hudson Valley Regional Airport, is a small, innovative, contract manufacturer that is assembling printed circuit boards and other electronic components for some of the nation's leading manufacturers. Metrix Technology is probably not the first company that comes to mind when we talk about high tech Hudson Valley manufacturing. But perhaps it should be.



Holly Doyle assembling an enclosure for a product used by the electrical power distribution industry. With the push toward electrical vehicles and the need to use renewable energy to replace conventional energy sources, there is a growing need for electronics used in power generation and transmission.

The company specializes in production volumes and quick-turn prototyping of electronic assemblies. With a zealous focus on quality the company can assemble single prototypes or production runs of 10,000 or more units. Metrix Technology’s services include printed circuit board (PCB) assembly, box build, and fulfillment services. The company also provides engineering and design services that include reverse engineering, schematic capture, and PCB layout. The company, though small with just 16 employees, is an agile provider of high-value-added services, reflecting the common traits of Hudson Valley manufacturing.

■ THE FOUNDING

Metrix Technology was founded in 1998 by Oliver Engel a former IBM employee with a PhD in Electrical Engineering from Vanderbilt University. Oliver had been recruited by IBM in 1984 to help design the chips used in IBM’s System 390 mainframe computers in the Hudson Valley.

“I had just finished my PhD and was working as an adjunct at Vanderbilt when IBM came calling,” Engel recalls. “It really was a great opportunity. I liked teaching well enough, but I really got into engineering because I like to build things. The prospect of working on the design and build of the 390 was too great to ignore and before long I was on my way to New York State.”

Engel enjoyed his time on the 390 and had the chance to work on other projects at IBM. However, when the company fell on difficult times in the early 1990s he took advantage of a buyout

offer in 1995 and worked in a business that focused on the design and layout of printed circuit boards. Eventually, after completing a layout, clients began requesting that we handle the assembly as well.

Subcontracting assembly sometimes led to quality and cost issues. “I kept seeing mistakes and long lead times. Eventually I just thought that we could do it better “Like I said – I like making things – not just designing them. This is the side of the business I enjoyed – and still enjoy.” Engel said.

By 2005 he had set up a 1500 sf shop in Hopewell Junction. Since then, Metrix has grown steadily into its current 10,000 sf home with 16 employees. Metrix collaborates with its customers to develop blueprints and bills of materials for electronic assemblies. Many of the components they make are used in power distribution and transmission, the aerospace industry and communications sector.

■ CONTRACT SERVICES

Metrix provides a wide range of contract manufacturing and assembly services. These include:

System Integration and Box Build Services. Metrix will assemble both the PCBA and the “box” (or enclosure) in which the product will be packaged, adding and testing many of the components.

LED Light Engines. Metrix will design and build LED light engines. These devices contain an array of LEDs along with the necessary electronics to power and control the LEDs.

Design & Prototyping. Mettrix will work with clients to create their products, from design to assembly and everything in between. They use state-of-the-art technologies including surface mounted technology (SMT) assembly line and other equipment used for through-hole component assembly. Their designers will also take an original design and help customers modernize it, bringing it up to today's standards.

Reverse Engineering. Mettrix can engineer in reverse. They can take a customer's product and work backwards to provide a prototype.

Printed Circuit Board Assemblies. While Mettrix provides a wide range of services for customers the company's bread and butter are printed circuit board assemblies. The company can assemble high reliability assemblies to class 3 requirements required by the military, for example.

Mettrix Technology serves a varied and diverse customer base. From large firms such as GE Vernova to small local firms, and complex assemblies with thousands of components to more simple and straightforward designs. Engel says this mix is a strength.

"Having a wide range of customers and products and services means more steady business. If one sector is down, we generally have customers in other sectors to take up the slack."

An area that has recently shown strong growth is electrical power distribution and transmission. The rise in EVs and the push to renewable energy sources such as photovoltaics and wind energy is driving the push to improve and add to the power grid "We are definitely seeing an uptick in power distribution and transmission," Engel said. "We are also seeing more in the way of aerospace."

Engel is quick to point out some of the smaller customers as well, and the unique products they are helping to build.

One such product is the production of a digital camera used by Panthera, an organization based in New York City that is "creating a world where wild cats thrive in healthy, natural and developed landscapes that sustain people and biodiversity." The organization works to protect the world's 40 species of wild cats. One way they do this is with sophisticated digital cameras that Mettrix Technology helps build. (Learn more about Panthera)

These cameras are designed with multiple sensors and the ability to transmit images, are used to record the presence, and obtain a census, of wild animals in remote location of the planet. Big cats, including lions, tigers, and jaguars, face daily endangerment due to the encroachment of their habitats caused by the expanding civilized world. Obtaining an accurate count and location of existing populations is vitally important to their preservation.

"It's pretty cool to be a small part of this project," Engel says.

■ A COMMITMENT TO QUALITY

Mettrix Technology Corporation is totally committed to providing customers with the highest quality in every aspect of their work, from the components used to fulfill orders to the packaging used for shipping – and every step in between. Only the highest quality materials are used and all are inspected before making it to assembly. Each step of the process is checked and double



Joan Feeley using our automated component counter x-ray machine. The machine shines x-rays through the packaging and each component creates a black dot on the x-ray photo. The software counts the black dots to tell us how many components remain on the reel.



Aaron Zaritsky working at the component rework machine in the process of removing and replacing a component on an assembly. Aaron is viewing a closeup of the component being reworked on the screen to make sure everything looks right.

checked, and each finished assembly goes through a thorough quality control system before being shipped to customers.

“Our overriding goal is to please our customers, and we do that by making sure that they receive what they ordered, when they need it, and where they need it.” Engel says. “We’re small enough to make

sure that is the case – but we are big enough to tackle pretty much any order.”

■ CHALLENGES... AND OPPORTUNITIES

While being small and nimble has its advantages it also presents some challenges. When asked about what some of those challenges might be both Engel and Kyra Alzamora, Mettrix Technology’s Administrative Assistant, a longtime employee agree that recruiting the right talent continues to be a challenge.

“Many of the jobs we have here require both mental aptitude and physical dexterity,” Engel says. “Finding people with the right aptitude and, more importantly, the right attitude is probably our biggest obstacle at the moment.”

“Some of our most successful employees came to us with a hobby in which they work with their hands,” Alzamora adds. “Several of our folks love to knit, and one is an accomplished jewelry maker.”

“If a person comes to us with aptitude, a strong sense of attention to detail, and the right attitude, we can train them and find the tasks that suit their skills and interests. Once people are here, they tend to stay,” Engel says.

Another challenge facing the company is finding the right computer system to help run the company. Most MRP (Material Requirements Planning) Systems and ERP (Enterprise Resource Planning) systems are designed for bigger operations. They are expensive and come with features that are extra or too complicated.

“For our current size and scale our system is great and it works well. “But if we continue to grow at our current pace, we’ll need to find a better program—and I haven’t found one that fits yet,” says Engel, “or even one that I think we can make work. But we’ll keep

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looking and I am sure we will find a fit soon enough.”

There are plenty of opportunities for growth and the company continues to build capacity to meet that growth. Investments in electrical grid expansion are expected to continue, driven by de-carbonization efforts and the increasing use of Artificial Intelligence, which demands higher electricity consumption and is straining the existing infrastructure. Mettrix is well positioned to capture some of that business from both existing customers and new ones.

Another possible area of growth comes from the aerospace and defense sector. Wars in the Middle East and Ukraine are consuming

Jamie Hulsey inspecting solder joints using our x-ray inspection machine. Of interest are the thin wires visible on the right screen. Those thin wires are only 1/1000 of an inch in diameter yet show up clearly using our high-end x-ray inspection machine. This machine allows us to detect problems which would otherwise escape.

Metrix Technology is poised to take the next step in its growth from small, entrepreneurial business to established, reliable manufacturer.



Carlos Pantin inspecting an array of boards which have just exited from the component pick and place machine. This is the last step before the boards go through the soldering process. Errors are easy to fix before soldering and much more difficult once the components are soldered on the board.

munitions at a rapid pace and those munitions, many of which require electronic assemblies, need to be replaced. While Metrix Technology is not a direct supplier of these components specifically they do supply the aerospace industry in general.

“We have invested in new equipment with the latest, most efficient technology. We have high speed pick and place machines, wave solder machines and reflow ovens,” Engel says. “We’ve also been very careful to keep our debt to a minimum. All our machines are completely paid for.”

Those machines are also not at full capacity so they can take on additional orders and new customers. “We are ready to add to our growth” Engel adds.

Now more than 25 years in business Metrix Technology is poised to take the next step in its growth from small, entrepreneurial business to established, reliable manufacturer. With a reputation for high-quality, customer-focused service, proven leadership, and solid financial stability, their next quarter-century is poised to be even more successful than the first.



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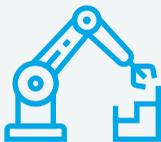
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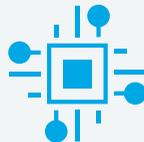
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