






A PATH FORWARD

After an unprecedented year, and with much still unknown, industry members are positioning themselves for a future beyond the pandemic.

by Pamela Mills-Senn



When the pandemic hit, Autometrix began offering live remote demos in the company's Ohio office on its demo machine (shown here) to customers interested in its cutting machines. A large screen on the back wall allows for easy video conferencing to discuss details after the demo. Photo: Autometrix Inc.



California was the first U.S. state to issue a statewide stay-at-home order because of the spreading pandemic, and with that decision, Jonathan Palmer, CEO of Grass Valley, Calif.-based Autometrix Inc., became one of many business leaders navigating a company through uncharted waters.

“We had several customers who were waiting for us to deliver machines and they were in essential business lines—emergency medical tents, etc.—so we worked to stay open and continue to do what we do,” recalls Palmer, whose company designs and manufactures cutting solutions for the textile and composite industries, along with developing patterning software for these machines. “But for at least a month I would joke that I had never been so busy not making money.”

Then, *just* as the company was prepping for a significant slowdown, business unexpectedly picked up, becoming “very strong” for the remainder of 2020, he says.

One of the first moves Palmer made when COVID-19 hit was letting customers know the business was still open. Then, as many IFAI members pivoted to making personal protective equipment (PPE), Autometrix started collecting patterns from companies willing to share, distributing these to other companies and coming up with and sharing its own. As interest in new equipment bounced back, the company delved into virtual demos—“A learning curve for everyone,” Palmer says—enabling Autometrix to reach potential customers worldwide and keep sales going.

Palmer’s company has fared relatively well, but his experience is hardly universal. Some segments of the specialty fabrics industry have been damaged by the pandemic more than others, and much is still uncertain. What has become obvious is that flexibility and strategic thinking are key attributes of companies that are successfully finding a path through and beyond the pandemic.

SURVIVAL STRATEGIES

For event tent manufacturer Aztec Tents of Torrance, Calif., restrictions on public gatherings led to “massive amounts of order cancellations” from customers, according to Aztec president Alex Kouzmanoff.

In response, the company began building some “tangential” PPE



Cooley employees Chuckie Sirypanhho and Freddy Vadelamar are shown preparing one of the company’s customized products for shipping. Cooley develops and manufactures sustainable, high-performance engineered geomembranes for multiple industries. During the pandemic, the company remained fully operational while following social distancing protocols and mask wearing. Photo: Cooley Group.



products (those designed for more temporary applications) that could be rented by its customer base. It also began investigating previously unserved markets.

“We came out with several partition products designed for more retail-type applications. This type of transaction was harder for us to pin down, since we didn’t know this customer the way we know our typical event rental customer,” says Kouzmanoff, adding that the company sold to the retail market through web-based platforms.

For many companies, maintaining employee safety while staying open became a primary concern, requiring businesses to reorganize. Cooley Group, a Pawtucket, R.I., developer and manufacturer of high-performance polymeric solutions, remained “fully operational” from the

start, implementing social distancing practices and strict mask wearing, says Daniel Dwight, president and CEO. Employees who could work from home separated into two teams, alternating days in the office. And the company accelerated its adoption of Microsoft Teams—an effort begun before the pandemic to increase videoconferencing capabilities and improve collaboration.

Dwight says the company’s “highly diversified” product range mitigated the pandemic’s impact. Hits delivered to certain markets, such as print media and shades, were offset by growth in others, like health-care and fuel containment.

Carmel, Ind.-based TVF, a fabric supplier for an array of industries, also shifted much of its office staff to work-from-home, says Chris

Cooley donated its Enviroflex® print media for COVID-19 public announcements. The billboard and banner substrate boasts a 40% lower carbon footprint and weight than standard flexible vinyl, while offering durability and printability comparable to heavier premium vinyl substrates.
Photo: Cooley Group.

One aspect I see that is sure to impact our future business is our ability to pivot and adjust as the world around us changes.

ALEX KOUZMANOFF
AZTEC TENTS

Fredericks, CEO, while the company's fulfillment centers remained open with increased safety protocols. Like Cooley, TVF serves a varied customer base. Although some markets were "severely impacted," others thrived by moving to produce PPE and related items, making it important for TVF to continue operating. Although the transition to remote work was initially "clunky," says Fredericks, it did have some upsides. "In some cases we found ourselves having more facetime with customers than in the past, which was a positive surprise," he says. "The same can be said internally. We really made an effort to [create]

opportunities for our team to virtually connect and collaborate. It's certainly not the same but in some cases we saw our team connect and collaborate in a more meaningful way virtually than when we were all in the office."

BUSINESS AS USUAL?

Some events change everything. At IFAI Virtual Expo 2020 in November, one session speaker remarked that 9-11 forever changed how our society looks at security, the 2008 economic collapse forever changed how we look at finances, and the COVID-19 pandemic will likely forever change how we look at hygiene. It will also

Put to the test: Lean manufacturing

How did lean manufacturing principles fare during the pandemic? *Review* spoke to Mark Reich, senior coach at the Lean Enterprise Institute (LEI).

EDITOR'S NOTE

Mark Reich is a senior coach at the Lean Enterprise Institute (LEI), a Boston-based nonprofit that helps companies improve through lean thinking and practices, eliminating waste-creating activities and delivering high value for customers, using the fewest possible resources. Before joining LEI, Reich spent 23 years at Toyota Japan and North America, most recently as general manager of the Toyota Production System Support Center. During his time as general manager, Reich directly implemented the Toyota Production System (TPS) or managed its implementation in various industries.

Q: Lean manufacturing principles are built on the concept of smooth, stable product demand and supply chains free of significant disruptions, correct?

A: Lean management does rely on stable and smooth demand to be most successful. When demand is unstable and uneven, the concept of *heijunka*, or leveling, helps us smooth production. Let's say you can make 500 products a day. But you get an order for 700 one day, 1,000 another day, then 200 and 300 other days, etc., but your average demand is 500. Heijunka says to hold just enough inventory to be able to cover fluctuations. What happens in these cycles is that orders total, say, 700 one day and the next fall back to 300. So, you still make 500 but you put 200 in inventory to cover the next fluctuation. You don't do that arbitrarily. Over time, you must study what the real average demand is to know the minimum number of items to hold in inventory.

You hold two kinds of inventory. Buffer stock covers fluctuations from outside customers. Safety stock covers issues inside your facility such as a piece of equipment that can't produce [for some reason] or you run out of material because a supplier didn't deliver.

The benefit of leveling is that you don't have to change your production pace or the number of team members. Lean makes the choice that we will try very hard to avoid managing fluctuations with labor modifications in hiring, laying off people or moving people between production lines, etc. Instead, we'll manage inventory to meet demand fluctuations as our first step before disrupting the workforce.

likely affect the way companies run their businesses.

“One aspect I see that is sure to impact our future business is our ability to pivot and adjust as the world around us changes,” Kouzmanoff says. “It was this one ability that allowed us to be nimble and adjust.”

The pandemic changed where many employees work and how businesses communicate internally and with customers, vendors and industry partners. Many predicted that these changes will be permanent.

“The combination of the work-from-home program and the extensive use of videoconferencing in our



This truck tarp is an 18 oz. vinyl-coated polyester fabric, one of TVF's most popular industrial offerings. The heat-sealable fabric is also used to manufacture industrial curtains and dividers, as well as industrial hose covers, mooring covers, oil booms and more. This varied customer base has been an advantage for TVF during the pandemic, as some markets suffered while others prospered. Photo: TVF.

Q: How did the pandemic test lean principles?

A: Everything goes out the window in a situation like the pandemic. If you made masks or ventilators, for example, you made a certain volume until now when suddenly you need 100 times the volume. You're going to have to add people, equipment and production shifts.

It doesn't make sense to design production systems or stockpile inventory with the idea that once in a century you'll have to contend with a pandemic. But lean principles still will help. The lean practice of total productive maintenance ensures that every machine can always perform its required tasks. Lean also encourages cross-training employees so they can move to produce what's needed.

Q: Some may think lean principles failed the pandemic challenge. What are they getting wrong?

A: I don't think lean principles failed but some companies failed to execute them. If introduced purely as a cost-cutting measure and a way to cut the number of people, lean management isn't going to be applied effectively. Plus, unfortunately, many companies view lean only as inventory management. There are two problems with this.

First, some people are portraying just-in-time production purely as inventory management, which it isn't. Secondly, people are subsequently portraying lean as purely just-in-time. We need to go back to the fundamental principle of just-in-time—providing a high-quality product to the customer in the shortest lead time based on demand. The managing of inventory (including the misperception that this means zero or near-zero inventory) is merely one of many methods to support just-in-time. In fact, because our focus is on the customer, if we cannot deliver to that just-in-time way of thinking, we're not lean. This is the question we need to answer, not how low or high is our inventory.

Having said all that, what lean does challenge us to do is consider that we have traditionally held "excess" inventory to cover wastes in our system. But lean or TPS never said don't hold inventory—that's a major misinterpretation of lean thinking and practice. Just-in-time is an important component of lean, but it's only one component.

Lean management isn't a static system. Yes, there are core principles we should never abandon, such as focusing on providing the most value to the customer. But the pandemic has given us an opportunity to reflect on lean management and use this opportunity to adjust.

We've started to see the normal course of business resume and at the same time a lot of folks have found additional revenue streams, much of which could continue once things get back to normal.

CHRIS FREDERICKS
TVF



TVF provided mask fabric to its customers that pivoted to making PPE. This mask features cotton broadcloth poplin fabric, a 200+ thread-count poplin with high-quality combed/ringspun yarn. The fabric has proven popular for apparel and home decor products, and it's become a favorite for masks as well. Photo: TVF.

day-to-day communication has led to increased productivity without deteriorating Cooley's collaborative culture," Dwight says. "The current plan is to make this program permanent and more productive."

Fredericks describes TVF's success at working remotely as "a pleasant surprise and a great benefit to many."

"It's something we'll definitely consider continuing even after business as usual returns," he adds. "I expect others to cut down significantly on business travel as well now that everyone is comfortable with video calls."

But not everyone at a manufacturing company can work from home, Palmer notes. "I do believe that some of our customers have an increased awareness of the importance of equipment and processes and how these can protect them from workforce disruptions," he says.

CAUTIOUS OPTIMISM

Given the damage the pandemic has wrought, it would seem reasonable to hold a somewhat gloomy outlook about the economy in general and some segments of the industrial fabrics industry in particular, but instead, some are cautiously upbeat. Palmer confesses to feeling as if "the other shoe needs to drop" when it comes to the world economy, but he's not hearing anything worrisome from the industry. There's a lot of interest in equipment—a sign of long-term investing, Palmer says—and in software solutions as the virus has revealed the "fragility of a workforce depending entirely on people."

Fredericks is also optimistic about the future for his customers and their markets. "We've started to see the normal course of business resume and at the same time a lot of folks have found additional revenue streams,

much of which could continue once things get back to normal,” he says, adding that conversations around supply chain reliability and reducing the risk of disruptions to this are ongoing.

Still, Fredericks believes it will take time before confidence returns to industries built on the ability of people to gather. Even businesses that have remained in good shape throughout the crisis should approach long-term planning more cautiously, considering not just best-case scenarios but also the worst, he advises.

How quickly the event rental industry could bounce back to pre-pandemic revenues is still murky, says Kouzmanoff, forecasting that this lack of clarity will persist into spring. He believes COVID has permanently altered the business landscape.

“It has reinvented the discussion of ‘what could happen to my business’ and moving forward, will forever impact decisions of businesses,” Kouzmanoff says. “The economy, business and society will recover, and even industries that have been hit the hardest will return.

“This will take time and I’m sure our industry friends are preparing for a leaner road to recovery and post-pandemic success by driving down their labor costs,” he continues. “Automation, mechanization and elimination of labor and wasteful revenue streams will make businesses operationally strong and better positioned to scale up and down in the future.”

Pamela Mills-Senn is a Long Beach, Calif.-based freelance writer.

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