



Urban
Manufacturing
Alliance

**T.E.A.M.
CASE STUDY**

Manufacturing Business Transition

**Mike Vindler
CEO of Tronix3D**



About Tronix3D

Tronix3D is a contract-based Additive Manufacturer specializing in low volume production and prototype parts. Services also include mechanical design and consulting as it relates to additive manufacturing.

Printing processes include HP Multijet Fusion (HPMJF), Fused Deposition Modeling (FDM), and Stereolithography (SLA). Customers include the robotics, energy, medical, and defense industries.



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About Mike Vindler, CEO

As a Development Engineer in the Energy Industry, Mike has a long history with additive manufacturing (AM) and mechanical design. He was a leading proponent of AM while working for a Fortune 500 company. Pioneering some of the first projects to use AM parts at the company for production components while also spearheading the adoption of the technology among other engineers within the organization.

About T.E.A.M.

T.E.A.M.—Tools for Equitable Acquisitions in Manufacturing is a project of the **Urban Manufacturing Alliance**, **Concerned Capital**, and **Common Future** to develop the capacity of community-based lenders to support the transitions of manufacturing businesses to new ownership, including to employees, with the goal of increasing racial equity and economic mobility within the manufacturing sector.

Case studies are an important part of this project as they share the personal journey of the buyer of a manufacturing company and include the trials and celebrations that come with acquiring a business. This case study is of a business acquisition which occurred prior to the T.E.A.M. project but is nonetheless illustrative.

This project was made possible via funding from **JP Morgan Chase** and with support from **Prosperity Now**. To learn more: www.teambusinessstransitions.org.



Business Acquisition Overview

Type/location 3D Printing company (mostly plastics) in Pittsburgh, PA.

Seller/buyer dynamic Buyer was a customer prior to acquisition.

Financing Friends-and-family raise that then was used as collateral for an SBA 7a loan. Sale was structured with a scheduled transfer of funds allowing for working capital during the early transition period.

Timing Acquired December of 2021.

Key Takeaway Mike had been a customer of the company and is also an engineer familiar with the technology and machines.

Post-Acquisition Vision/Plan Lean into the prototyping capabilities and small-run production. Also use any downtime to backfill parts for street racing cars.

Point of Inspiration Relationships and trust matter. Mike was able to purchase Tronix3D because the seller knew him and trusted his vision. His strong partnership, and friends and family network, allowed for creative financing.

How T.E.A.M. Could Have Helped Mike would have been connected to a local lender who understood his business and would have had access to a loan that matched his needs and goals.



Mike's Journey

Mike Vindler is an engineer-entrepreneur. Even before purchasing Tronix3D, Mike was an intra-preneur at Siemens working in R&D and prototyping. In fact, Mike met the seller of Tronix3D because they were located in the same industrial complex outside of Pittsburgh. Mike, a client of Tronix3D, got to know the team over the course of a few years. When the owner of Tronix3D was given an offer from an aerospace company to buy part of the company (equipment, patents and workforce), he went to lunch with Mike to brainstorm who might be interested in purchasing the other part (plastics, machines and technology). Unbeknownst to either of them - Mike was interested!

Mike brought the idea to Jason, his friend and business partner of five years (they design custom aftermarket race car parts together), and they decided it was a way to leave the corporate world and build a company that complimented their existing one, had its own clients, and would allow them expand into new markets. As Mike says, his partner is really good at coming up with wild ideas and Mike is good at bringing these ideas to market; they make an excellent team. At Tronix3D, Mike would be the CEO and Jason would be the CTO.

The duo bought Tronix3D for \$1.5m which included the name, machines, computers, materials, plans, and existing clients. Mike and

his partner were creative in how they financed this transaction; they raised a half million dollars from their personal network and then used this money and real estate holding as collateral for an SBA 7a loan through a local bank. Mike's lunch meeting with the seller was in June, and he closed in October. Most of that time was spent navigating the SBA lending process. They structured the sale to be \$1.25m at closing to the seller with the remaining \$250,000 after six months.

The sale also came with a period of shared space and existing employee time allocation with the expectation that Mike could find a new space and employees for the company after three months. Mike and his partner saw the move as an opportunity to align their location with the market they were leaning into - robotics and additive manufacturing at an industrial scale. They decided to focus on attracting clients looking to do small- to mid-sized production of components of one to 1,000 parts.

Purchasing a company and moving it within months was ambitious. In order to have capital to move the company, the seller accepted \$1.25m at closing with the remaining \$250,000 to come after six months. Mike admits that he underestimated the amount of working capital needed and felt lucky that he was able to obtain a private loan to make it through the transition.

At the beginning, Mike and his partner also were running the shop by themselves because the employees were part of the aerospace



company's acquisition of the metals part of the business. But working in the business directly allowed them to deeply understand the client base, machines, and time needed to fulfill orders. They added their first employee one month after the purchase, another four months later, and another two months after that.

Relocating the company also helped them market the shift of the company's core function. They scaled back the electronics and on-demand related manufacturing, as they felt that companies like Xometry cornered that market; instead, they focused on concierge design-to-manufacturing and truly additive manufacturing. Mike said, "When you're implementing a new additive manufacturing method, complementing manufacturing with design work really provides better value to customers. We can work with our customers on their specific project, including design, reducing their production costs by reducing our manufacturing costs. That's our unique value to our customers."

This full spectrum client services allowed them to modify designs of products with their customers to improve performance, quality, and reduce

costs. In fact, this model is leading to a new partnership with a medical device company. This is the groundwork for the company's eventual transition plan.

They don't foresee growing Tronix3D beyond 10 to 15 employees - that's where the "sweet spot" is of a dynamic, fast-moving prototyping company. They foresee developing spin-offs coming out of Tronix3D with opportunities to sell or license designs coming out of these new companies.

As for lessons learned, Mike is truly enjoying building this company. One thing he underestimated was how responsible he feels for his employees. He does his best to pay well and provide opportunities for employees to explore their own ideas on the machines. He is building the same culture of intra-preneurship that supported him along his journey.



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Interview

(lightly edited for clarity)



Audra: Tell us about Tronix 3D and how you came to acquire this company.

Mike: Sure! Tronix3D is a 3D printing company in Pittsburgh, PA

focused on additive manufacturing, working at an industrial scale. We support anybody

looking to do small- to mid-sized production of components, usually one to 1,000 parts. That production

level brackets us into the right customer. We recently moved into a new location in Pittsburgh proper, due to the robotic sector and all the up and coming things happening here.

As for how I came to acquire the company, it is a bit of a story. I graduated with a mechanical engineering degree from the University of Pittsburgh and worked for Siemens energy for about 13 years. My role was advisory expert engineer, which is like upper level management without people. I did a lot of R&D, low-volume manufacturing, and design work. Engineering is my passion.

In 2018, Tronix3D opened up in the same industrial complex as the Siemens facility where I worked. I was on the Siemens Global Additive Manufacturing Board, so when an additive manufacturing shop opened up next door, I quickly became a large customer. Back then, Tronix3D was a small team of five people so I was able to interact with them often, so I became a little more than a customer.

One day over lunch with the owner, he told me that he was looking to sell part of the company. An aerospace buyer was interested in the metals side of the business which included intellectual property relevant to that industry - essentially rocket engines. But the aerospace company wasn't interested in the plastics side of the business. The original owner knew I had connections in the manufacturing world and thought I might know of a potential buyer. But I wanted to become the buyer, instead. I saw it as an opportunity to leave the corporate world. I had a great job, an interesting job but you cap out on what you can really do for yourself. I had already started some small companies on the side that I still have today, and at Siemens, I was very much in a group that supported kind of coming up with your own things. So a lot of what appealed to me about a small business was really what I was doing already within Siemens, because I was very self-directed. I thought that I could probably do this on my own too.

I do have a business partner at Tronix3D. I am the CEO and he is the CTO. I run the business,



and he does all the really cool tech stuff. We have a lot of crossover between each other, but we are very different people, which is great. And when I say that we are very different people, I'm really good at commercializing products. He's really good at coming up with wild ideas, but he has no idea how to bring something to market.

I bring that up because we actually started one of our other side companies together, five and a half years ago. At that company we design custom aftermarket race car parts. So, after lunch with the former owner, I called up my partner and said "Hey, what do you think about buying a 3D printing company?" and his immediate answer was, "That sounds awesome." We saw Tronix3D as a way to leverage our current business, as well as some of the future endeavors. Acquiring Tronix3D would allow us to create that base R&D and prototyping company to then explore and facilitate some of these other things that we want to do. And we're already starting to do that.

Audra: Did the aerospace company just take the IP and the metals, and leave you guys the real estate and the people?

Mike: No. We didn't get the real estate or the people. The aerospace company wanted to leave that group intact. They wanted to get the plastics equipment out, so that they could bring in more metal equipment and refocus the entire team in one direction.

Audra: With that situation how did you create a value, a sale price for the part you acquired?

Mike: There was not a really good way to start evaluating that. The owner had other interested parties who gave formal offers and we matched the highest formal offer. Early in our negotiations he said that if we matched his highest offer, he would prefer to go with us because he knew the business would stay intact. He didn't want it to get absorbed into something else. We worked with him a lot and he knew that the transition would be good in our hands.

We ended up coming to a sales price of \$1.5m based on assets (of about \$600k) and sales/revenue projections. We negotiated the terms to also ensure all the sellers loans were paid off prior to the closing so the company came over debt free upon acquisition. On top of the \$1.5 million purchase price we were given a cohabitation of the space for three months and some staff time. (Staffing started at full time at the beginning and reduced over those three months as we took over the company.)

Audra: How did you finance that?

Mike: My business partner and I have a good friend who owns a VC firm. He doesn't normally invest in companies like ours. He was one of our primary investors. Getting his support made a huge difference. That was part of a friends and family round that raised \$500,000 total, between all of our investors. And then my business partner, Jason, and I were able to collateralize an SBA 7a loan for the remaining one million dollars. Jason and I each have real estate holdings, so we were able to have equity returned to us. And we were right at the tail end of COVID so we got



the first three months paid for of the 7a loan.

Audra: How long did the negotiation and purchase take?

Mike: That first lunch meeting was mid-June, we ended up acquiring the company on October 15, 2021. Most of that was predicated by SBA durations - we knew how long the SBA was going to take. I think that helped us a lot.

Audra: Did you run into any barriers?

Mike: Our first banker, who we thought would be good because it was the banker the former owner used, was terrible. We abandoned them after weeks of lost or erroneous paperwork. I had existing relationships at Chase Bank, and I do all my personal and banking business there.

Audra: Did you have an LOI or other type of purchase agreement that guided the sale?

Mike: We had an asset sale agreement that was put together by lawyers. But because the aerospace company was also acquiring Tronix LLC (the metal side), I had to create a holding company, gather all the funds in that holding company, and then do an asset acquisition from Tronix LLC. And then after the asset acquisition, I was able to file the DBA to use the Tronix3D name, and then have the seller sign off on using that new name.

Audra: So how did you fund leasing new real estate, moving the business, and hiring people? That is a significant cost beyond the acquisition price.

Mike: We had to be a little thrifty. It was pretty

obvious that the bank wasn't going to give us more than \$1.5m, so we negotiated with the seller to pay him \$1.25m at closing and then in six months the other \$250,000. That was written into the acquisition documents so that gave us \$250,000 working capital. Now, I underestimated the amount of working capital that I needed; luckily, that private investor friend I mentioned earlier gave us a \$100,000 loan toward working capital to help us bridge that gap.

Audra: What about staffing? Or are you set up so that you really can operate lean with the machines you have?

Mike: We've rolled in staff slowly. For the first month, it was just Jason and I, plus the staff from the aerospace side who were helping us. We were able to run it pretty well for the first month, but we also saw a dip in customer sales, which made it easier for us as we started. After the first month, we added our first employee. By March, we added our second employee, and then we just added our third employee. We're a total of five people working day-to-day.

Audra: You said you had this jump in growth? How were you able to do what you thought you could do when you first thought about buying?

Mike: Our race car company now sells more 3D printed parts than ever before. Because I can control the backstock of that company, I fill in the low spots for production with that company's needs, keeping machines in use and productive. Our growth was due to us getting into the robotics sector here in Pittsburgh. And that was



due to physical location change. There was no one doing true additive manufacturing in the city of Pittsburgh; there was literally no company like Tronix3D.

We are different from online manufacturing sites, like Xometry, Proto Labs, or any of those other fast term, 3D printing shops. What we bring is the design experience. In additive manufacturing, when you're trying to implement a new manufacturing method, being able to complement your manufacturing with design work really provides better value to our customers. We work with our customers on their specific project, including design, which reduces their production costs by reducing our manufacturing costs.

When the manufacturing process is connected to design, it provides a unique value to our customers. It can accelerate time to market or, if we show them that if they change the design, we get more production out of our machine, therefore we can lower the cost. We are shifting the perception that some of these companies have about when to invest in another manufacturing process. They don't have to go to injection molding at 500 pieces because of a design change we can push that to 1,000 pieces using an additive process which saves them money and time.

Audra: Since these interviews are part of a project about succession planning, I would be remiss if I didn't ask you - what is your exit strategy?

Mike: We're 14 months into this, but we were already starting to see the pathway. I talked about Tronix3D as a prototyping and design company. This creates a hub and spoke business model where we have this hub of Tronix3D, and then we have these other businesses that can be accelerated and developed by the core of what Tronix3D is good at. We don't foresee growing Tronix3D beyond like 10 or 15 employees as we think that's where our sweet spot is of being a really dynamic, fast moving prototyping company. But what we foresee is developing spin-offs coming out of Tronix3D.

Our first spin-off is going to be in medical device technology. We started working with a company called Trend Medical, and they make medical braces. Tronix3D was able to accelerate their time to market and reduce production costs on their final parts by so much that they suggested a partnership. One of the core people from Trend, Jason, and I are going to form another three person company focusing on medical device designs and we will do all the prototyping, design, and have it queued up for manufacturing by Tronix3D. Then we're going to sell and license those designs out to other companies. We're going to focus on the core of what Tronix3D is really good at, which is creating these devices transitioning to additive processes like injection molding.

Audra: My last question is - what didn't I ask you? These stories are meant to illuminate purchasing a company and the trials and tribulations and joys of that.



Mike: Transitioning from the corporate world to being self-employed was more stressful than I thought it was going to be. As soon as you have one employee, you realize that the decisions you're making affect other people's long-term financial stability. Because we are a small company, we can't provide the benefits like large companies can. But, we do what we can and are transparent about it, like adding money to paychecks to cover healthcare costs. One benefit we offer is that we encourage employees to use the equipment for their own projects during slow or off-time. This also helps the company because we can post this to social media, unlike our regular projects which are under confidential agreements. I do want to take care of my employees, and I do want them to succeed so as we grow we will evaluate. I don't know if it'll be equity for employees or just paying them well, we will see.

Audra: So how do you manage all your social media and being the CEO and doing R&D?

Mike: Well, you just don't sleep as well. And I have a baby coming. There is a massive amount of work happening right now to make sure that I'm not as integral to the process as I am today.

Audra: I have a feeling that being a dad and seeing all the baby-stuff - you will be 3D printing prototypes of things to improve parenting.

Mike: I'm sure I'll be making little clips and straps and couplers on strollers.

Audra: Thank you for your time and sharing your story. Have fun becoming a dad! I'll be back in touch later in the year to see how it is all going.

Mike: Thanks!

About the Urban Manufacturing Alliance

UMA works to transform and reshape manufacturing ecosystems into drivers of just and equitable development that puts communities first. We partner with and convene a diverse network of partners to learn, share, co-design, and scale solutions in which people, places, businesses, and the planet can heal and thrive.

Our partners include: manufacturing support organizations, community-based organizations, educational institutions, business owners, workers, and the public sector.

About Audra

Audra is a Co-Director of the Urban Manufacturing Alliance and leads UMA's Catalytic Capital Pillar.

