



Cleaning with ozone: an innovative solution for every day

Q&A with Steve Hengsperger, founder and CEO of Tersano

Steve Hengsperger is an engineer, entrepreneur, and innovator based in Canada. He is founder and CEO of Tersano Inc., a producer of devices that use ozone technology to create a sustainable solution to clean and sanitize residential and commercial settings. Tersano aims to change the way the world cleans, an especially relevant goal for these times. Steve is also founder and CEO of Advantage Engineering, an industrial-component prototyping and molding company.

Tell us a little bit about your background and education.

I studied mechanical engineering at the University of Waterloo in Ontario and graduated in 1991. During this time, I held sales and marketing roles at companies like IBM and thought I would have a bunch of job opportunities lined up in Toronto when I finished school, but then the recession hit and many companies were laying off staff as opposed to hiring. I ended up finding a job with a tool and mold shop in Windsor to do engineering CAD work. I thought I would be in Windsor for a couple of months, a year at most, but I'm still here now.

Back in 1994, these were the days when computers for doing CAD work cost upwards of \$50,000. On top of this, the software we were using at the tool and mold shop

cost around \$25,000 and the developers put it on sale. I was still single at the time and thought "I could do a little work on the side from home," so I bought the software and set it up. The owner of the shop where I was working kept saying "You'll never make it on your own." Eventually I quit and decided to invest all my time into my business because the other thing I had always wanted to do was get more involved with stereolithography as there was a lot of talk about 3D printing. Within a year, I grew this company, now called Advantage Engineering, to a team of twelve guys and bought the first SLA stereolithography 3D printer in Canada.

What did you see at the time in the technology that other groups doing similar things did not see? How did

you become the first to really get involved in the 3D printing world?

The stereolithography 3D printing machines were very expensive at the time, and weren't really something many companies saw use for, especially in the automotive industry. I ended up talking to many non-automotive customers that were starting to embrace this technology. Many of them were interested in having multiple prototype parts, so I quickly purchased a vacuum casting robotic machine to make urethane parts. My philosophy was to offer the latest, greatest, and best materials to get these prototype parts as close to production quality as possible.

Can you talk a little bit about your philosophy of trying out new concepts and innovation?

I think that much of our innovation comes from listening to customers and understanding the issues or problems that they have, and saying "How do we help them solve that?" rather than saying "Here is what we have." Our initial reaction sometimes is that it's not possible, but once we start working and thinking of different ways we can get to a solution it leads to a lot of innovation and creative problem solving.

How did you transition from the 3D printing and manufacturing industry to your Tersano business?

In our early years, we were doing prototypes for a company called Fantom Technologies, a vacuum cleaner company in the Niagara region. They had the Dyson license so they were the first to introduce a bagless vacuum cleaner in North America. They ran into financial trouble and as a result, many of their engineering staff were out of jobs. They came to me and mentioned that they had brought a water treatment system using ozone technology to the market just before their demise. They said that this device had a lot of problems, but that if we could design one from scratch and make it better, there would be a lot of potential with this product. That is how we started Tersano. This was back in 2001, and shortly after, the EPA, FDA, and USDA all came out with statements that said you could use altered water to sanitize and clean surfaces. This was a game changer so we built a quick prototype home sanitizing system and when we started showing these devices to retailers, there immediately was a lot of interest. We ended up launching both products, our water treatment system and home sanitizing system, because our goal has always been to replace chemicals. Looking back, we were way ahead of our time because now everyone is looking for sustainable alternatives to common problems. Back then, the word "green" was rarely used, and now sustainability is at the forefront of everyone's minds.

At the time, what potential did you see in the product even though it had previously been unsuccessful?

When we made the decision to start Tersano, we were looking only at the water treatment system. In hindsight,

when we look at the product that we launched to consumers (the home sanitizing system), we kind of shake our heads and wonder why we thought people would buy that - the bottle was only good for fifteen minutes between charges and it took up to five minutes to charge. We ended up shifting our focus onto the B2B world because retail was very challenging. However, in B2B we could grow organically and spend more time talking to customers and making the product better, which is where the real innovations came. This was around 2008, and by 2010 we had a device on the market that created the sanitizing solution instantaneously so there was no longer a charging time. This model of our product had a useful time of 45 minutes, and a year later we came up with another important innovation, the cartridge, which extended the useful life of our product to 24 hours. The magic of our product is that for both the residential and B2B products, you just put regular water into the device. For example, in an office building or hospital or airport, you can simply hook up to a tap in the janitor's closet.

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What are the top benefits of using your product versus traditional cleaning chemicals that are prevalent in the market today?

Our product basically only uses water and oxygen as inputs, and then converts that solution into a powerful cleaner, deodorizer, and sanitizer. That in turn then turns back into water and oxygen so it is very sustainable and has no negative impact on the environment. As an example, if you're cleaning with a mop and bucket and dump the dirty water down the drain, that dirty water contains all the chemicals you used to clean. With our solution, there's no chemicals involved. The beauty is that all we're doing is adding an extra oxygen atom

into the water, making ozone instead of O2. You can get our product on your skin, splash it in your eyes, and even drink the solution by accident without it harming you in any way. In our early days, we sold based on simplicity since we offer a single product that can replace many different cleaners. Now, we also promote the fact that our solution is chemical-free, residue-free, and scent-free, which is very attractive to many government buildings and schools. Another differentiator is our high slip coefficient of 0.9 compared to 0.6 for chemical products. One of our first clients, a hotel in Vegas, saw 70% less slip and fall lawsuits after using our product.

How has the B2B part of the business contributed to the company's credibility?

For example, we are on McDonald's approved list of chemicals and we're the only on-site generation

sustainable product that they have. We are also the first choice for some of the biggest contract cleaners in the world such as ISS, Sodexo, and Compass.

Seeing as how most of your experience was with building tools and the like, how were you able to pivot and make an innovative cleaning solution?

I always tell people that you go to school to learn how to learn. Very few of us do in the real world what we learned in school, so when it came to Tersano, I viewed it as a challenge that I could embrace and learn from.

Can you tell us a little bit about what the road map looks like for Tersano? Any interesting features or applications that you have planned or that you're just getting started on?

We are working on a few things. One of them is to add IoT capabilities to our products. Our devices already get plugged into an outlet and utilize power, so this will be relatively easy to do. Another project we are working on is building a dashboard tool for customers that can track how much solution of Tersano they used. This will allow them to make public claims as to how many liters of chemicals they no longer use. Another use case for this dashboard tool would be for billing customers for the amount of solution that they had used; this way they are not pre-paying but are using Tersano products as they go every month, similar to electricity or natural gas.

What does success look like to you? What are the big milestones that you are hoping to achieve, and what do you need to achieve this success?

On the B2B side, we would like to get to a point where we have 10% market share or something significant versus our current market share right now. I also wish people would be more open to believing that a technology like ours can work and replace harsh chemicals. Tersano products are often faced by a lot of skepticism, especially



on the consumer side, because it starts with just water and seems too simple to be true.

Funding would help accelerate growth plans. This would be a two-pronged goal as in order to grow, we would need funding to get the products to markets and for R&D, but then also funding for the software development side of it as well.

As a Canadian-based business, do you have global ambitions or geographies on which you want to focus? In which countries today have you had the most success so far and where do you see opportunities going forward, and to what extent is this driven by the regulatory environment?

Even though we're Canadian, Europe has been our biggest market so far. They seem to embrace sustainability a lot more easily and quickly than North America. A challenge we have is that we need to get regulatory approval in each country. As a company, we're very proud that we know where we stand in every country around the world, we know the path to get regulatory approval in each country, and that's something we're working towards. Many of our competitors don't take the same amount of care in getting regulatory approval.

Our two best distributors in Europe are the UK and France, and we have a good distributor down in Australia as well. We also see lots of opportunity in the surrounding areas such as the whole Nordic area, which we believe is a great opportunity since they focus a lot on sustainability.

How do you market your products and get them into the right hands?

We've tried a variety of marketing strategies. Lately, we have been using influencers to market our products and actually have seen success with micro-influencers. For example, for larger social media content creators, even though they may have millions of followers, if they're

promoting something that doesn't align with their brand or not what their followers are interested in, then it doesn't work.

So you generally use influencers with smaller followings?

Yes, micro-influencers generally have less than twenty thousand followers. Our target market is the 25- to 34-year-old age group, and the next best age group for us is 35- to 44-year-olds which is why our Facebook engagement is relatively high. We also target the 65 and over age group and this demographic buys the most iClean Minis. This happened because it was originally so expensive, and the older age group could justify the cost. Now that prices are lower, we're finding that the younger generation are increasingly purchasing it. We also see a lot of potential in the younger demographic because they are most appreciative of using less chemicals around their homes.

Is there anything else that you think readers should walk away with that we may not have covered?

I would love readers to walk away with a sense of how our product works so efficiently and why it was such a significant technological innovation. We can clean and sanitize most things from greasy surfaces to bacteria on your hands, and have even successfully been tested five different times against Covid. People call us "magic water" or "Harry Potter water" because it basically does everything and replaces a lot of everyday cleaning products. ■



Clairfield is currently advising Tersano on its fundraising. For further information, contact Oliver Khan: okhan@clairfield.com.

