

Workplaces

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Vertex Pharmaceuticals, Corporate Lobby | Artaic Custom Mosaic

Artaic Takes Over the Mosaic Art Market with Breakthrough Robotic Technology

WHILE TRAVELLING IN EUROPE, TED ACWORTH WAS CHARMED BY ANCIENT MOSAIC ART HE SAW AT MUSEUMS AND ARCHAEOLOGICAL SITES.

by Emily Clingman

While travelling in Europe, Ted Acworth was charmed by ancient mosaic art he saw at museums and archaeological sites. Later in life, when Acworth was building his home, he wanted to install mosaic surfaces in places like the bathroom and kitchen, but found the process of commissioning an original mosaic installation too complicated, time consuming and expensive. So, he built a robot to do it for him.

That's the really short version of the story. Like the many tiny square tiles that make up mosaic art, Acworth's story has lots of pieces which led to his success.

Acworth is the founder and CEO of Artaic, a Boston-based manufacturing company that uses robotic technology and innovative design tools to customize, design and fabricate mosaic installations for residences, commercial properties, institutions, hospitality settings and public art.

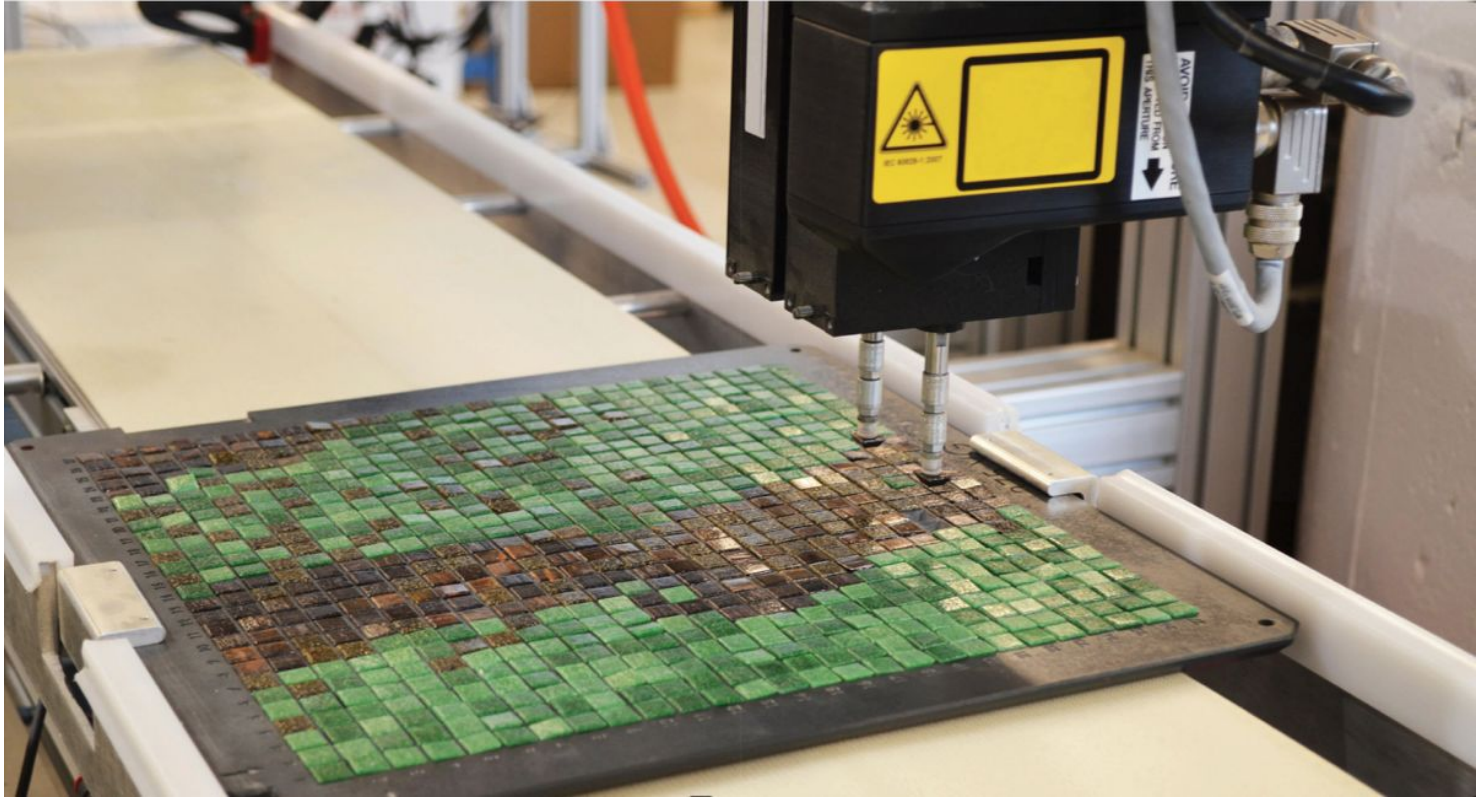
"My mother is a painter and did a lot of commercial murals," Acworth said of his artistic roots. "And I was the youngest of four and got kind of stuck with her while they all went off to college. After school sometimes, I would go and hang around the worksite until she finished up her day. I think that's where I got an appreciation for art and commercial decorative murals. I remember going with her to Luciano Pavarotti's house, and she was painting a room that featured one of his pianos. And that was pretty cool, too."

Acworth holds an MBA in management of technology from the Massachusetts Institute of Technology, where he was a Sloan Fellow in Innovation and Global Leadership. He also holds a Ph.D in mechanical engineering from Stanford University and Master and Bachelor of Science degrees from Columbia University.

"I've always been hands-on, which is why I think I'm drawn to mosaic," he said.

Acworth worked with NASA developing robotics, but was looking for a more creative outlet he could be passionate about. He came back to his love for mosaic and wondered if the manufacturing process could be achieved by robotics. He began developing the idea around 2007, and after several years of development the company was started. But the recession hit at the same time, and nobody was building anything between 2009 and 2013.

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Fortunately, Acworth reflects, he wrote a research proposal to the National Science Foundation at that time to request funding to conduct research in digital design tools for the arts.

"The idea being, we help artists with tools to do art better and to make a better living," Acworth said. "So, I won that grant and that was the beginning of designing mosaic software. We also won other grants for our robotics, and that was more about developing advanced manufacturing so America could compete globally as a manufacturer when the U.S. doesn't have low-cost labor. That was great support for the company in the early years. When the recovery started around 2013, we were in a great position to deliver to customers designing buildings again. It's because of those grants that we could invest in the technology, and we were ready."

Artaic took off from there and has cornered the world market on affordable, authentic mosaic artwork. Acworth says the key is the linkage between the software and the robotics. All the competitors use offshore labor from India and China for the low cost. At the Boston facility, both the design center and the manufacturing plant are in the same location.

"Because we have a customization process, we need the manufacturing to be right next to the design," Acworth said. "There's a huge advantage to having those intimately connected."

Artaic has been growing rapidly, with a 25% sales growth each year in the last five years and a 55% sales growth last year, according to Acworth.

"We're really picking up steam," he said.

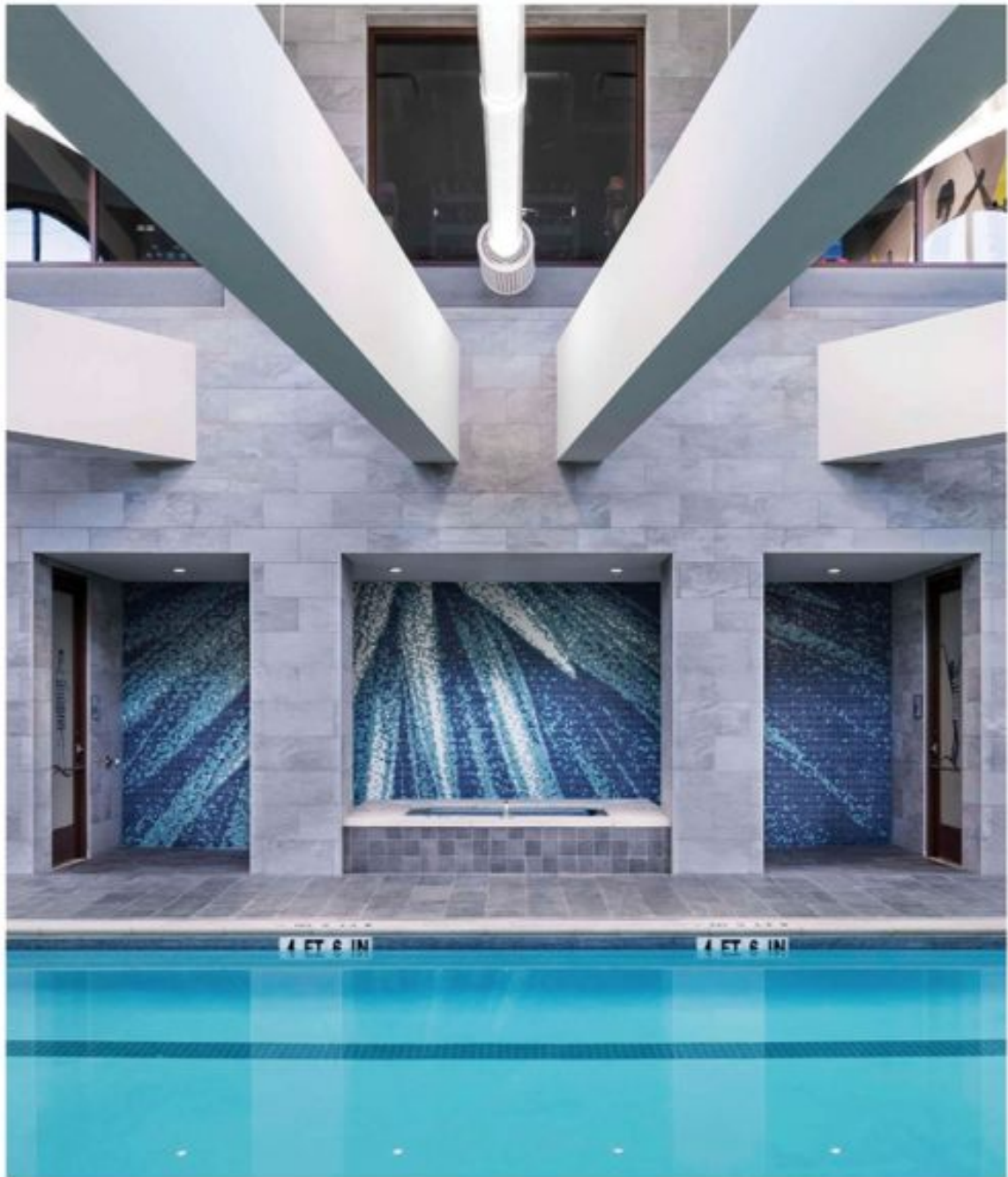
So, how does the Artaic mosaic process work?

Artaic's advanced mosaic software, Tylist, is used to design and digitally manipulate mosaic imagery prior to fabrication. Designers and artists can choose from an array of options, including tile type, color, size and grout type. This increases design flexibility and enables exact customization down to the last tile.

Once it's time to build or renovate, Artaic receives the order, and its robots manufacture the tiles, which are then made into a kit and shipped to the worksite. The kits come in numbered, square-foot sheets. An installation diagram shows builders how to lay the sheets on the surface in the right order.

Individual tiles come in a couple of different sizes. For one-inch tiles, there are 144 square tiles in a square-foot sheet. For 3/8-inch tiles, there are 729 tiles in a square-foot sheet. A 1,000-square-foot mosaic might take two tile installers a week to complete it. Installation generally runs about \$15-\$40 per square foot, depending on the geographical location and the complexity of the application.

For convenience of shipping and installation, Artaic always assembles in square-foot sheets. The sheets have a temporary carrier — a front-faced polymer skin. Once



Jackson Healthcare | Designed By RJTR | Artaic's Flourish Collection | Photography by Katie Bricker

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Ted Acworth, founder and CEO of Artaic

adhered to the wall, the polymer is peeled away, and the tiles stick into the glue. Each mosaic is fitted exactly to the intended surface, so if there's a doorway or a window, there's no cutting and fitting needed on site, and no waste of materials.

"Installation is easy," Acworth said. "You start at the top left corner of your surface and that's sheet number one, and you're on row one. Then you move across sheet by sheet, then start on row two, etcetera. It's very straightforward. And there's no cutting and fitting on site ... we do all that in the factory so it's ready to go for you."

Mosaic art can be applied in just about any situation, from corporate to health care to hospitality or public art. Artaic has quite a portfolio, having worked with many well-known companies.

One notable project featured mosaic as a wayfinding element. When IHS Markit opened its New York City office, it sought an environment as dynamic as its work. IHS Markit's fifth-floor location spans the city block, lending itself to a large, open concept. Artaic created colorful, custom backsplashes and wall murals to adorn the office's social areas, including the cafe and pantry, and denote particular floors or locations within the workspace.

"On each floor, we changed the colors for wayfinding," Acworth said. "So people could say, I'll meet you at the red area or the green area or the orange area. You've got the beauty and artistry of the mural, you also have the wayfinding aspect and the durability."

For its Vertex Pharmaceuticals project, a scientist pulled up a cell phone photo of the formula the company developed to cure cystic fibrosis, according to Acworth. It was the first blockbuster drug that made Vertex billions. The scientific compound was written on a dry erase board, and Artaic took a photo. Next it turned the photo into a wall-size mosaic that consisted of more than a million tiles for the lobby of the office.

Acworth has found something he's passionate about. He's a huge fan of artwork in the workplace and health care facilities. Studies show artwork and beautiful spaces can increase inspiration, morale and productivity in the office and help patients recover faster.

"If you invest money into the beauty of a building, a space, it's going to positively impact your bottom line for years to come," Acworth said.

Artaic's Tylist software is available to use for free. Anyone can play around with images and designs to create their own mosaic. Visit <https://artaic.com/tylist/> to try it out.

"Since we received grants paid for by taxpayer money, this is my way of giving back," Acworth said. **WPM**