

TROY STARTUP MAKES WESTERN HEMISPHERE'S FIRST 3D-PRINTED CERAMIC WALL WITH CEG'S SUPPORT

ABOUT METAORNATE. MetaOrnate is a Troy, New York, startup that makes ceramic architectural facades via additive manufacturing, also known as 3D printing. Riley Studebaker founded the company in early 2023, following his move to the Capital Region to become a lecturer on robotic building materials at Rensselaer Polytechnic Institute's School of Architecture.

THE CHALLENGE. When Studebaker moved to the Capital Region in January 2023, he planned to start a company that designs and produces 3D-printed ceramic facades, though he was not sure how long it would take to scale the business. He had gained experience in this field at the University of Pennsylvania Weitzman School of Design, where he had received his Master of Science in design with a concentration in robotics and autonomous systems and where he later worked as a researcher. Both UPenn and RPI have the 3D printing and robotic arm equipment that Studebaker would need to produce the highly decorative ceramic facades, but gaining access to such technology for a private enterprise usually would be challenging.

MEP CENTER'S ROLE. Gaining access to that technology was less challenging in the Capital Region. The first time Studebaker walked into the Tech Valley Center of Gravity (TVCOG), he saw the UR5 robotic arm made by Universal Robots and realized his startup would get off the ground faster than anticipated. The UR5 programmable robotic arm has a reach of 33.5 inches (850 mm) and a payload of 11 pounds (5 kg). The device is owned by Fuzehub, part of the New York MEP and the MEP National Network™. The Center for Economic Growth (CEG) Director of Technical Services Tom Bell had advocated for the UR5's placement at the TVCOG and worked to attract entrepreneur interest in its utilization. In early 2023, CEG entered into an agreement with Fuzehub to borrow the UR5.

"Riley happened upon the robot during a tour of the COG. Without access, he wouldn't have been able to validate his prototype idea, and start producing product for his first customer," said TVCOG Facilities and Incubator Director Dan Falkenstrom.

"CEG has been central to the ability for me to establish MetaOrnate as a business, and to have our initial success. I have hired an RPI student who was previously my researcher to work on our first project: a wall that is scheduled to be delivered in Philadelphia in January 2024 using clay material extracted from Sheffield, Massachusetts, and processed in Troy. The resources available to me through the CEG as well as the TVCOG and FuzeHub were a contributing factor in my decision not only to establish MetaOrnate, but also to take a job offer to teach in the area at RPI. With full candor, the CEG, as well as specifically Tom Bell, have been central to the existence and success of this endeavor so far."

-Riley Studebaker, Founder

RESULTS



Tripled offered products



Doubled sales projections

CONTACT US



625 Broadway
ESD, Division of Science,
Technology & Innovation
(NYSTAR)
Albany, NY 12245-0000



(518)292-5347



www.esd.ny.gov/nystar/nymep.asp



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