

# Revolutionary solution may be in works in 3D metal printing for robotics

January 28 2016, by Nancy Owano

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For professionals in 3D printing circles, this was Wednesday's juiciest question of all: "Is Velo3D secretly working to revolutionize 3D metal printing for robotics?"

That was the headline from 3ders.org, talking about the young California-based company which develops and manufactures metal laser sintering [printing](#) machines for 3D printing. The Santa Clara company started in 2014, founded by Benjamin Butler and Erel Milshtein.

Palo Alto-based Tekla S. Perry, senior editor, *IEEE Spectrum*, who watches startups, spoke about metal printing indications based on following some "[breadcrumbs](#)."

She wrote that "job postings, talks at conferences, and other breadcrumbs left along Velo3D's development trail" suggest at least a sketchy outline of company plans. "Consider which 3-D printing technology is ready for disruption: metal."

Two of the fastest-growing segments of the additive manufacturing industry are [metal](#) 3D printing and micro 3D printing, said *3DPrint.com* earlier this month.

Last summer, the Velo3D received \$22.1 million in venture investment soon after being founded, said *3ders.org*. They have since been "dropping hints" that they could be working on a metal 3D [printing](#) solution for the [robotics industry](#) which the report described as

revolutionary.

If you go by the company's name, you might guess they have an eye on bicycle parts but the report said that the founder of Golem Robotics, Ofer Shochet, is a member of the board of directors at Velo3D, and pointers are toward robotics.

According to the report, Shochet believed that 3D printed metal robotics will be a major expansion field. Robotic experts will find advantage in the technology's ability to create more complex and new geometries. The report added, though, that this was just speculation, even though "signs coming from Velo3D all point in one direction."

This resonates with a report in May, when Michael Parker in *3DPrint.com* wrote about the RoboUniverse Conference & Expo. Shochet, had predicted that "we are going to see a greater [convergence](#) of robotics and 3D printing. Additive manufacturing (AM) is already having an impact on robotics, allowing for quicker iterations on designs and getting functional models completed quicker."

*IEEE Spectrum*, meanwhile, talked about printing metal objects as done regularly in industry, particularly aerospace. It uses a different, and, to date, more expensive technology, selective laser sintering.

"This technology melts metal powders into solid shapes; it requires high temperatures, and far more complicated equipment than what's found in the layering sort of printers used for plastic. The patent for this technology expired in early 2014—just before the formation of Velo3D."

Perry then posed a question which makes the company interesting to watch. At the time, industry said cheap [metal](#) printers would not be arriving on the scene any time soon. They would come only after a

significant breakthrough on the materials side. Asked Perry: "Could Velo3D's founders have that breakthrough figured out?"

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