## The US Marines Deploy LulzBot 3D Printers With the Help of Building Momentum

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US Marines Training with Building Momentum [Full Image]

The US Marine Corps is known for innovating on the fly, and Building Momentum, in conjunction with their LulzBot 3D Printers, is helping them take that innovation to a whole new level. A veteran-owned firm in Alexandria, VA, USA, Building Momentum provides consulting on science, engineering, and technology development to defense, education, corporate, and entrepreneurial organizations. "We're the people who go to strange places and do MacGyver-like things, and we do a lot of training for that with the US Marine Corps," said CEO and Founder Brad Halsey.

Having utilized his command of military 3D printing during his deployment in Iraq, problem solving in high pressure conditions, Halsey was inspired to share his expertise and enthusiasm. Since 2015, Building Momentum has been helping innovators around the world, providing intensive instruction in such fields as mobile lab design, 3D printing in combat, and CAD software. About his client base, Halsey said, "Anyone from teachers to Seal Team guys, you name it. The client who has gotten most of our training is the U.S. Marine Corps, and all of our training is extremely immersive."

## **LulzBot 3D Printers: The First Choice for Innovative Solutions**



When time is of the essence, problem solving with technology becomes a necessity. Building Momentum's training includes

team-oriented challenges requiring a combination of emerging technology and creativity in order to achieve a technical objective within a designated time constraint. They present multi-faceted creative challenges under pressure, every day for a week or more. One of the more impressive uses for LulzBot 3D Printers involved the creation of 3D printed bridges, fit together in segments, with no adhesive material. The bridge that held the most weight, roughly 250 pounds, currently holds the record.

Halsey recently returned to the United States from Kuwait, where his team supplied Marines with LulzBot TAZ 6 3D Printers and provided military 3D printing training on deconstruction and reassembly. "The TAZ 6s that we have in Kuwait, we teach them how to tear them down and build them back up," Halsey said. "Having the ability to remake the parts is actually pretty useful, and that's one of the reasons we like the TAZ over other printers."

The fact that LulzBot 3D Printers are certified Open Source Hardware is a big deal for Halsey, who sounded off about the advantages of Free and Open Source technology. "I have a very strong and adamant philosophy that whatever I teach a Marine, they have to be able to do at home, after hours, overseas, anywhere they can," Halsey said "So we train everyone explicitly, as much as humanly possible, to use Open Source stuff."

## **Missions Made Possible with 3D Printing**



For Halsey and his team, training is only the beginning. Building Momentum will soon be opening their own community-driven, co-working makerspace in Washington D.C. where small businesses, artists, and educators can gain full-time access to machines and training courses for rapid prototyping as well as artistic innovation. "If you use a TAZ 6 to make a product and it's going well, you're going to buy more TAZ 6s as you expand your business," Halsey said.

When asked about specific uses for LulzBot 3D printers in the Marines, Halsey was quick to disarm the notion of weapons: "A lot of the things we focus on are some other types of solutions and development technologies, things that can help in other ways that aren't just some weapon accoutrement." Buckles, handles, camera

mounts, and other things that have a tendency to break can be designed and printed in a matter of hours, instead of waiting days or even months for a replacement. For the latest intel on specific uses for LulzBot 3D Printers in the Marine Corps, stay tuned for part two of this series.

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