Breathalyzer firm takes cue from NASA technology

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Photos by Kathleen Lavine | Denver Business Journal
Lifeloc Technologies Inc. has struck a deal with NASA for technology that could create a better breathalyzer.

NASA technologies for measuring gases in spaceships and on other planets could help a local company create an out-of-this-world breathalyzer for law enforcement.

Wheat Ridge-based Lifeloc Technologies Inc. signed a five-year agreement with the U.S. space agency's Glenn Research Center, in the hope that NASA sensor technology can help make better, cheaper and smaller alcohol breath testing machines.

The deal between a breathalyzer maker and NASA may seem unlikely at first glance. But it makes a lot of sense, said Barry Knott, CEO and president of Lifeloc (OTCBB: LCTC).

"NASA has thousands of technologies, and it's hard to imagine they haven't worked on something that would apply to a lot of businesses," Knott said. "You just can't put things into space and a man on the moon without having to develop a lot of technologies beyond just a rocket."

NASA has vast research expertise and, with federal budget cuts straining the agency, is eager to commercialize things businesses can use, he said.

The research agreement is the first arrangement to spring out of the manufacturing innovation partnership between NASA and the Colorado Association for Manufacturing and Technology (CAMT).

CAMT told Lifeloc, a 26-year-old business, about the opportunities to commercialize NASA research.

Lifeloc's $8 million annual business selling breathalyzers is based on fuel-cell technology, including its roadside breath tests used by police that are about the size of an oversized mobile phone.

NASA has sensor technologies, using microchips, which could be adapted to measuring the contents of breath, holding the promise of shrinking the breathalyzers and making them cheaper to produce.

Lifeloc found potential to explore manufacturing other kinds of sensors — for disease detection, or to test air in mines for harmful gases — more cost-effectively than the company could otherwise.

"Things moved from intriguing to quite interesting very quickly," Knott said. "We got to the point where we said, gee, let's go ahead and see where this goes."

Knott said the agency was surprisingly eager to see if its research had promise for Lifeloc. "If I went to NASA on my own, I don't think they would've given me the time of day, but as part of this agreement, I got a lot more than that," Knott said.

The NASA-CAMT joint Aerospace and Clean Energy Initiative was forged in 2010 to create an innovation park that could incubate manufacturing businesses. The park project stalled when CAMT, the City of Loveland and a company redeveloping the former Agilent business campus differed on strategies for the park.

But CAMT's ACE initiative is helping connect companies with NASA to explore whether agency technologies available for license could be useful to the businesses.

Under Lifeloc's agreement with NASA, researchers will help identify sensor technologies that might make sense for the company, and the company will research the technology's commercial and production potential, Knott said. If a new product emerges, Lifeloc would license the technology from NASA.

The company spent $440,000 on research and development in 2011, according to its Securities and Exchange Commission filings.

It wouldn't be the first local company to use technology from the space program in its commercial products.

Outlast Technology, in Boulder, uses NASA technology in heat-regulating textiles used by companies in athletic socks and undergarments.

Greg Avery covers tech, telecom, aerospace and bioscience for the Denver Business Journal and writes for the "Boosters, Bits & Bioscience" blog.