

## **Techshot President, CEO John C. Vellinger Greenville, Indiana**

Commercial space pioneer John C. Vellinger is an innovative entrepreneur and a long-time leader in the microgravity research community. As an eighth-grade student nearly 35 years ago, Vellinger entered a science competition sponsored by the National Science Teachers Association and NASA. His concept of a space-based incubator capable of supporting growing chicken embryos caught the attention of judges and space agency scientists.

For several years Vellinger continued to improve his concept – winning regional competitions along the way. His third entry was selected as a national winner. Then in 1985, while a freshman at Purdue University, Kentucky Fried Chicken (KFC) partnered with him to develop his incubator. He quickly and cost effectively manufactured the device and trained Teacher in Space Christa McAuliffe to maintain the unit, dubbed “Chix in Space”, on what became space shuttle Challenger’s final mission.

Two years after the tragic loss of the crew, Challenger, and the incubator, Vellinger set out to rebuild the unit for flight aboard the middeck of space shuttle Discovery. The success of that mission, and of the incubator, garnered world-wide media attention and established a strong reputation for Vellinger as an innovative engineer.

Following his graduation from Purdue with a bachelor’s degree in mechanical engineering, Vellinger and KFC engineer Mark Deuser founded Techshot Inc., in Greenville, Indiana and initially earned work for their young company as an affiliate of a Center for the Commercial Development in Space at the University of Alabama in Huntsville. Other examples of their custom space research facilities flew aboard five more shuttle missions, including STS-95 – the crew of which included U.S. Senator and legendary Astronaut John Glenn. Vellinger personally trained Glenn to operate a Techshot payload called ADSEP, which he discusses in his memoir.

Following the conclusion of the space shuttle program, Vellinger seamlessly led Techshot into the International Space Station (ISS) era. Today, the company owns and commercially operates a catalog of space hardware aboard the ISS. Besides KFC, customers and collaborators include Tupperware Brands, Novartis, Eli Lilly, Walter Reed National Military Medical Center and the Uniformed Services University of the Health Sciences. In addition to developing equipment, Vellinger has helped operate his devices remotely from his own Payload Operations Control Center in Indiana. Recently he assisted record-breaking American Astronaut Peggy Whitson with experiments she performed in space with Techshot hardware.

Under his leadership, Techshot has been selected for the Tibbetts award three times by the U.S. Small Business Administration. Vellinger also has been presented with the NASA Exceptional Technology Achievement Medal for his development of the Techshot Bone Densitometer, which is being used in space by biopharma companies and research institutions to help develop new drug treatments for diseases affecting people on Earth such as osteoporosis.

He personally helped operate the company’s 3D bioprinter in microgravity aboard a parabolic-flight aircraft. A spaceflight qualified version, with which Techshot expects to manufacture human organs and tissues in space for use on Earth, soon will launch to the ISS. The company also was selected by NASA’s In Space Manufacturing Program to prototype a 3D manufacturing facility that is expected to be deployed aboard the ISS and deep space vehicles.

Vellinger provides nearly 50 high-skill, high-wage jobs in Indiana, California and Florida, and the staff is growing rapidly as the tempo of the commercialization of low-Earth orbit steadily increases. He has been issued eight patents and has numerous technical publications to his credit.