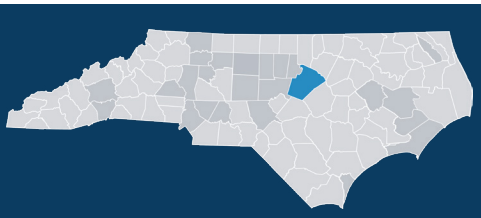
BRIDGING THE VALLEY OF DEATH:
A One North Carolina Small Business Program SUCCESS STORY

BENNETT AEROSPACE, INC | CARY, N.C.



SMART ENGINEERING CREATES NEW PRODUCTS & A SUCCESSFUL COMPANY

IT'S ONLY NATURAL THAT a company full of bright scientists and engineers would be as precise and intentional when engineering their own company's growth as when designing their next high-tech product. For Bennett Aerospace, the calculations to avoid the Valley of Death included the smart use of federal technology grants matched with the One North Carolina Small Business Program.

"As a veteran owned, advanced technology R&D and professional support services company, Bennett Aerospace is passionate about innovating cutting edge technologies to protect the warfighter. SBIRs allow us to quickly develop tip of the spear technologies and get them into the hands of those that risk their lives for us daily," says Julia Bennett, Bennett Aerospace's Chief Executive Officer, when speaking of the federal government's Small Business Innovation Research grants. SBIR grants are critical tools for nurturing promising new technologies, but award amounts are modest to start and can take some time to come to fruition. "But if you're doing it as part of a larger strategy, it can be pretty powerful," Julia Bennett adds.

As an 8(a), woman-owned business with limited resources, Bennett Aerospace's initial strategy included a bias toward self-funding, avoiding unnecessary debt, and thoughtfully applying lean but effective methods to proportionately scale up and evolve subsequent to every award.

The company acted as a steward of the resources received, and applied clever yet prudent methods to deliver customer solutions, as well as simultaneously build internal infrastructure that could be scaled across the entire company. "We were careful not to grow without the consideration of our people, Bennett's most valuable resource. Being singularly focused on delivering the best solution to our customer by retaining key talent, while self-aware of our financial limitations, Bennett Aerospace was able to carefully assess, build and evolve its employee offerings, core capabilities, and leadership following each win, and thus far be able to escape the Valley of Death" says Julia Bennett.

Dr. Brandon Conover, one of Bennett's earliest engineers now turned VP, points out that "Bennett Aerospace, doesn't develop a technology first and then attempt to win an SBIR related to that technology. Instead, Bennett has engaged the federal market with a 'listen-first' approach, to truly understand outstanding needs. Then the company assembles smart teams to build the required solutions."

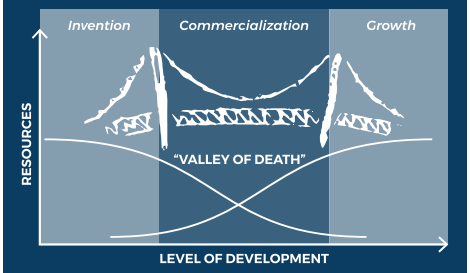
Bennett Aerospace's solutions have been plentiful, including heads-up visual displays for the military, body armor, and a whiz-bang technology known as VoltFlex that can convert kinetic energy (such as walking) into electrical energy, using flexible piezoelectric nanostructures embedded in clothing or footwear. The company has grown from a small start-up to over 170 employees today, with job openings for 20 more.

Scaling up to this level of success doesn't happen by accident, and Julia Bennett is quick to point out the federal grants are not enough to grow jobs and commercialize new products. "Every additional investment on top of that is crucial. The OneNC grant is a great example of that. We were able to bring on engineers full time to work on specific SBIRs, but also utilize their additional time to write new grants, to help develop other technologies, to help us with the scaling issue." As company CEO Julia Bennett adds, "Bennett Aerospace is committed to providing the capabilities required to keep our military men and women safe and effective as they are our everyday heroes. The OneNC Small Business Grant was instrumental in helping us achieve this."

ABOUT THIS SERIES

Entrepreneurs and business owners face many challenges during the life of their companies, but none strike more fear and difficulty than the 'Valley of Death.'

A familiar phrase to venture capitalists and business executives, the Valley of Death is the period of time a company must navigate between the discovery of a business-worthy idea or technology and the point when the company generates enough paying customers and revenue for long-term survival, job creation, and profits. Finding funding sources to bridge this gap is an ongoing struggle.



The One North Carolina Small Business Program helps promising, technology-oriented companies in the state survive and thrive. By providing matching dollars to companies that have already won highly-competitive federal technology grants, the OneNC Small Business Program is an important solution for North Carolina companies facing one of the business world's toughest challenges.

Bridging the Valley of Death:
A *One North Carolina Small Business Program* Success Story

one north carolina
Small Business Program

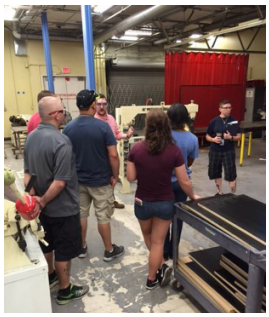
About The Program

- Established in 2005 (§ 143B-437.80-81), the Program awards matching funds to small businesses that receive federal Phase I Small Business Innovation Research (SBIR) or Small Business Technology Transfer (STTR) Phase I grants.
- SBIR and STTR grants are the single largest source of early-stage technology development and commercialization funding for small businesses (more than $2 billion annually) – larger than all private sources combined.
- Yet the federal grants are often not large enough to allow the small businesses to complete their work, and federal restrictions on the uses of grant funds often limit the businesses.
- The North Carolina Program supplements and leverages the federal funds, helping homegrown businesses commercialize innovative technologies & create jobs.
- Since Program Inception:
  - 398 grants awarded
  - Over $24.7 million awarded
  - 255 different companies in 25 counties and 41 cities across the state have received funding
  - More than 900 jobs created or retained
  - More than $500 million in external capital investment
  - More than 100 patents and copyrights already received, and another 250 applied for and under review
  - More than $125 million in total sales resulting directly from the technology developed with Program funding
  - More than $1.5 billion in total sales resulting indirectly from licenses of the technology developed with Program funding
  - More than 95 percent of the grantee businesses agree that the Program encourages the establishment and growth of high-quality, advanced technology firms in North Carolina
  - For more information, visit: nccommerce.com/sti/grant-programs

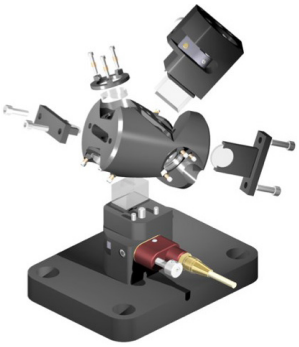
BENNETT AEROSPACE™

About The Company

- A veteran-owned, woman-owned, minority-owned, 8(a) small business delivering innovative on-site professional, scientific, and technology support services. Bennett Aerospace has been nationally recognized as one of America's fastest growing companies, as evidenced by their inclusion in Inc500's 2017 list.
- Year Founded: 2008
- Office Location: Cary, N.C.
- Current Number of Employees: 158
- Website: bennettaerospace.com
- Federal SBIR/STTR Funder: U.S. Department of Defense - Office of Secretary of Defense, U.S. Department of Defense – Department of the Navy, U.S. Department of Defense - Air Force, Department of Commerce, National Aeronautics and Space Administration
- One NC Small Business Grant Recipient in 2009 and 2010



A group is given a tour of Bennett Aerospace's warehouse space.



The North Carolina-based Bennett Aerospace Team has successfully completed the first SBIR Phase focused on developing the Optical Wideband Laser – Tunable Attack System™ Version 1.0 (OWL-TA System™ v1.0) – a tunable laser system suitable for use both as an offensive laser package to defeat and destroy optical sensors and as a laboratory instrument for the testing of eye-safe laser systems. The Team is building upon proven RISTRA Optical Parametric Oscillator (RISTRA OPO) technology in order to output up to 1 J in pulse laser energy over a continuously tunable wavelength range of 1300-2000-nm. In Phase 1, the Team provided modeling and design documentation necessary for reaching this goal, as well as detailed plans for future work needed to make the OWL-TA System™ a reality.