

A Virginia SBIR Success Story



An interview with Bill Cumbie

Founder & CEO

Pancopia, Hampton, VA

*Interviewed by Robert Brooke, SBIR Program Director,
Center for Innovative Technology*



Bill Cumber (Right)

About Pancopia: I always wanted to develop technologies that helped the environment. I had worked at an international environmental engineering firm for 29 years. About ten years ago I went part time with the firm and started a company to treat infections. We received an STTR to help with research and raised additional funds but were not successful in commercializing a medical treatment and ended up liquidating that firm. I returned to working full time with the engineering firm and in 2014 I decided to take advantage of an early retirement opportunity. That's when I started Pancopia. Pancopia is developing technology to recover valuable resources from wastewater.

Why SBIR? SBIR funding provides money to do critical research, and it provides credibility to our company and the research that we are conducting. I was familiar with SBIR/STTR from my prior firm that had an STTR with NIH. Two weeks after I took an early retirement, NASA had an SBIR topic for "a biological waste water system for the space station that could be shut down and re-started rapidly." That was pretty much what I was looking for! I knew about a technology that was out there, and I reached out to some of the world's leading experts on this technology -- some that were near me in Hampton, VA. I hired an SBIR proposal consultant (SBIR Resource Center), using a micro grant from CIT. We received the phase I, and later the phase II, and now are working on two Phase III's. We have also received a Phase I from USDA, and we have a phase I pending from Dept. of Energy.

Broaden your horizons: Since there is only one space station to sell to, we knew we wanted to use our NASA work to build out technology for other purposes. We've always viewed NASA as a partner in technology development as they are pioneers in areas related to water -- water on the space station costs \$83K per gallon! So we knew they had a need, but pretty much won't be our only customer if we want to stay in business. Our goal was to develop this technology for use by municipal and agricultural markets. We are using the core work performed for NASA to move towards more commercial opportunities -- we've targeted a DOE SBIR that will address problems in swine lagoons and permit them to be used to generate biogas successfully (much different than the space station).

Cash Flow and "Scope Creep": Companies fail for a few reasons -- cash flow and scope. They often try to do too much. You need to focus, and find out how to mine as much in your core area to develop technology and create cash flow. We have had our own issues with too much scope -- be careful not to propose too much! We have had 3 phase I's and have taken losses on each of them. Even with 35 years of experience in managing proposals, I have over committed to the amount of work that can be funded by SBIR's! It's not worth winning it if you go bankrupt. Cash flow is very important, but keep in mind that agencies can pay fast, or they can pay slow! It's good to have another source of income if possible -- I did not leave the large engineering firm completely when I started my first company, so I could keep some funding and benefits

before I went full time. In our current company I also supplement our income by doing more traditional engineering consulting work similar to what I did at the large firm.

Agencies have different communication styles: For NASA, we developed a monthly communication plan. We viewed these as opportunities to speak with them and learn more. With our phase II, we were able to engage with another project at Texas Tech, so we keep monthly communications with them and NASA. With USDA, we did not speak with them at all during the project. So, they are all different!

Finding ways to develop core technology: We have used multiple agencies to help continue to build the core technology and to grow opportunities for both federal and private sector sales. We applied to USDA and got a phase I and had great results. We are currently waiting for a phase II. It was in that project that we discovered something unexpected that ultimately was the foundation of an SBIR we applied to at the Department of Energy – we wanted to see if we could build a smaller unit that could be used in different situations. They use slightly different technologies, and they have different forms. So, we’ve tried to develop different products for different use cases in the same area.

Use resources and support. You must have partners, use their help, and take their advice! Participate in SBIR workshops, get help with proposals, engage with resources designed to help you succeed. Get CIT and other funding to help prepare proposals. Be sure to ask for help from everyone you can – if you don’t ask you won’t get it! The National Institute of Aerospace (NIA), the City of Hampton, the local PTAC office, and CIT have all helped us succeed. Finally, use the TABA funding that the agencies have -- \$5K in phase I and \$50K in phase II. It’s paid for by the agencies, and it helps push you to engage with customers.

Keep making connections: We’ve worked with experts at numerous universities, USDA, CIT, and others. We keep engaged with NASA, and are keeping tabs on the municipal markets and finding out what they need. We keep in contact with USDA experts in the agricultural world, and have executed multiple cooperative research agreements with them. We wanted to go to trade shows in agriculture since that’s an area we don’t have a lot of experience in – I’ve recently been invited to give a keynote speech at the Virginia Water and Wastewater Conference that will be virtual this year. Connections are hard to make, but you need to make them!

Keep Looking for Customers: You may think your baby is beautiful, but it may not be to others. If you receive SBIR, find out if the agency has an ICORPS program. We did an ICORPS program to help us keep developing our customer paths. You must find ways to keep informed about your customers so you build a technology that they need.

Fortitude! My first startup ended up closing. Shortly after Pancopia started, there was a flood in the building that wiped out a lot of our work and equipment! When the government shut down due to budget impasse, we had to adjust. And the global pandemic may impact the supply chain we want to sell our technology too – so you need know it won’t all go the way you thought it would. There’s a good chance it will take twice as long or longer, so remember, it’s a marathon, not a sprint!



This interview funded in part through a grant
award from the US Small Business
Administration

For more information about CIT’s SBIR
support program for Virginia based
entrepreneurs, contact
Robert.brooke@cit.org or visit



www.cit.org