



Brenda I Prenitzer

Orlando, Florida



NanoSpective, Inc.

Learn about Florida Entrepreneur Brenda I Prenitzer:

Incorporated in 2003 by four University of Central Florida alumni, NanoSpective, Inc. is a homegrown technology company with deep roots in the Central Florida community. After sixteen years in business, NanoSpective has grown into an industry leader, utilizing cutting edge technology and state-of-the-art equipment to provide materials science and nanoscale materials characterization services to a diverse range of industries. The NanoSpective team of expert scientists use sophisticated imaging and spectroscopic techniques to determine physical and functional properties of different materials. Whether the work is in intellectual property, failure analysis, quality control or research and development, NanoSpective provides a range of analytical services to support technological advances that contribute to a higher standard of living across the world.

Owner, co-founder and CEO, Brenda Prenitzer, shared the history of the company, challenges faced along the way, her personal journey as an entrepreneur, business advice for others and her future goals for NanoSpective.

"After working as a flight attendant for 10 years, I decided to go back to school to complete my degree," she said. "I graduated from the University of Central Florida with a degree in Chemistry in 1995. A National Defense Science and Engineering Graduate Fellowship (NDSEG) allowed me to continue my education at UCF. In 1999 I completed my PhD in Materials Science from the Department of Mechanical, Materials and Aerospace Engineering. While working towards my PhD, I had access to the equipment and expertise at both the Materials Characterization Facility at UCF and the AT&T Microelectronics R&D and Fabrication Facility. A direct and lasting product of this access and mentoring was the practical experience which grew to be a unique expertise in the fields of materials science, characterization science, nanoscale technology and intellectual property support. It is this unique expertise that enabled my enriching career at AT&T Microelectronics, which after a series of name metamorphoses became Agere Systems. The same uniquely specialized expertise enabled us to found NanoSpective in 2003 and continues to be a primary differentiator and driver of our success today."

With the help of tax matching incentives and support from several state and local organizations, including the I-4 Corridor, UCF and Agere, two state-of-the-art pieces of equipment were jointly purchased and placed in the UCF Materials Characterization Facility (MCF) in 2001. The model for the MCF as an advanced characterization facility, a shared university

resource and an external user facility was pioneering. The new Transmission Electron Microscope (TEM) was one of only three in the world. With an approximate \$3,000,000 price tag, it is clear that this type of equipment is not consistent with a start-up budget. Having access to this caliber of equipment further differentiated NanoSpective and allowed them to overcome what would have otherwise been an insurmountable barrier to entry, providing another key factor in the inception of NanoSpective.

“At that point, we had everything we needed to start the business,” she said. “We had the equipment, the facility, expertise, a project pipeline, and support from UCF as well as Agere. The UCF lab was a ‘user facility’ which allowed us to rent time on the equipment whenever we had a project on hand. Our bond with UCF continued when we were fortunate enough to be accepted into the UCF Business Incubator. We were able to receive assistance and guidance on best business practices and strategic planning. From the earliest days at the incubator it was easy to recognize that one of the most significant and continuing benefits was being welcomed as a part of the entrepreneurial community. We are grateful for the advice, inspiration and opportunity provided by our entrepreneurial organizations like the National Entrepreneur Center, Advisory Board Council, Florida Small Business Development Center, GrowFL and the GrowFL CEO Nexus.”

Prenitzer shared that although the initial stages of starting the business were not burdened by high risk, it did require a lot of sweat equity and a strong support network. With on-demand access to state-of-the-art equipment, no employees to manage and an in-demand skill set, they enjoyed a significant competitive advantage until 2010 when, as

Prenitzer put it, "We realized that technology and our competition had outpaced us."

"This is around the time when we began our transition," she said. "We had a few 'what are we going to do now' type discussions at the end of 2010. There were three of us that wanted to grow. Our other partner didn't so she transitioned out of the business."

The years 2011-2015 were marked by significant transformation in leadership and business practices. While one of the co-founders continues to be a valued member of the technical staff, Prenitzer had purchased 100% of NanoSpective equity by 2015.

"As the business evolved, we really began to understand what was required to build a scalable second-stage company," she said. "As such, we made the decision to buy our own equipment which has allowed us to increase capacity to meet client needs. We also recognize the need to devote equal emphasis to advancing our best business practices."

From 2015 until now, Prenitzer explained that scaling continues to be the biggest challenge, as well as a top priority.

"Making the template and the process so we can replicate and scale ourselves, while remaining stable, continues to be our biggest challenge," she said. "We're looking at hiring an external company to help us capture our processes as well as building the IT infrastructure to help us encode that. We're also seeking to add culturally aligned technical and business expertise as we continue to grow."

Since 2011, Prenitzer has augmented her understanding and capabilities

of business by joining GrowFL's CEO Roundtable. Like most great entrepreneurs, she recognized a need to find support in areas she lacked. As Prenitzer shared, her experience with the Roundtable has been invaluable.

"I'm extremely grateful to be part of the Roundtable," she said. "It's all about learning from the other members. We each have unique strengths and perspectives. My strength is vision and culture, with a keen sense of process. However, I'm not a manager. Implementation is not a strong suit of mine. Spending time with like-minded CEOs gives me access to a group of professionals with a lot of experience. I can honestly say there hasn't been a single meeting where I felt disinterested or bored of what was being discussed. We all have different businesses, but our struggles and concerns are all very similar. It's truly remarkable."

Prenitzer recalled a recent experience with the GrowFL CEO Roundtable that, as a result of recommendations from fellow CEOs, she was able to successfully navigate a potentially devastating situation for the company.

"A few years ago, one of our largest clients was encumbered by a circumstance that caused a temporary but precipitous reduction in their demand for our services," Prenitzer said. "As a result our revenue was no longer sufficient to meet our fixed costs. This was a particularly harrowing juncture for NanoSpective as resources were being depleted even to the point of cashing in my 401(k). At the same time we had a singular lifeline. We were negotiating with a different client for a guarantee of work. The stakes were pinned to a single phone conference. If we didn't win this engagement, it would have been very

difficult for NanoSpective to continue. The other CEOs in my group offered some great negotiation advice. Long story short, that advice helped us to secure a guarantee of work that was greater than 50% of our highest annual revenue. A secondary yet lasting result of that engagement was the addition of two new pieces of equipment worth \$450,000."

When asked whether or not Prenitzer would recommend the CEO Roundtable to a colleague, her response is unequivocal. "Without a doubt," she said. "I'll sometimes work an entire weekend without sleep. Even if I'm completely exhausted, I'll make time for the Roundtable. It's about making time to work on your business and not in it. I always feel refreshed and come away with new knowledge."

Looking ahead, Prenitzer's vision for NanoSpective is to be the best custom analytical services company in the world by following a path of continuous improvement. "Our past and future strategies converge around our philosophy and practice of caring for the stakeholders first," she said. "NanoSpective's future vision is guided by our mission to provide a place for our team members to be inspired and have career security. We will continue to seek out innovative enabling and funding strategies that rely on collaboration and strategic alliance to create our scalable, sustainable future." With additional opportunities on the horizon, Prenitzer foresees doubling NanoSpective's full-time staff of eight in the near future.

What advice does Prenitzer have for aspiring entrepreneurs? "It's a long haul," she said. "Make sure you enjoy what you're setting out to do, set your course and be prepared to preserve. If you stop in the middle, it

looks just like failure. One of my favorite quotes is from Carol Bartz. She says, 'If you think you can't, you're right.' Don't give up. Along the way, seek out a community and be willing to accept help. Have a plan, but be open to unexpected opportunities and be willing to pivot."

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