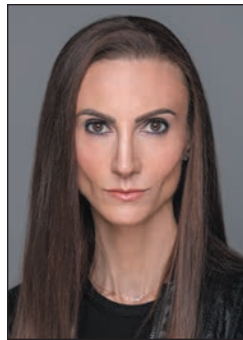


Enhancing The Learning Experience

An Interview with Sandra Reiter, Chairwoman and Chief Executive Officer, Vertex Solutions

EDITORS' NOTE Sandra Reiter brings more than two decades of operational and consulting expertise to the leadership of Vertex Solutions. She holds a master's degree in business administration and a juris doctor degree from Columbia University and is a member of the New York and Massachusetts State Bars. She earned her BA cum laude from Middlebury College and graduated from Phillips Exeter Academy cum laude.



Sandra Reiter

COMPANY BRIEF Vertex Solutions, LLC (vertexsolutions.com) is a high-technology learning enterprise company. Founded in 1997, Vertex specializes in progressing human performance by implementing emerging technology for better learning to promote and achieve customer confidence and success.

How do you define Vertex Solutions' mission and purpose?

At Vertex Solutions, we firmly believe that enhanced learning is the catalyst for brighter futures. Superior learning empowers individuals to achieve their objectives, excel in the workplace, make meaningful contributions to their communities, and lead more fulfilling lives. It is defined not only by the quality of instruction, but also by its relevance to personal goals and its accessibility. Central to our mission is the commitment to harness emerging technologies to democratize high-quality learning for all, regardless of geographic, social, or economic boundaries. We continually explore innovative solutions that extend the reach of superior learning to wherever people live and work.

Enhancing the learning experience also means providing learners with the opportunity to develop job-specific skills in environments that closely mirror real world scenarios. We are dedicated to replicating the proven mentor protégé model; a methodology that, since the early 1970s, has demonstrated the fastest knowledge transfer and the most enduring retention. This model emulates on-the-job training, where an expert imparts the nuances of a task and its rationale, followed by guided practice, assessment, and constructive feedback. Our XR aviation simulators exemplify this expert-apprentice approach by offering a comprehensive, immersive learning experience that equips users with

practical, actionable skills. Vertex Solutions' XR aviation simulators serve both the commercial and defense sectors, ensuring that pilots across industries have access to the most advanced and effective training solutions. However, it is particularly important to us that we support the men and women of the U.S. Air Force, as well as our other armed services, by providing cutting-edge training tools that enhance mission readiness, increase operational safety, and improve skill proficiency in high stakes environments. Our commitment to innovation in aviation training directly aligns with the needs of national security and defense, helping to prepare the next generation of pilots and aircrew for the challenges they may face. By integrating our expertise in mixed reality technology with a deep understanding of military training requirements, we are dedicated to equipping those who serve with the best possible learning solutions.

This said, we are also becoming further entrenched into the commercial sector, specifically with Archer Aviation, developing the simulators for their eVOTL aircraft. It is exciting to broaden our offerings into the commercial category. Our objective is to train our users better and create improved learning environments

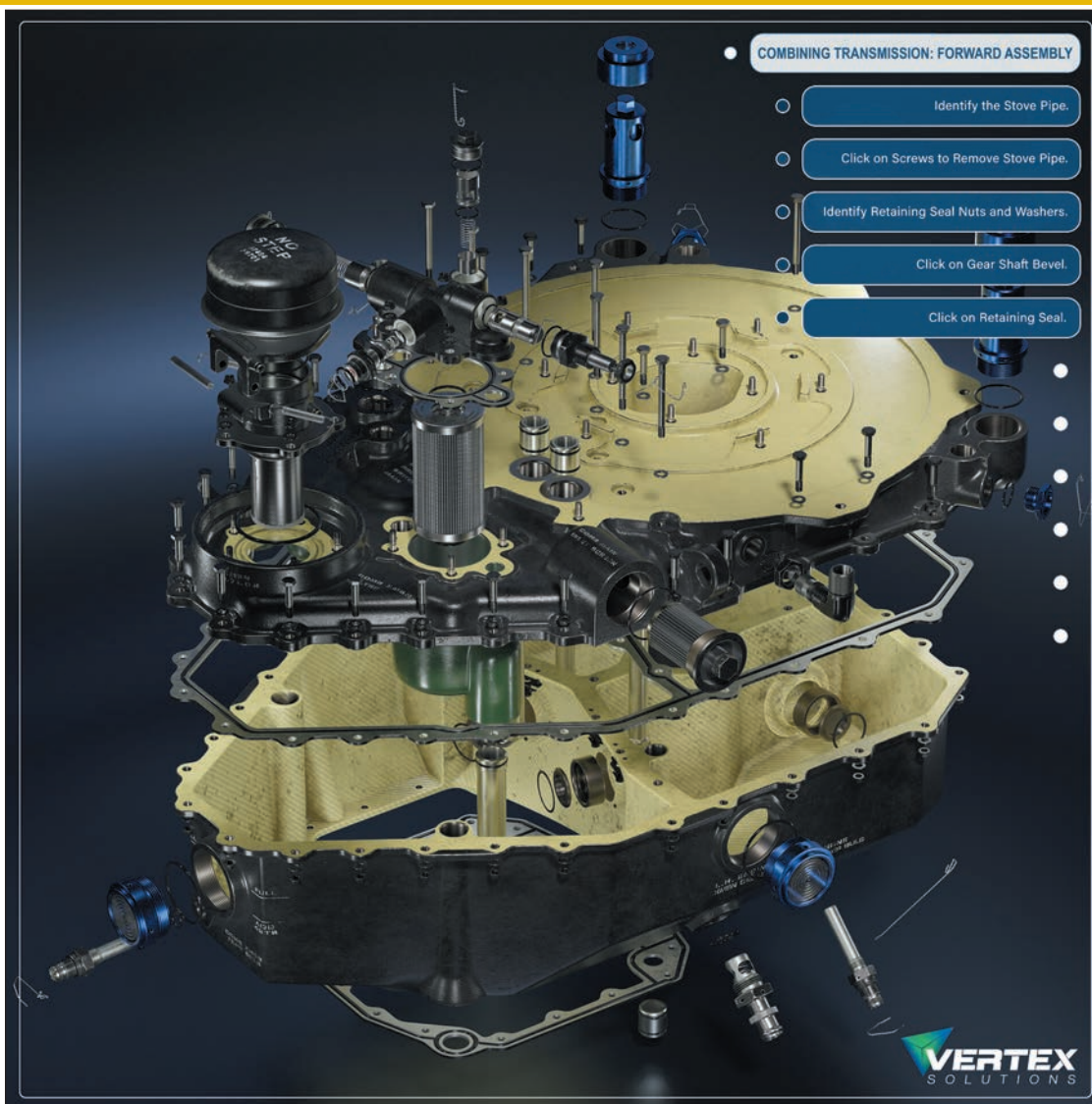
that extend beyond the military, allowing us to reach an extended market with the benefits of our life-saving teachings.

How critical is to maintain Vertex Solutions' culture and values as the company continues to grow?

A steadfast commitment to culture and values serves as the foundation that enables us to navigate the rapid evolution required to remain at the forefront of innovation. Our agility and ability to drive continuous technological advancement allow us to outpace larger competitors in the aerospace simulation industry. Nowhere is this need for rapid innovation more critical than in the defense sector, where the military's ongoing pursuit of next generation technologies demands solutions that enhance operational effectiveness and survivability. With the landscape constantly shifting, driven by technological breakthroughs, emerging threats, and evolving security challenges, innovation is not merely an advantage; it is a necessity. In an environment defined by constant change, uncertainty can only be mitigated by a strong cultural foundation built on trust, transparency, and shared purpose. A lack of clarity or consistency in values can lead to internal misalignment and external unpredictability, whereas a clearly defined and universally understood culture fosters cohesion, strategic focus, and a unified approach to problem



The Archer Midnight Flight Training Device – pursuing worldwide aircraft flight equivalency certification at less than one tenth the price of traditional simulators



VR Transmission Maintenance Trainer: Hands-on, risk-free training for maintenance and skilled trades – unlocking availability and access to real-world skills training. Delivered to US Army 223rd Aviation Regiment supporting CH-47 maintenance training.

solving. By explicitly articulating, and by personally demonstrating, the behaviors and results that are valued (and rewarded), we ensure that every member of our team is aligned in both thought and action.

Developing and reinforcing our culture around well-defined values creates shared expectations, strengthens trust, and provides a clear sense of direction – even in the face of rapid transformation. While our vision and mission set the course for where we are headed, our culture and values dictate how we will get there. A true culture of innovation is rooted in the encouragement of creativity, calculated risk-taking, and relentless experimentation. We invest in our people, empowering them to think beyond conventional boundaries and equipping them with the tools and resources needed to turn bold ideas into tangible solutions. Our values emphasize collective success over individual achievement, fostering deep empathy for our customers, an acute understanding of their challenges, and a commitment to delivering training solutions that are highly relevant to the mission critical needs of those we serve. This approach not only fuels our growth, but also ensures we remain agile, responsive, and competitive in an industry where staying

ahead technologically can mean the difference between success and obsolescence.

As we look to the future, our unwavering dedication to innovation will continue to be our guiding principle, ensuring that Vertex Solutions remains at the cutting edge of training and simulation – advancing learning, expanding accessibility, and ultimately improving lives.

Will you elaborate on Vertex Solutions' focus on innovation and where innovation will happen in the coming years?

Vertex Solutions has long maintained a dedicated research and development team focused on advancing learning technologies through both internally and externally funded initiatives. Our track record of innovation includes securing multiple Small Business Innovative Research (SBIR) awards, many of which have successfully transitioned into Phase III commercialization contracts. This commitment to research and technological evolution has been fundamental in transforming Vertex from a courseware development company in the 1990s into the high-tech learning solutions leader we are today.

Currently, we are at the forefront of revolutionizing pilot training through our lightweight, cost-effective Mixed Reality (MR) aviation simulators. In November 2024, Vertex was awarded a

collaborative research contract with the Federal Aviation Administration (FAA) to define the metrics and fidelity requirements necessary for MR simulator training hours to be accredited toward official flight time. Additionally, we are working closely with Archer Aviation to develop an MR simulator designed to meet both FAA and international certification standards, ensuring it can serve as the primary training platform for Archer Midnight pilots.

Vertex Solutions' MR simulators are a paradigm shift in aviation training. At approximately one twentieth the cost of traditional simulators, they operate on a single 110-volt outlet and require no specialized facilities. FAA certification of MR simulators will enable a fundamental transition from large, centralized training centers to more accessible, office-based simulators located near where pilots live and work, directly aligning with our mission of expanding access to high-quality training.

Looking ahead, we anticipate significant advancements in MR technology over the next two years. Higher resolution head mounted displays will become smaller and lighter, enhancing usability and immersion. Increased processing power will allow for more intricate 3D terrain modeling, with real-time updates that reflect new structures, storm damage, and evolving weather conditions. Meanwhile, artificial intelligence (AI) driven analytics will provide automated student performance assessments and instructor feedback, elevating pilot training to new levels of proficiency and safety.

What have been the keys to Vertex Solutions' growth and how do you define the Vertex Solutions' difference?

Vertex Solutions differentiates itself in a competitive landscape by two key strengths: our ability to develop groundbreaking solutions that align with our vision of making high-quality learning more accessible and our deeply ingrained culture and values that define how we engage with customers and partners. These attributes enable us to compete effectively against much larger organizations while maintaining agility, innovation, and a customer centric approach. Mixed reality simulation is an emerging market driven by cutting-edge technology, and continuous innovation is the cornerstone of our growth. By maintaining an in-house R&D capability, we not only enhance our MR simulation technologies but also explore ways to optimize high-resolution graphics and aircraft models to reduce the cost of tutorial learning within simulator training. We view pilot training as an interconnected system of multiple training interventions – including instructors, courseware, simulators, and live aircraft – ensuring all elements function cohesively to drive proficiency. Our goal is to ensure that every learning solution we provide seamlessly complements our customers' broader training ecosystems.

One of the most meaningful acknowledgments we have received from a customer was their recognition of the effort we put into understanding their unique training needs and tailoring a solution specifically for them, rather than simply offering a pre-existing product. This reflects the

foundation of our corporate culture: fostering true partnerships with our customers to achieve shared objectives. We take the time to understand their goals, definitions of success, and the broader context of their training systems to develop the most effective approach. This same philosophy extends to our subcontractors, where we actively consider their business objectives and strive to create mutually beneficial solutions. Many of our long-term business relationships are built on a foundation of trust, with partners who know that we will always operate with integrity and a commitment to shared success. Our relationships with partner companies are just as vital as those with our customers. To thrive as a small business in a fast moving, innovation driven industry, we must be both willing and capable of integrating the most advanced technologies from a diverse array of partners. We have designed a flexible, open architecture software framework that enables us to rapidly incorporate best-of-breed technologies into our simulators. However, access to these technologies is made possible not just by our technical capabilities, but by the strong collaborative relationships we have cultivated with our partners. It is this spirit of cooperation and shared innovation that allows us to deliver cutting-edge solutions that push the boundaries of what is possible in training and simulation.

How is technology impacting the way Vertex Solutions operates?

We integrate cutting-edge Extended Reality (XR) technologies into our hardware based simulators to provide warfighters with training experiences that are both visually and physically immersive. By combining high-fidelity virtual environments with tactile, haptic feedback, our simulators replicate real world scenarios with exceptional accuracy. Our software and hardware are designed and implemented in a modular fashion, allowing us to swiftly adapt to the ever-changing XR market and provide our customers with best-of-breed, cutting-edge technology.

To maintain our leadership in simulation technology, we have developed a proprietary, localized Large Language Model (LLM) tailored to our specific needs. This in-house LLM assists in error checking and summarizing extensive research and documentation, streamlining our development processes. Additionally, we



Two of Vertex's family of low-cost, lightweight, reconfigurable MR flight simulators. Developed in conjunction with Defense Innovation Unit and delivered to US Air Force, Air Education and Training Command.

actively monitor emerging trends in AI and data analytics on a daily basis across multiple industries, allowing us to anticipate breakthroughs and integrate the most impactful innovations into our solutions.

Our software development team employs best-in-class agile methodologies to manage projects efficiently, ensuring we meet or exceed schedules and budgets. By embracing iterative development, continuous feedback, and adaptive planning, we can respond swiftly to changing requirements and deliver high-quality solutions. Our commitment to monitoring developments in agile practices across industries allows us to incorporate the latest tools and techniques, maintaining our competitive edge in delivering innovative training solutions.

Will you highlight the strength and expertise of the Vertex Solutions' team?

A key strength of our organization is our diverse workforce, which includes a significant number of military veterans. Their firsthand understanding of the defense landscape, leadership acumen, and ability to perform under pressure enrich our team's capabilities, fostering agility and innovation. By embedding veterans into our workforce, Vertex Solutions not only honors their service but also leverages their unique expertise to better anticipate and address the complex needs of our clients, navigate global challenges, and sustain a competitive edge in a rapidly evolving landscape.

Beyond technical proficiency, our team's greatest asset is their unwavering commitment to Vertex Solutions' culture and values. Our employees share a deep empathy for our customers, demonstrating a genuine investment in solving challenges and driving success. They are

“Sandy is a natural leader and genuinely instills confidence in those around her; her energy and belief in others drive people to want to step up and be successful.

She has a unique capacity to tell it like it is – no fluff, no pretense - just sharp insights and smart ideas delivered with her signature (Sandy) authenticity.”

Linda Tantawi, former CEO, Susan G. Komen, NYC;

CEO, Lustgarten Foundation for Pancreatic Cancer Research

naturally curious, constantly seeking new ways to enhance learning effectiveness, because they believe in the transformative power of education. This shared mission fosters a culture of collaboration, where a strong work ethic and collective success take precedence over individual recognition. Trust and mutual support are foundational to our team dynamic, ensuring that every member is confident in the strength of those around them.

At Vertex Solutions, we recognize that individual expertise alone is not enough to sustain excellence. Our success is built on the synergy of exceptional talent, a passion for our mission, and a culture that values the contributions of every team member. This combination is what enables us to push the boundaries of innovation and deliver meaningful, lasting impact.

What do you see as Vertex Solutions' responsibility to be engaged in the communities it serves and a force for good in society?

Our leadership team is deeply engaged in the communities where we live and work, recognizing that our investment in these spaces extends beyond corporate responsibility; it is a fundamental part of who we are. We understand that fostering strong community relationships not only enriches the places we serve, but also cultivates a pipeline of future talent. By actively engaging with students through hands on seminars featuring our virtual and mixed reality simulators, we bridge the gap between cutting-edge technology and the diverse career paths that bring these innovations to life. These experiences are designed to ignite curiosity and inspire the next generation, demonstrating how a wide range of skills and disciplines converge to develop transformative learning solutions.

Our commitment to community engagement extends beyond education. Through strategic investments in local programs, partnerships, and workforce development initiatives, we contribute to the long-term prosperity of the regions where we operate. By supporting STEM education, military advocacy groups, and professional organizations including local Chambers of Commerce and Economic Development Councils, we reinforce our mission to advance learning and innovation.

For Vertex Solutions, community involvement is not just about giving back; it is about growing together. As we push the boundaries of technological and defense capabilities, we remain

equally dedicated to fostering an ecosystem of learning, collaboration, and shared success. Our mission comes full circle when we empower individuals with the skills they need to join us in shaping the future, driving forward a vision where better learning leads to brighter lives.

What has made philanthropy so important to you and how do you decide where to focus your philanthropic efforts?

In many ways, my philanthropic efforts choose me. That started for me at the age of 12 when I got involved with the Susan G. Komen Breast Cancer Foundation after my grandmother was diagnosed with breast cancer. That evolved over the years to my work as the founder and chairwoman of The Young Professionals Committee for Susan G. Komen, Greater NYC, a committee that was then rolled out across the U.S. and globally. I eventually served as chair of the board from 2013 to 2016.

Much of my philanthropic focus is on making things accessible to people who may not otherwise have access, which is similar to how we focus our giving at Vertex when we work with students and in schools to provide technology and resources.

I think to be effective in philanthropy you need to look at it from a business lens in regard to setting goals and objectives, and having timelines and metrics. While always keeping who you are serving front of mind and what they need to be successful. Success here is measured by intangibles, like opportunity to live life to its fullest. People, and how I can teach them and give them tools to empower them to be successful, will always be my priority, regardless of my endeavor.

How do you approach your management style?

As the owner of this Woman Owned Small Business (WOSB), I am deeply committed to leading with unwavering integrity, resilience, and an unshakable ethical compass. My management style is rooted in leading by example, setting the highest standards of excellence, accountability, and innovation for my team.

With my background as an attorney, I bring a meticulous attention to detail, ensuring that every decision is grounded in precision, strategy, and a deep understanding of complex regulatory and operational landscapes. Yet, I also humbly recognize that true leadership is not about having all the answers; it's about fostering an environment

where the exceptional minds within my organization, and the broader aerospace, defense and commercial communities, can collaborate, challenge conventional thinking, and push the boundaries of what is possible.

I believe in empowering individuals, cultivating a culture of trust, and inspiring a leadership mindset at every level. By doing so, we align our collective expertise toward a shared vision; advancing the mission critical objectives that drive progress and innovation in our industry. I am lucky – what I do, I believe in; I believe in my team, and vice versa, they know that I would run over a cliff for them whereas they would take a bullet for me. This can't be taught, but only felt through unwavering commitment to bettering each other and those around us.

What are your priorities for Vertex Solutions as you look to the future?

Our vision for the future is centered on building comprehensive pilot training ecosystems that complement and enhance the lightweight, cost effective simulators we currently provide. Attaining FAA certification levels that enable pilots to log flight hours within our simulators will not only expand our presence in the commercial aviation sector, but will also strengthen the credibility of mixed reality simulation for military training. Vertex is already pursuing certification internationally. In partnership with Archer Aviation, Vertex is working with the General Civil Aviation Authority of UAE to have our simulator of the Midnight Aircraft certified for logging flight time. By developing tailored curricula and instructional content designed for a training framework that prioritizes accessibility to high fidelity simulators, we aim to demonstrate that such programs yield superior results at lower costs around the world, an achievement that will redefine Vertex's role in the industry.

Our approach will provide young aspiring pilots an opportunity to pursue an aviation career that might otherwise be out of reach. Deploying our training framework into pilot training aviation academies reduces the cost of pilot training in communities that rely solely on flight hours to train pilots. Expanding access to high fidelity simulator training at lower costs will not only increase the number of pilots being trained, but expand the diversity of those able to achieve their dream of flying. In my eyes, the sky is our limit. ●

“Working with Sandy has shown me what effective leadership looks like in action. She brings a unique blend of legal expertise and people skills that translates into an uncanny ability to spot talent and build high-performing teams. What I appreciate most is how she balances giving us room to run our departments while maintaining clear expectations.”

Nic Dezinski, Director, Vertex Solutions