

People at Pinnacle

Crafting customized solutions with careful component selection

Interview with Dirk Steiner,
Chief Product Officer at Pinnacle



At Pinnacle, success lies in choosing the right components to build customized X-ray solutions that meet every customer's unique needs. From leveraging X-ray technology like the MesoFocus for precision imaging to selecting the perfect detectors and generators, Pinnacles expertise ensures seamless integration and exceptional performance.

With a deep understanding of industry requirements and strong supplier partnerships, Pinnacle delivers systems that combine flexibility, reliability, and innovation.

From Germany to Atlanta Georgia and beyond

Dirk, can you tell us about your journey and how you started your career?

"I started my career in 1998 in Germany, working on my thesis with Philips, which later became YXLON and Comet. I began in software development before moving into project management for robotics. In 2004, I transitioned to technical sales for CT systems, then moved to the U.S. in 2012 as Product Development Manager for YXLON. After a decade. In 2022 I joined Pinnacle, in Atlanta Georgia, as Chief Product Officer."

"My primary focus is overseeing product development and ensuring that everything, from design to production, runs smoothly. It's about integrating all the moving parts of our expanding operations to meet customer needs efficiently and effectively. Our facility, 60,000 square feet, houses manufacturing, offices, welding, and painting. Today, the plant is running two shifts to meet demand."

Let's talk about the competitive landscape in the cabinet-building business.

"We stand out by creating customized solutions rather than relying on a fixed product lineup. By listening to customers and understanding their needs, we design systems that fit their requirements. Off-the-shelf solutions may cover about 80% of an application's needs but often fail to deliver full functionality. Our approach ensures a perfect fit, aligning the cabinet solution with the customer's application and goals."



Dirk Steiner in front of the [PXS-RDM system](https://www.pxsinc.com/product/pxs-rdm/), read more about it here: www.pxsinc.com/product/pxs-rdm/

"Customers share their requirements, and we build the solution. Every component matters, the tube, detector, manipulation type, and software, all working together to create the ideal system."

"Our software is very flexible and customizable. If they want the serial number or parts stored in a certain way or to retrieve data in a certain way, our software can accommodate it. If they're going to put in the serial number, a lot number, a batch number, or something else, we can customize it for them. We know this is attractive for our customers and a significant benefit, instead of buying something off the shelf. The custom approach is key to our success, as was Rod's vision when Pinnacle was founded."

How do customers perceive the value of customized X-ray systems compared to standard solutions?

"Customers look beyond the initial price difference because a customized system quickly pays for itself through better efficiency and a perfect fit for their application."

"A system that isn't fully tailored requires extra time for manual adjustments, like positioning, which slows down image acquisition. Longer inspection times lead to higher costs per item and reduced throughput."

"For example, inspecting an aircraft part in four hours instead of two days results in significant labor and time savings. The break-even point for a customized solution is reached quickly - most customers recover the investment within a few months. That's why so many choose to partner with Pinnacle."



Well organized and well stocked storage facility at Pinnacle Manufacturing Plant.

Choosing Components

How does Pinnacle approach product development and system customization?

"We scout new technologies and develop products by combining the right technology, software, and hardware to create customized systems. Rather than traditional R&D to invent something from scratch, we leverage existing technologies and integrate them into bespoke solutions. The key is knowing how to find and combine the right pieces to meet the specific requirements of each project."

What factors influence component selection at Pinnacle?

"Customer needs, technical specifications, and budget considerations drive component selection. For example, some customers request specific brands, such as a Comet tube, based on their past experiences, and we're happy to accommodate those preferences. Other decisions are shaped by a

manufacturer's history, product variety, or unique capabilities."

How important is the price when selecting components for the system?

"Price is a significant factor, especially in competitive situations. We are cost-conscious because staying profitable and competitive is essential. However, we don't prioritize price at the expense of other critical factors like reliability, quality, and ease of use. We aim to balance cost efficiency and system performance correctly."

"We often purchase components like tubes, generators, and complete X-ray sets in bulk to optimize costs. This strategy secures better pricing, even if we buy more than what's immediately required. Bulk purchasing allows us to deliver systems faster when new orders come in and ensures we have spare parts readily available for replacements. It's a proactive approach allowing us to efficiently meet customer needs."



The impressive robotic setup in the [PXS-RDM system](https://www.pxsinc.com/product/pxs-rdm/), read more about it here: www.pxsinc.com/product/pxs-rdm/



The MesoFocus 450 integrated into the [PXS-RDM system](https://www.pxsinc.com/product/pxs-rdm/), read more about it here: www.pxsinc.com/product/pxs-rdm/

Choosing Comet

What makes the MesoFocus tube unique, and when is an HP tube better?

"The MesoFocus tube stands out with its smaller focal spot (100–150 microns) compared to standard 400-micron tubes, allowing for greater geometrical magnification and high-resolution imaging. Its ability to switch between high power with a larger focal spot and high resolution with a smaller one makes it highly versatile. MesoFocus offers maximum flexibility and can even simulate a larger focal spot like an HP tube for labs with diverse materials and varying inspection needs."

"However, MesoFocus is a premium option and isn't always necessary. If a 400-micron focal spot meets the application's needs, an HP tube provides excellent performance at a lower cost. Choosing the right tool ensures the best value for the customer."

Why do some systems prefer MesoFocus technology?

"MesoFocus excels in high-resolution imaging while maintaining flexibility. Its sealed design reduces maintenance and minimizes downtime, making it especially valuable in production environments with critical reliability and uptime."

How do you match the MesoFocus tube with other components, like the detector panel?

"Matching the MesoFocus tube with a panel mainly depends on the customer's resolution requirements. While customers sometimes insist on a specific panel brand based on their experience, we usually recommend the best detector for our systems. At Pinnacle, we have extensive experience and are well-equipped to make informed recommendations, ensuring all components work seamlessly together."

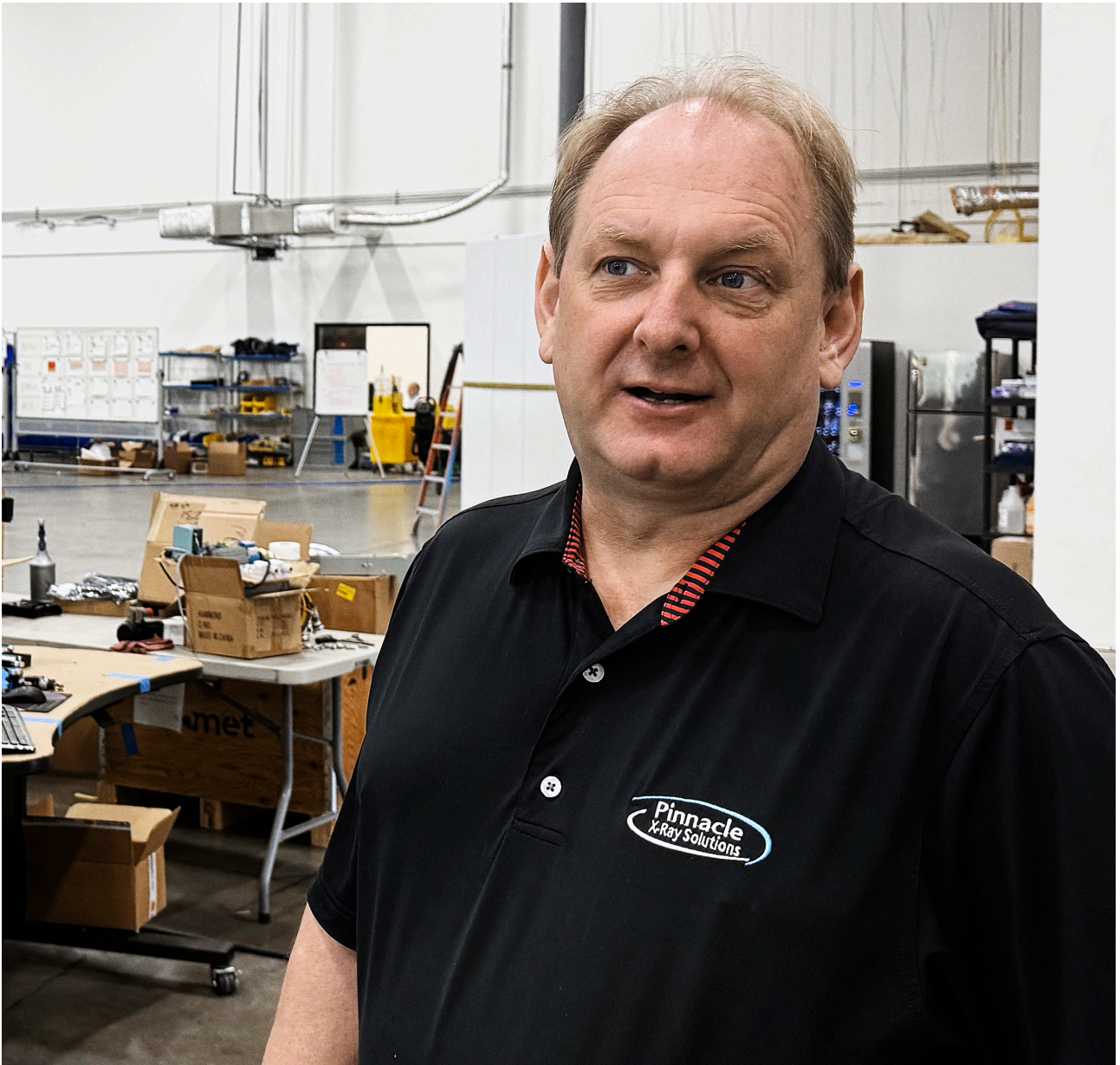
What are the key features of the MesoFocus tube and generator set?

"The MesoFocus module stands out for its reliability and ease of use. I prefer pairing Comet X-ray tubes with Comet generators because they offer stability, advanced technology, and user-friendly operation. Comet's commitment to quality and seamless integration makes them a perfect fit for our systems. Their tubes and generators are known for their dependability, ensuring consistent performance in demanding applications."

Thank you, Dirk.

"I think our main advantage we offer is that we're flexible and able to provide exactly what our customers need, rather than selling them something off-the-shelf."

Dirk Steiner, Chief Product Officer at Pinnacle



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