

Aerospace/Defense

PteroDynamics: Pioneering Advanced Air Mobility in the Heart of Colorado

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PteroDynamics, an innovative aircraft company specializing in vertical takeoff and landing (VTOL) technology, recently established its headquarters in Colorado Springs, capitalizing on the region's quality of life; emphasis on STEM education and innovation; and economic incentives to drive its growth.

PteroDynamics' aircraft are revolutionizing offshore cargo deliveries, emergency response and infrastructure inspections, solidifying the company's role in redefining air mobility in the military and commercial fields. The company continues to grow and collaborate with local and global companies with a goal to be constantly improving their technology to best suit the needs of the consumer.

"The goal of our company is to have the most performant aircraft that flies faster, longer, carrying heavier payloads and using less energy," PteroDynamics CEO Matthew Graczyk says.

PteroDynamics is built around the Transwing® VTOL system that Dr. Val Petrov invented in 2017. It features folding wings that enable seamless transitions between vertical and horizontal flight, optimizing energy efficiency and payload capacity. Graczyk, who partnered with Dr. Petrov in 2017, transformed the concept into a business that delivers advanced Unmanned Aircraft Systems (UAS), air mobility solutions for high-value, time-sensitive missions.

Ideal for operations in confined or hard-to-reach areas, "it's not just the design of the aircraft that's very unique," says John Sommerfield, a marketing and communications strategy representative for PteroDynamics, citing the P4 Transwing game-changing combination of VTOL with the aerodynamic efficiencies of a horizontal wing aircraft. "It looks like a fixed-wing aircraft when it flies, which is why it doesn't look like a VTOL," says Sommerfield.

→ The aircraft is the Transwing®. It is an autonomous VTOL UAS (vertical takeoff and landing unmanned aerial vehicle).



Photo by Kristian Bogner.

The company strategically selected Colorado Springs as its headquarters, citing the area's quality of life, proximity to STEM schools and favorable business climate. "We had expectations for Colorado, and I would say, on almost every vector, they have exceeded our expectations," Graczyk says.

The company's headquarters began with only 9,000 square feet on North Nevada Avenue and recently expanded to more than 20,000 square feet, to accommodate its growing team and advanced aircraft development. With roles spanning engineering, manufacturing and business operations, PteroDynamics places a strong emphasis on recruiting top talent and fostering a collaborative culture.

"Colorado is the right answer. It really is," states Rich Brasel, PteroDynamics chief revenue officer. "It's got every single thing that we need as a company that's growing."

The company also considered locations in Florida, Texas and California. Another reason PteroDynamics decided on Colorado is the benefits from a \$2.5 million economic incentive program through the state, designed to offset

employment taxes and support workforce expansion. According to the Colorado Office of Economic Development & International Trade (OEDIT) website, they "offer over 100 programs and funding opportunities to businesses within our state."

These programs include the Job Growth Incentive Tax Credit, Strategic Fund Job Growth Incentive and the Rural Jump-Start Tax Credit. The company also credited Colorado OEDIT's programs in supporting trade show access for Colorado companies. Their assistance enabled PteroDynamics' early appearances at international trade and airshows, building crucial relationships as well as awareness of their product.

PteroDynamics has made significant strides in developing its aircraft, and its work has garnered attention within the aerospace industry. The company has a growing portfolio of intellectual property, including six granted patents and 14 pending patents across 11 jurisdictions.

Graczyk says, "We've been very careful, I think, about trying to figure out where we want to have these patents prosecuted around the world to protect our intellectual property for

both ourselves and the people that we work with."

Additionally, PteroDynamics has participated in global air shows and secured distributor agreements with international partners to introduce its technology to new markets. The company's technological advancements were further validated by its successful participation in the 2024 Rim of the Pacific (RIMPAC) exercise, where its aircraft demonstrated capabilities during challenging maritime environments amid sea trials with the U.S. Navy. These trials showcased the aircraft's potential for military and defense applications, which could pave the way for future collaborations with government agencies.

PteroDynamics' innovative aircraft target a range of commercial and military applications. Offshore oil platforms, power lines, pipelines and other critical infrastructure stand to benefit from the company's ability to deliver supplies and conduct inspections in environments which traditional aircraft find extremely challenging. PteroDynamics'

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folding wing design provides operational flexibility by enabling takeoff and landing in smaller spaces while improving energy efficiency and extending flight range.

These features make its aircraft a versatile solution for industries requiring precision, speed and adaptability. The company's relationship with the Navy is focused on the problems of maritime resupply. Ships need replacement parts frequently, and this currently means delivery by helicopter.

There are additional applications for the UAS outside of the military, including using advanced camera technology for search and rescue efforts, as well as offshore oil and gas operation quality and safety inspections.

"It's useful for multiple missions, both military/defense and civil ... I'm talking about law enforcement, firefighting, that sort of stuff ... disaster response," explains Brasel. "They need parts. They need surveillance around them, to look at the water all the time to make sure the pipelines aren't leaking. Someone falls off the side, then you search and rescue. There's a storm, someone needs to go around, make sure everything's OK and not broken."

In addition to its commercial and defense efforts, PteroDynamics actively engages in initiatives to strengthen its industry presence and regional impact. The company was one of 50 companies to win the Colorado Companies to Watch program, which recognizes second-stage businesses for their innovation, growth and contributions to the state's economy.

PteroDynamics continues to focus on expanding its operations, securing additional funding and engaging with local and state legislators to support the continued growth of its workforce and technological development.

The company's growing global presence underscores


its ambition to revolutionize air mobility. Distributor agreements with international partners facilitate the introduction of its aircraft to new markets, while participation in prestigious global air shows showcases its unique capabilities to potential clients and stakeholders.

"Our ability to go do other missions, that before were undoable, is there now. And it has really been amazing," says Brasel.

These achievements pave the way for future collaborations with the Department of Defense and other government agencies.

The company's Certificate of Authorization (COA) further expands its operational capabilities by allowing advanced flight testing in controlled airspace. With a focus on innovation, collaboration and growth, PteroDynamics is poised to redefine advanced air mobility while reinforcing Colorado's position as a leader in aerospace technology.

"One of the reasons why I think the drone industry is eventually going to be very successful is just the amount of opportunities out there," says Brasel. "The future is bright out there for UAS. This technology is going to have direct impact: improvements on everybody's life, their businesses and their capabilities. I think that's right around the corner."

Adds Sommerfield, "Ours is a platform that just is a better mousetrap, we think." 



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