Space and Technology in Colorado

Hundreds of Manufacturing and Research Companies Make Colorado a National Aerospace Powerhouse

Airports are not only hubs for transportation and commerce but also serve as centers for advanced research and technological development. With more than 400 aerospace companies in the state[1], Colorado boasts one of the largest and most diverse aviation and aerospace industries in the country. These companies range from small businesses developing tiny subsystems for aircraft to multinational corporations designing and building spacecraft that will travel to Mars and beyond. No matter their size, nearly all these companies contribute to Colorado's economy and support the global aerospace industry. Six airports in Colorado reported having aerospace manufacturing or technological research on site. Below are just a few examples of the programs and facilities that continue to push Colorado to the forefront of the aerospace industry.

Pilatus Business Aircraft – Rocky Mountain Metropolitan Airport

Pilatus Aircraft Ltd is a Swiss aircraft manufacturer known for producing versatile business aircraft which have the capability to operate from short and unpaved runways. Pilatus aircraft are fitted with large passenger cabins, standard cargo doors, and offer multiple interior configurations that are customizable to support their customer's needs. The company offers both military training aircraft and general aviation aircraft, each of which makes up roughly half of their annual revenue. The PC-12 is their most popular aircraft and operates at a cost one-third less than similar sized twin turbo-prop aircraft.

Pilatus Aircraft's USA headquarters are located at Rocky Mountain Metropolitan Airport in Broomfield (BJC). The Broomfield location was first established in 1996 as a sales and fabrication facility in order to take advantage of the large market for business aircraft in the United States. Pilatus has expanded significantly at the airport since then as it opened a 118,000 square foot state-of-the-art fabrication facility at the airport in 2018.

Most of the employees at the facility focus primarily on fabricating and installing custom executive interiors and exteriors for their PC-12 NGX and PC-24 aircraft. 120 people are currently employed and over the next several years, Pilatus plans to grow by another 20 to 30 people at the airport. Pilatus has an apprenticeship program to train their workforce to meet their rigorous quality standards. The paid apprenticeship provides hands-on training in skilled trades and offers candidates the ability to earn an associate's degree in various disciplines. The Broomfield facility has the capability to deliver two aircraft per week. More than 1,800 PC-12 and PC-24 aircraft have been produced, many of which were completed at Rocky Mountain Metropolitan before being exported to customers around the world.

Pilatus' Broomfield-based staff is responsible for managing nine Pilatus Authorized Sales and Service Centers in North and South America. These centers provide technical support and maintenance training, house spare parts, and conduct test and demonstration flights for prospective customers. In addition, Satellite Service Centers provide support to customers across wider regions. The excellent customer service and custom design for aircraft is what the company brands as the "Pilatus Class". Pilatus not only takes pride in supporting their customers, but their employees as well, who are branded as the "Pilatus Family". The new facility at the airport will allow Pilatus to continue to serve its customers and employees for many years to come.

Photos courtesy of Pilatus Business Aircraft LTD.

[1] Office of Economic Development & International Trade (2016) accessed at https://choosecolorado.com/key-industries/aerospace/

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Bye Aerospace – Centennial Airport

A continually rising star in Colorado's business and aviation industries, Bye Aerospace is a pioneer on the forefront of the engineering and production of electric aircraft. Bye Aerospace prides itself in developing electric aircraft that feature exemplary engineering, research, and solutions. The result is an electric aircraft platform that produces zero emissions and answers compelling market needs. Bye Aerospace is in the process of developing two aircraft models: The two-seat eFlyer 2 is ideal for flight training and has a maximum range of three hours flying time while the eFlyer 4 is designed to be an ideal personal aircraft and has a range of over four hours flying time. Flight schools around the country are the most popular customer of the eFlyer 2 due to the five-fold savings in operational costs versus traditional piston-engine powered flight training aircraft.

Founded in 2007 by George E. Bye, and headquartered at Centennial Airport (APA), Bye Aerospace works closely with Scion Aviation and several local businesses to communicate regularly with general aviation airports across Colorado, the nation, and the world about the infrastructure changes needed to accommodate electric aviation in the near term. The company has been recognized by several organizations and was recently deemed the "Small Business of the Year" by the Aurora Chamber of Commerce and the "Most Innovative" company as part of Colorado Business Magazine's "Made in Colorado" awards.

Bye Aerospace is currently in the testing and certification process for the eFlyer 2 and hopes to keep the schedule moving forward as quickly and safely as possible. Bye anticipates that the eFlyer2 will receive final FAA certification as early as first quarter 2022. The eFlyer 4 is currently in its initial development stages and plans to fly the prototype in the coming months. Bye Aerospace is growing and revolutionizing the general aviation, aerospace and defense industries and continues to lead incredible innovations regarding electric aircraft and the future of aviation.

Colorado Air And Space Port (CFO) – Watkins/Denver

One of the most significant challenges facing commercial space flight operations is the lack of ground facilities capable of serving suborbital spacecraft such as Sierra Nevada Corporation's Dream Chaser as they require large areas of land and airspace to operate safely. Luckily, Colorado Air and Space Port (CFO) is leading the way in the state and the country as the premier facility for future commercial space travel development.

Colorado Air and Space Port was certified as a public spaceport in 2018 and is the only licensed launch site in the Northwest Mountain region. Although most of the airport's current traffic is general aviation aircraft, Colorado Air and Space Port plans to serve as the state and the region's hub for commercial space transportation, research, and technological development. CFO sits on 3,200 acres of and land and is ideally located to access Denver International Airport and more than 180 aerospace companies based on the front range. Colorado Air and Space Port is working closely with the FAA, Adams County, and airport stakeholders to ensure that the facility serves the community and the aerospace industry well into the future.

Photos courtesy of Bye Aerospace

Photo courtesy of Colorado Air and Space Port Website

Summary

Today's aerospace industry is rapidly involving, as new technologies and innovations are produced on a daily basis. Luckily, hundreds of aerospace companies in Colorado are already pushing the envelope of technological development and advanced research. The companies discussed above and all those in the state not only support innovation in the aerospace sector but also directly contribute to Colorado's entire economy. Colorado is primed to lead the way for the nation and the world as space travel becomes more cost effective and common in everyday life.