

Industry Overview

The aviation cluster includes companies that manufacture aircraft and provide air transportation services. More specifically, the cluster includes airlines, airports, aircraft manufacturing and technology companies, and support services. Colorado's robust system of 76 public-use airports supports 265,000 jobs, \$12.6 billion in payroll, and generates \$36.7 billion in economic output annually. Denver International Airport (DIA) provides an invaluable link between the nine-county Metro Denver and Northern Colorado region¹ and the global community. By promoting trade and commerce, DIA serves as a catalyst to transform the region into one of the nation's most prosperous and vital economies. In 2013, DIA managed about 1,600 flight operations and more than 144,000 passengers every 24 hours, making it the fifth-busiest airport in the nation and 15th busiest in the world. Total passenger traffic at DIA reached 52.6 million in 2013 and set several records for monthly passenger traffic. This was the sixth year in DIA history that the airport's yearly passenger traffic exceeded 50 million.



In 2014, DIA served 25.9 million passengers during the first six months, reporting the busiest first half of the year in its 19-year history. In November 2014, DIA's year-to-date passenger traffic exceeded 49 million and international passenger traffic increased year-over-year for the 31st-consecutive month. International traffic reached the second-highest level ever for the first half of 2014, rising 12 percent between June 2013 and 2014, with 1.1 million international passengers served during the first six months. More than 20 nonstop flights operate between Denver and international destinations in nine countries, including recent additions to Panama City, Guadalajara, and Chihuahua. With the addition of these international cities and existing flights from DIA to Europe, Asia, and South America, these destinations form a global triangle with Denver at the nucleus.

Similar to passenger traffic, air freight activity remains a dynamic part of the airport's daily operations. Eight cargo airlines and 13 major and national carriers currently provide DIA cargo service. With 24-hour operations, the airfield and a 39-acre cargo ramp make freight handling efficient, with no curfews. The airport's total cargo operations currently exceed approximately 226,315 metric tons per year.

Aviation Economic Profile

The aviation cluster consists of 41, six-digit North American Industry Classification System (NAICS) codes including aircraft manufacturing, passenger and freight air transportation, airport operations, and air traffic control.

With direct employment of 16,350 aviation workers, the nine-county region ranked 11th out of the 50 largest metro areas in absolute employment in 2014. The region ranked 13th for aviation employment concentration. Roughly 73 percent of Colorado's aviation cluster employees work in the region.

¹ The nine-county Metro Denver and Northern Colorado region consists of Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, Jefferson, Larimer, and Weld Counties.

Aviation Employment and Company Profile, 2014

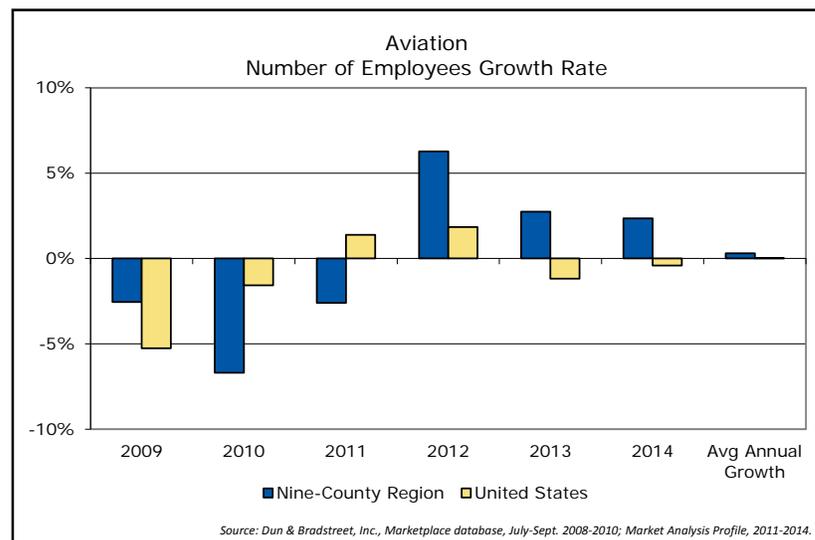
	Nine-County Region	United States
Direct employment, 2014	16,350	1,013,630
Number of direct companies, 2014	570	39,510
One-year direct employment growth, 2013-2014	2.3%	-0.4%
Five-year direct employment growth, 2009-2014	1.6%	0.0%
Avg. annual direct employment growth, 2009-2014	0.3%	0.0%
Direct employment concentration	0.9%	0.7%

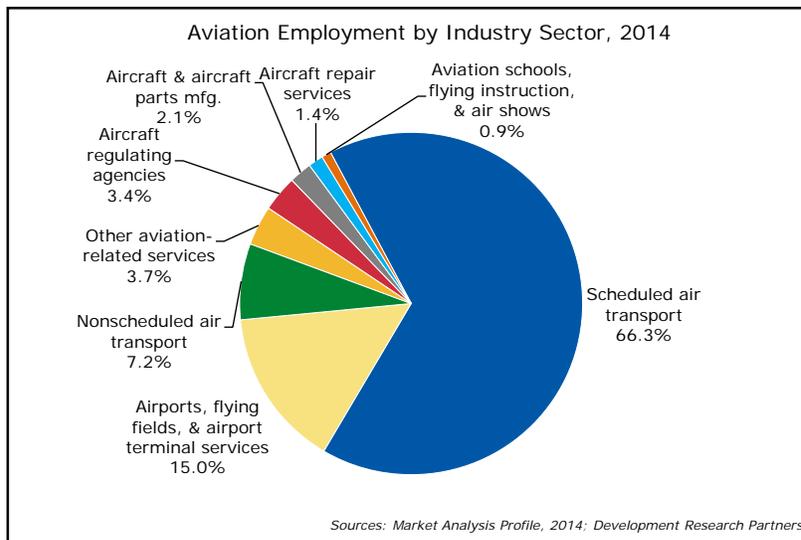
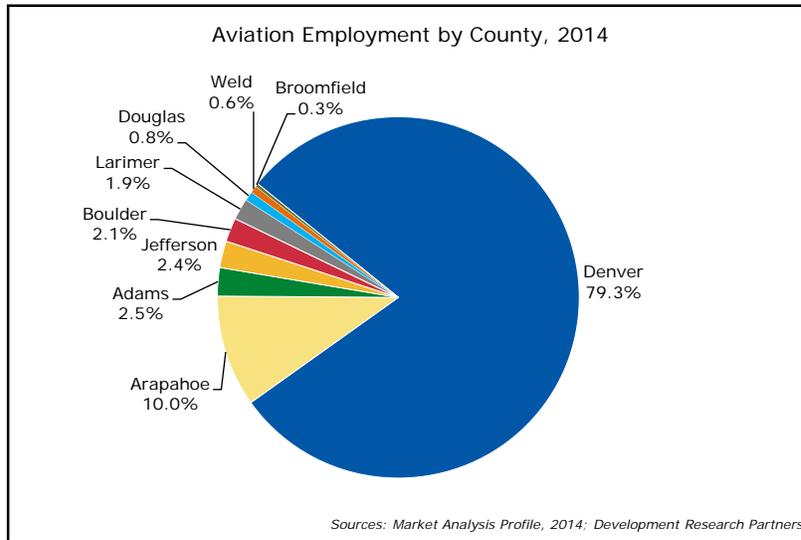
Sources: Dun & Bradstreet, Inc. Marketplace database, July-Sept. 2008-2010; Market Analysis Profile, 2011-2014; Development Research Partners.

Aviation Employment

The nine-county region's aviation employment (16,350 workers) rose 2.3 percent in 2014, compared with the previous year's level, adding nearly 380 new jobs over the same period. National employment levels declined 0.4 percent over-the-year. Nearly 2 percent of the nation's aviation employment is located in the region. Between 2009 and 2014, the region's aviation employment rose 1.6 percent, compared with no change at the national level. Aviation companies employed 0.9 percent of the region's total employment base, compared with a 0.7 percent employment concentration nationwide.

About 570 aviation companies operated in the nine-county region in 2014. Eighty percent of the region's aviation companies employed fewer than 10 people, while 1.2 percent employed 250 or more.





Nine-County Region Airport Information

The nine-county region's commercial, reliever, and general aviation airports form a cohesive system for commerce and air travel needs. The diverse system of airports provides residents and businesses outstanding access to regional, national, and international markets. The state's largest airport—Denver International Airport (DIA)—generates more than \$26 billion for the region annually. Combined, the nine-county region's airports contribute more than \$28 billion to the region's economy annually, according to CDOT's Division of Aeronautics.

Denver International Airport (DIA)

DIA is a state-of-the-art facility owned and operated by the City and County of Denver. Occupying 53 square miles and located approximately 24 miles northeast of downtown Denver, DIA is the primary airport serving the nine-county region and the state of Colorado. DIA has more than 35,000 badged employees who work for the airport and approximately 1,200 at the City and County of Denver.

DIA accommodates more than 50 million passengers annually with six runways, three concourses, 109 gates, and 42 regional aircraft positions. DIA can serve the ever-expanding international travel market via the sixth runway, the longest in North America. DIA has 15 commercial carriers offering scheduled nonstop service from Denver to more than 180 domestic and international destinations, with major hubs for United, Southwest, and Frontier Airlines.

The nine-county region is a natural hub for cargo operations due to its central U.S. location and access to an extensive freight network and major interstate highways. Additionally, the airport's air cargo and mail facilities comprise 375,000 square feet in five buildings south of the airfield, with room to expand. DIA is home to several world-class cargo companies and support facilities, including World Port Cargo Support, DHL, UPS, FedEx, and United Airlines cargo. The U.S. Postal Service facility is also located nearby, providing a wide array of competitive shipping and receiving options. Further, more than 50 freight forwarders and customs brokers operate within 20 miles of DIA.

DIA is a recognized leader in sustainability efforts, and was the first airport in the nation to receive ISO 14001 Environmental Management System certification in 2004. The airport is also a Gold Member of the Colorado Department of Public Health and Environment's Environmental Leadership Program. The airport continually works to reduce its carbon footprint through a variety of energy efficient technologies. DIA is the largest distributed generation photovoltaic energy producer in Colorado and its four solar array systems produce approximately 6 percent of the airport's total electrical power requirements. The airport has one of the largest compressed natural gas fleets in the country including 172 buses, sweepers, and other alternatively fueled vehicles, and 121 electric and hybrid electric vehicles. Alternative vehicles comprise roughly 51 percent of the airport's light duty fleet.

Reliever Airports

Three reliever airports—those designated by the Federal Aviation Administration (FAA) to relieve traffic at commercial airports and general aviation airports, and provide other aviation services—are strategically located throughout the nine-county region. These airports support the state and regional economies by creating jobs and contributing to overall economic development efforts. Further, the airports are among the fastest growing in the country and represent a vital part of the Colorado aviation industry's future economic growth and vitality.

- **Centennial Airport** is the premier reliever and business airport in the state. Supporting 23 business parks and more than 6,000 businesses responsible for more than 27 percent of the state's GDP, the airport provides all services necessary to compete in a global economy. The airport is home to four, 24/7 award-winning fixed-based operator concierge services, a fully staffed 24/7 FAA Air Traffic Control Tower and on-demand U.S. Customs clearances, nationally ranked catering, a 10,000-foot CAT 1 ILS runway, gateway service to Ronald Reagan Washington National Airport, and some of the most competitive fuel prices in the country. Services such as Flight for Life, law enforcement, medical flights, flight schools, and aircraft maintenance services are also based at the airport. Centennial Airport generates more than \$1.3 billion for the region annually, the highest among the state's general aviation airports.
- **Front Range Airport**, located six miles southeast of DIA, is the region's only reliever airport without major residential areas nearby and no noise or over-flight impacts making it both remote and convenient. At just under 4,000 acres, Front Range is the largest reliever airport in the region, and includes 1,000 acres for aviation and aerospace development. Additionally, an adjacent 6,300-acre business park is planned for development to support airport-related commercial and business activities. Front Range Airport has the nation's tallest general aviation tower, which controls two 8,000-foot/CAT 1 ILS

full-precision runways and associated taxiway and ramp system. CDOT's Division of Aeronautics is located at Front Range Airport in a state-owned building. Spaceport Colorado has proposed to create an aerospace technology park on the airport campus for research and commercial development and the FAA could issue a spaceport operator license by mid-2015.

- **Rocky Mountain Metropolitan Airport (RMMA)**, located between downtown Denver and Boulder, is the most convenient reliever airport to downtown Denver, and one of the five busiest airports in Colorado. Averaging more than 120,000 operations each year, RMMA has three runways, including a 9,000-foot CAT 1 ILS runway, and offers a user-fee designated U.S. Customs Office open 24 hours a day. RMMA also has Part 139 FAA airport certification with established requirements for commuter passenger service and large, on-demand aircraft charter. RMMA is home to more than 40 aviation companies and flight departments, including the U.S. headquarters of Pilatus Business Aircraft and HeliQwest. The airport is adjacent to the Interlocken Business Park and Westmoor Technology Park, and also houses the U.S. Forest Service tanker base and the National Center for Atmospheric Research. A new, state-of-the-art FAA control tower opened at the airport in 2012. In 2014, RMMA continued work on the Airport Master Plan Update including a new Corporate Taxilane and enhanced airport pavements, with completion expected in late 2016. The airport generates more than \$460 million in annual impact to the region.

General Aviation Airports

Colorado's general aviation airports form a cohesive system for commerce and air travel needs. Five general aviation airports are located in the nine-county region:

- Boulder Municipal Airport
- Erie Municipal Airport
- Fort Collins-Loveland Municipal Airport
- Greeley-Weld County Airport
- Longmont Municipal Airport

Metro Denver's airports receive significant support from the region, especially from the Colorado Department of Transportation's (CDOT) Division of Aeronautics and the Metro Denver Aviation Coalition (MDAC). Established in 1991, CDOT's Division of Aeronautics supports Colorado's general aviation and regional commercial aviation community through aviation fuel tax revenues, a discretionary aviation grant program, and long-range system planning in partnership with Colorado's general aviation airports. MDAC is an industry affiliate of the Metro Denver Economic Development Corporation that serves as a private-sector advocate dedicated to the continued growth and development of the region's aviation industry, including the long-term growth and vision of DIA and Metro Denver's three reliever and five general aviation airports.

Major Aviation Companies

- Air Methods Corp.
www.airmethods.com
- American Airlines, Inc.
www.aa.com
- Air Serv Corp.
www.airservcorp.com
- Delta Air Lines, Inc.
www.delta.com
- DHL
www.dhl.com
- FedEx
www.fedex.com
- Frontier Airlines
www.flyfrontier.com
- Great Lakes Aviation
www.greatlakesav.com
- Heli-One Colorado
www.heli-one.ca
- Integrated Airline Services, Inc.
www.iasair.com
- Jeppesen
www.jeppesen.com
- Pilatus Aircraft
www.pilatus-aircraft.com
- Signature Flight Support
www.signatureflight.com
- Southwest Airlines
www.southwest.com
- United Airlines
www.united.com
- United Parcel Service Inc.
www.ups.com

2014 Industry Highlights

Denver International Airport Project Updates

Several projects were underway at DIA in 2014:

- Construction continued on the Hotel and Public Transit Center that will transform the area directly south of Jeppesen Terminal. Several project milestones were reached, including major road and bridge construction and more than 60 percent of the East Rail Line was completed. The \$544 million project will include a new onsite 519-room Westin Denver International Airport Hotel and Conference Center, a station for the 23-mile commuter rail line that will connect DIA with Denver Union Station in downtown Denver, an open-air plaza above the station providing connections to the main terminal, and upgrades to the airport's existing train and baggage systems. The hotel, conference center, and public plaza will open in the fall of 2015, with rail service starting in 2016.
- DIA completed two projects designed to improve two of its most heavily used runways. The first project was a \$10.3 million reconstruction of Runway 7-25, which replaced 400 deteriorating concrete slabs. The second project was a \$14.7 million upgrade to the lighting system on Runway 8-26. DIA also replaced the lighting in the east and west parking garages with energy-efficient LED lighting, which is expected to trim DIA's energy use in the garages by 45 percent.
- Southwest Airlines opened five new gates on Concourse C and renovated its existing gates. The airline has more than 170 daily flights to nearly 60 nonstop destinations from Denver, which is the fastest-growing market in the carrier's history.
- DIA will add 14 new restaurants and stores, including a brewery-themed eatery to the new Westin Hotel airport hotel that is currently under construction. The businesses will include restaurants, bars, coffee kiosks, and high-end fashion stores slated to open in late 2015.
- The U.S. Transportation Security Administration (TSA) opened a new application center for its Pre-Check service at DIA. TSA Pre \checkmark ® provides passengers a dedicated security-screening lane with benefits that include leaving on shoes and light outerwear and belts, as well as leaving laptops and compliant liquids in carry-on bags.
- DIA added its fourth solar array capable of generating up to 2 megawatts (MW) of power. The electricity from the new solar array will be used to power the Denver Fire Department's Aircraft Rescue and Fire Fighting Training Academy at the airport. Collectively, DIA's four solar systems can generate 10 MW of power.

Key Company Announcements

A number of airlines and aviation companies expanded in the nine-county region in 2014.

- United Airlines will reclaim 175 jobs that were previously outsourced to SkyWest Airlines. The company decided to outsource 600 positions and bring 400 positions back to the company's airline hubs, including Denver. The available positions include ticket and gate agents, and baggage handlers for United Express flights.
- United Airlines extended its lease with DIA through 2035. The lease agreement could save United nearly \$35 million each year through the airport's debt restructuring.
- Englewood-based Air Methods Corp. purchased a new flight simulator and plans to be a hub for flight training with the addition of three more simulators through 2016. Air Methods operates a fleet of 400 medical aircraft consisting of 380 helicopters and 20 planes, roughly one-third of the country's medical aircraft.
- Broomfield-based Pilatus Aircraft received a \$312 million contract from Santa Monica, Calif.-based Surf Air to build 65 single-engine turboprop planes. Upon completion, Surf Air will be the largest single operator of Pilatus PC-12, a six- or eight-passenger plane. While the aircraft are manufactured in Switzerland, they are shipped to Broomfield for interior fabrication and painting.
- Frontier Airlines leased the former Continental Airlines hangar at DIA. The hangar will serve as a maintenance facility for aircraft and ground service equipment. Under the five-year lease, Denver will reimburse the airline for costs of up to \$1.6 million to repair the hangar.
- Southwest Airlines will increase nonstop service in the 2015 summer season from 174 to 185 departures a day, adding 50 jobs at DIA.

Global Market Additions and Service Milestones

DIA increased its presence in several global markets and celebrated numerous service milestones in 2014:

- United Airlines began nonstop service between Denver and Panama City, Panama in December 2014. Panama City will provide a direct link to its hub of international commerce and will serve as a gateway to destinations across Latin America. The flights will be offered daily between November and August and five times weekly between September and October. The new service could have an estimated \$35 million to \$40 million annual economic impact to Colorado and support more than 400 new jobs.
- Volaris Airlines began nonstop service from Denver to Guadalajara and Chihuahua, Mexico in July 2014. This marked the first airline to offer flights directly from Denver to cities in Mexico that are not vacation hubs or the country's capital.
- British Airways will increase its capacity on its daily flights between Denver and London by 23 percent and will add first-class service. The airline will begin flying a Boeing 747-400 between DIA and Heathrow Airport in March 2015. The increased capacity will allow more convenient access to the United Kingdom and to connections to other European cities. London is Denver's largest market in Europe.
- Nonstop flights between Denver and Dallas Love Field began at the end of 2014. Nonstop flights between Dallas and other cities were prohibited by the 1980 Wright amendment. Due to the change in policy, Southwest airlines initially added three daily nonstop flights to Denver and has since increased to five nonstop flights.
- United Airlines and DIA celebrated the one-year anniversary of the nonstop flight between Denver and Narita International Airport in Tokyo. During the first year of service, nearly 720 Boeing 787 flights carried nearly 130,000 passengers. The nonstop service generated an estimated annual economic impact of \$130 million to the state's economy and created 1,500 jobs.
- Frontier Airlines celebrated 20 years of service in July 2014. The airline began service in 1994 from the Stapleton International Airport to Bismarck, Fargo, Grand Forks, and Minot, North Dakota. Frontier Airlines provides more than 3,300 jobs, 85 daily departures, and served 15 unique destinations in 2014.

Spaceport Colorado

In 2014, Front Range Airport continued the application process for certification from the FAA to operate as a horizontal-launch spaceport facility. The subsequent designation for Spaceport Colorado, which may be granted in 2015, fulfills a 2011 declaration by Gov. John Hickenlooper of Colorado's intent to become a spaceport state. The effort will increase Colorado's competitiveness in the aerospace industry and support new opportunities in the future growth of commercial space research and transportation. Plans for Spaceport Colorado include the development of an aerospace and technology park to support a broad range of activities and commercial opportunities, including research and development, testing and evaluation, manufacturing, crew training, scientific research, suborbital flight, point-to-point travel, and unmanned aircraft systems (UAS). Spaceport Colorado has an abundance of surrounding land and convenient access to DIA and the Metro Denver area's sizeable aerospace industry, research universities, and talented aerospace workforce.

Unmanned Aerial Systems (UAS)

The nine-county region is a global leader in UAS, with support from unmatched assets including a robust aerospace industry and military presence, established research institutions, and exceptional geographic and climatic diversity for testing sites. With UAS representing a growing portion of the nation's military budget, and commercial UAS operations set to expand rapidly, the U.S. Congress is encouraging the integration of UAS into the National Airspace System (NAS), which presents Colorado job growth and economic impact opportunities. The nine-county region's UAS resources and key project announcements in 2014 included:

- The Research and Engineering Center for Unmanned Vehicles (RECUV) at the University of Colorado Boulder (CU-Boulder) is a university, government, and industry partnership dedicated to developing and integrating unmanned vehicle systems. RECUV engineers new mobile sensing systems, stimulates strategic discussions among leaders, increases public awareness of UAS, and educates and trains a next generation of engineers. In 2014, RECUV conducted an international research effort—the first multiple, unmanned aircraft interception of a rush of cold air, or gust front—preceding a thunderstorm across the Pawnee National Grassland. The research focuses on developing a smart, small unmanned aircraft system that can plan its own flight path to maximize endurance by combining real-time weather-radar and atmospheric-model data with measurements made from the aircraft.
- The Jonathan Merage Foundation awarded the College of Engineering and Applied Science at CU-Boulder a \$130,000 contract to design a tracker vehicle and a new lightning detection instrument for integration into a small, unmanned aircraft. The system will be designed to measure electric field

changes associated with lightning strikes. This project will occur in three phases over the next year, with deployments for thunderstorms beginning in the spring of 2015.

- The University of Denver's Unmanned Systems Research Institute (DU2SRI) promotes knowledge, education, research, and development in unmanned systems, and is pushing forward the frontiers of unmanned systems to develop the next generation of fully autonomous UAS. The DU2SRI infrastructure includes five unmanned ground vehicles, one all-terrain mobile robot, more than 17 (electric and non-electric) unmanned helicopters and quadrotors, FAA-approved simulators, electronics design and fabrication capabilities, and complete UAS design and testing. In April 2014, the University of Denver signed an integrated robotics patent license agreement.
- The U.S. Geological Survey's (USGS) National Unmanned Aircraft Systems Project Office, located in Denver, leads and coordinates USGS efforts to promote and develop UAS technology for civil and domestic applications. These efforts will directly benefit the U.S. Department of the Interior and USGS missions, including access to an increased level of persistent monitoring of earth surface processes (e.g. forest health conditions, monitoring wildfires, earthquake zones, and invasive species) in previously difficult to access areas.

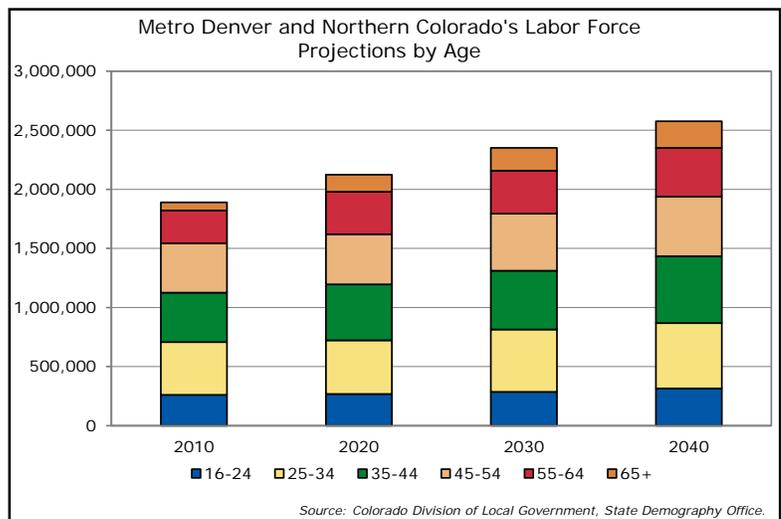
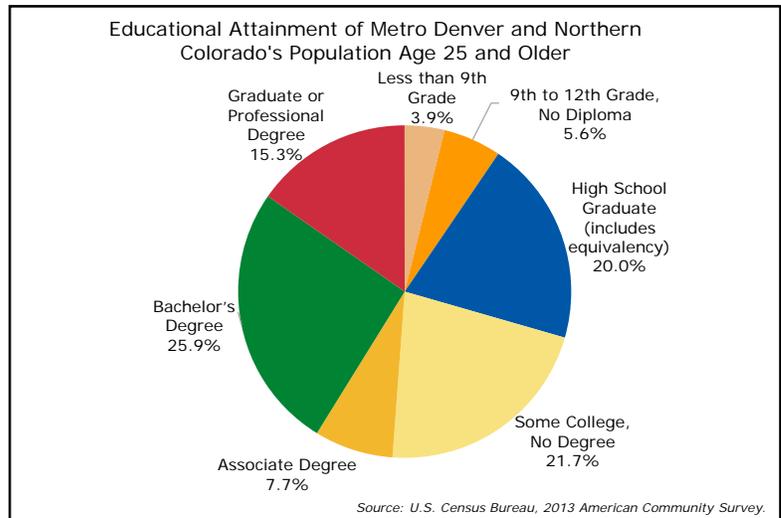
Aviation Workforce Profile

Many companies choose locations because of the available workforce. With nearly half of the nine-county region's 3.6 million residents under the age of 35, employers can draw from a large, young, highly educated, and productive workforce. Of the region's adult population, 41.2 percent are college graduates and 90.5 percent have graduated from high school. The state has the nation's second-most highly educated workforce as measured by the percentage of residents with a bachelor's degree or higher.

The attractiveness of the region draws new residents through migration. The region's population is expected to grow 53.3 percent from 2010 to 2040, driving a 36.3 percent increase in the region's labor force over the same period. It is important to note the changing composition of the workforce supply as the baby boomers begin to retire, which will pose implications for businesses whose employee pool includes significant numbers of these workers.

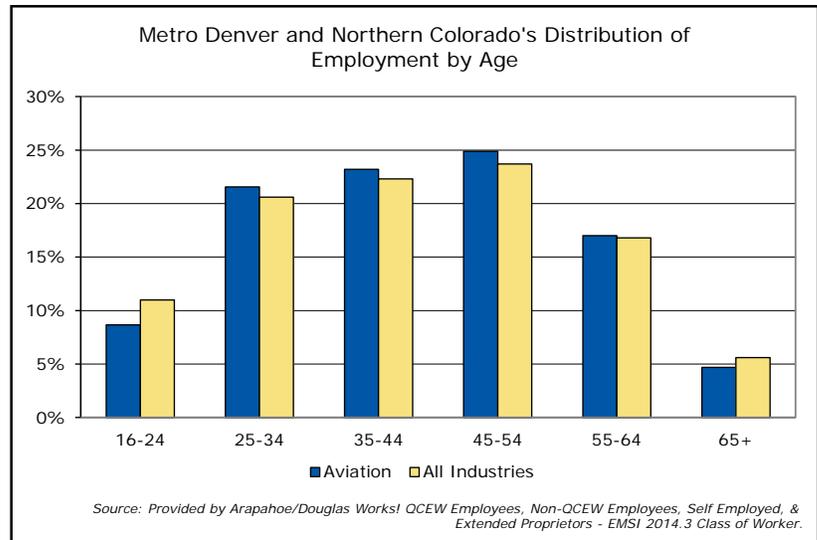
The nine-county region's aviation industry employs 16,350 people and includes a large pool of talented, well-educated, and highly skilled workers. Compared with the age distribution across all industries, the aviation cluster has a larger share of employees between the ages of 25 and 64 years old.

The aviation workforce supply consists of four main components: those currently



AVIATION: Metro Denver and Northern Colorado Industry Cluster Profile

working in the industry; those doing a similar type of job in some other industry; the unemployed; and those currently in the education pipeline. The Metro Denver and Northern Colorado Occupation & Salary Profile below includes the 10 largest aviation occupations in the region. For these 10 largest occupations, the chart details the total number of workers employed in that occupation across all industries, the number of available applicants that would like to be working in that occupation, the number of recent graduates that are qualified for that occupation, and the median and sample percentile annual salaries.



Wages

The 2013 average annual salary for aviation employees in the nine-county region was \$56,670, compared with the national average of \$66,710. Total nine-county payroll in the aviation cluster exceeded \$905 million in 2013.

Metro Denver and Northern Colorado Aviation Occupation & Salary Profile, 2014

10 Largest Aviation Occupations in Metro Denver and Northern Colorado	Total Working Across All Industries (2014)	Number of Available Applicants (2014)	Number of Graduates (2013)	Median Salary	10th Percentile Salary	25th Percentile Salary	75th Percentile Salary	90th Percentile Salary
1. Aviation pilots, copilots, & flight engineers	2,859	114	75	\$106,264	\$47,744	\$87,625	\$142,043	\$168,635
2. Flight attendants	2,476	67	0	\$38,899	\$31,628	\$34,578	\$43,541	\$46,302
3. Reservation & transportation ticket agents & travel clerks	2,555	35	0	\$28,750	\$21,513	\$23,475	\$42,406	\$47,891
4. Painters, construction & maintenance	4,487	93	30	\$31,534	\$21,665	\$27,675	\$35,308	\$39,799
5. Transportation workers, all other	1,839	79	19	\$38,225	\$21,816	\$26,607	\$43,835	\$47,519
6. Aircraft mechanics & service technicians	1,696	53	241	\$63,313	\$35,423	\$48,753	\$75,241	\$82,480
7. Carpenters	17,912	354	75	\$33,419	\$24,992	\$28,765	\$37,256	\$42,171
8. Construction laborers	21,184	704	19	\$29,182	\$21,833	\$25,677	\$33,204	\$38,102
9. Emergency medical technicians & paramedics	1,860	84	939	\$42,455	\$20,533	\$27,314	\$61,728	\$71,765
10. Labor & freight, stock, & material movers, hand	22,984	1,064	0	\$25,318	\$18,377	\$20,793	\$32,953	\$42,761

Notes: The number of available applicants is a point-in-time measurement of the number of people who have registered in Colorado's workforce development system's statewide database, Connecting Colorado, as being able and available to work in a particular occupation. Results should be interpreted with caution since registration in Connecting Colorado is self-reported. In addition, the skills rubric may assign up to four occupation codes for each registrant. Therefore, the number of available applicants could be inflated. Source: Provided by Arapahoe/Douglas Works!; QCEW Employees, Non-QCEW Employees, Self Employed, & Extended Proprietors - EMSI 2014.3 Class of Worker.

Education & Training

Colorado's higher education system provides an excellent support system for businesses in the region. There are 28 public higher education institutions in Colorado, of which seven four-year and six two-year public institutions offering comprehensive curricula are located in the nine-county region. In addition, there are more than 100 private and religious accredited institutions and nearly 340 private occupational and technical schools offering courses in dozens of program areas throughout the state. Although not exhaustive, a list of the major, accredited educational institutions with the greatest number of graduates for each of the 10 largest

aviation occupations in the nine-county region are included below. A directory of all higher education institutions with corresponding websites may be accessed via <http://highered.colorado.gov>.

- Colorado State University
www.colostate.edu
- Red Rocks Community College
www.rrcc.edu
- University of Denver
www.du.edu
- Front Range Community College
www.frontrange.edu
- Regis University
www.regis.edu
- University of Northern Colorado
www.unco.edu
- Jones International University
www.jiu.edu
- University of Colorado Boulder
www.colorado.edu
- Metropolitan State University of Denver
www.msudenver.edu
- University of Colorado Denver
www.ucdenver.edu

Key Reasons for Aviation Companies to Locate in the Nine-County Region

The region is a top aviation location offering:

1. A prime air transportation location

- Denver International Airport (DIA) was the fifth-busiest airport in the nation and 15th-busiest worldwide in terms of passenger traffic in 2013. (U.S. Bureau of Transportation Statistics, 2014; Airports Council International 2014; and Denver International Airport, 2014)
- Located on the 105th meridian, the nine-county region's central location at the exact midpoint between Tokyo and Frankfurt positions the region favorably to serve growing world markets. The region is an excellent location for doing business with the entire nation and is within four hours flying time of every North American city with a population of 1 million or more. (Metro Denver Economic Development Corporation)
- DIA is the largest airport site in North America and the second-largest international airport in the world by land size. Encompassing 53 square miles of land, DIA is one of the few major U.S. airports with room to expand its current facilities to accommodate future growth. (Denver International Airport, 2014)
- DIA's six nonintersecting runways offer a competitive advantage for businesses relying on speed to market, facilitated by state-of-the-art logistics facilities, airside-to-groundsides interface, and air route connectivity throughout North America and to Asia, Europe, and South America. (Airport City Denver, 2014)
- DIA ranked fifth among the nation's 100 largest airports for the greatest decline in average domestic airfares since the first quarter of 2000. The average domestic fare at DIA fell 45.4 percent between the first three months of 2000 and 2014, while the average U.S. domestic fare declined 18.9 percent over the 14-year period. (U.S. Bureau of Transportation Statistics, 2014)
- Skytrax ranked DIA as the fifth-best domestic airport in the world in its annual World Airport Awards. DIA was also recognized for the best airport staff service in North America, the second-best regional airport in North America, the third-best airport in North America, and the ninth-best world airport serving more than 50 million passengers annually. (Skytrax, 2014)
- Three general purpose Foreign Trade Zones in Metro Denver and Northern Colorado allow manufacturers using imported parts and materials to expedite customs and reduce or eliminate fees and tariffs. Aspen Distribution, Inc. operates the original site located near the former Stapleton Airport, and the second zone, WorldPort at DIA, is just minutes from DIA. The newest and largest zone geographically—Great Western Industrial Park in Windsor—connects to the Burlington Northern Santa Fe and Union Pacific rail lines via the Great Western Railway of Colorado. (City and County of Denver)

2. Lower overall costs of doing business

- Colorado's simplified corporate income tax structure based on single-factor apportionment allows companies to pay taxes based solely on their sales in the state. Along with few regulatory burdens, Colorado's corporate income tax rate of 4.63 percent is one of the lowest and most competitive tax structures in the nation. (State of Colorado; The Tax Foundation)

- To promote aviation growth in the state, aircraft manufacturers or companies that are involved in the maintenance and repair, completion, or modification of aircraft located in aviation development zones can qualify for a state income tax credit of \$1,200 per new employee in tax years between 2006 and 2017. (Colorado Department of Revenue)
- Signed into law in 2014, On-demand Air Carrier Sales & Use Tax Exemption supports Colorado's business-friendly climate for aviation companies. House Bill 1374 (2014) provides sales and use tax exemptions for on-demand air carriers and eligible aircraft that on-demand air carriers utilize only for the purpose of final assembly, maintenance, modification, or completion of the aircraft manufacturing process.
- The City and County of Denver began a two-year phase out of its 3.62 percent sales and use tax on aviation parts in 2014. The exemption will bring new, high-paying aircraft maintenance jobs to Denver. (The City and County of Denver, 2014)
- Legislation passed in 2008 abolished Colorado's fly-away sales tax on planes manufactured in Colorado. The exemption, a valuable incentive for aircraft manufacturers, applies to aircraft built in Colorado but housed in another state. (State of Colorado, Office of the Governor)
- *Forbes* ranked Metro Denver fourth among the "Best Places for Business and Careers" in 2014. Four other Colorado metropolitan areas were included on the list. The Fort Collins metro area ranked fifth overall, Greeley ranked 20th, Boulder ranked 23rd, and Colorado Springs ranked 29th. (*Forbes*, 2014)
- Colorado tied with Virginia as the eighth-best state for business in 2014 and the state earned top-10 rankings in the categories that measure access to capital (first), workforce (fifth), economy (eighth), and technology and innovation (ninth). (*CNBC*, 2014)
- Colorado has the nation's ninth-best tax climate for entrepreneurship and small business. (Small Business & Entrepreneurship Council, 2014)
- Metro Denver office rental rates averaged \$28.83 per square foot in the fourth quarter of 2014, making the region's office market highly competitive with other major markets in the U.S. (CoStar Realty Information, The CoStar Office Report, Q4 2014)

3. Access to aviation-related training programs

- The Aviation and Aerospace Science Department at Metropolitan State University of Denver (MSUD) is one of the largest and most advanced collegiate aviation programs in the country, and home to the state-of-the-art Robert K. Mock World Indoor Airport and Advanced Aviation and Aerospace Flight Simulation Training Lab.
- In 2014, Great Lakes Airlines established a priority hiring agreement for MSUD aviation graduates. Students who enter the new program, which provides classes, training, and pilot certifications, are guaranteed an interview at Great Lakes.
- MSUD is revolutionizing aviation and aerospace education with its Aerospace Engineering Sciences building, a high-tech, collaborative-learning facility that will house multiple disciplines to answer the workforce needs of the aviation, aerospace, and advanced manufacturing industries. (Metropolitan State University of Denver, 2014)
- The nine-county region offers nearly 20 flight training schools at Boulder Municipal Airport, Centennial Airport, Erie Municipal Airport, Fort Collins-Loveland Municipal Airport, and Rocky Mountain Metropolitan Airport. These schools provide pilot training, aviation instruction, and certification programs. (Metropolitan State University of Denver, 2014)
- MSUD and Aims Community College in Greeley are among 36 schools approved under the Federal Aviation Administration's Air Traffic Collegiate Training Initiative. (Federal Aviation Administration, 2014)
- Colorado-based Heli-Ops is one of the nation's leading high altitude helicopter training centers and helicopter operators and is the first helicopter flight school in the nation to adopt a curriculum-wide Scenario Based Training program. (Colorado Heli-Ops, 2014)
- The Emily Griffith Opportunity School offers a Federal Aviation Administration (FAA)-certified aircraft maintenance program in airframe and powerplant mechanics at its Aircraft Training Center located at Front Range Airport.
- Redstone College is located adjacent to Rocky Mountain Metropolitan Airport and offers programs in airframe and power plants (A&P) and electronics technology. Redstone is also one of the largest providers of newly licensed FAA A&P mechanics and graduates are recruited by some of the nation's top aviation employers. (Redstone College)

4. An overall better quality of life

- Metro Denver ranked as the fourth-fittest metro area in the nation in 2014. Denver's high percentage of residents participating in physical activity, and low obesity and cardiovascular disease rates contributed to its high rank. (American College of Sports Medicine, 2014)
- Colorado has the fourth-highest percentage of state land area devoted to the National Forest System. The state offers access to more than 50 national parks and wilderness areas, 42 state parks, and the greatest number of 14,000-foot peaks in the nation that support a healthy, active lifestyle. (U.S. Forest Service, 2014; Colorado State Parks, 2014)
- Boulder ranked second on the 2014 list of the "Top 100 Best Places to Live." Aurora (50th) and Lakewood (88th) were also named to the list. (Livability.com, 2014)
- Castle Rock ranked fourth in *MONEY Magazine's* 2014 list of the "Best Places to Live." Centennial (13th) and Boulder (23rd) were also named to the list's top 50. (*MONEY Magazine*, 2014)
- Denver ranked as the seventh-best city for millennials (ages 25-34) out of 25 major cities with a population over 1 million in 2014. (Niche.com, 2014)
- FasTracks, a comprehensive project to build out Metro Denver's entire mass transit system by 2019, is the largest simultaneous transit buildout in U.S. history. The expansion will make Metro Denver one of the top five regions in the country in terms of miles of fixed rail.
- The cost of living in Metro Denver is only 8 percent above the national average and is well below that of many other major cities. (The Council for Community and Economic Research, Cost of Living Index, Q3 2014)
- Metro Denver ranked third-sunniest among 20 major U.S. cities with sunshine on almost 70 percent of the days each year. (U. S. National Oceanic and Atmospheric Administration, National Climatic Data Center, 2013)

Aviation Industry Cluster Definition

NAICS Code*	NAICS Description	SIC Code	SIC Description
238320	(P) Paint & wall covering contractors	1721-0301	Aircraft painting
314110	(P) Carpet & rug mills	2273-0100	Aircraft & automobile floor coverings
314110	(P) Carpet & rug mills	2273-0101	Aircraft floor coverings, except rubber or plastic
326211	(P) Tire mfg. (except retreading)	3011-0102	Airplane inner tubes
326211	(P) Tire mfg. (except retreading)	3011-0202	Airplane tires, pneumatic
331491	(P) Nonferrous metal (except copper & aluminum) rolling, drawing, & extruding	3357-9901	Aircraft wire & cable, nonferrous
332111	(P) Iron & steel forging	3462-9901	Aircraft forgings, ferrous
332112	(P) Nonferrous forging	3463-9901	Aircraft forgings, nonferrous
332312	(P) Fabricated structural metal mfg.	3449-9904	Landing mats, aircraft: metal
332510	(P) Hardware mfg.	3429-0401	Aircraft hardware
332912	(P) Fluid power valve & hose fitting mfg.	3492-01	Fluid power valves for aircraft
332999	(P) All other miscellaneous fabricated metal product mfg.	3537-0101	Aircraft engine cradles
333318	(P) Other commercial & service industry machinery mfg.	3699-0302	Flight simulators (training aids), electronic
333924	(P) Industrial truck, tractor, trailer, & stacker machinery mfg.	3537-0201	Aircraft loading hoists
334519	(P) Other measuring & controlling device mfg.	3829-0102	Fuel densitometers, aircraft engine
334519	(P) Other measuring & controlling device mfg.	3829-0103	Fuel mixture indicators, aircraft engine
334519	(P) Other measuring & controlling device mfg.	3829-0104	Fuel system instruments, aircraft
334519	(P) Other measuring & controlling device mfg.	3829-0110	Pressure & vacuum indicators, aircraft engine
334519	(P) Other measuring & controlling device mfg.	3829-0111	Synchronizers, aircraft engine
334519	(P) Other measuring & controlling device mfg.	3829-0112	Testers for ck. hydraulic controls on aircraft
334519	(P) Other measuring & controlling device mfg.	3829-0113	Thrust power indicators, aircraft engine
336310	(P) Motor vehicle gasoline engine & engine parts mfg.	3592-0101	Valves, aircraft
336320	(P) Motor vehicle electrical and electronic equipment mfg.	3647-9901	Aircraft lighting fixtures
336320	(P) Motor vehicle electrical and electronic equipment mfg.	3694-0206	Motors, starting: automotive & aircraft
336360	(P) Motor vehicle seating & interior trim mfg.	2399-0404	Automobile & aircraft seat belts

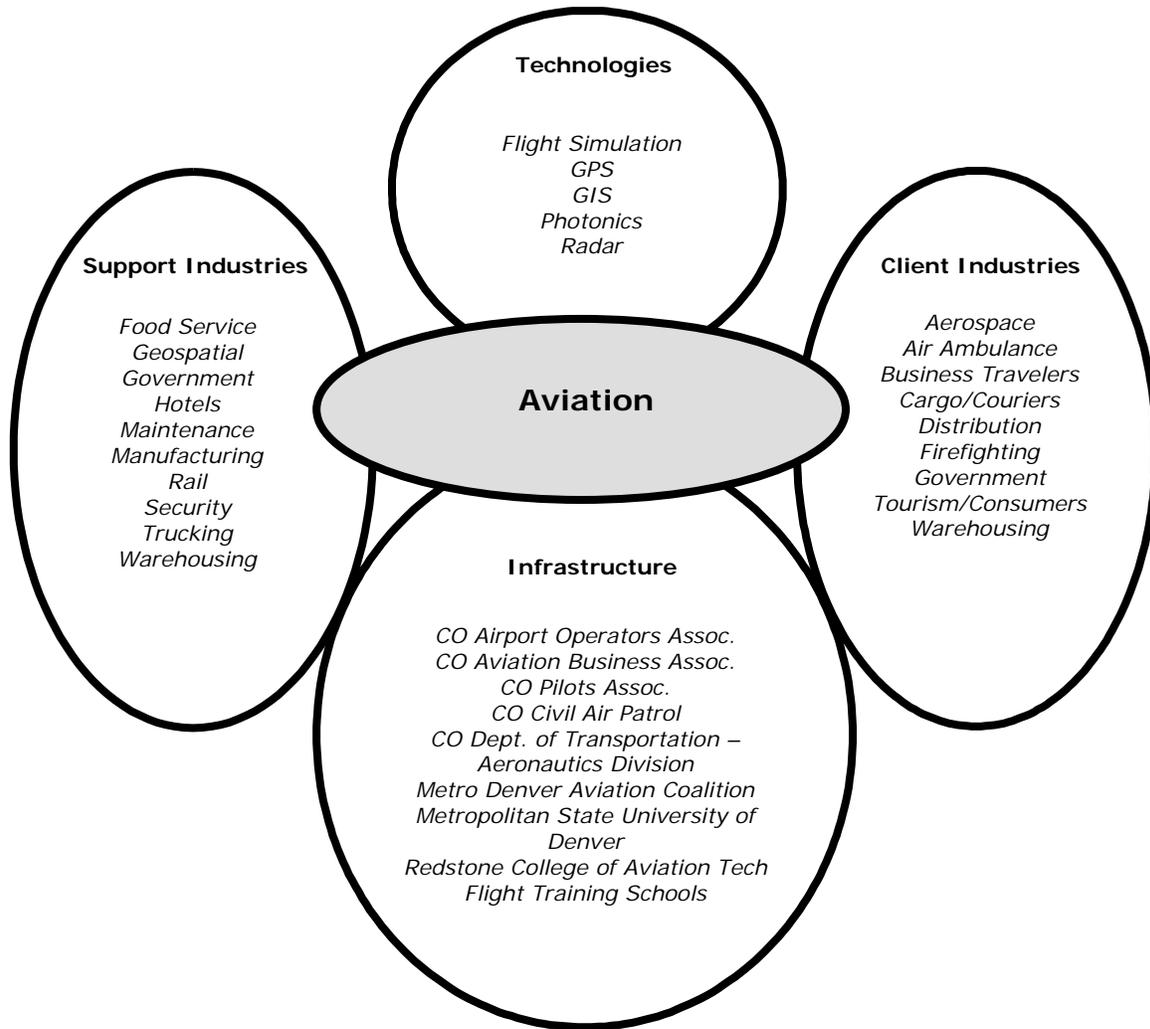
AVIATION: Metro Denver and Northern Colorado Industry Cluster Profile

Aviation Industry Cluster Definition Cont'd

NAICS Code*	NAICS Description	SIC Code	SIC Description
336360 (P)	Motor vehicle seating & interior trim mfg.	2531-0302	Aircraft seats
336411	Aircraft mfg.	3721	Aircraft
336412	Aircraft engine & engine parts mfg.	3724	Aircraft engines & engine parts
336413	Other aircraft part & auxiliary equip. mfg.	3728	Aircraft parts & equip., NEC
423860 (P)	Transportation equip. & supplies (except motor vehicle) merchant wholesalers	5088-0301	Aeronautical equip. & supplies
423860 (P)	Transportation equip. & supplies (except motor vehicle) merchant wholesalers	5088-0302	Aircraft & parts, NEC
423860 (P)	Transportation equip. & supplies (except motor vehicle) merchant wholesalers	5088-0303	Aircraft engines & engine parts
423860 (P)	Transportation equip. & supplies (except motor vehicle) merchant wholesalers	5088-0304	Aircraft equip. & supplies, NEC
423860 (P)	Transportation equip. & supplies (except motor vehicle) merchant wholesalers	5088-0306	Helicopter parts
424720 (P)	Petroleum & petroleum products merchant wholesalers (except bulk stations & terminals)	5172-0201	Aircraft fueling services
441228 (P)	Motorcycle, ATV, & all other motor vehicle dealers	5599-01	Aircraft dealers
481111	Scheduled passenger air transportation	4512	Scheduled air transport
481112	Scheduled freight air transportation	4512	Scheduled air transport
481211	Nonscheduled charter passenger	4522	Nonscheduled air transport
481212	Nonscheduled charter freight	4522	Nonscheduled air transport
481219	Other nonscheduled air transportation	4522	Nonscheduled air transport
481219	Other nonscheduled air transportation	7997-9901	Aviation club, membership
488111	Air traffic control	9621-01	Aircraft regulating agencies
488119	Other airport operations	4581	Airports, flying fields, & airport terminal services
488190	Other support activities for air transportation	4581	Airports, flying fields, & airport terminal services
488190	Other support activities for air transportation	7699-2200	Aircraft & heavy equip. repair services
488190	Other support activities for air transportation	7699-2201	Aircraft flight instrument repair
488190	Other support activities for air transportation	7699-2202	Aviation propeller & blade repair
488190	Other support activities for air transportation	7699-2206	Hydraulic equip. repair
532411 (P)	Commercial air, rail, & water transportation equip. rental & leasing	7359-0401	Aircraft rental
541330 (P)	Engineering services	8711-9902	Aviation and/or aeronautical engineering
561330 (P)	Professional employer organizations	7363-9908	Pilot service, aviation
561599 (P)	All other travel arrangement & reservation services	4729-0101	Airline ticket offices
561720 (P)	Janitorial services	4581	Airports, flying fields, & airport terminal services
611512	Flight training	8249-9901	Aviation school
611512	Flight training	8299-9908	Flying instruction
621910 (P)	Ambulance services	4522	Nonscheduled air transport
713990 (P)	All other amusement & recreation industries	7999-1002	Air shows
811213 (P)	Communication equip. repair & maintenance	7622-0101	Aircraft radio equip. repair
811219 (P)	Other electronic & precision equip. repair & maintenance	7629-9901	Aircraft electrical equip. repair
926120 (P)	Regulation & admin of transportation programs	9621-01	Aircraft regulating agencies

*(P) indicates that only part of the NAICS industry category is represented in the industry cluster definition.
 Note: NEC indicates "not elsewhere classified."

Aviation Industry Cluster Relationships



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