

The Wide Wings and Rotors of General Aviation

*The Industry's Economic and
Community Impact on the
United States*





Welcome

Dear Reader:

The book you're holding tells the incredible story of the wide wings and rotors of general aviation, capturing the significant economic and community impact the industry is having all across the United States, and how it is making life better for millions of people around the world.

In 2014, the General Aviation Manufacturers Association (GAMA) and our sister associations—the Aircraft Electronics Association, the Aircraft Owners and Pilots Association, the Experimental Aircraft Association, Helicopter Association International, the National Association of State Aviation Officials, the National Air Transportation Association, and the National Business Aviation Association—asked PricewaterhouseCoopers to do an in-depth study of general aviation's contributions to the U.S. economy. In updating this study for the first time since 2006, we found confirmation of our industry's strength and resilience, despite the recent economic recession and industry changes that have taken place. Demand for our products and services remains very healthy, and users of general aviation contribute substantially to the U.S. economy, as you'll see in some of the study's key statistical highlights on the following page.

Our industry's impressive economic numbers allow general aviation businesses to offer highly paid and highly skilled jobs to employees—which, in turn, allows them to support their families and play active roles in their communities. That impact then extends throughout the economy as those employees spend their salaries and pay their taxes, which, via compounding, support other businesses and their employees and so on. General aviation's widespread economic effect is felt in each state of our nation.

To get the best sense of what these numbers mean, it helps to look at the compelling stories behind them. In this book, we have picked a few companies and organizations to represent the hundreds of businesses and charitable activities that make up the dynamic and exciting general aviation industry. You'll read about how Gulfstream Aerospace Corp. in Savannah, Georgia is not only serving customers throughout the world, but supporting its local community with millions of dollars in charitable contributions. You'll learn how Appareo Systems, which started with two people working out of a closet-sized office in a North Dakota State University research park, has grown to 165 employees and several buildings—and still turns to local university students for much of its talent base. You'll see how Air Methods in Englewood, Colorado helps to transport 100,000 patients each year to receive emergency medical care. And you'll discover how general aviation is literally a lifeline for hundreds of Alaskan communities that are only accessible by air.

I hope you'll find these stories as inspiring and impressive as I did. Thank you for reading.

Blue skies and strong tailwinds,



Pete Bunce
President and CEO, GAMA

Highlights from the Economic Impact Study

In 2014, the General Aviation Manufacturers Association (GAMA) and seven other general aviation associations* hired renowned auditing firm PricewaterhouseCoopers (PwC) to determine the industry's total impact on the U.S. national and state economies. Using data from 2013, the most recent year available, PwC analyzed the data and issued the report, "Contributions of General Aviation to the US Economy in 2013." Highlights of the results follow. For the complete PwC report, please visit GAMA's Web site at www.gama.aero.



TOP 3 STATES

in total GDP impact of general aviation	in total economic output supported by general aviation as a percent of total economic output in the state	in total number of jobs supported by general aviation as a share of statewide employment
California	Kansas	Kansas
Texas	Connecticut	Connecticut
Florida	Georgia	Alaska

TOP 10 STATES

in terms of general aviation's total GDP impact per capita

1. Kansas	3. Alaska	5. North Dakota	7. Vermont	9. Minnesota
2. Connecticut	4. Arizona	6. Washington	8. Georgia	10. Oregon

in terms of total jobs attributable to general aviation

1. California	3. Florida	5. Illinois	7. Arizona	9. New York
2. Texas	4. Georgia	6. Kansas	8. Ohio	10. Washington

*Aircraft Electronics Association, Aircraft Owners and Pilots Association, Experimental Aircraft Association, Helicopter Association International, National Association of State Aviation Officials, National Air Transportation Association, National Business Aviation Association

Building Success with Investment



FACT:

Georgia ranks 4th among states in total jobs supported by general aviation.

Many of these same employees are also veterans who have bravely served their country. Hiring military veterans is a top priority for Gulfstream, with nearly 30 percent of its domestic workforce comprised of veterans.

As a result of all these efforts, Gulfstream is well-poised for its future and that of its 15,000 employees worldwide.



Like many aircraft manufacturers, Gulfstream Aerospace Corp. is committed to the success of its people and communities.

Since 2006, Gulfstream has created more than 4,700 jobs at its Savannah, Georgia, headquarters thanks to two major expansions. The first, completed in 2009, was a \$400 million investment resulting in 1,500 new jobs. In 2010, Gulfstream launched a \$500 million expansion that has created more than 3,200 jobs, taking the company's Georgia employment beyond 10,000.

The benefit of these expansions and the industry-leading work of Gulfstream employees led to recognition from the state with the 2014 Georgia Manufacturer of the Year Award in the large manufacturer category.

But the impact is felt far beyond Georgia. A new hangar at Gulfstream's Westfield, Massachusetts facility in 2013 created nearly 100 jobs and increased services at the busy business aviation hub. Gulfstream Appleton, in Wisconsin, recently added a dedicated mid-cabin hangar. And new Sales and Design Centers opened at Gulfstream Dallas (Texas) and Gulfstream Long Beach (California).

All of these expansions have created an even greater ripple effect throughout the U.S. economy thanks to Gulfstream's supplier spending. In Georgia alone, Gulfstream invested more than \$1 billion in suppliers and payroll expenses in 2013.

As Gulfstream grows, it continues to believe in being a good corporate citizen—and employees lead the way in this effort. Just in 2014, Gulfstream employees participated in the United Way Campaign, with Gulfstream donating more than \$2.7 million. Employees also donated thousands of volunteer hours with a variety of charitable organizations.

From Wright Brother Advice to Worldwide Business

Hartzell Propeller in Piqua, Ohio traces its roots to the early 1900s when Orville Wright, a friend of Robert Hartzell, suggested that Robert use his lumber background to begin producing walnut aircraft propellers for the emerging aviation industry. From that proud history, Hartzell currently delivers 4,000 propellers annually using advanced engineering and manufacturing technology. Its propellers are used on aircraft throughout the world, serving a variety of aviation missions, from general aviation to professional operations including business aviation, air medical, missionary relief, pilot training, freight hauling, and passenger service. Hartzell has a 300-person workforce, including many employees from local families who are the second or third generation serving on the Hartzell team. From a small town in Ohio comes a product with a global reach.



Helping Special Olympics Athletes Achieve Their Dreams

Every four years, hundreds of athletes and their coaches climb aboard business jets and turboprops for the ride of a lifetime: an all-expenses-paid flight to the Special Olympics.

Since 1987, Cessna Aircraft Company, now part of Textron Aviation, along with aircraft owners and aviation industry associations, has supported the Citation Special Olympics Airlift (CSOA), which expanded in 2014 to include Beechcraft King Air owners and their aircraft.

"These athletes are champions," said Kriya Shortt, Senior Vice President of Sales and Marketing at Textron Aviation. "Providing private air travel to and from the USA Games not only offsets thousands of dollars for each state's Special Olympics organization but provides a faster, more comfortable travel experience for the athletes."

More than two years of planning goes into the event, which in 2014 involved 102 owners and operators donating their aircraft, pilots, and fuel to transport more than 600 athletes and coaches from 28 departure locations in 22 states to Trenton-Mercer Airport (TTN) in New Jersey. A week later, they also provided transportation home.

With the flights arriving in just a few short hours, thousands of volunteers spring into action. As soon as the planes land, they



drive fuel trucks and tugs, and transport luggage to athletes' rooms. Greeters offer high-fives and supportive smiles as they welcome athletes off the planes and into hospitality areas filled with colorful balloons and signs.

"It's an inspiring display of the spirit of the general aviation community," said Shortt. "We are proud to play a role in this event that happens only because of the unwavering support of our aircraft owners. Our customers and employees truly enjoy the opportunity to make a difference in the lives of the athletes and their families."

Owners and pilots enjoy the opportunity to establish a rapport with athletes and coaches during the flights. "Our company gives to a number of charities in other ways," said Evan Fagen, President and

Chief Operating Officer of Minnesota-based construction company Fagen, Inc. "But as Citation owners, we have a unique opportunity to give back in a very meaningful way through the airlift."

With the competition over a week later, the athletes board the same planes home, again thanks to the generosity of general aviation owners and pilots. "It's really as invigorating as the first week coming out," said Carl Wolf, Vice President of Sales and Marketing for Garmin, whose company aircraft helped transport athletes to and from the Summer Games and who volunteered there. "In fact, in some ways it's even more fun. The athletes had a great week, they proudly wear their medals, and they're ready to go home to be greeted by their families."

Supporting Haiti's Rebuilding Efforts

After a 7.0-magnitude earthquake devastated the island of Haiti in January 2010, general aviation responded quickly. Nearly 100 general aviation aircraft flew humanitarian missions from the United States to the Haitian capital of Port-Au-Prince in the first days after a local airport opened to humanitarian flights. More than 4,500 relief flights were made by general aviators in the first 30 days, helping to bring critical supplies and medical personnel to areas outside Port-Au-Prince that larger aircraft could not serve. Business aircraft alone



brought 3,800 passengers and more than 1.4 million pounds of critical supplies to relief groups on the island. In May 2010, the U.S. Congress passed a resolution recognizing the general aviation community's many contributions and generosity in helping the people of Haiti. In the five years since the earth-

quake struck, general aviation aircraft have returned to Haiti numerous times. In July 2013, for example, 32 volunteers flew 14 Cirrus SR-22 airplanes and an Eclipse business jet to bring \$100,000 of needed medical supplies to St. Luke's Hospital in Haiti.

Connecting Alaska's Communities

Alaska may be the largest U.S. state by size, but many of its areas are extremely remote: a full 82 percent of the state's communities are not connected to a highway or road system. So it's no surprise that general aviation (GA) helps to make basic life in Alaska possible—bringing students to and from school, taking them to sports tournaments, carrying out law enforcement, delivering the mail, getting groceries to stores, and transporting business supplies.

"General aviation plays a vital role in the lives of our citizens," said John R. Binder, Acting Commissioner for the Alaska Department of Transportation & Public Facilities.

The state is home to 403 public-use general aviation airports, more than 5,700 active GA aircraft, and over 8,000 active pilots. Alaska has more private planes per capita than any other state and Alaskans fly more than eight times as often as citizens of other states. Aviation overall contributes \$3.5 billion to the state's economy, 47,000 jobs—about 10 percent of the state's total—and 8 percent of Alaska's GDP, according to the Alaska Department of Transportation & Public Facilities, Division of Statewide Aviation.

As Barron Sample, a teacher at the Akiachak School in Akiachak, Alaska put it, "Aviation has really brought our world together. And it keeps us in touch with the outside and allows us to get the things that we need."

Aviation is so ingrained in the fabric of Alaska that many children will see or ride in an airplane before they do so in a car. Many services that citizens in the contiguous United States take for granted—such



FACT:

General aviation supports 5,800 jobs in Alaska.

as calling 911 and having an ambulance respond in a matter of minutes to drive them to a nearby hospital—require aviation in Alaska, where medevac ambulances often bring the life-saving equipment on board with them to the patient. Aviation also supports other businesses important to Alaska's economy, such as resource exploration, pipeline patrol, hunting and fishing, and tourism. The state's terrain—which includes picturesque mountains and large stretches of uninhabited areas—provides some of the most scenic GA flying in the country.

For Alaskans, then, general aviation is not a luxury or convenience, but a way of life. Clifton Dalton, an Alaska resident and paramedic, summed up: "Without aviation, without the airports, everyday life wouldn't exist. It just couldn't happen."

Going Green in Nantucket, Massachusetts

Nantucket (Massachusetts) Memorial Airport is working to become the first airport with "carbon-neutral" ground operations in the United States. The general aviation airport—which has 150,000 annual aircraft operations and passenger enplanements of 200,000—has year-round service to Boston and seasonal service to New York and Washington D.C. The airport is focused on reducing energy demand, using renewable energy resources to meet the remaining demand, and lowering non-energy-related greenhouse gas emissions. These airport measures include installing indoor and outdoor LED lighting and turning to solar thermal technology to reduce heating oil use for water heating. When fully implemented in 2016, the program will eliminate almost 1,000 metric tons of carbon emissions each year—or the equivalent of planting about 94,000 tree seedlings and growing them for 10 years. The Massachusetts Department of Transportation and Nantucket Airport plan to identify lessons and practices learned in the transition and how they might apply to other airports in the future.



Nebraska Family Business with an International Reputation

For many business jet operators, Duncan Aviation is a household word. Founded in 1956, the company has built an international reputation as a maintenance specialist spanning the entire range of business jet models. But its economic impact is felt most strongly in the local communities where its more than 2,100 employees work each day: at its Lincoln, Nebraska headquarters; in Battle Creek, Michigan; and at the Provo (Utah) Airport.

Duncan Aviation's large maintenance, repair, and overhaul (MRO) facilities in all three locations make it a significant player economically, with a payroll in excess of \$100 million annually. In Lincoln and Battle Creek, it is one of the top 10 employers in each city.

The company added about 100 jobs within the past 18 months and expects to hire another 50-75 technicians in 2015. Much of the growth stems from the opening of a new 175,000-square foot hangar and maintenance complex in Lincoln. As a result, Duncan Aviation is now at or above its 2007 pre-recession employment levels, reported Chairman Todd Duncan, who assumed the role from his father, Robert, in 2007. Todd's grandfather, Donald, moved the company to its current location in 1963.

Along with the three major MROs, the company operates more than 25 satellite avionics locations nationwide, which employ over 100 technicians who offer avionics line and installation services. Duncan Aviation also has engine and interior technicians available who can provide



FACT:

**25 percent of
Duncan Aviation's
workforce are veterans.**

engine and interior services in the field, and operates eight engine rapid-response offices.

The company has made hiring veterans—who comprise 25 percent of its workforce—a priority, recruiting them through job fairs, local National Guard units, and internal referrals. In 2014, the Michigan Veterans Affairs Agency recognized Duncan Aviation's efforts with its Bronze Veteran-Friendly Employer Award.

Duncan Aviation's success is helping other local businesses. With a complex refurbishment of a business jet taking several weeks to complete, the company is a significant driver of business for local hotel rooms,

rental cars, and food services for on-site aircraft owner representatives in Lincoln and Battle Creek.

With over \$500 million in revenue in 2014, of which \$100 million came from international sales, Duncan Aviation is planning for further growth, especially inspections of high-end jets, such as the Dassault Falcon Jet 7X and the Bombardier Global Express families. Major expansion, said Duncan, is also planned for the Provo location, bringing with it new facilities—and new jobs.



Pouring Revenues Back into the Local Economy

Loyd's Aviation has been serving general aviation at Meadows Field in Bakersfield, California for over 56 years. With 37 employees and a payroll of \$1.8 million, the company's modern 10,000 square-foot Bakersfield Jet Center FBO terminal is an entry point to this southern San Joaquin Valley city for general aviation operators. Furthermore, some 90 percent of the company's revenues—generated by fuel sales, aircraft maintenance, charters, and management—goes back into the Bakersfield area economy through purchases from local suppliers. The company also supports area non-profits, including the Bakersfield Chamber of Commerce, Bakersfield Memorial Hospital, the American Red Cross, and Court Appointed Special Advocates, an organization that trains volunteers to help foster children through the court system.

Saving Lives By Giving Patients a Lift



When a patient requires an air ambulance in a medical crisis, Air Methods is often called on to respond. Based at Centennial Airport in Englewood, Colorado, the 35-year-old company operates more than 450 aircraft—mostly helicopters—from more than 300 bases in 48 states, transporting more than 100,000 patients annually to hospitals all across the country to get the care they need.

Their aircraft are some of the more than 900 civilian EMS and air ambulance helicopters flying in the United States today. Air ambulances can shave potentially life-saving minutes off of trips to hospitals, and many are fitted with specially

designed interiors to allow for medical care during flight.

In addition to providing this critical service, air ambulances also feed the economy. Companies own or rent local facilities to house their personnel and aircraft. Besides a flight and medical crew, each helicopter

FACT:
General aviation provides \$471 in per-capita contribution to Oregon's GDP.

needs routine inspections and maintenance, which requires the services of certified maintenance technicians backed by local vendors. And Air Methods' more than 4,400 pilots, maintenance technicians, dispatchers, medical crews, and support staff contribute to the economy through their spending and taxes as well.

Beyond responding to routine air ambulance calls, Air Methods' aircraft are frequently some of the first to arrive on the scenes of natural disasters. When Hurricane Katrina struck New Orleans in 2005, the helipad at Tulane University was underwater, so Air Methods' helicopters landed on a garage roof, with pick-up trucks forming an "X" so the rotorcraft would know where to land. The company's aircraft also deployed to Louisiana in 2008 for Hurricane Gustav.

Harvesting Materials That Are Off-Road

A Columbia Helicopters Vertol 107-II lowers a long line to a logger waiting to extract felled timbers. Heli-logging is a little-known but vibrant sector of the vertical lift industry, supporting both the local and the broader economy. For instance, a single Columbia Helicopters logging crew has a total direct and indirect economic impact of more than \$80,000 per month in the community where it's working. Heli-logging allows for harvesting of otherwise inaccessible timber without the need to build roads. It also provides raw materials for the lumber industry and supports many construction jobs that require wood. Portland, Oregon-based Columbia Helicopters was founded in 1957 with a single helicopter and today supports forestry, construction, petroleum exploration, government support, disaster relief, and fighting wild fires.



Business Aviation Helps Drive Company's Success



Anyone who has ever rented a vehicle for company travel, or while on vacation, will certainly recognize the name Enterprise. Today, Enterprise Holdings encompasses thousands of offices and locations across the globe, which makes business aviation an essential part of the company's ability to manage its operations.

Enterprise Holdings Executive Chairman Andrew Taylor, above, has frequently noted how business aviation is intertwined with the company's history.

"Business aviation is one of the reasons we were able to grow and become a successful company," Taylor has said of the St. Louis, Missouri-based company. "We could not have done it without it."

Founded in 1957 as a small leasing company by Taylor's father, Enterprise Holdings is now the world's largest car rental company. In addition to Enterprise Rent-A-Car, the company also owns the National Car Rental and Alamo Rent A Car brands.

Taylor joined the family business more than 50 years ago, and quickly realized the flexibility and ease of travel provided by business aviation. As Enterprise has grown, so too has the company's reliance on business aviation in allowing company personnel to travel between distant locations, across the country, and around

FACT:
General aviation supports **\$6.7 billion** in total impact to Florida's GDP.

the globe, far more quickly than can be managed onboard commercial airliners.

"Using business aviation allows us to visit multiple cities in a short period of time," Taylor added, "and that's just not possible with any other mode of transportation."

Enterprise Holdings is recognized around the world as a company that stands for excellence. The company and its affiliated businesses operated 1.5 million vehicles worldwide in fiscal year 2014, with \$17.8 billion in annual revenue.

"Enterprise is all about helping people and companies get where they need to go, when they need to get there," Taylor has added. "We are there for them, and business aviation is there for us."

Keeping America's Kitchens Cooking

From its headquarters in Orlando, Florida, Restaurant Equipment World helps to keep the world's commercial kitchens running. Offering more than 250,000 new and used supplies to professional food-service kitchens, the company, with 45 employees, also has an office in Dubai, United Arab Emirates. Yet it's the personal touch that matters, said President and CEO Brad Pierce, the third-generation family owner, above. "Small businesses like mine must be nimble, efficient and constantly in front of customers in order to succeed," Pierce noted. "I use my business airplane to go to more places and meet more people in less time than my larger competitors. In a David v. Goliath environment, the airplane gives my business a competitive edge."



Turning to America to Build Businesses

It's a story the media doesn't often tell: non-U.S.-owned companies choosing to locate their facilities in the United States. But every business jet manufacturer worldwide has at least one facility in America, and many of them are significant contributors to state and local economies.

Take Embraer, which is based in Brazil but has offices in Melbourne, Florida. In 2014, Embraer announced it was breaking ground on a 236,000-square-foot facility, to include an assembly hangar, paint facility, flight preparation staging areas, and dedicated delivery center. This new building joins Embraer's existing 212,000 square-foot facility, where it assembles its Phenom aircraft, also in Melbourne. As a result, the company's employment footprint in Florida will grow from 400 people to 1,000 people when the second building opens in 2016. That's a big boost to Melbourne, which was hit hard when NASA retired the space shuttle in 2011.

In 2014, Embraer also opened a 75,000 square-foot Engineering & Technology Center in Melbourne, the first outside Brazil, which will focus on designing and developing aircraft interiors. "The project was one of a kind and could have gone anywhere in the world," Gary Spulak,



President of Embraer Aircraft Holding Inc., told *Florida Today*. "There was a very significant evaluation process that went on to determine the best place in the world to put this facility."

Other non-U.S.-owned companies have also bet on the United States as a source of good talent and a good place to build their businesses. French-based Dassault Falcon, above, has been in Little Rock, Arkansas since 1975, but in 2014 announced plans to expand its facility by 250,000 square feet to a total of 1.25 million square feet, in a \$60 million project. The additional space will allow Dassault to complete the Falcon 5X and ultra-long-range Falcon 8X jets in Little Rock.

"Dassault's Little Rock facility brings international attention to the strength of our



state's aerospace sector," then-Arkansas Governor Mike Beebe said at the opening. Dassault has more than 1,700 employees in Little Rock. It also has facilities in Teterboro, New Jersey; Reno, Nevada; and New Castle, Delaware.

Canadian-based Bombardier has built a significant business aviation presence in the U.S. since 1990. In addition to its Learjet manufacturing center in Wichita, Kansas, which is also home to the company's global flight test center, Bombardier operates business aircraft service centers in Wichita; Tucson, Arizona; Dallas, Texas; Fort Lauderdale, Florida; and Hartford, Connecticut. It also has a training center in Dallas, and a global parts distribution center outside of Chicago, Illinois. The service center sites provide 24-hour aftermarket support services to customers in the U.S. and around the world for Bombardier's Learjet, Challenger, and Global lines of business jets, all of which benefit from U.S. technology and expertise.

Company-wide, Bombardier employs some 8,000 workers in 18 states. In 2013, the company spent \$2.7 billion with U.S. suppliers across 49 states, and its U.S. operations generated \$3.5 billion in exports between 2009-2013.

Export-Import Bank Helps U.S. Manufacturers Grow

Since 2012, the Export-Import Bank of the United States has provided approximately \$1.9 billion in financing guarantees for U.S.-based general aviation manufacturers to facilitate the sale of their aircraft in other countries. This financing has helped small companies such as Air Tractor, Inc., which employs 260 people in Olney, Texas, to grow. As a result of Ex-Im Bank support, Air Tractor—which manufactures airplanes used to treat crops and fight fires—has developed new markets in places such as Spain and South America. The Bank helps support about a quarter of Air Tractor's overall sales. Thrush Aircraft, Inc., in Albany, Georgia, below, which manufactures aerial-application aircraft used in agriculture, forestry, and firefighting operations, has also turned to the Bank for financing support.



Thrush first used Ex-Im Bank financing in 2010 to export an aircraft to Kenya. Since then, its production line has doubled and it has added 60 new jobs. Export credit agencies like the Ex-Im Bank allow companies to compete on a level playing field globally and keep workers employed.

Innovation and Education in America's Heartland



FACT:

North Dakota ranks 5th in total GDP impact per capita for general aviation.

When Appareo Systems launched in 2003, it had just two employees working from a closet-sized office in the North Dakota State University (NDSU) Research and Technology Park in Fargo, North Dakota. Today, the electronics and software design and manufacturing company employs more than 165 people, has offices in Tempe, Arizona and Paris, France, and is doubling its existing headquarters and manufacturing space.

What's been behind Appareo's phenomenal trajectory, a compounded annual growth rate of more than 45 percent since 2005? Strong ties to the community, including the area's universities, are one element that has allowed the company to evolve quickly. More than half of the company's engineering staff are NDSU graduates, as is its founder, Chairman and CEO Barry Batcheller. (Appareo is still located in the NDSU Research and Technology Park, but now owns two buildings there.) The company also works closely with the flight

school at the University of North Dakota in Grand Forks, and employs a number of its graduates in engineering and business development.

Appareo's status as a privately held company also allows it to take a long-term approach to products. The company can "be very intentional and pick the best opportunities for our success," Aviation Business Unit Manager Tony Grindberg has said. Appareo first found success in 2007 with the launch of its ALERTS system

to bring flight data monitoring to light and legacy aircraft. The ALERTS Vision 1000 device is now factory-installed equipment throughout the Airbus Helicopters product line.

Appareo continues to build on its successes in general aviation with its upcoming certified ADS-B transponder, a device that will allow pilots to meet the FAA's Automatic Dependent Surveillance-Broadcast (ADS-B) mandate with an easily installed, affordable avionics solution.

What's more, Appareo fosters a close-knit culture among its employees. Its designers, engineers, and manufacturers not only work in the same buildings, but often eat lunch together—allowing for the kind of free-flowing dialogue that often sparks innovative ideas. Controlling a product from concept to delivery in-house also allows Appareo to ensure a high level of consistency and quality control in its work.

All of these factors have poised Appareo—which means "to appear" in Greek—for an even brighter future. Not bad for a company that started with just a tiny office and two employees.



Providing Speedy Service So Planes Can Fly Again

Headquartered in the metropolitan Dallas/Fort Worth area, DFW Instrument Corporation is an FAA-certified repair station. With 23 employees, the company's location at Addison Airport allows its customers to taxi right up to the company's hangar for Aircraft-on-Ground support. DFW Instrument Corporation specializes in providing precision aircraft instrument repairs and overhauls; it also manages and supports all avionics and instrument part sales. As an authorized dealer for several leaders in the U.S. avionics market, DFW Instrument Corporation has the opportunity to provide parts from its own inventory and to access those from other well-known manufacturers, such as Honeywell and Rockwell Collins, to meet its customers' needs. In 2010, DFW Instrument Corporation teamed up with a distributor in Belgium to support European sales.

Training Future Aviators

Paragon Flight has just 15 employees at its Page Field (KFMY) headquarters in Ft. Myers, Florida, but it's already having a major impact in the Southwest Florida community. The 9-year-old enterprise, which launched with three airplanes in an off-airport office, is now the largest aeronautical services provider on the field with 10 aircraft, and has trained more than 3,000 general aviation pilots.

CEO Chris Schoensee, 34, and his wife, Sarah, 31, took over the flight school from Chris' father, Kevin Schoensee, in 2011. They, along with Chief Flight Instructor Jeffrey Wolf, 29, are young entrepreneurs who match a passion for flying with a desire to succeed in business.

Paragon's leaders attribute its success to good equipment and instructors, great flying weather, and strong customer service. The company was named AOPA's best flight school in the U.S. in 2014 based on a poll of more than 3,600 flight students from 1,447 flight schools. Besides its Ft. Myers location, Paragon also operates at the Naples (Florida) Airport.

The school's training ranges from classes for beginners to those who want to become commercial pilots.

Many of the school's students "enjoy flying for fun," said Wolf, who began his flight training on Page Field when he was just 16 years old and has been with Paragon since 2009. "They are successful people. Many are business owners. They can go anywhere they want to get training, so if they are not enjoying it here, they will leave."



Paragon's fleet is valued at \$2.5 million to \$3 million. Modern—most have Garmin all-electronic panels—and diverse, it includes six Cessna 172s, a Flight Design CTLS LSA, a Tecnam P2006T Rotax-powered twin, a Cessna 206, and a high-performance Cessna Corvalis TTX.

The airplanes collectively log about 600 hours a month, and 800 hours during the busy winter season.

Paragon's size and activity make it a significant contributor to the \$27.35 million direct economic impact that the Lee County Port Authority says Page Field has

on Southwest Florida. "They are one of the great tenants on the airport," noted Barry Bratton, Director of General Aviation for the Lee County Port Authority.

FACT:

General aviation supports \$30.2 billion in total economic output in California.



Teaching Pilots Safety in San Francisco's Skies

By focusing on three simple concepts—safety, community, and adventure—San Carlos Flight Center at San Carlos (California) Airport has quickly developed into a major flight school player on the West Coast. Starting in 2012 with just one airplane, one flight instructor, and a half-dozen clients, the flight center has now has 14 airplanes, three simulators, three staff instructors (and another 23 independent Certified Flight Instructors on call), four line employees, and a receptionist. And its client roster has mushroomed to about 175 people. The center's scenic San Francisco Bay location also enables its students to enjoy the stunning views for which the region is well known.



Bringing Aviation Fans and Their Dollars to Wisconsin

If there is a single event that shows all the elements of general aviation and its economic benefits, it is the Experimental Aircraft Association's EAA AirVenture Oshkosh fly-in held each July in Oshkosh, Wisconsin. The numbers for the week-long event are massive: An attendance of 500,000 people from more than 65 nations, with 10,000 airplane arrivals in the Oshkosh area and 800 exhibitors showcasing every facet of flight.

While AirVenture is the largest annual fly-in in the world, it is representative of the local economic benefits seen at fly-ins and air shows nationwide. Tens of millions of people attend air shows and fly-ins every year. They bring their dollars to the local communities that host these exciting and highly publicized events.

For Oshkosh and eastern Wisconsin, EAA AirVenture Oshkosh is an unmatched



FACT:

*General aviation contributes over **\$3 billion** in economic output to Wisconsin.*

economic spike. An independent University of Wisconsin System estimate in 2008 puts the annual economic benefit for the state at \$110 million per year.

"AirVenture week" means filled hotels and busy restaurants as more than 70 percent of visitors come from outside Wisconsin. Local residents rent their homes for housing, earning enough to pay annual property taxes or take their own vacations. Communities in the region see new investment, and city and county governments collect tax dollars for projects otherwise paid for by local homeowners or consumers. And thousands of Oshkosh-area

young people are "EAA alumni"—earning their first summer paychecks working for vendors and companies needing temporary help.

For general aviation businesses, EAA AirVenture Oshkosh is their Christmas season. Innovative new products ranging from emerging technologies to business jets are on display for the world's pilot population. Sales and contacts made at AirVenture fill the order books that keep people employed in their hometowns through the rest of the year.

EAA AirVenture Oshkosh is a spark that annually ignites the general aviation economy nationwide. It is also a magnificent example of how general aviation brings dollars and progress to a community.



Small Planes, Big Growth in Scenic Washington

Calling beautiful Yakima, Washington home since 1980, CubCrafters has grown to become a world-renowned manufacturer of Utility and Sport Airplanes. The company has doubled in both revenue and employees during the past five years, currently employing more than 150 staff in the area and expanding its production to several

local facilities. CubCrafters attributes its growth to growing market interest in classic taildragger aviation, new high-performance aircraft like the Carbon Cub SS and Carbon Cub EX, and leading-edge design, materials, and manufacturing standards. Its location doesn't hurt, either. Within minutes of the factory, pilots can experience mountains, forests, lakes, rivers, and even desert basins—while also taking in views of orchards and vineyards.



More Information About the Sponsoring Associations



Aircraft Electronics Association

Founded in 1957, the **Aircraft Electronics Association (AEA)** represents nearly 1,300 member companies in 43 countries, including government-certified international repair stations specializing in maintenance, repair and installation of avionics and electronic systems in general aviation aircraft. The AEA membership also includes manufacturers of avionics equipment, instrument repair facilities, instrument manufacturers, airframe manufacturers, test equipment manufacturers, major distributors, engineers and educational institutions.



Aircraft Owners and Pilots Association

Since 1939, the **Aircraft Owners and Pilots Association (AOPA)** has protected the freedom to fly for thousands of pilots, aircraft owners, and aviation enthusiasts. AOPA is the world's largest aviation member association, with representatives based in Frederick, Maryland, Washington, DC, Wichita, Kansas, and seven regions across the United States. AOPA provides member services that range from advocacy at the federal, state, and local levels to legal services, flight planning products, safety programs and award-winning media. To learn more, visit www.aopa.org.



Experimental Aircraft Association

The **Experimental Aircraft Association (EAA)** is based in Oshkosh, Wisconsin, and embodies the spirit of aviation through the world's most engaged community of aviation enthusiasts. EAA's 185,000 members and 1,000 local chapters enjoy the fun and camaraderie of sharing their passion for flying, building and restoring recreational aircraft. For more information on EAA and its programs, go to www.eaa.org.



General Aviation Manufacturers Association

The **General Aviation Manufacturers Association (GAMA)** represents more than 85 of the world's leading manufacturers, general aviation airplanes and rotorcraft, engines, avionics, components, and related services. In addition to building nearly all of the general aviation airplanes flying worldwide today, GAMA member companies also operate fleets of airplanes, fixed-based operations, pilot/technician training centers, and maintenance facilities worldwide. To learn more, visit www.gama.aero or look for us on Facebook and LinkedIn.



Helicopter Association International

The **Helicopter Association International (HAI)** is a trade association representing the interests of the vertical lift industry worldwide. HAI members fly more than 5,500 helicopters in more than 70 nations.



National Association of State Aviation Officials

Founded in 1931 to ensure uniformity of safety measures, standardize airport regulations, and develop a truly national air transportation system, the **National Association of State Aviation Officials (NASAO)** represents professionals in state government aviation agencies who organize, promote, and fund a wide variety of aviation programs across the United States. NASAO also works closely with Congress, the Department of Transportation, and other Federal agencies to represent state views before the Federal government and ensure strong partnerships.



National Air Transportation Association

The **National Air Transportation Association (NATA)**, the voice of aviation business, is the public policy group representing the interests of aviation businesses before Congress and the federal agencies. For more information about NATA, please visit www.nata.aero, [www.twitter.com/nataaero](https://twitter.com/nataaero), or www.facebook.com/nataaero.



National Business Aviation Association

Founded in 1947 and based in Washington, DC, the **National Business Aviation Association (NBAA)** is the leading organization for companies that rely on general aviation aircraft to help make their businesses more efficient, productive and successful. The Association represents more than 10,000 companies and provides more than 100 products and services to the business aviation community, including NBAA's Business Aviation Convention & Exhibition, the world's largest civil aviation trade show.

Contributing Sponsors

