

The international guide to business airports, FBOs and ground support partners

# Business Airport

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July 2018

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### **Jet cards:**

Do these membership programs hold the key to future growth?

### **Fuel roundtable:**

BAI discusses all things fuel with the largest suppliers to the business aviation market

Location focus: Ireland | Case study: Phoenix-Mesa Gateway Airport  
City guide: Mumbai | Interview: Joe Cohen, CEO, Victor



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# Welcome

Talk about ADS-B surveillance technology has been ongoing for many years now. It has long been a feature of different countries' plans to modernize their national airspace systems, such as the USA's NextGen and Europe's SESAR projects.

According to the FAA, ADS-B is transforming the aviation sector. The technology enables aircraft to automatically transmit data on identification, current position, altitude and velocity, to both ATC and to other aircraft. It is hoped that the technology will not only improve safety and reduce costs, but that it will also increase the capacity and efficiency of airspace.

Equipping aircraft with ADS-B In technology, which receives information, is voluntary. However, as of January 1, 2020, it will become mandatory in the USA for aircraft to be equipped with ADS-B Out broadcasting technology. Although the 2020 mandate has been in place for nearly 10 years, some in the industry are concerned that not all aircraft will comply in time.

According to Jeff Aman, satellite manager at one of MRO provider Duncan Aviation's avionics shops in Kansas City, "Capacity for all MRO shops is filling up fast," and soon there won't be enough MRO capabilities to meet the demand for ADS-B Out installation. In fact,

in December 2017, Duncan Aviation president Aaron Hilkeman predicted that 40% of the US business airplane fleet will not meet the 2020 deadline. Speaking at the Corporate Jet Investor Miami conference, Hilkeman said that the installation rate would have to reach nearly 4,000 per month to achieve 100% compliance – which he believes is impossible.

In *No time to lose*, on page 38, Aman stresses that with less than 18 months left before the deadline, aircraft operators need to schedule an installation date now, before it's too late: "The big takeaway from this entire process is that in aviation, procrastination is a bad idea."

The FAA is standing strong on the mandate and is adamant that there is no flexibility in the 2020 deadline. On its website it states, "Don't get left in the hangar: You must equip by January 1, 2020." Aman comments, "Historically with other mandates they [the FAA] have pushed the date back due to a lack of compliance. This is the first time they're sticking to it."

The message is clear: if you still haven't equipped your aircraft with ADS-B Out technology, then you need to do it now, before you run out of time and risk being grounded!

Helen Norman, editor

**"If you still haven't equipped your aircraft with ADS-B Out technology, then you need to do it now, before you run out of time and risk being grounded"**

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**DASSAULT FALCON SERVICE UNVEILS RENOVATED FBO AT PARIS-LE BOURGET AIRPORT**



**Paris-Le Bourget Airport**

**Location:** 16 miles (26km) by road to Paris city center

**Operator:** Groupe ADP

**Runway length:** 07/25 – 2,990m (9,810ft)

**FBOs:** Dassault Falcon Service, Advanced Air Support, Jetex Flight Support, Signature Flight Support, Sky Valet, Universal Aviation France

**D**assault Falcon Service (DFS) welcomed crew and passengers to its fully refurbished FBO at Paris-Le Bourget Airport for the first time in June 2018.

The new-look FBO features a fully redesigned crew lounge with a large, bright open space at its center with a glass roof, a revamped meeting room, and a new crew work zone that is equipped with TV screens, high-speed internet access and iMacs.

The aim of this renovation project was to give crews the same levels of experience and customer service that are already provided to business jet passengers at its VIP passenger lounge, which was refurbished five years ago.

As part of the project, DFS kept the original structure of the building but added a large sunroof. The direct natural sunlight that now enters the building complements the choice of light-colored materials and contemporary furniture in the FBO. The addition of plants and other decorative items aims to create a quiet and serene atmosphere.





Above: **The FBO now offers a bedroom with exclusive shower room**  
 Right: **The DFS FBO facility at Paris-Le Bourget Airport**

### New sleep pod for relaxation

Dassault Falcon Service's renovated FBO now also hosts a dedicated nap area, which has been dubbed the 'snooze room'. The area is equipped with an EnergyPod from MetroNaps, which the company claims is the world's first chair designed for napping in the workplace.

The pod enables passengers and crew to take time out before and after flights. It offers users the chance to rest in a zero-gravity position, which MetroNaps claims takes the pressure off the cardiac system with the elevation of the feet and relaxes the muscles of the lower back with a bend at the knees. The pod plays specially composed sleep music and features a gentle wake sequence of programmed lights and vibrations. The pod also includes a status indicator that communicates when it will be free next and a usage tracking solution to optimize facility management.



Main: **The crew lounge now features a large, bright and open space**

Right: **MetroNaps' EnergyPod**

### *"On clear days customers can even enjoy a view of the Eiffel Tower, Montmartre and Sacré-Cœur"*

Jean Kayanakis, DFS general manager at Paris-Le Bourget

Jean Kayanakis, DFS general manager at Paris-Le Bourget Airport, said, "Since its inception 50 years ago, DFS FBO has committed itself to ensuring business aviation operators enjoy access to the best and most complete package of support services available at Paris-Le Bourget. Maximizing passenger and crew satisfaction remain our primary objective."

The FBO is adjacent to DFS's Le Bourget maintenance, repair and overhaul facility, which supplies a range of maintenance, cabin interior upgrade, and air charter services for Falcon users in Europe, Africa, the Middle East and Asia. The airport is just 26km (16 miles) by road from Paris city center, making it a popular stop for business and leisure customers en route to the city.

"The FBO offers unique access to Le Bourget Airport, providing safety, comfort and confidentiality," commented Kayanakis. "On clear days customers can even enjoy a view of the Eiffel Tower, Montmartre and Sacré-Cœur."

The facility is part of the Air Elite network, a chain of FBOs around the world that are designed to meet an exacting list of airport, facility and customer service quality standards. The DFS Paris-Le Bourget Airport FBO handles approximately 5,000 aircraft movements each year. ○

## TAG FARNBOROUGH AIRPORT BECOMES THE FIRST CARBON NEUTRAL BUSINESS AVIATION AIRPORT IN THE WORLD



### Energy supply

The airport has committed to the REGO (Renewable Energy Guarantees of Origin) energy supply scheme, which provides transparency to consumers about the proportion of electricity that suppliers source from renewable sources. TAG Farnborough claims this will see the airport's annual footprint reduced by a further 2,000 tons and help to support the renewable energy sector.

### Offsetting

TAG Farnborough Airport has offset residual emissions through an offsetting project in conjunction with Carbon Footprint Ltd. In 2017, carbon emissions were offset through school tree planting projects paired with a conservation project in the Amazon rainforest, which protects trees in one of the most biodiverse places in the world. The airport worked with 12 local schools and charity organizations, planting 3,500 trees.

### Investment

The hub has invested more than £1m (US\$1.3m) in energy efficiency projects over the past five years.

### Reductions

Carbon emissions at TAG Farnborough in 2008 were 5,242 tons. Over the past 10 years, the airport has reduced emissions over which it has direct control by 42%, equivalent to 2,183 tons.

### Lighting

In early 2018, the airport carried out a total refit of its airfield ground lighting system, replacing old tungsten fittings with LED lighting. In the first two months, the new lighting at the airport tower alone saved 15% (13,902kWh) of total electricity consumption.

### Vehicles

TAG Farnborough has implemented an innovative sustainable staff travel plan, which encourages employees at the airport to adopt low- or zero-carbon travel such as cycling, the use of public transportation and car sharing. The airport also has a network of 20 electric vehicle chargers, which has enabled the use of electric vehicles, from small ground-handling trucks to a Tesla Model S. A bicycle fleet is available for staff to enable footprint-free travel between buildings.

### Solar power

Nearly 200 custom-built solar panels have been fitted to the roof of the airport's headquarters building. The airport has also invested in specialized hangar heating systems and a waste management program, which saw zero waste to landfill achieved throughout 2016 and 2017. ○

**T**AG Farnborough Airport in the UK has been awarded carbon neutral status, the first business aviation airport in the world to achieve this under Airport Carbon Accreditation run by ACI Europe. To achieve carbon neutral status, an airport must have mapped its carbon emissions, reduced CO<sub>2</sub> emissions under direct control, engaged with others on the airport site to reduce their emissions, and invested in responsible and credible programs to offset residual carbon emissions. How did TAG Farnborough achieve this status? Here are the key facts...





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BUSINESS AVIATION BUYING CLUB **CONVOLUS** LAUNCHES EUROPEAN FBO NETWORK WITH SAVINGS OF UP TO 30% ON STANDARD PRICING

**B**usiness aviation buying club Convulus has launched its European FBO network as part of its exclusive aircraft operator members-only platform. Designed to support small- and medium-sized fleets, Convulus negotiates group pricing for its members. The platform enables suppliers to market to a considerable number of aircraft operators at once, facilitating their outreach. The Group covers operational cost categories supported by an operator including handling, satellite communications with crew simulator training, MRO and fuel. Convulus deems its unique selling point as being that it is the only operator-independent, Europe-focused buying club in the business aviation sector.

By launching its FBO network, Convulus now covers nearly 100 business aviation airports with 11 members who are operators in the UK, Germany, Switzerland and the Nordics. The members have a total of 113 aircraft at present, with individual fleets ranging from one aircraft to 20. Its launch partners



**“A year ago, some people advised us against pursuing FBOs. It makes us incredibly proud to now have an active network in place”**

**Vital statistics**

**Location:** Its 11 members are operators in the UK, Switzerland, the Nordics and Germany

**Aircraft:** Members hold 113 aircraft ranging from a PC-12 to bizliners

**Launch partners:** Alpha Jet Services, Dassault Falcon Service, Jet Aviation, United Aviation Services, and more

**Target clients:** Small and medium operators with 20 aircraft or fewer

include Jet Aviation, ExecuJet and Skylink Services. Convulus claims the new FBO network will offer deals for handling services at airports, enabling up to 30% savings on standard pricing.

Nicolas Deville, co-founder and chief operating officer at Convulus, said, “Launching our network of selected FBO partners, and the platform that goes with it, is the result of more than a year of hard work, and marks just the beginning of what we can do for our current and future members. We are incredibly excited by seeing it go live and making it grow as it is a critical step in our mission to help small and medium operators in Europe.

“Feedback has been largely positive and we are happy to start seeing regular usage of our agreements with handlers,” he continued. “We are launching a booking system soon, addressing some of the challenges our members are currently facing and providing even more value.”

“A year ago, some people advised us against pursuing FBOs and handling as a cost category because of its complexity. It makes us incredibly proud to now have an active network in place. It was a lot of work and will continue to be so, but it has been an incredible journey so far and we are excited by what’s coming, especially as the foundations of our technology and processes are now in place to scale this model,” concluded Deville. ○

Above: **ExecuJet (its Zurich FBO is pictured here)** was one of Convulus’s launch partners



Convulus co-founders Nicolas Deville and Irena Deville

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**EBAA'S MILLENNIALS REPORT REVEALS THAT THE GENERATION WANTS ENVIRONMENTALLY FRIENDLY AIRCRAFT, RIDE-SHARING AND ON-DEMAND FLYING**

**60%** stated they would use ride-sharing air services. That number dropped to 46% if the ride-sharing service was automated

**Over 50%** are keen to learn more about the industry

**36%** of respondents say the industry should focus on sustainable technology



**59%** believe that new forms of air transport will dramatically change our lives

**Millennials expect that the largest job growth in business aviation will be in R&D and engineering**

**E** BAA has released its *Expanding Horizons: How Millennials See the Future of Business Aviation* report, detailing Generations Y's perspectives and desires from the sector. The report asked young people aged between 18 and 25 in Germany, France, the UK and Switzerland about mobility, business aviation and the future of sustainable personal air transport. Here, *Business Airport International* outlines some of the key findings of the report.

**60%** cited flexibility as the most important benefit

**When asked what might attract a more diverse workforce, millennials ranked promotion of equal opportunities (64%), family-related benefits (58%) and flexible work schedules (52%) as their top three choices**

**50%** believe that cost is the biggest obstacle to private flying. Safety (36%) and carbon footprint implications (35%) were also identified

**Only 4%** cited 2020 as a realistic date for personal air transport to become available for everyday use

**23%** say they deem the freedom that personal air transport provides as empowering



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FOR

**Rufus James, airport manager at Fort Lauderdale Executive Airport (FXE)**

“To enhance customer service for international travelers arriving in Fort Lauderdale, FXE installed automated passport control [APC] and global entry kiosks at its on-site Customs Border Protection [CBP] facility. FXE has one of the busiest CBP clearing facilities in the USA, handling nearly 50,000 passengers in 2017.

“The self-service kiosks offer low-risk, pre-approved travelers the opportunity to expedite entry into the USA through an automated process. Travelers can declare their citizenship, present their documents, and complete the administrative portion of the process in a quick and easy manner via the appropriate kiosk. The overall processing time is greatly reduced. In fact, in reviewing data pulled from the kiosk logs to date, for around 1,200 passengers the average passenger processing time was 51 seconds.

“In a fast-paced, digitally connected world where every second counts, one of the most important benefits of self-service technology is the ability to offer a time-saving experience that reduces stress, offers more control over one’s traveling experience and, most importantly, saves precious time that can be redirected to the more important things in life.

“FXE has long been a champion of the use of technology to increase efficiency and provide accurate information. The airport enthusiastically advocates for the use of self-service technology and will continue to seek out innovative solutions to improve customer service, promote sustainability in a global market, and provide a seamless travel experience for those visiting, working and playing in Fort Lauderdale.”

# At your

Should business airports adopt self-service technology? Two industry experts put forward their arguments

**“High-net-worth individuals expect impeccable customer service tailored to their needs – and that can really only be achieved with the power of the human touch”**

George Galanopoulos,  
managing director,  
Luxaviation UK

Right: Luxaviation believes that private aviation is synonymous with human interaction





Photo: City of Fort Lauderdale

Left: The automated passport control and global entry kiosks at Fort Lauderdale Executive Airport

**“Reducing stress and saving precious time are the most important benefits of self-service technology”**

Rufus James, airport manager, Fort Lauderdale Executive Airport (FXE)

# service?

**George Galanopoulos, managing director at Luxaviation UK**

“The self-service technology sphere is interesting – it’s certainly an area that could support, to an extent, the sense of exclusivity in business aviation. The truth, however, is that high-net-worth individuals expect impeccable customer service tailored to their needs – and that can really only be achieved with the power of the human touch.

“It is the human element of business aviation that makes it so appealing to those who use it as a means of transportation. The entire process that private aviation travelers undergo at business airports is centered on human interaction. They arrive at the FBO and are greeted with a smile by the staff; they are offered a drink; and the laborious check-in and security procedures are taken care of for them. This is what makes business aviation

appealing and is actually the whole point of flying privately. Replace this with self-service alternatives and suddenly clients will find themselves bearing more responsibilities, taking away the air of exclusivity that business aviation is associated with.

“Can self-service technology really offer the complex and individualized service required in business aviation? The areas of voice activation, augmented reality and AI are all technologies that promise so much to the business aviation industry and will, one day, deliver. But for now, they are simply not on the same playing field as human-to-human interaction. Self-service is certainly something we are excited about, but until such time as it can replicate personal interaction, it’s not an area we would anticipate being used in private aviation any time soon.” ○



**AGAINST**

# “India is still lacking a large fleet charter operator that can provide customers with a reliable, safe and world-class onboard experience”

**Atiesh Mishra**



The founder of New Delhi aviation consultancy AJM JET Management discusses India’s need for a large fleet operator

**B**usiness aviation in India has grown rapidly in recent years and still has great potential for expansion. This growth is partly coming from a rising number of big businesses and Ultra High Net Worth Individuals (UHNWI) in the country increasing private jet traffic between western countries and India (the number of billionaires rose 30% YoY between 2017 and 2018).

Despite being a large country, India is limited in its options for business travel. The availability of business class seats on commercial airlines has shrunk as some of the full-service carriers are now moving to the low-cost model, leaving clients with no option but to rely on charter operators, who currently lack the fleet strength to bring reliability in service.

Although India has the largest charter fleet of private jets in Asia, with 61 aircraft, most charter companies have a fleet size of less than three aircraft and lack uniformity of type, which often results in lack of operational reliability. The market is currently dominated by mid-size and light category aircraft, with models such as the Falcon 2000, Legacy 650 and Citation XLS being popular choices.

## Addressing challenges

For the Indian market to prosper, a number of challenges have to be addressed. For example, the majority of air operator certificate (AOC) holders in India support the corporate travel requirement of their parent companies, who fund them and focus on flying for

in-house customers, selling spare hours to external customers. This means that the requirements of the wider business aviation community are often not met.

Charter companies in India also tend to work on a fixed-base model. This means that a customer who charters an aircraft from Mumbai, for example, typically has to pay for the return flight, irrespective of where their trip ends. Outside India, many large fleet charter companies have introduced one-way pricing, which attracted customers from Asia who were used to the fixed-base charter model. Customers worldwide are now familiar with this one-way model and are demanding it wherever they travel in the world, including India.

Another area that needs development is encouraging customer loyalty. For several years, Indian UHNWIs and other charter customers have been buying private jet cards for their travels in Europe and the USA. These developed markets offer flexible card programs, guaranteed availability and reliability of service to charter customers. Customers traveling in India now expect the same levels of service.

## Filling the void

Answering the demands of customers who are willing to pay for bulk flight hours, a reputable European fleet

operator is soon to announce a strategic tie-up with an Indian charter company, introducing its services in India. This operator ensures that an Indian client gets the same experience on board the aircraft while flying in India as when flying in Europe.

Furthermore, the recent initiatives of India’s Directorate General of Civil Aviation – such as a waiver for obtaining permits for operating flights to foreign destinations – have provided a boost to local charter companies. The presence of a general aviation terminal in Mumbai and two FBOs under construction in New Delhi are also supporting the growth of business aviation in the country.

However, India is still lacking a large fleet charter operator that can provide customers with a reliable, safe and world-class onboard experience. An operator that may have a fleet of 7-10 midsize or light category private jets of the same type would have a good chance of success in the present market. I believe that in the coming years the business aviation sector will see large fleet operators based in Europe and the USA partnering with local AOC holders to fill the void in the charter market. ○



Above: **Chhatrapati Shivaji International Airport in Mumbai (pictured) has a dedicated general aviation terminal**

This article reflects the opinions of Atiesh Mishra, founder of New Delhi aviation consultancy firm AJM JET Management



**2004 Learjet 45XR**  
s/n 45-240 ■ N45ZR



5860 TT, TFE731-20BR Engines on MSP Gold, Honeywell Primus 1000 System, Flight Docs Maintenance Tracking Program, SmartParts, Painted 2011, Refurbished Interior 2011 – 9 Passenger, including Belted Lav. . . . . **CALL FOR PRICE • +1 (303) 946-9105**

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4112 TT, Two Private Owners Since New, EADI/EHSI, Single Pilot IFR, Turbomecca Arriel 1C1 Engines, Maximum Take Off Weight: 4100 kg, New Paint 2008, Five Passenger VIP Interior – Replaced 2008. . . . . **CALL FOR PRICE • +1 (410) 573-1515**

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he business aviation industry is on the verge of major growth, according to the new CEO of private jet marketplace operator Victor. Joe Cohen, who joined the business in May, believes that the digital age and technological advances will bring increased transparency and simplicity to the business aviation sector, which will open the market to a whole new audience.

Victor, which has put digital innovation at the forefront of its business plan since it was first established in 2011, allows customers to compare, book and manage flights online, with instant price estimates and in-app flight management. The company discloses the operators and aircraft details, creating a totally transparent customer experience. Cohen replaces Clive Jackson, ex-CEO and

founder, who launched Victor in 2011. So, who is Joe Cohen?

Cohen's accolades include co-founding Property.Works, a commercial property marketplace targeting SMEs; being founder and CEO of online events ticket marketplace Seatwave; and he was also global chief operating officer of dating website Match.com.

"My career began in the early 1990s in California just as the first Mosaic browser was released. I was able to work on the first website built inside The Walt Disney Company," says Cohen. "I sat in a room several years later while working with Citysearch when the largest US newspaper companies were unable to agree on a classified advertising strategy. That non-decision eventually laid the groundwork for marketplaces eBay, Zillow and AutoTrader. I was also part of the group that bought Expedia from Microsoft, a move considered crazy by everyone at the time."

# Welcome on board

Joe Cohen, Victor's newly appointed CEO, talks to *BAI* about his career to date, digital trends and his plans for the charter marketplace

Words | **Kirstie Pickering**



***“Victor is brilliantly positioned to take advantage of – and benefit from – the growth we’re seeing across private aviation”***



## What is Alto?

Alto is the world's first frequent-flyer points program for private jet charter. Available exclusively to Victor's passengers, Alto credits the accounts of customers with points every time they use its charter services.

Customers can activate their Alto account via the Victor application, with each US\$1 spend equating to one Alto point. Passengers can see how many points they would earn with every flight before confirming their booking. These points can then be redeemed against future flights in blocks of 10,000.

The Alto dashboard also shows how many Alto points are pending for flights the customer has booked with Victor, but not yet taken. If the passengers receive any complimentary Alto points, the dashboard will show them when they were issued and their monetary value.

Above: Victor hopes to expand globally, with its headquarters based in the UK

Cohen continues, "I've also been an active player in helping to create some of the greatest online brands and businesses, including Disney, Ticketmaster, Match.com, Seatwave, Virgin and Sofar Sounds. Business has changed, with technological advances over the past two decades displacing many great businesses. Despite this, consumers still want what they want, when they want it. Rejuvenated approaches to customer service over the past 20 years have reinforced that customers can – and should – get what they want."

### Expert knowledge

Cohen's experience within digital marketplaces is evident, founding and working at companies that have become household names. While marketplaces within the business aviation sector are still relatively rare, Victor's offering means Cohen is able to transfer his experience into a whole new sector.

"I've been through digital transformation in several marketplace-driven businesses before, and there are

similarities to Victor's position now," says Cohen. "You've got a complex network of charter supply that is still largely run offline. You also have the consumer side – a fragmented marketplace built on target customers that take time to find and engage with.

"These customers are benefitting from the accessibility and convenience that technology brings to so many areas of their lives and now they want that benefit everywhere, whether it be ordering restaurant food to their doorstep, or booking jet charter. I believe my experience will help better connect customers and operators within the private aviation ecosystem. There will be challenges ahead, but Victor is perfectly poised to drive positive change."

Victor was built on multiple rounds of investment sourcing, using the funding to expand its reach around the globe to make acquisitions – such as that of YoungJets in 2015 – and open offices overseas from its headquarters based in the UK.

"Since launching in 2011, Victor has established itself as a leader across Europe," says Cohen. "Victor is brilliantly positioned to take advantage of – and benefit from – the growth we're seeing across private aviation.

"I think this growth will accelerate massively over the coming years and that means there is a big opportunity for the business. Victor is made up of some extremely dedicated, talented people. I'm looking forward to working with them and, as an experienced leader, I think I can help them develop further and help Victor drive major industry change," adds Cohen.

### Digital diligence

Heading a company that relies heavily on its digital strategy means it is essential that Victor moves with the times. While the private jet charter marketplace is still a leader in its approach to embracing technological advancements, Cohen is mindful that it is important to keep up with the ever-changing market to keep ahead.

"Digital transformation is the major trend impacting private aviation," he says. "I believe that the industry compares with commercial aviation pre-1974, when there were no global distribution systems [GDS] or revenue management programs. Since the emergence of Galileo and Amadeus, commercial aviation has doubled in size every

15 years. I believe that private aviation is about to hit that trajectory with the introduction of GDS and powerful digital ecosystems, helping it shift into a much higher gear.

"I'll be looking to elevate our product development. One early form of this is Alto [see *What is Alto?*, left], the world's first frequent-flyer program for private jet charter. The program, exclusive to Victor, has been driven entirely by customer feedback and aims to deliver a unique, highly rewarding experience for them. We are finding new ways

***"As an experienced leader, I think I can help the team develop further and help Victor drive major industry change"***

to combine our high-tech platform and high-touch service in order to deepen our relationship with customers. This is essential as we continue to scale.

“I am also keen to develop a dynamic, values-led culture within the team that, in time, will allow us to serve the highly fragmented jet charter market with its most seamless and pivotal customer proposition ever,” Cohen continues.

### Going global

According to the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) created by ICAO, aircraft operators will need to purchase offsets for their growth in CO<sub>2</sub> emissions above their 2020 levels. Operators’ average level of CO<sub>2</sub> emissions from international aviation covered by the scheme between 2019 and 2020 represents the basis for carbon-neutral growth from 2020.

With this in mind, in April of this year, Victor launched its carbon offset program with Air BP and BP Target Neutral. The program aims to help Victor and participating aircraft operators meet aviation industry deadlines for the reduction of their environmental impacts.

More than half of Victor and Air BP’s 20 biggest operator customers have signed up to the initiative, which is transitioning to a fully fledged industry program and will be expanding further throughout 2018.

Below:

**Victor allows customers to compare, book and manage flights online**

## Alyssum Group gains

Victor received a US\$18m co-investment from BBA Aviation, BP Ventures and existing shareholders to help create the Alyssum Group. The formation of the Group is the beginning of a long-term initiative with backing from strategic players in the business aviation industry.

Led by Clive Jackson, Alyssum Group founder and ex-CEO at Victor, the group will create a ‘connected’ ecosystem that enables stakeholders across the aviation industry to boost efficiency and maximize profitability by sharing data and business intelligence, and developing a robust set of commercial and business standards that will ensure the general aviation sector continues to advance.

Headquartered in London, Alyssum Group aims to improve the end-to-end charter quotation, booking and transaction processes between operators and charter brokers, creating greater consistency of charter service and delivery.

Alyssum Group’s subsidiary businesses include Victor and aviation flight planning and services provider RocketRoute.

RocketRoute launched MarketPlace last year, an app that allows pilots and dispatchers to quickly source and connect with thousands of ground handlers, FBOs and aviation providers located all over the world.

Alyssum Group’s acquisition of RocketRoute will drive the expansion of MarketPlace, opening it up to a wider range of service providers and partnerships – from flight sales to flight planning.

**“Rejuvenated approaches to customer service have reinforced that customers can – and should – get what they want”**

This, in addition to the unveiling of Alto and investment vehicle Alyssum Group already taking place this year (see *Alyssum Group gains*, above), proves that Victor is striving to grow in every way it can. The company’s expansion into the US market will inevitably boost operations, extending Victor’s reach and team numbers.

“I’m based at Victor’s headquarters in London, but will be actively operating on both sides of the Atlantic, with a particular focus on growing our presence in North America,” comments Cohen. “We opened new Manhattan headquarters last year and doubled the size of our team. Bookings have grown rapidly since, but there is plenty more growing to do.

“As part of the newly formed Alyssum Group, too, there is some interesting collaborative work to explore with sister brand RocketRoute, the aviation services and flight-planning business. By utilizing RocketRoute’s dynamic industry data, we can start to offer an even higher and much more intelligent level of charter service for customers and operators,” Cohen continues.

“Working together can also enhance the efficiency of business operations for our suppliers, ensuring a level of progress and development previously unseen in the private aviation industry.” ○



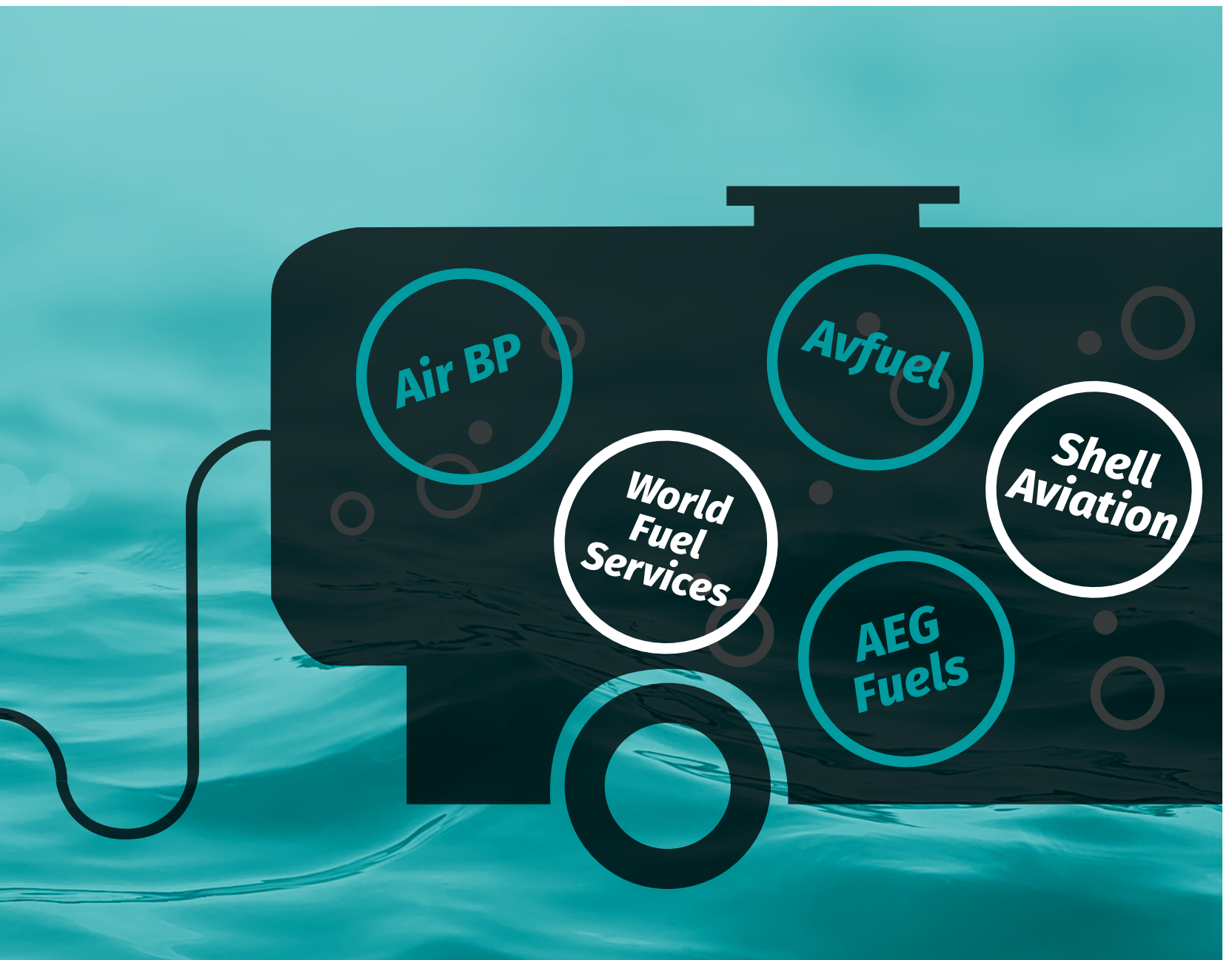
Five of the largest fuel suppliers to the business aviation market share their views on digitization, sustainable fuels and changing customer demographics

Words | Helen Norman



# Think tank





## A guide to the use of sustainable alternative jet fuel

At EBACE 2018 in May, a coalition of international business aviation organizations and government officials joined forces to launch a new initiative looking at advancing the development and adoption of sustainable alternative jet fuel (SAJF). As part of the initiative, a new guidebook was launched to raise awareness of available and emerging sustainable alternative jet fuel options. *The Business Aviation Guide to the Use of Sustainable Alternative Fuel* provides a road map for the education about, and use of, SAJF in the sector.

The guidebook, which has been produced by a coalition including EBAA, GAMA, IBAC, NATA and NBAA, focuses on three key points. First, it highlights that SAJFs for business aviation are safe, approved and available today, although in limited quantities. Second, the guide covers the benefits

offered by SAJF, including how it is more economical and will help operators meet internal and external environmental obligations, such as CORSIA. And third, the fuels are produced from multiple feedstocks, which are sustainable, renewable resources, and are therefore an environmental win-win.

“Business aviation has always been an early adopter of technologies that have improved fuel efficiency and reduced environmental impacts,” says IBAC director general Kurt H Edwards. “Sustainable alternative jet fuels are a new technology available now for use by our innovative community. Their growing use will be a critical component of business aviation’s global commitment to mitigate and reduce carbon emissions, and to meet our aspirational goal of carbon-neutral growth from 2020.”



# Irene Lores

**general aviation sales and marketing director, Air BP**

**H**

**ow is the business aviation fuel market faring?**

Over the past year, we've seen fuel demand from business aviation operators grow across our global network of 900 locations. This has been driven by an increase in departures generally and in the larger cabin aircraft sector in particular. One trend we have identified is that we see that quick, convenient fueling is increasingly important to business aviation customers as airports become busier. Technological advances are making it easier for customers to order in advance. For example, the RocketRoute MarketPlace app, which we developed in collaboration with RocketRoute, offers a one-stop shop for pilots and operators to plan and organize trips. In seconds, customers can view a wide range of suppliers at an airport, check pricing, taxes and fees information, select the services they require, and place orders.

**What is Air BP working on?**

Our most recent innovation is our Airfield Automation technology, which was announced in May and is the first commercially deployed system to provide an engineering barrier to help prevent misfueling. The cloud-based platform consolidates the data related to airport fueling operations and works via an app on a handheld device in the fueling vehicles. The app, named safe2go, captures fuel volume readings and provides fuel grade checks to add an additional misfueling barrier. It then electronically captures customer details, which are confirmed with an electronic signature from the pilot or airline.

**What does the future hold for environmentally friendly fuels?**

Biojet fuel is being supplied today as a drop-in fuel and Air BP is working with industry bodies and customers to map a commercially viable pathway to bring biojet fuel to the market. Higher market penetration levels will require customer demand and be driven by consumer-led initiatives, fiscal incentives, regulatory support and as-yet unknown breakthroughs in technology.

Air BP has supplied biojet fuel in the Nordics since 2014 at around 10 airports, including Oslo, where we were the first to supply biojet fuel through the hydrant. In 2016, we announced a US\$30m investment in Fulcrum BioEnergy, and construction recently started on its plant in the USA to convert household waste into sustainable aviation fuel, bringing the commercial supply of sustainable alternative fuels one step closer.

In relation to Avgas, current unleaded options are not a drop-in replacement, therefore care is needed with their introduction to manage the misfuel risk. Air BP currently supplies unleaded Avgas at a number of locations in Europe with plans to roll out further locations.

**What are your views on carbon offset programs?**

We believe that decarbonization will be driven through more efficient operations, better infrastructure, new technology and low-carbon fuels. Carbon offset programs, however, also have a role to play.

We have made a 10-year commitment to retaining our carbon neutral into plane operations accreditation through adhering to a carbon reduction plan, including start/stop technology on refueling vehicles, improving operational efficiency of waste management and stock management, and maximizing the options for supplying biofuel. Any residual emissions, following these reductions, will be offset through BP Target Neutral, a well-established program that invests in carbon reduction projects around the world.

As part of our strategic collaboration with Victor, one of the world's leading on-demand marketplaces for private jet charters, we launched a carbon offset program for private flying in April. It is an opportunity for aircraft operators to meet the needs of their customers by offering them carbon neutral flying. Over half of Victor and Air BP's biggest operator customers have signed up to the initiative.

**Predictions**

Irene Lores, general aviation sales and marketing director, Air BP: "We believe that digitization will continue to drive customer convenience both at the airport and prior to arrival at the airport. Secondly, the ability to capture data and create insight for customers is likely to play an important role in helping drive better fuel management. We will also need to be able to meet the emerging fuel demand from China, USA, India, Indonesia and Vietnam as the top-five growing markets to 2035, and finally, the industry will need to work together to reduce the carbon impact of business aviation."



**"Decarbonization will be driven through better infrastructure, new technology and low-carbon fuels"**





# Joel Hirst

vice president of sales, Avfuel

# C R Sincock

managing director of business development, Avfuel



### What is Avfuel working on?

CS: We're always listening to our customers and looking to be at the forefront of innovation. With this in mind, we recently created a new platform for fuel handling and operations training, featuring a state-of-the-art learning environment that allows FBO management to more easily centralize and implement staff training. In addition, our marketing division is implementing advanced processes to help our branded FBOs compete in the modern market. This initiative is driven by more sophisticated data analysis. We're also looking to strengthen the Avfuel Network of independent FBOs as a more compelling fueling option for flight departments by adding quality locations. So far in 2018, Avfuel has added 90 contract fuel locations globally. We've also added 18 branded FBOs, including two in Italy: Argos VIP at Rome Ciampino and Milan Linate airports.

### What are the key challenges concerning fuel supply?

JH: In the current environment, logistics become complicated when FBOs opt for just-in-time inventory, particularly when considering trucking challenges that are compounded with advanced technology. For example, in December 2017, the US Department of Transportation required that all trucking companies move to electronic logs. This change was enforced on an already-aging industry and some drivers opted to retire rather than adapt. This then caused further strain on the thinly spread transportation sector. These challenges mean that ordering fuel one to two weeks in advance, rather than just-in-time, is optimum. Having said that, as we have relationships with more than 90 refiners and 300 supply terminals, we're able to fulfill our customers' fuel needs, even during demanding events or at times of emergencies.

### How has technology changed the sector?

JH: Technology has saved time and money for operators. Avfuel's digitized systems offer quick access to reliable and competitive pricing at more than 3,000 global fueling locations. Customers further benefit from integrated scheduling, one payment platform, and rewards.

Technology has also added obscurity, particularly in terms of how to evaluate pricing. Flight departments have many choices: obtaining fuel pricing from the fuel supplier, a reseller, a FBO, or from a number of aggregators that have popped up in the past five years. To ensure accuracy and procure the best prices, I suggest working directly with two or three established fuel suppliers to arrange fuel. This streamlines the fuel-procurement process, eliminates redundancy, and reduces costs.

### How can the industry become more environmentally friendly?

CS: Supporting development in this area is very important to Avfuel, which is why it created Avfuel Technology Initiatives Corporation. Founded in January 2012, the company's mission is to further industry advancements, including sustainable alternative jet fuel (SAJF) on several fronts, and no-lead avgas replacements, domestically and internationally. As part of this initiative, in June we announced that Avfuel has entered an agreement with next-generation biofuels company Gevo, which became effective on July 1. With the agreement, Avfuel becomes Gevo's exclusive aviation fuel distributor of the SAJF portion of Gevo's renewable hydrocarbon products to business aviation and Avfuel's entire portfolio of customers.

The initiative is now working on a carbon offset program that would be implemented not only domestically, but also internationally. We believe the environment is a priority and that all aviation sectors have a social responsibility to protect it.



### Predictions

C R Sincock, managing director of business development, Avfuel: "In the next three to five years, we will see promising advancements in the infrastructure of and access to sustainable alternative jet fuels. We will also see continued consolidation in the industry, but I also believe we will observe preservation of the independent FBO model, which will contribute to healthy competition in the market."

.....  
**"We believe the environment is a priority and that all aviation sectors have a social responsibility to protect it."**

C R Sincock, managing director of business development, Avfuel



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# Anne Anderson

**vice president, Shell Aviation**



**W**

**here are the key growth areas?**

We are seeing that in addition to the strengthening of economies in key markets for the sector, such as the USA, business aviation has also benefited

from increased numbers of high-net-worth individuals and commercial airlines paring back their presence at smaller airports. In other markets, we are also seeing developments across Asia, the Middle East and Europe, where key locations continue to perform well. There are regions within these markets that are primary growth drivers, such as in Europe, where the east is showing particularly strong growth compared with the west of the market, which is slightly more mature. Consolidation will continue to be a feature, with FBOs joining together to create global networks and fewer standalone operations. This is resulting in further competition being created across the business aviation landscape.

**What is Shell working on?**

One recent example of technology we have introduced is a new data-capture system we have started implementing at our refueling operations across the world, called the Shell SkyPad. SkyPad enables us to record all refueling information into a tablet on the apron in real time, helping reduce turnaround times and allowing our customers to take off more quickly. Often these processes are all paper-based and require the refueler to enter the data into accounting systems manually. Shell SkyPad also reduces the room for errors, making invoicing more accurate, as well as providing insights into stock management.

We are also developing new solutions that contribute toward efforts to reducing carbon emissions across our customers' operations and aviation more generally. One example of this would be an electric-pump refueling vehicle

that we have designed, built and are currently testing. The vehicle, which is a first for the aviation industry, has the potential to deliver reductions in diesel consumption and emissions across airport refueling operations.

**How are you meeting the needs of your customers?**

One example of how we are meeting our customers' needs is through our Aviation Centre of Excellence (ACE) program. Airports such as Lille in France and Saarbrücken in Germany benefit from the program that is designed to help FBOs and small- and medium-sized airports optimize their operational and safety processes. The ACE program covers marketing assistance, supply security, delivering safe and effective operations, continuous asset supply, management, and maintenance support from a trusted partner.

Another recent project is our work with EON Reality to offer training on aircraft refueling procedures using virtual reality. The VR Filter Water Separator Trainer that we have developed is a fantastic example of how we can use new digital innovations to support operators in their training, helping them to reach the strict standards required in the aviation industry.

**How do you plan to become more sustainable?**

One of our main areas of focus is leading our industry in advancing low-carbon solutions that are essential for the sustainable growth of aviation. To this end, we will start offering a secure supply of bio-sustainable aviation fuel by 2019. In addition, we are working to ensure that all ground operations, wherever we and our partners are present, will be carbon neutral.

And of course, in the aviation industry, the absolute priority must always be safety. At Shell, we work across our operations on the implementation of our Goal Zero safety standard. Goal Zero is a company-wide initiative targeting no harm to people and no leaks. Goal Zero underlies the strong safety culture established within Shell Aviation. To strengthen our safety culture even further, consistently high Health, Safety, Security and Environment (HSSE) performance is rewarded through an incentivized scheme, audits and training.

**Predictions**

Anne Anderson, vice president, Shell Aviation: "The reduction of emissions across operations and increasing the use of sustainable fuels will be a focus for business aviation as it will across the aviation sector more generally. The Shell SkyPad is a good example of how digitization and the use of big data analytics will also play a central role in shaping the future of business aviation, delivering operational efficiencies and improving business performance."



**"We are working to ensure that all ground operations we are associated with will be carbon neutral"**



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**Shell Aviation.**



# Mark Amor

**vice president, World Fuel Services**



## How is the business aviation fuel market looking?

A steady rise in traffic across the business aviation sector has been driven by innovative new aircraft, technologies and new business models. This has resulted in an industry that is looking dynamic right now, helping to further boost the sector. The other side to this is that it is creating stiff competition for airport operators who are stretched and in need of partnership support. In turn, this creates new opportunities for the aviation fuel market, particularly those fuel providers that offer a more holistic approach to its service offering. No longer is a traditional model of bulk-selling fuel, and managing assets, enough for growing sites – operators need access to bespoke, flexible services that will support their own business aspirations.

## What is happening at World Fuel Services?

World Fuel Services has a number of exciting developments in the pipeline. In 2017, we launched the myWorld app, which consolidates fuel, flight planning, weather, airport search, and trip applications into a single application. It provides pilots and dispatchers with a single, easy to navigate platform. Furthermore, Avinode – our air charter marketplace platform – has experienced significant growth as the charter market continues to move to self-service.

Another new development is in our airport and FBO offering in Europe and Australia. Our acquisition of the ExxonMobil aviation assets has enabled us to change the game as a solutions provider. A good example of this is our

work with XLR Executive Jet Centre, Birmingham, UK. The general aviation ramp at Birmingham Airport was not being serviced with a convenient fuel supply, which was leading to issues with turnaround times and low customer satisfaction. We worked with XLR to create a new full-service FBO. Via our accredited training offering, XLR now has qualified into-plane refuelers that give XLR autonomy and responsibility for bringing fuel to its customers as its needed. Alongside flexible payment services, our work with XLR has reduced costs and created new revenue streams for XLR Executive Jet Centre at Birmingham, leading us to expand our partnership with XLR to its site at Liverpool John Lennon Airport.

## What does the future hold for environmentally friendly fuels?

Sustainable jet fuel alternatives will play a crucial role in driving environmentally friendly operations for all areas of aviation, with legislatures across the world backing them as a way forward. It is hardly a surprise; an average of 260g of CO<sub>2</sub> per kilometer is produced for short-haul flights. IATA says that sustainable jet fuel could decrease this by 80%.

As a logistics and supply expert, we have been assisting our FBO and airport customers with securing consistent supply and we have been an active supply chain participant in the groundbreaking programs with end consumers such as Gulfstream, Qantas and Air Canada.

For example, we have a long-standing relationship supplying Gulfstream with a consistent source of renewable fuels for its daily operations in Savannah, Georgia, USA. The fuel is a 30/70 blend of low-carbon, drop-in renewable fuel and Jet-A. It provides the same performance as conventional, petroleum-based jet fuel and requires no changes to factory-standard engines or aircraft. Each gallon of renewable fuel burned is expected to achieve a more than 50% reduction in greenhouse gas emissions, relative to petroleum-based jet fuel, on a lifetime basis. This work has resulted in our being awarded a Gulfstream Aerospace Corporation 2018 Supplier of the Year Award.

**“Sustainable jet fuel alternatives will play a crucial role in driving environmentally friendly operations”**



## Predictions

Mark Amor, vice president, World Fuel Services:

“Customers will increasingly be looking for more of a one-stop shop for the provision of fuel and services. As a result, we believe fuel providers will have to revisit how they offer broader solutions, such as payment processing and on the ground investments. We also see the growth of new business aviation models, which are often digitally-led and technologically enabled. Wheels Up in the USA or JetSmarter are good examples. This should see demand continue to increase, on a global scale, and we predict that this will lead to more choice on airport, resulting in greater competition. Finally, sustainability remains one of the key trends for the business aviation sector, and that looks set to continue. Sustainable fuels are increasingly important for operators and customers are starting to seek them out more than ever.”





# Greg Cox

**executive vice president of business aviation, AEG Fuels**

**H**

**ow is the business aviation fuel market faring?**

At AEG Fuels, we continue to experience record growth across all regions spurred by new customer opportunities and the growing market that we are all realizing. Today we provide fuel services to clients at around 3,000 airports around the world, and we plan to expand this reach in the coming years. With regards to the key trends changing the way fuel is supplied and purchased within the business aviation market, we believe that customers are becoming more sophisticated with their purchasing habits. They are now engaging key channel partners to aggregate and purchase fuel more strategically, rather than purchasing on a flight-by-flight basis.

**How is your customer demographic changing?**

We are seeing a steady increase of general aviation operators across all segments, including Part 91 and Part 135 charter operators. Our customers are now more tech-savvy and they expect to be able to do business anytime, and anywhere. We continue to apply innovative technology solutions to ensure we are meeting the needs of our customers. We invest heavily in marketing to and hiring the next generation of business aviation professionals, who can provide fresh perspectives and keep AEG Fuels at the forefront of changing needs. Technology also continues to drive transparency in the sector and decreases information arbitrage. Furthermore, there is more emphasis now than ever before on excellent customer service and personalized solutions.

**Tell us more about developments at AEG Fuels.**

We continue to apply innovative technology solutions to better meet the needs of our customers anytime and anywhere. We are also expanding our customer base. In February, for example, we announced that XJet has chosen AEG Fuels as the exclusive fuel provider at the company's FBO facilities at Denver International and London Stansted airports. We hope to build a long-term global partnership with XJet, which plans to have 10 locations around the world by 2020. This is a big step for AEG as we work toward building a branded FBO offering; stay tuned as we continue to look for opportunities to align with partners to strengthen our brand and market share.

**What does the future hold for environmentally friendly fuels?**

AEG Fuels continues to work with operators and OEMs to certify aircraft on biofuels and continues to provide supply chain solutions that allow operators to include alternative fuels as part of their overall annual consumption. Current production and delivery restraints continue to limit the immediate adoption of environmentally friendly fuels; however, we remain at the forefront to overcome these logistic hurdles. ○

***"We are taking steps in the development of a rapidly growing renewable fuel business"***

**Predictions**

Greg Cox, EVP of business aviation, AEG Fuels: "I believe there will be an increase in demand in the business aviation sector in the coming years. We will see increased access to alternative fuels and more new technologies making the customer experience more convenient and transparent. These technologies will also lead to more personalized services to the end user, as the industry continues to demonstrate a strong commitment to customer service and understanding their needs."







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Creating a reputation for excellent customer service is what every company strives for. A clear branding strategy helps differentiate one company from another, especially when customers have multiple options in one location.

A recent report published by international communications agency Citigate Dewe Rogerson, titled *The Growing Importance of Branding in Business Aviation*, found that just one in three business aviation professionals surveyed would describe the overall public perception of the sector as 'positive'.

Respondents said they think much of the blame for this negative opinion is with the mainstream media, which two-thirds of professionals believe covers business aviation only when there is a crash or a scandal, much like the publication of the Panama Papers. This was the leaking of 11.5 million documents that detailed financial information for more than 200,000 offshore entities, including tax avoidance data on private jet purchases.

Businesses can boost their ranking within the public opinion by creating a visible brand for their operation. Branding is a name, slogan, design and

# Build the brand

Does business aviation need better branding? *BAI* explores the sector's approach to creating a brand and asks whether more investment is needed

Words | Kirstie Pickering

## The impact of branding

The report *The Growing Importance of Branding in Business Aviation* by Citigate Dewe Rogerson found that only 35% of business aviation professionals think senior management currently take the development of their brands seriously enough. Of respondents, 49% described their branding efforts as 'moderately effective'.

As to why business aviation companies are not doing better with their branding impact, 44% said they believe they are hampered by the overall poor image of the sector. Despite this, 78% of those interviewed think businesses in the industry will invest more in their brands over the next three years, with one in five believing there will be a significant increase in the amount spent on branding.

At present, however, only 9% say the industry is 'very effective' at communicating the many positive benefits of the sector, such as its contribution to economic growth and the creation of jobs.

any other feature that differentiates one company from another. However, a brand is much more than just a logo or corporate identity. When a company becomes renowned for consistent excellent service and unique selling points (USPs), its brand encapsulates what the customer experience is too.

"The brand represents everything that you want people to feel and experience," says Sindy Foster, managing director at Nylon Marketing, whose clients include Bombardier. "When it comes down to it, all business airports and FBOs do exactly the same thing, with basic facilities available such as passenger and ground handling, aircraft servicing, refueling, and so on. To stand out from the crowd, you need to identify or create your USP.

"What is it that you do or provide that no other service delivers? It is not always about the big-ticket items. It's great to have additional services like showers upon landing, a chauffeur service and security partnerships, but sometimes it can be as simple as reliable wi-fi everywhere, clean facilities and good food options. Taking care of the little details matters. Taking care of the big details is a given."

### Standing out

Although facility offerings may be similar, a customer will choose one company over another if it has a brilliant reputation that means they know they are guaranteed an excellent service every time.

"As an independently owned and operated FBO and aviation services firm, branding and marketing is extremely important simply because we compete with so many national and international chain companies," says Lynn Eplaw, president at Gary Jet Center.

"They have huge multimillion-dollar marketing budgets and programs and can leverage purchasing across the world, and we have a single location in which to attract the Chicago or USA-based arriving aircraft. Branding and

**"To stand out from the crowd, you need to identify or create your unique selling point"**

Sindy Foster, managing director at Nylon Marketing



**"You can't choose a brand and just sit with it. It has to evolve with you"**

Lynn Eplaw, president at Gary Jet Center



marketing allows us to showcase who we really are and set up the experience you'll have once you arrive at Gary Jet Center. It allows the first-time customer to understand the type of business and people we are and assures our current customer base that we commit to who we say we are," Eplaw says.

Foster adds, "It's not just about being the cheapest – it is more likely to be about which service is the best when all things are considered. Putting the customer's needs first is paramount. Examine all of your services from that perspective and find ways to improve them.

"Raising service level so that it can be seen as a brand benefit that matches or exceeds the customer expectation should be the first consideration. Start with creating the best operation that you can with trained and motivated staff, clean facilities and attention to detail, and then look at how you can wrap that experience up in your brand. Having the coolest name in aviation won't matter if no one has positive memories of using your facility."

### Picking a niche

Branding isn't simply about having a memorable logo and a friendly face. Customers will be looking for the businesses that are aware of emerging or current trends and incorporating that into their service offering. While this could mean something as small as serving up the



“Bombardier Business Aircraft – and the industry at large – understands sustainability as a business imperative. By doing so, we are ensuring the longevity and success of the business aviation industry. We also know that achieving sustainable profitable growth goes hand in hand with putting eco-efficiency and innovation at the center of our business approach,” adds Cristofaro.

### Making a connection

According to the Citigate Dewe Rogerson report, only 11% of business aviation professionals described the sector’s branding as very effective, but 78% said they thought those in the sector will invest more in their brands over the next three years. So, where to begin?

“The best way to connect with potential customers in this industry is to have experienced business aviation business development, sales and marketing teams,” says Joe McDermott, senior business aviation consultant at Global FBO Consult. “This is important even if it is only one person who can create comprehensive, tailored and competitive packages directly to each potential client based on a study of their type and scale of operation to best meet their requirements. This is effective when paired with a simple and distinctive branding that in itself clearly identifies an airport or FBO.”

“If you need to find new ways to communicate, starting locally is a good step,” says Foster. “Sometimes brands are so focused on global marketing that they fail to maximize their own regional opportunities. Creating local relationships and partnerships – whether they are commercial-based, charity-based or education-based – is a good thing to do to increase local awareness of your business.”

latest food trend, many will be looking at larger, long-term commitments when picking whom to spend large sums of their money with.

The impact aviation has on the environment is a popular subject of discussion at present, for example. ICAO’s global scheme CORSIA – Carbon Offsetting and Reduction Scheme for International Aviation – means that operators will have to purchase offsets for above-average carbon-neutral growth from 2020.

CORSIA has nudged business aviation companies to take steps to become more eco-friendly, while wider shock regarding the hugely publicized plastic in oceans scandal will encourage many customers to be more mindful of their own impact on the environment. Offering a service that incorporates sustainability into its operation is a selling point in the modern age.

Bombardier prides itself on its sustainable offering, pinpointing it as having a vital role in its work and committing to responsible practices across its business. To Bombardier, sustainability means smart products, responsible operations, an engaged workforce and community investment.

“Sustainability is a fundamental value at Bombardier, and is an integral part of how we conduct our business,” says Anna Cristofaro, manager for public affairs and communications at Bombardier.



**“The best way to connect with potential customers is to have experienced business development, sales and marketing teams”**

Joe McDermott, senior business aviation consultant at Global FBO Consult



Right: Gary Jet Center's newly renovated FBO offers customers a modern experience

**“Taking care of the little details matters. Taking care of the big details is a given”**

Sindy Foster, managing director at Nylon Marketing



Above: Customer service and facilities contribute to the reputation of a business aviation brand

Foster continues: “This will benefit you in obtaining local business and local media opportunities, which will assist in raising the online profile of your business, hence creating a stronger international proposition.”

Having a company building that is memorable or photogenic also lends itself to a branding strategy. Using professional imagery on social media and the company’s website creates a positive first impression.

“We use a lot of imagery to visually showcase the environment,” says Eplawy. “We have a new US\$3.5m FBO that can stand up against any aviation facility in the world.”

“We created a space worthy of corporate and private aviation. By using imagery of our new facility, a user-friendly website, and consistent messaging about our company and our services, we have been able to establish a brand that reflects who we are.”

**Is it important?**

All companies within the business aviation sector could benefit from a strong branding strategy. Offering a service with high standards in customer service, operations and communications is ineffective for revenue generation if potential customers don’t know the business exists.

“There are certainly lots of ideas on creating a successful brand, but ours evolved over time,” says Eplawy. “As our business capabilities expanded and grew, we grew as well. The message changes as well as the business environment. You can’t choose a brand and just sit with it, just like you can’t start a business and expect it to stay the same. It has to evolve with you.”

Whether the investment pot is small or large, effective methods for branding and marketing needn’t be burdensome. A clear vision for a company’s brand can be the difference between a profit and a loss. ○

**Branding tips from the experts**

1. “Understand your market, your advantages over competitors, your limitations, and above all, keep branding simple.” – Joe McDermott, senior business aviation consultant at Global FBO Consult
2. “Apply a common-sense approach to all marketing proposals. There are still companies carrying out marketing based on top keywords in Google, but if no one is using those phrases and you still aren’t getting any enquiries, something is wrong with that approach. If the message resonates and is directed at the right audiences, at the right time, and in the right way, you will get more inquiries.” – Sindy Foster, managing director at Nylon Marketing
3. “Don’t emulate someone else and don’t chase others. Define who you are, and set sail. Nothing is worse than trying to be a ‘me too.’” – Lynn Eplawy, president at Gary Jet Center
4. Nylon Marketing’s branding ethos is to “monitor what is being said about you by customers, the press and competitors; promote what you do and how you do it – if you believe you do something far better than competitors, shout about it; and suppress any problems that may arise with customers.” Ignoring problems will only lead them to escalate, which will work negatively for your brand’s reputation.



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The deadline is fast approaching for ADS-B installation, and operators who don't comply by the January 2020 deadline are putting their businesses at risk

Words | Saul Wordsworth

# No time to lose?





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**A**

ADS-B, or automatic dependent surveillance – broadcast, is a surveillance technology that determines aircraft position through satellite navigation and broadcasts it to air traffic control and other aircraft. For the first time the pilot sees what the air traffic controller sees – a display showing other aircraft in the sky. The display also identifies perilous weather and terrain, and informs on temporary flight restrictions. And because there is no regulatory requirement for control towers to invest in new equipment, ADS-B seems like a natural step in increasing the safety and efficiency of air traffic control.

“ADS-B will improve safety and efficiency both in the air and on the ground,” explains Rune Duke, senior director of airspace, air traffic and aviation security at the Aircraft Owners and Pilots’ Association (AOPA) in the USA. “It is the primary technology that will drive the airspace system’s transition from ground-based surveillance to satellite-derived position information that forms the foundation for NextGen. ADS-B Out is required after January 1, 2020 for aircraft flying in ADS-B required airspace. We expect between 100,000 and 160,000 GA aircraft will need to equip.”



Left: Aircraft operators must book their ADS-B upgrade now to avoid being grounded in 2020

**“The installations themselves have been pretty straightforward, with few challenges”**

Jeff Aman, satellite manager, Duncan Aviation



### An installer speaks

“Since 2017 I’ve performed around 20 ADS-B installations,” says Jeff Aman, satellite manager at one of Duncan Aviation’s avionics shops in Kansas City. “The installations themselves have been pretty straightforward, with few challenges. The STCs we’re incorporating are for the most part very well written.

“The installations have averaged 10 days, the longest three weeks. The average price is US\$70,000 [£52,000], with the cheapest at US\$10,000 [£7,500]. Many operators still mostly want to do their installation in conjunction with other maintenance to minimize downtime. Unfortunately, with the backlog we have, it’s coming to the point where they no longer have that option. They’re simply going to have to bring their aircraft down.”

The main message Aman and his colleagues are trying desperately to convey to operators is “Please schedule an installation date.”

With only 18 months left before the compliance deadline, capacity for all shops is filling up. Soon there won’t be any room.

“We generally ask that operators bring their jet to our premises,” says Aman. “In most cases there is very limited manpower to travel to a customer’s facility, and installations are tricky to perform on the road.”

Aman has at times struggled to come up with an appropriate solution for older airframes. There are various STCs that do cover such aircraft, but by nature of the equipment it quickly becomes expensive for the operator to upgrade.

“In those situations, many operators realize their aircraft can’t be upgraded at a reasonable cost, so make plans to sell,” he says. “I’m not sure where, perhaps South America or Mexico. The big takeaway from this entire process is that in aviation, procrastination is a bad idea.”

With ADS-B operational, pilots in equipped aircraft will have access to air traffic services that provide a new level of safety, better situational awareness, and more efficient search and rescue. Those equipped will enjoy more efficient spacing and optimal routing in non-radar environments.

“Radars used today can take 5 to 12 seconds to update an aircraft’s position,” says a representative of the FAA. “ADS-B equipment provides air traffic controllers with updated aircraft information almost every second. This enables controllers to identify and resolve potentially hazardous situations quickly and effectively.”

### Deadline approaching

The FAA and the European Aviation Safety Agency (EASA) have mandated that all aircraft flying in designated controlled airspace across European and US regions must be equipped with ADS-B Out by January 1, 2020 in the USA, and by June 7 in Europe. The existing ADS-B Out mandates require a version 0 (DO-260) ATC Mode S transponder, while the upcoming mandates in Europe and the USA require a version 2 (DO-260B) transponder. ADS-B In is considered an option and is not part of the mandate.

“Although the mandate is not global, ADS-B Out is an airspace requirement in many parts of the world,” says David Shilliday, Honeywell Aerospace’s vice president of airlines, Europe, Middle East, Africa and India. “Australia has mandated the airspace and there is a big push in large chunks of Asia to move to ADS-B in the early 2020s. China is expected to be the next major airspace owner to begin implementation. Along with the US and Europe, these are the key locations for ADS-B updates.” (See *Global Compliance: An Overview*, page 41).

**“The longer the operators wait, the more likely it is that they’ll have to face installation backlogs, component shortages and price increases”**

David Shilliday, vice president of airlines, Europe, Middle East, Africa and India, Honeywell Aerospace



### Installation challenges

The FAA estimates that 100,000-160,000 aircraft will need to be equipped with ADS-B. With 18 months left until the deadline, time is running out fast.

According to Duncan Aviation president Aaron Hilkeman, 40% of the US business airplane fleet will not meet the 2020 cut-off.

“The longer the operators wait, the more likely it is that they’ll have to face installation backlogs, component shortages and installation price increases, meaning their aircraft may be grounded in 2020,” says Shilliday. “Operators and owners who haven’t upgraded yet need to think about implementation and the timeline, starting now.

While upgrading an aircraft is a big investment, most GA operators need to be ADS-B Out compliant if they want to continue flying in 2020.

This upgrade will help ensure aircraft are safer in the air and less likely to collide with other planes.” Aircraft that operate outside Class A-E airspace and not within a 30 nautical mile radius of any airport listed in Appendix D to Part 91 of the FAA’s General operating and flight rules (general aviation) will not need to upgrade to ADS-B Out.

**“Operators have had 10 years to comply with this mandate, so they are not going to be looked upon favorably if they haven’t complied”**

Gary Harpster, senior modification sales, avionics, Duncan Aviation



**Why the delay?**

There are a number of challenges with fitting ADS-B to aircraft. These include type of aircraft, timeframe of installation, cost, and the current delay operators are facing owing to a lack of shop space because of the sheer number of aircraft that still need to be upgraded. All aircraft cockpits have their own specification, meaning there is no one-size-fits-all solution. While some aircraft may already be equipped with components to support ADS-B functionality and require only software upgrades, others will need complete system installation overhauls.

“There are many factors that might lead to a delay in ADS-B equipage, such as operators hoping costs will continue to decline,” says the FAA. “However, this is hard to predict and if too many owners wait, suppliers and installers will not be able to keep up with demand and prices could possibly increase as January 1, 2020 draws near. Contrary to rumors, the deadline will not be extended.”

One of the principal reasons for the delay is the FAA’s historical leniency toward deadlines. For the first time it is holding operators to account. This has created a massive problem.

“The FAA gave plenty of warning,” comments Jeff Aman, avionics specialist with Duncan Aviation (see *An Installer Speaks*, page 40). “Historically with other mandates they have pushed the date back due to a lack of compliance. This is first time they’re sticking to it. Operators enter into the process, human nature being what it is, with the mindset, ‘They’ve pushed it back before; they’ll push it again.’ Complacency on the operators’ part has been a huge factor.”

Gary Harpster, senior modification sales, avionics, Duncan Aviation, adds, “We have operators telling us every day that they are going to hold off on the ADS-B installation until the last minute. There is no easy way to say what a problem they will face following that course of action. Prices have already escalated due to demand pressure, shops are running at capacity and the only places that seem to have

**Global compliance: An overview**

**USA:** After January 1, 2020 ADS-B Out capabilities will be required to fly in most airspace where a Mode C transponder is required today.

**Europe:** 1090ES required for instrument flight rules (IFR) aircraft with a maximum take-off weight exceeding 12,566 lb or maximum cruise faster than 250 KTAS (knots true airspeed). Mandatory for new aircraft. Must be retrofitted into all aircraft by June 7, 2020.

**Australia:** 1090ES required for all IFR operations. Foreign-registered aircraft equipped with transponders are exempt below flight level (FL) 290 until June 6, 2020.

**Canada:** Currently no mandate, but operators who voluntarily equip with 1090ES can receive a higher level of service.

**Hong Kong:** 1090ES required in all airspace, FL290 and above.

**Indonesia:** 1090ES required, FL290 and above.

**Mexico:** 1090ES required beginning January 1, 2020, in Class A, B, C, E above FL100 median sea level, and other specified airspace.

**Singapore:** 1090ES required on specified airways.

**Sri Lanka:** 1090ES required within the Colombo Terminal Control Area, FL290 and above.

**Taiwan:** 1090ES required in all airspace, FL290 and above.

**Vietnam:** 1090ES required on specified airways.

available schedule are the ones that have just jumped into this because they see an opportunity.

“Operators have had 10 years to comply with this mandate, so they are not going to be looked upon favorably if they haven’t complied. Come 2020, aircraft not ADS-B equipped may lose access to the many metropolitan areas and airports located in ADS-B required airspace.”

Duncan Daines, chief marketing officer, Gama Aviation, explains, “The technology isn’t the issue, it’s the ability to fit, wire and modify the existing capabilities of the aircraft. With very few ‘standard’ aircraft, complexity is added. This can increase costs partly due to the need for a supplemental type certificate [STC – a national aviation authority-approved major modification or repair to an existing type-certified aircraft], which may or may not be available, plus a raft of supply chain and slot availability issues. These add cost and downtime to the aircraft. This explains some of the inertia.”

Companies that provide aircraft upgrades need to put more effort into connecting with operators and owners alike, making them aware of the key deadlines across Europe and the USA, encouraging installation as soon as possible and highlighting the timeline for fitting ADS-B. Many such companies have numerous ADS-B options and packages for a multitude of aircraft and avionics providers and are working with facilities to service aircraft right away. As an example, Honeywell is currently collaborating with Duncan Aviation and H4 Aerospace to provide operators and owners with a trusted ADS-B solution and reliable service centers for aircraft to be outfitted.

**Help at hand?**

In an effort to assist the industry with the 2020 mandate, the FAA formed a working group called Equip 2020 in October 2014. Approximately 100 operator, manufacturer and supplier representatives attend meetings alongside the FAA. In addition, in 2016 the FAA implemented a GA rebate program to help GA pilots with equipage costs. The program ran for one year – the last day to make a rebate reservation was September 18, 2017 and the last day to claim a rebate was February 15, 2018. The last day to claim a rebate for those granted an extension was April 27, 2018. The program resulted in US\$5.1m (£3.8m) in rebates being claimed by owners of eligible US-registered, fixed-wing, single-engine piston aircraft. The rebates were used to ensure ADS-B Out installations occurred several years ahead of the deadline and defrayed the costs associated with the equipment and installation for eligible GA aircraft.



Upgrading to the new ADS-B Out system will increase the safety of aircraft flying in designated controlled airspace



The lack of a 'standard' aircraft is making the upgrade process more complicated

**“There are several ADS-B systems available today, both UAT and 1090ES, which cost about the same as a transponder”**

Rune Duke, senior director of airspace, air traffic and aviation security, AOPA



“We requested that the rebate continue but the FAA ended the GA-focused program in 2017,” says Duke of the AOPA. “We continue to work with the FAA to increase awareness of the mandate and the advantages of equipping with ADS-B, and to facilitate more efficient avionics certification pathways that can help bring costs down. There are several ADS-B systems available today, both UAT [universal access transceiver] and 1090ES, which cost about the same as a transponder.”

**Don't get left behind**

Some anxiety surrounds the subject of second-hand or previously owned aircraft, and whether they will become obsolete beyond 2020. Most, however, can be upgraded to ensure compliance with ADS-B mandates. There is also an exemption available for some older aircraft (see *Exemption 12555*, right) but this won't apply to the majority of operators.

“We may see a certain amount of ‘mandate obsolescence’,” says Daines. “For example, for the owner of a Learjet 31 it may not be worth the investment. Most aircraft will maintain enough value, however, to make compliance with the mandate worthwhile. Those trying to sell aircraft without ADS-B Out will find it difficult, as preference is likely to be given to aircraft that are already fitted. New owners want to avoid aircraft downtime and any threat of unforeseen costs.”

The advice from everyone is to book your ADS-B upgrade now to avoid the costs and downtime that will certainly come from non-compliance. ○

**Exemption 12555**

**What is it?**

Exemption 12555 was created by the FAA for the extended use of older types of GPS navigation receivers present in more mature aircraft. Airlines for America (A4A) petitioned the FAA on behalf of member airlines for an exemption because navigation receivers suitable for transport category aircraft that would meet the ADS-B Out rule requirements will not be available for purchase or installation in sufficient quantities until closer to 2020. To provide additional time for suitable receivers to be made available, the FAA issued a limited grant of exemption (Exemption 12555) from specific performance requirements of the ADS-B Out rule during certain periods of GPS satellite constellation performance.

**How does it work?**

The exemption allows operators with aircraft that use GPS receivers meeting the performance requirements of TSO-C196 to operate in the airspace designated by ADS-B rules even though they do not meet the accuracy and integrity performance requirements. The FAA has agreed to operate sufficient alternate methods of surveillance to manage the infrequent performance outages that these receivers experience. For operators using TSO-C129 GPS receivers, the exemption allows them to operate in airspace designated by the ADS-B rule even though they do not meet the accuracy and integrity performance requirements and the FAA determines that there is an acceptable backup means of surveillance for the specific operation.

**What is the deadline for application?**

Operators seeking the relief provided under Exemption 12555 must notify the FAA of their intent to comply with the conditions and limitations of the exemption and must develop and submit a detailed plan to the FAA by August 1, 2018. The exemption expires on December 31, 2024.

**How do I apply?**

Each interested operator must submit a request to the FAA to use Exemption 12555 and affirm its intentions to comply with the conditions and limitations cited in the exemption. Requests must be submitted through [Regulations.gov](https://www.regulations.gov) per Regulatory Docket No. FAA-2015-0971. The operator should attach the request as a comment to the Petition for Exemption; Summaries on [Regulations.gov](https://www.regulations.gov).

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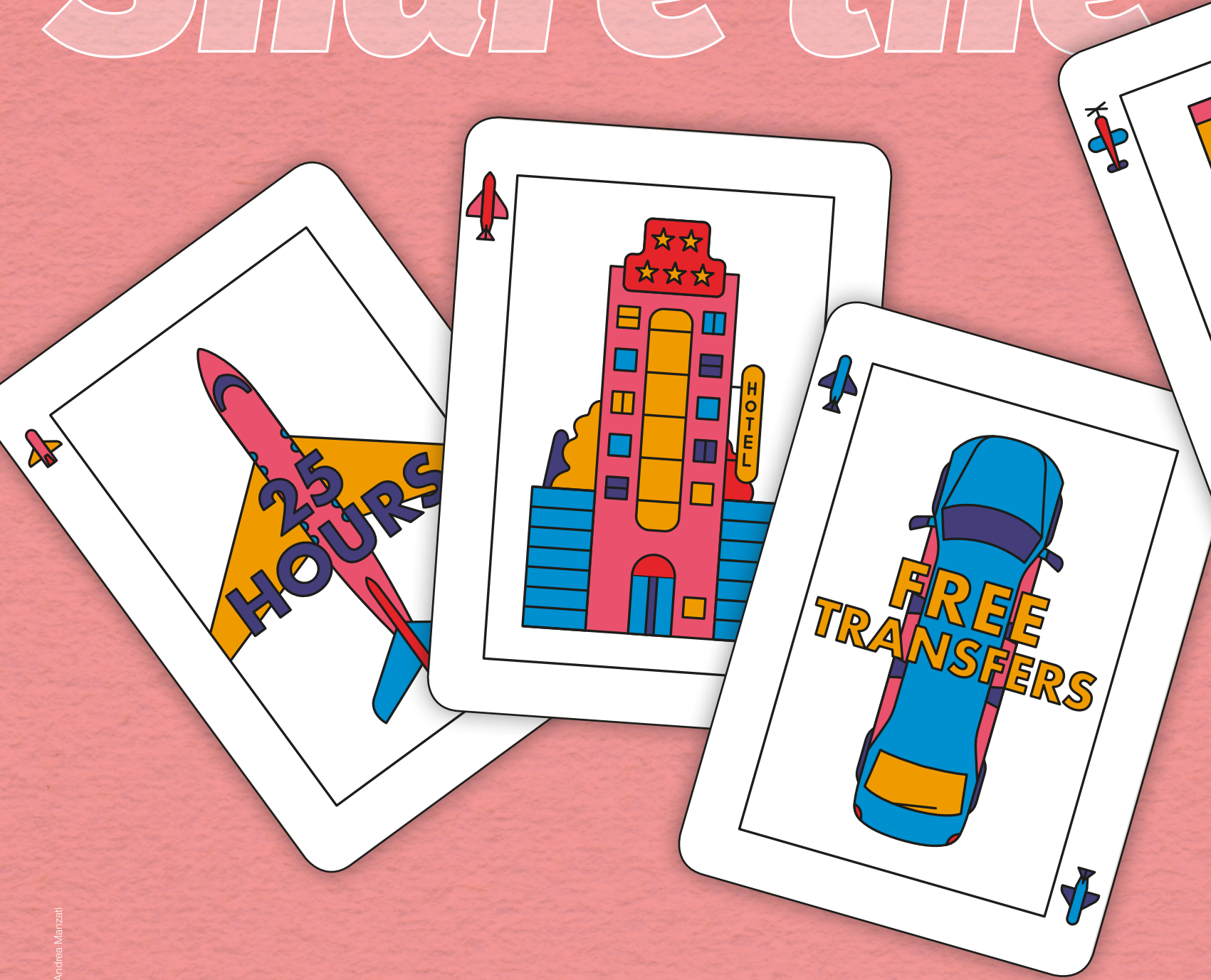


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# Share the



Does the simple jet card hold the key to the future success of the business aviation market?

Words | Keri Allan



Since they were first launched in the late 1990s, jet cards have grown hugely in popularity – today there are now over 35 providers and more than 250 different customer programs.

Their introduction has played a very important role in helping the business aviation industry to grow, by offering an alternative to fractional ownership and the limited private charter options that were available at the time.

“It all began with a jet owner who wanted to earn money when he wasn’t using his jet, but didn’t want to have ‘just anyone’ flying on it, so the idea was to sell blocks of time to people he knew,” says Doug Gollan, founder and editor of the Private Jet Card Comparisons website. “Twenty years later, jet cards fill the gap between on-demand charter and full or fractional ownership of aircraft.”

Many providers believe the continued appeal of jet cards lies in offering the benefits of flying, but without the overhead costs and asset depreciation of owning an aircraft, or the fleet constraints or poor utilization associated with fractional schemes.

“Consumers continue to be attracted to models that allow you to use something for the time you need, then simply walk away when you are done. This is seen in the popularity of sites like Airbnb, HomeAway, Uber and YachtLife,” highlights Magellan Jets president Anthony Tivnan.

# wealth

## JET CARDS

Another aspect of their popularity lies in their simplicity. Users simply prepay for private jet flights or charter programs using their jet cards, which are typically sold in increments of money or time, such as 25 hours or £150,000 (US\$200,000). In return, they have access to a fixed hourly rate for their journeys and guaranteed availability. Cardholders can then book their travel via email or phone, or increasingly through mobile apps.

“Because jet cards guarantee availability, a fixed price and a seamless booking process, travelers can simply schedule their flights and be on their way,” says Tivnan. “Billing is accessed from the flight hours used on a specific trip, so travelers don’t need to worry about the variable pricing found in the charter market, which fluctuates daily depending on supply and demand.”

### A plethora of choices

Cards can cover specific regions, such as North America, or offer worldwide travel, and aircraft may include helicopters and turboprops through to light and long-range jets. Many last for a specific timeframe, whereas others have no set expiration date.

How the jet card schemes run can vary greatly too. Some providers wholly own the aircraft they offer on their schemes, whereas others use fractional fleets they manage. For example, Sentient Jet, the first company to launch a jet card, back in 1999, works with a select group of operators rather than owning its own fleet.

All this variety means that card users have a huge – and perhaps slightly overwhelming – choice of programs to pick from. “It really comes down to what you [as a customer] want. There are some card brokers who are mom and pop shops where you are dealing with the actual owner, then there are providers that are big conglomerates,” notes Gollan.

### Who uses jet cards?

So who are these customers? Simply put, they’re regular travelers, often top-level managers, CFOs, CTOs and the like, who travel for business multiple times in a year.

Interestingly though, there are two groups of users who noticeably differ. Firstly, on his website, Gollan points out



**“Because jet cards guarantee availability, a fixed price and a seamless booking process, travelers can simply schedule their flight and be on their way”**

Anthony Tivnan, president, Magellan Jets

Above: Some jet card providers own their fleet, while others work with a group of operators to offer a selection of different aircraft

Below: Jet cards are opening up the business aviation market to a younger clientele



that many jet card users are individuals that also own their own jets, but purchase a card in order to provide jet access to family members or business associates for those times when their own jet is already in use.

At the other end of the spectrum is the next generation, who are gaining interest in private jet travel thanks to this simpler, and more accessible service.

“According to [market research company] WealthX, the average jet owner is around 60 years old and male,” says Steven Warner, head of JetCard at Air Partner. “In Air Partner’s experience, the new breed of customer is far younger than the typical jet owner and just as likely to be male or female.

“A private jet experience is more accessible than ever now. Financially it is well within the reach of those who regularly fly first or business class. The expectation for growth among some in the industry is that 50% of future customers will not have been active charters before. Companies will look to win business and first class customers from scheduled carriers, along with those currently tied into timeshare ownership schemes.”

Stephanie Chung, vice president of sales and guest services at JetSuite, agrees that jet cards are a great introduction to the business aviation industry: “They’re the





perfect entry-level product and the easiest way to charter a private jet,” she notes.

### Promoting loyalty

Jet cards continue to contribute to the growth of the business aviation industry – according to a recent report from aircraft activity analysis tool TRAQPak, jet cards and on-demand charters boosted private aviation flight activity by 7.7% in March 2018 compared with the previous year. In part, this is down to increased loyalty, which goes hand-in-hand with purchasing a jet card.

“They absolutely promote loyalty,” says Vincent Wigmans, founder of Fly Aeolus. “Customers often place a substantial sum of money with an operator and that is a piece of trust. If people purchase 75 flight hours, then they do have the intention to fly with us more often.”

Fly Aeolus offers one fare from € 580.00 per flight hour. For each flight request, a quotation is made based on your desired travel schedule. If you intend to use our services more than once, the Pre-paid packages below are attractive. You choose a package that best fits your travel behavior and receives a discount on all your flights.

**Fly Aeolus Basic**  
from € 580.00 / hour

**Pre-paid Personal**  
For regular travelers.  
€ 10.000  
Approx 15 flighthours  
Discount of 3%  
The flown flight will be deducted from your pre-paid package.

**Pre-paid Business**  
For business travelers.  
€ 20.000  
Approx 30 flighthours  
Fixed discount of 5%  
Taxi booking assistance  
Cancel booking free of charge  
The flown flight will be deducted from your pre-paid package.

**Pre-paid Elite**  
For weekly travelers.  
€ 50.000  
Approx 75 flighthours  
Fixed discount of 7%  
Taxi booking assistance  
Cancel booking free of charge  
The flown flight will be deducted from your pre-paid package.

Left: Fly Aeolus' range of jet card packages



But, for customers that only have a certain budget at their disposal, the set – and potentially lower – cost can make the difference between flying private or via a normal carrier.

### Adding value

However, with competition between jet card providers now so high, simply offering a jet card isn't enough – providers must be proactive in order to retain and grow their customers.

One response has been to provide added value in myriad forms, such as refundable flight hours, cancellation and amendment policies, and partnerships (see *Differentiation through luxury partnerships*, below).

Sentient Jet's app, for example, enables cardholders to quote and book flights, read safety flight reviews, manage passenger information and receive flight details, as well as providing access to a 24/7 live chat feature and localized recommendations from the company's portfolio of cardholder benefits.

“Private Jet Card Comparisons' analysis of the Sentient member benefits found over US\$125,000 in freebies and discounts, so the perks can be significant,” says Gollan.

Special offers are also used to entice new customers. For example, JetSmarter recently announced a free 60-day membership trial and Magellan Jets ran a ‘first flight free’ promotion. “We continue to add benefits and options for a more customized user experience,” Tivnan explains. “We provide options that can be added to a membership, such as complimentary upgrades, limo transfers, wi-fi and fuel discounts. We also continue to introduce new products into the market that we know our customers want,” he continues. “Recently we launched a Sikorsky S76 helicopter card, as well as a Falcon 2000 product.”

But even with so many great benefits, card users must still keep an eye out for potential hidden costs, as Gollan

## Differentiation through luxury partnerships

As well as enjoying all the benefits of private jet travel, providers offer jet card holders a wide variety of membership perks. These often include exclusive partnerships with luxury brands and events, such as complimentary stays at renowned hotels including The Peninsula chain, and exclusive retail offerings at stores such as Saks Fifth Avenue.

AirPartner's jet card holders receive exclusive invitations to its curated calendar of partner events, “from VIP supercar experiences through to prestigious polo matches”, notes head of JetCard Steven Warner. And at Magellan Jets, customers have been offered exclusive deals with companies such as Canyon Ranch, the Four Seasons, Worth Avenue Yachts, Revo and Frete.

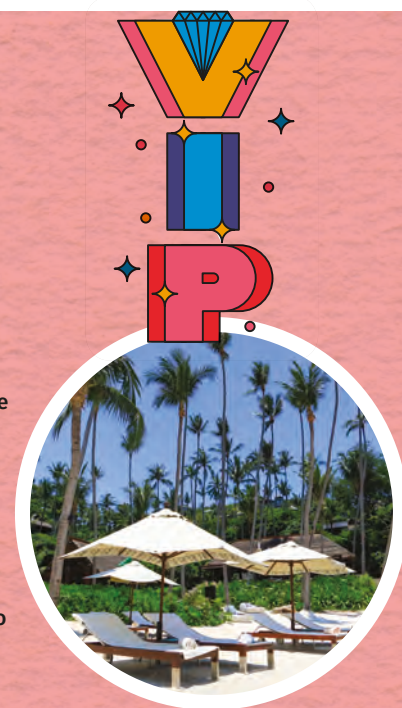
Providers believe such partnerships with like-minded brands help differentiate them from the competition. Sentient Jet, the first jet card provider, and still one of the largest, took things to another level in 2013 when it launched its first official Cardholder Benefits Guide.

“Sentient has elevated and personalized the Sentient Jet experience by forming exclusive

partnerships with world-class brands across travel, food and wine, jewelry and lifestyle categories,” says president and CEO Andrew Collins.

“Every year, we release a new guide and new partnerships, perks and benefits that customers enjoy and value. The benefits include everything from complimentary nights at The Little Nell in Aspen and Meadowood Resort in Napa Valley, California, to luxury shopping discounts and Hertz's platinum level membership. Through the partnerships, Sentient offers perks and unique experiences that drive loyalty, provide value and enhance the luxury travel experience for our cardholders,” he notes.

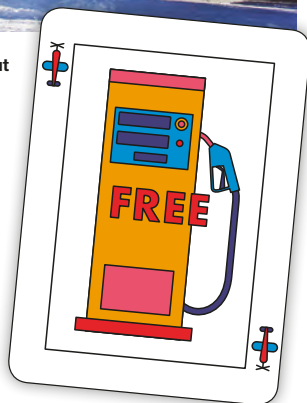
However, Stephanie Chung at JetSuite believes these companies that offer partnerships tend to pass these costs along to the customer. “Our focus is to offer the lowest hourly rate possible by focusing on the best preflight and onboard experience,” she says. “That being said, we're currently working on strategic partnerships with luxury beauty products and hotels to elevate the travel experience for our members in ways that add value rather than cost.”





Above: It's important to find out if the jet card covers de-icing charges if flying in winter

Left: Magellan customers can access luxury aircraft like the Gulfstream G650



points out. "Beyond the quoted hourly rate, in the USA customers should find out if the 7.5% Federal Excise Tax is included – some companies include it, others don't," he notes. "They should also ask about fuel surcharges, consumer price index [CPI] escalators, peak day surcharge – which can run as high as 40% – plus surcharged airports and destinations. Also look at what type of catering is included, if taxi time is charged, and a big one – is de-icing included? This is something that could be important if they do a lot of winter flying. The key is to do some proper research before buying."

**Jet cards are here to stay**

There may be a lot for customers to consider when purchasing a jet card, but experts in the business aviation industry believe they're here to stay.

"While deliveries of new jets are still below pre-great-recession levels and fractional ownership has been flat, the number of jet card providers has more than doubled in the past 10 years and there are three new launches just this year," Gollan highlights.

"On-demand charter is time-consuming. Fractional ownership is expensive and a long-term commitment. It's estimated that the market for jet cards in the USA alone is over two million affluent households plus tens of thousands of business owners ranging from doctors and lawyers to real-estate developers and bankers," Gollan adds.

"The jet card is a product for the future," continues Sentient Jet's president and CEO Andrew Collins. "The jet card model itself is particularly sustainable, given its nimble nature – the fact that you can use it at will, when you need to, means it's very flexible and lends itself to favorable economics," he concludes. ○



Above: Jet cards are often sold in increments of time to suit the customer's needs

**Calling cards**

**Eight of the latest jet cards and promotional offers to enter the business aviation market**

1. Tag Aviation launched its ONE Account in May 2018, which offers contract-free unlimited travel, with no time, geography or flying-hour limitations. Users simply contact their account manager when they wish to travel. The account also offers refundable deposits, carries no surcharges, and offers flexibility on the type and size of jet used.
2. At the end of May 2018, NetJet jet card customers were invited to VIP treatment at the Monaco F1 Grand Prix. Customers had access to an exclusive private terrace with excellent views of the race, with special guests providing unique insights into the race.
3. To celebrate its 10<sup>th</sup> anniversary in April 2018, Magellan Jets launched a series of special offers including 10-hour jet cards (offered during the last 10 days of every quarter) and a new 10-hour helicopter card.
4. From May 1, JetSmarter began offering a free 60-day trial membership. To be eligible, travelers must provide proof of one of the following: Charter expenses over US\$50,000, an existing jet card, aircraft ownership, or membership with another private jet company.
5. In April 2018, JetSmarter launched a family private jet membership plan for up to six people. In addition to a US\$3,000 initiation fee, annual membership for families is US\$9,950. Under the terms, four users are allowed and a fifth and sixth user can be added for US\$1,950 per person annually.
6. In 2018, Fly Aeolus started offering a low-cost jet card for use of single-engine turboprops in Europe, starting from US\$720 per hour.
7. Unity Jet launched its own jet card in April 2018. The requirement to join is a US\$25,000 deposit and any unused portion is refundable at any time.
8. Jet card provider XOJET partnered with Monticello Motor Club in April 2018 to offer new benefits to cardholders. Benefits include members receiving track access at Monticello Motor Club through the Taste the Track driving experience.

Below: Tag Aviation's ONE Account offers jet travel with no limitations



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# Jewel in the crown

Strong economic growth and a wealth of business aviation facilities make Ireland an attractive destination for individuals and corporations alike.

*Business Airport International* looks at what makes the Emerald Isle shine

Words | Hazel King

Ireland is set to be the second fastest growing economy in the EU behind Malta in 2018 and 2019, with the European Commission predicting growth of 5.7% and 4.1% respectively. And business aviation appears to be following suit – latest figures from the European Business Aviation Association (EBAA) show there were 7.6% more business aviation flights in 2017 than in 2016.

“Ireland’s economy is once again moving ahead across all industry sectors, and business aviation can be expected to grow in parallel,” explains Joe McDermott, CEO of the Irish Business Aviation Association (IBAA) and senior consultant at Global FBO Consult.

“The charter market is very much on the move in the right direction. Ireland is the 17<sup>th</sup> biggest operator of business aviation in Europe – out of 28 countries – and there is an overall tendency for growth in the country,” says Robert Baltus, COO, EBAA. “When you look at the economic impact that business aviation makes, there’s about 2,000 direct and indirect jobs created by the sector and it generates €666m (US\$769m) for the Irish economy annually.”

#### **Busiest locations**

In 2017, there were 7,579 business aviation departures from the 12 main airports in Ireland – with Dublin International and Shannon handling the majority of them (3,214 and 2,148 respectively).

Business aviation is well catered for at Dublin International Airport, situated six miles north of the country’s capital, with three FBOs on-site – Universal Aviation Ireland, Signature Flight Support and Jetex, which announced on May 30, 2018, that it will open its FBO in the next few weeks. The airport also has a dedicated private terminal – Dublin Airport Platinum Services – which operates a VIP suite and security services and handles all outbound passengers.

Brendan McQuaid, managing director for Jetex’s Dublin FBO, comments, “Dublin is booming right now, the airport itself is scaling up, and there are so many jet operators and corporations that generate a lot of air traffic.”

Traffic at Dublin International is expected to grow at a steady pace over the next few years, rising by 6% in 2017 to 29.6 million passengers. “As commercial business passengers increase so too will GA, because the economy is very stable,” McQuaid adds.

EBAA’s Baltus agrees: “When the economy picks up, business aviation does very well too – there is a clear link between the two.”

The new Jetex FBO will have a lounge for crew and for passengers, provide access to Dublin Airport Platinum Services’ lounge, and offer services such as ground handling, fuel, concierge, and a full dispatch package.

## FLYING TO IRELAND

Similar facilities are on offer at Universal Aviation's FBO, which opened in 2006. The FBO also operates a busy into-plane fuel operation, with two large capacity dedicated fuel trucks, allowing rapid action fueling requests in quick-turn situations. "Dublin is a busy international airport with operators coming for commerce, tourism, sport and music, so restrictions are inevitable, meaning slots and parking need coordination and follow-up," says Sean Raftery, managing director, Universal Aviation UK and Ireland. "To meet the demands and reduce our customers' risk and stress, we're focused on continuing to enhance amenities, such as our purchase of new VIP vehicles, and enhancing our safety processes through IS-BAH certification, which we are working on."

Both Signature Flight Support and Dublin Airport Platinum Services offer similar services all day, every day.

Shannon Airport, Ireland's second busiest, has the added benefit of offering US Customs Pre-clearance to all passengers, making it an attractive choice for those wishing to travel from Europe to the USA hassle-free.

"Shannon is strategically important, being the last point of exit before heading across the Atlantic," Raftery explains. "Even with longer range aircraft these days, the airport is attractive as fuel prices are generally low, the runway is long and there are no slot restrictions. There is also the option of customs pre-clearance through US Customs and Border Protection (CBP), Shannon being the only airport in Europe to offer this to business aviation. It is still one of the best airports anywhere to choose for quick tech stop turns."

The airport is well serviced, with a choice of FBOs that all offer VIP handling, access to private lounges and fueling. "The current list of FBO companies includes Signature Flight Support, Universal Aviation, Westair Aviation and QA FBO. EFG Inflight based in Shannon offers all FBOs an excellent VIP catering service," says Joe Buckley, business relations manager at Shannon Airport.

According to IBAA's McDermott, Shannon has great potential to attract more corporate aviation services – including MRO and completions – as it has the space to expand, and a young and highly educated workforce being fed into the system by local technical colleges and universities. "Shannon, on the west coast, is actually home to more business aviation than the capital, with operators GainJet Ireland, PrivateSky, VipJet and Westair, among others, located there, offering aircraft management services, Continuing Airworthiness Management Organization (CAMO), charters, acquisition and sales, and other related services," he says.

"Shannon is the busiest North Atlantic tech stop on the eastern side of the Atlantic Ocean and is only one of two airports globally offering US Customs Pre-clearance for business aviation." The other is Reina Beatrix International Airport in Oranjestad, Aruba.

Other airports that cater well for business aviation include Cork Airport in the south; Dublin Weston Airport to the east – Ireland's only dedicated executive private jet airport; Waterford Airport in the southeast; and Ireland West Knock in the west. Donegal Airport, in the northwest of the country, offers service for business and leisure travelers, and was voted the world's most beautiful landing spot in PrivateFly's 2018 poll of scenic landings.



Above: **Cork Airport handles both commercial and business aviation traffic**

Below: **Signature Flight Support's lounge at Dublin International Airport**

**"Dublin is a busy international airport with operators coming for commerce, tourism, sport and music, so restrictions are inevitable"**

Sean Raftery, managing director, Universal Aviation UK and Ireland



### Ireland West Knock

**Opening times:** 6:00am-10:00pm,  
PPR for all GA flights

**Runway length:** 7,546ft (2,300m)

**Parking charges (per 24 hours):**  
Up to 3.0 metric tons – €10 (US\$11.55);  
3.01-15 metric tons – €6 (US\$6.90) per metric ton or part thereof;  
16-25 metric tons – €9 (US\$10.0) per metric ton or part thereof  
**Fuel:** Jet/Avgas  
**FBOs:** None

### Shannon

**Opening times:** 24/7

**Runway length:** 10,500ft (3,200m)

**Parking charges (per 30 minutes):**  
Wide/Contact – €32.75 (US\$37.90);  
Narrow/Contact – €26.20 (US\$30.30);  
Wide/Remote – €16.40 (US\$18.90);  
Narrow/Remote – €13.10 (US\$15.10);  
Light aircraft – €1.10 (US\$1.30); Long-term Remote €5.40 (US\$6.20)

**Fuel:** Jet

**FBOs:** Signature Flight Support, Universal Aviation, Westair Aviation and QA FBO

## Aircraft leasing

Aircraft leasing is a huge industry in Ireland. The country is one of two major centers in the world for aircraft leasing firms (the other is the USA), and the industry supports more than 4,970 jobs and contributes £438m (US\$581m) annually to the Irish economy, according to the report *Taking Flight – 2018: An economic and employment analysis of the aviation leasing industry in Ireland*, by accountants PwC. The leasing market grew by 36% from 2012 to 2016, owing to multiple factors: new entrants to the market setting up their leasing platform in Ireland; existing lessors growing and/or moving their portfolio to Ireland; and the renewal of aircraft with newer models and the retirement of older fleet. Growth is set to continue, albeit at a slower rate of 22% between 2016 and 2021. More than 30 global leasing companies now operate in Ireland, among them some of the largest operators, including AerCap, GECAS, Avolon, SMBC, AWAS and Orix Aviation, leasing anything from helicopters and turboprops to regional, cargo, narrow- and wide-body aircraft.

# Fly in to...

## Donegal

**Opening times:** 6:45am-8:00pm  
Monday-Saturday;  
9:45am-8:00pm Sunday  
**Runway length:** 4,908ft (1,496m)  
**Parking charges (per 24 hours):**  
First two hours free, then  
up to 3.5 metric tons – €10.50 (US\$12.15);  
up to 10 metric tons – €28.60 (US\$33.05);  
up to 20 metric tons – €50.70 (US\$58.60);  
over 30 metric tons – €64 (US\$74.00)  
**Fuel:** Jet  
**FBOs:** None

## Dublin Weston

**Opening times:** 8:00am-sunset + 30 minutes  
**Runway length:** 3,301ft (1,006m)  
**Landing charges:** €20 (US\$23.10) per landing for  
aircraft and helicopters under 1 metric tons;  
€40 (US\$46.20) per landing for visitors from outside  
the state (including Northern Ireland  
and the rest of the UK)  
**Fuel:** Jet/Avgas  
**FBOs:** Airport's own executive business jet terminal

## Dublin International

**Opening times:** 24/7  
**Runway length:** 8,650ft (2,637m)  
**Parking charges (per 15 minutes):**  
Wide/Contact – €34.90 (US\$40.30);  
Narrow/Contact – €27.90 (US\$32.20);  
Wide/Remote – €9.60 (US\$11.09);  
Narrow/Remote – €7.70 (US\$8.90);  
Wide/Satellite – €33.10 (US\$38.20);  
Narrow/Satellite – €26.50 (US\$30.60);  
Light aircraft – €2.65 (US\$3.00);  
Long-term remote – €180 (US\$207.90) per day  
**Fuel:** Jet  
**FBOs:** Universal Aviation Ireland, Signature Flight  
Support, Dublin Platinum Services and Jetex

# Ireland

### Facts

- 7,579 departures in 2017
- €666m (US\$769m) output of the business aviation sector in Ireland
- 20 aircraft registered in Ireland

## Waterford Regional

**Opening times:** 7:30am-8:45pm (June, July  
and August: 8:30am-9:45pm)  
**Runway length:** 4,701ft (1,433m)  
**Parking charges (per hour):** First hour is free,  
then under 1.3 metric tons – €3.00 (US\$3.50);  
1.3-2.4 metric tons – €4.00 (US\$4.60);  
2.5-3.4 metric tons – €4.00 (US\$4.60);  
3.5-4.9 metric tons – €6.00 (US\$6.90);  
5.0-6.4 metric tons – €8.00 (US\$9.25);  
6.5-7.9 metric tons – €8.00 (US\$9.25);  
above 8 metric tons – €10.00 (US\$11.55);  
above 12 metric tons – €12.00 (US\$13.90)  
**Fuel:** Jet/Avgas  
**FBOs:** None

## Cork

**Opening times:** 24/7  
**Runway length:** 6,998ft (2,133m)  
**Parking charges (per 30 minutes):** Wide/Contact  
– €32.75 (US\$37.90); Narrow/Contact – €26.20  
(US\$30.30); Light aircraft (under 6 metric tons) –  
€1.10 (US\$1.30). Parking free 11:00pm-6:00am  
**Fuel:** Jet/Avgas  
**FBOs:** Swissport Executive and Weston Aviation

### Challenges and restrictions

There are very few challenges or restrictions when flying to Ireland, with the main issues encountered at Dublin International Airport owing to a high volume of traffic and groundworks currently underway on a €320m (US\$370m) second runway.

“There are slot restrictions in Dublin due to the development of the second runway,” says Jetex’s McQuaid. “Slots are very difficult to get so we need as much advance notice as possible when you are planning your trip to Ireland.”

McDermott continues, “At Dublin, runway arrival and departure slots have become extremely difficult to obtain, with operators often being forced to accept slots some hours out of sync with their requirements. Others have chosen to use Ireland West, Shannon or even Belfast International. The Belfast option will become interesting when Brexit kicks in as it is, of course, part of the UK, so customs and immigration will become a factor for consideration.”

Like Dublin, Shannon has also updated its runway, completing a rehabilitation program in 2017, which included closing the airport during the night for five months. “Business aviation traffic is currently returning to 2016 levels, and we offer a 24-hour operation with no slots, curfews or any other restrictions,” says Buckley.

### The Brexit conundrum

As McDermott mentioned, there will be issues surrounding customs and immigration between Ireland and the UK when the results of the Brexit deal are put

## FLYING TO IRELAND

into place at 11:00pm on March 29, 2019. Currently, it is unclear what the border process will be, with political parties arguing between a soft 'invisible' and a hard 'physical' border between the Republic of Ireland and Northern Ireland.

"It is of course difficult to know what is going on behind closed corporate doors but it does seem that Shannon may benefit from Brexit, or at least from Brexit uncertainty as a number of UK-based companies have looked or are looking at the airport as their new gateway to the EU. The airport is not short of greenfield sites or workforce, and the local community government is very much pro-aviation," continues McDermott.

According to the EBAA's *Brexit scenarios for business aviation* report, business aviation contributes a total of 192,000 jobs to the European economy directly, with an additional 182,000 estimated to be generated indirectly. The sector generates €42bn (US\$48.5bn) in output and €15bn (US\$17bn) in gross value add, so "it is paramount that this business activity continues uninterrupted after Brexit".

In terms of what Brexit will mean for Ireland, EBAA's Baltus argues, "There are two separate issues – Ireland has always been at the forefront of aviation and making sure aviation can work well. That's why a lot of the leasing companies base themselves in Ireland [see *Aircraft leasing* on page 52]. But also, the Irish Aviation Authority has been very proactive in developing the Irish aircraft registry, because it appreciates the value of the industry. Whether Brexit will bring more aircraft to the Irish register, that's really difficult to gauge because people have a number of options and that decision is part of a bigger picture.

"We've prepared a study [*Brexit scenarios for business aviation*] on the likely impact of Brexit on our members, both UK and non-UK. We have identified four key areas: traffic rights; ownership and control; the structure of VAT, Customs, etc; and the future relationship between the UK and EASA, and consequences for the wider aviation community. All four areas will have an impact on Irish aviation as well. The main difficulty is we don't really know where the negotiations are going, but we've tried to give visibility to our members so they are well equipped to make the right decision in line with whatever the UK decides,"



### Facts

- 2,000 direct and indirect jobs
- 4.6% departures in Ireland are business aviation
- Business aviation departures up 7.3% in 2017
- Most common aircraft is the Learjet 45XR

Above: **More than 2,000 business aviation flights departed Shannon Airport in 2017**

Below: **Universal Aviation has offered FBO services at Dublin Airport since 2006**



Baltus continues. The full report can be found in the publications section on the EBAA website.

So, will Brexit have a big impact on operations? "Absolutely," says Jetex's McQuaid. "We have already seen many major global firms relocating to Dublin and after Brexit happens we expect to see some aircraft leaving the British register and perhaps coming over to the Irish register. Ireland will be the only country left in the EU with English as its first language, therefore the US multinationals will automatically move to Ireland, as they are already doing. We see the GA business will increase quite a lot and when the DAA [Dublin Airport Authority] builds Dublin's second runway, the airport will be in a position to handle the increase in movements."

### Growth on the horizon

Despite the uncertainty surrounding Brexit, the outlook for business aviation is ultimately positive. However, McDermott believes there is still work to be done in promoting business aviation and improving its image in the country. "Business aviation is sadly still seen in Ireland by too many of the public and politicians alike as for the elite or rich. Its value to business development and global connectivity, in support of the modern industries that Ireland has been so successful in attracting, is not fully recognized," he explains.

However, this perception is slowly changing – the EBAA has launched a new campaign called Expanding Horizons, which aims to educate people about the advantages of business aviation to the wider economy (see *EBAA Expanding Horizons*, left). "We cannot change everyone's perception, but as long as the right people understand what the economic impact of business aviation is, what it does to connectivity, what that means to the wider community – those are the most important things that we would like to make people aware of," says Baltus.

"We are very excited about the outlook for business aviation in Ireland, and in Europe generally," he continues. "We don't know what the future will bring, but as people start to learn more through the Expanding Horizons campaign, more people will realize that business aviation should be part of their travel mix.

"Ireland has been very proactive in growing its finance, aircraft leasing, aviation infrastructure and legal industries, and there is a lot of support from the authorities when it comes to business aviation – the country understands very well the need for a healthy aviation environment," Baltus concludes. ○

## EBAA Expanding Horizons

The EBAA launched its Expanding Horizons program in Brussel, Belgium, on March 14, 2018. The five-year campaign, focusing on three key groups of stakeholders, seeks to positively shift perception of the value and benefits of business aviation to Europe.

"Business aviation is critical to the economy of Europe, providing access to more than three times the city pairs provided by scheduled carriers," says Eric Drosin, director of communications for EBAA. "In fact, 96% of these city pairs are not served by scheduled air transport. This access is unique to business aviation and is an important conduit for enterprises throughout Europe, not to mention an important asset to humanitarian efforts. Yet many people are unaware of the vital connection business aviation provides communities in Europe. Expanding Horizons aims to promote the value and contribution of business aviation throughout Europe."

The Expanding Horizons campaign will include a website, social media assets, promotional video and member profiles. Expanding Horizons will also publish a Future of Sustainable Air Transport report and a social media video to raise awareness among potential users of business aviation.





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# Best of both worlds

A new 'hybrid' tiltrotor aircraft could be just the ticket for busy executives looking to save time by flying direct to their destination. Should FBOs be worried?

Words | Anthony James

## Key stats

**Length overall:** 46ft (14.1m)  
**Height, to top of tailplane:** 15ft (4.5m)  
**Width, rotors turning:** 60ft (18.3m)  
**Weight empty, equipped:** 10,500 lb (4,765kg)  
**Max. take-off weight:** 18,000 lb (8,165kg)  
**Max. range:** 700 nautical miles (1,296km)  
**Cruise speed:** 275kts (510km/h)  
**Passengers:** 6-9



Main: **Era Group will take delivery of two AW609s in 2020 to perform offshore/utility, VIP, EMS and SAR missions**

**M**any FBOs are used to seeing passengers fly in by jet, only to then get into a limousine or board a helicopter to travel on to their ultimate destination, many miles away from the business airport at which they have just landed.

However, a new aircraft combining the benefits of both a helicopter and a fixed-wing aircraft could carry executives all the way to their final stop, enabling them to touch down directly on the rooftop of an office or factory, rather than hours away at a distant runway.

The 'hybrid' in question is Leonardo's AW609 tiltrotor, which continues to undergo stringent testing in its bid to obtain certification by "the end of 2019" – the words of Gian Piero Cutillo, managing director of Leonardo's helicopter division, speaking at the recent Heli-Expo, with deliveries slated to begin "immediately after".

Capable of taking off and landing vertically, with a standard range of 700 nautical miles and a maximum cruise speed of 275kts (510km/h), the AW609 can carry two pilots and nine passengers above adverse weather conditions in a pressurized cabin at twice the speed and range of typical helicopters. As such, Leonardo is convinced it will be a big hit with business aviation.

Described as a 'multirole aircraft', it can be configured for commercial applications such as executive and private transportation, energy services, emergency medical services (EMS), search and rescue (SAR), as well as defense and

national security applications such as homeland security, naval, utility and personnel recovery.

Beyond its inherent versatility, Leonardo hopes a composite airframe, advanced touchscreen cockpit and full fly-by-wire digital controls will only add further to its attraction among possible operators.

#### **Time-saver**

But it is the AW609's ability to fly point to point that Bill Sunick, senior manager of AW609 marketing at Leonardo Helicopters, believes will really clinch the deal for business customers.

"The VIP and corporate market segment is a big part of our focus for this aircraft," he confirms. "For a lot of our corporate clientele, their meetings aren't at airports. The reason they have flight departments is to maximize the executive's time. Helicopters are attractive as they're runway independent, giving you point-to-point freedom. However, they don't fly very fast, they don't fly very far and they have altitude restrictions. The AW609's tiltrotor combines the benefits of both a fixed-wing aircraft and a helicopter because it is runway independent, meaning you can truly go point to point."

Sunick estimates that "90% of the time" corporate passengers would use the AW609 as a conventional twin-engine turboprop aircraft. "We're going to be flying between 20,000ft and 25,000ft in a pressurized cabin environment so the corporate executive can still conduct a lot of work in the back, similar to any twin turboprop aircraft, such as a Beechcraft King Air or a Piaggio P180," he continues.

Right: **Flying point to point, the AW609 will save executives valuable time when traveling distances between 50 and 500 nautical miles**

As a result of its unique tiltrotor design, Sunick is convinced the AW609 will actually offer a quieter cabin than rival turboprops, at least during conventional flight: "Our engines are located further outboard, on the wing tips," he notes. "Four out of five of our gearboxes are also located on the wing tips. We think it's going to even be quieter inside from a cabin experience perspective than a King Air, just because of the location of the engines and gearboxes."

### Difficult development

More than 20 years in the making, the AW609 has endured a tough development and testing program, which saw the loss of its second AW609 tiltrotor prototype during flight testing in October 2015. The aircraft burst into flames during high-speed trials in Italy, claiming the lives of the two test pilots on board.

The first prototype resumed flight in August 2016 while a third joined the program in early-2017, undertaking ground and flight test activities at Leonardo's facility in Philadelphia, Pennsylvania, before heading out to artificial icing trials in Marquette, Michigan. These tests validated the robust ice protection system onboard the AW609, which will allow the aircraft to fly in known icing conditions and reach operational altitudes not currently available in any other commercial rotorcraft. The final prototype is expected to join the fleet by the end of 2018.

"We did artificial icing tests last year, and we're wrapping up and looking to deliver our final development aircraft this year," says Sunick. "Then we'll be doing final assembly on our first production aircraft next year, with certification efforts aligned to that schedule."

### Sweet spot

Before embarking on such an elongated and expensive development program, Leonardo carefully examined where the AW609 aircraft could offer real value in the business aviation market.

"We've done a lot of market studies looking at total transit time," notes Sunick. "If you're going 50 miles or less, your fastest means is surface transportation, typically a car; and if you're going over 500 nautical miles your fastest means is probably going to be a bizjet. But for those destinations that are greater than 50 nautical miles but less than 500 nautical miles, that's where the runway independence and point-to-point transit offered by this aircraft really sits in a place of its own."

As a Philadelphia resident "sandwiched between New York and Washington DC", Sunick is particularly familiar with the needs of US high flyers, including those from its bustling financial sector.

"Let's take a Wall Street executive," he says. "With the traffic in Manhattan, it can take up to an hour to get to the

## A brief history of the AW609

The BA 609, as it was previously known, is a nine-seat civil tiltrotor originally designed and commissioned by Bell in conjunction with Boeing. Bell launched the aircraft at the NBAA convention in Orlando, Florida, in November 1996. Bell would then work with Agusta, later AgustaWestland, and now Leonardo on the program, with Leonardo becoming the sole owner of the program in 2016.

A first flight was made in March 2003. Deliveries will begin after certification, expected at the end of 2019. A report from the Teal Group notes that the 609 originally cost about US\$10m for the first 70 customers, depending on configuration, and suggests a final price of about US\$22m to US\$25m is likely.

**"We'll be doing final assembly on our first production aircraft next year, with certification efforts aligned to that schedule"**

Bill Sunick, marketing, Leonardo Helicopters



airport from the office. But being runway independent, the AW609 could use a Wall Street helipad, and fly right to the point of final destination. That's very advantageous – in fact the average passenger load in the US for business aviation is four passengers, while the average range is around 370-380 nautical miles. I would estimate that is true for about three-quarters of the missions in a typical business jet within the United States, which is well within the capabilities of the AW609."

Although slightly larger than a conventional helicopter, Sunick is confident the AW609 will be able to take off and land from existing helipads without any major modifications: "If you're going to do a vertical take-off, you need an area probably similar to our AW189, so roughly a 60ft x 60ft take-off pad," he says.

"If you're starting your flight at an airport, the AW609 has the advantage of being able to do a short take-off by slightly rotating its engine nacelles to carry out a rolling take-off. We can actually combat the issues presented by runways at higher altitudes by getting better performance by doing a rolling take-off, which can also combat strong headwinds. We can gain performance back – these are things that helicopter operators don't have the advantage of, but we do by having a large, fixed wing to increase performance."



Above: The AW609 features a composite pressurized fuselage for up to nine passengers

Right: An above-the-weather 25,000ft cruising altitude will make for a more comfortable ride

### Cause for concern?

So should FBOs be worried, given that an aircraft as flexible as the AW609 could see business airports avoided altogether – at least as final destinations? Probably not, given that Leonardo itself said during Heli-Expo back in February that it currently had expressions of interest for approximately 50 aircraft from operators worldwide, suggesting the aircraft will be something of a rarity.

Richard Aboulaflia, vice president of analysis at Teal Group Corporation, pours more cold water on the idea that the AW609 could be a potential threat to FBOs: “After several decades, I’m not sure the 609 will survive to enter service,” he says. “If it does, it will be a niche machine, since it’s extremely expensive given its cabin size and overall capabilities. If it succeeds beyond everyone’s wildest dreams, they might sell 300-400, which means it will barely register as a total percentage of all business/GA aircraft. Therefore, it will have no measurable impact on FBOs and airports, particularly since a significant part of demand will come from government users.”

If anything, Sunick suggests the AW609’s unique characteristics could represent an opportunity, rather than a threat: “There’s a lot of smaller airports that have runways around 1,000ft [305m] or so that can now start bringing in the AW609 and have a lot of VIPs and corporate flight departments operating from there. And for larger facilities, it’s a blessing too, as it could help alleviate congestion.”

### Rescue mission

During Heli-Expo, Leonardo revealed its first US commercial operator for the tiltrotor – Era Group will take delivery of two AW609s in 2020, to perform offshore/utility, VIP, EMS and SAR missions. The deal is a good indication as to where the AW609 will find its greatest audience.

“They do a lot of oil and gas operations, where our nine-seat standard configuration is a nice match,” says Sunick. However, he also notes Era will use its AW609s for EMS and SAR – and the latter is where Sunick believes the AW609 will have the biggest impact.

“From an acquisition perspective, instead of having to buy two separate aircraft with two separate crews, separate training simulators, separate maintenance schedules and tools, you can just buy one aircraft,” he notes. “A lot of our search and rescue operators see tremendous opportunities for cost reductions – as well as improved rescues, which they can execute a lot faster.”

Sunick learned first-hand about the unique requirements of EMS and SAR missions during a recent trip to Australia: “I went down there on behalf of a not-for-profit medical organization that was looking for more from its aviation providers,” he reveals. “In urban areas along the coast, they have no problem doing rescues with helicopters; but inland, in the outback, when they have to fly greater distances, they’re currently using fixed-wing, turboprop aircraft on dirt strips to help those in need, which is fine – at least until it rains the next day and then you can’t complete the mission. They have a dire need to go far, fast and vertical, plus they need a pressurized cabin to help with certain medical injuries. EMS operators really see the benefit of being able to do faster rescues with a more benign environment in the back.” ○

A multimillion-dollar investment will see Phoenix-Mesa Gateway Airport transform its business aviation service offering to meet rising demand. *Business Airport International's* Kathryn B Creedy visited the airport to explore the work underway

Words | Kathryn B Creedy

# Expand your horizons

## Mesa key facts

- Phoenix-Mesa Gateway Airport: established in 1993 on the former Williams Air Force Base
- Airport Authority owned by Cities of Mesa, Phoenix and Apache Junction, the Gila River Indian Community and the towns of Gilbert and Queen Creek
- Based aircraft: approximately 30, depending on season
- Total operations: 297,416 in 2017, 96% of which were general aviation
  - Business aircraft operations: approximately 36,352 in FY2017
    - Three runways – 10,200ft, 9,300ft and 10,400ft
    - Control tower: busiest contract tower in the USA
  - Tenants: approximately 50 aviation-related companies
  - Non-aviation tenants include: Arizona State University Polytechnic, Innovation Research Park



One are the days when airports could rely solely on landing fees and other traditional airport charges to fund their businesses, and nowhere is that more evident than at Phoenix-Mesa Gateway Airport (AZA), Arizona, which is about to embark on an ambitious reboot of its commercial and business aviation service offering.

“We see the future as both a challenge and an opportunity,” says airport manager J Brian O’Neill. “We inherited World War II-era facilities and while they are well maintained, some need updating. For example, our hangar door heights won’t accommodate larger business aircraft such as Gulfstream G550. It’s frustrating to have to turn away business because of this small thing.”

According to the airport, 96% of its almost 300,000 annual operations is general aviation, so it’s essential that facilities meet the needs of these customers. “We have to stay in the game with new hangars,” O’Neill continues. “We have already invested US\$500,000 in renovating an existing hangar and it was leased out before it was even finished. We know the demand is there. It is part of our obligation as a good regional development partner to provide good facilities.”

The airport’s general aviation infrastructure includes one FBO – Gateway Aviation Services. It is co-located with the Barrio Brewing Co, a microbrewery keen to capitalize on the growing activity at the airport. AZA also has growing commercial operations with US airline Allegiant Air and Canada’s WestJet, which use the airport’s Charles L Williams Terminal.



Above: Phoenix-Mesa Gateway has three long runways that accommodate any cargo aircraft

Left: The FBO offers Jet A and 100LL AvGas, with volume discounts available

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**The power of the airport**

Twenty-five years ago the 3,000-acre site was a remote military facility known as Williams Air Force Base. As a civil airport it is now at the center of the thriving and rapidly expanding Phoenix East Valley, with more than 1.5 million people living within a 20-minute drive. As the airport has grown, so too has interest in developing the land surrounding it.

AZA has attracted 50 companies to the site, employing over 2,500 people within the airport. It is a diverse mix of maintenance repair and overhaul (MRO), aircraft operations, airlines, air medical transport, aviation shops, supplies and distribution centers, consumer services – auto collision repair, a lawyer and a cross-fit training center – freight and supply chain services, ground handling and manufacturing.

“Pilots coming in here for MRO services become familiar with the airport, the services here and the ease of access to areas such as Scottsdale, and they spread the word,” says O’Neill, explaining why he believes the airport has grown, and continues to do so.

Textron Aviation has a big presence on the field with its Cessna Citation Service Center having between 10 and 15 aircraft on the ramp on any given day. Textron also has its subsidiary MRO, Able Engineering and Components Services, on-site. MRO Constant Aviation, which opened only a year ago, regularly has 12 aircraft on the ramp, and specializes in a variety of business jets. Embraer Executive Jets has a customer service center at AZA and works on Embraer 145s coming off lease. It is not unusual to see 10 or 12 aircraft on the ramp at any one time, as the company refurbishes the regional jets before they are placed back



Left: Gateway Aviation Services is a full-service FBO that prides itself on excellent customer service at its concierge front desk and offers a 24/7 line service

Below: Phoenix-Mesa Gateway Airport forecasts enplanements to reach 2.2 million by 2027

into service. The airport is also negotiating with a company to open a new 737 MRO operation.

Aside from its extensive MRO services, AZA has embarked on a number of property leasing deals aimed at giving it a steady income. It has attracted dozens of aviation-related companies and a host of building development and construction businesses, as well as research and educational facilities. The result is a research, educational and industrial park, which is anchored by Arizona State University Polytechnic.

Also at the airport is a University of North Dakota aerospace training facility, partnering with Chandler-Gilbert Community College, which complements the ATP Flight School. In addition, Aviation Performance Solutions specializes in upset prevention and recovery training while both CAE Oxford Aviation Academy and Embry-Riddle Aeronautical University round out the training options.

Furthermore, AZA has become an aircraft testing site and in 2017 hosted five large test groups from manufacturers Boeing, Mitsubishi, Bombardier, Aerotek and Embraer. Test crews cite the three runways and available office and storage space for crews and tools as great reasons to choose AZA, as well as the reliable average temperatures and flexibility of airport staff.

**“Pilots coming in here for MRO services become familiar with the airport, the services here and the ease of access to areas such as Scottsdale, and they spread the word”**

J Brian O’Neill, airport manager, Phoenix-Mesa Gateway Airport



## SkyBridge Arizona by numbers

- 17,000 projected new direct and indirect jobs, with 10,000 directly related to SkyBridge and more than 2,400 in construction
- **Expected increase of cargo flights every year, reaching 10,000 by 2036**
  - US\$230m, 360-acre commercial development
  - **2,000,000ft<sup>2</sup> (186,000m<sup>2</sup>) of warehouse space**
    - 1,000,000ft<sup>2</sup> (93,000m<sup>2</sup>) of office space
  - **900,000ft<sup>2</sup> (84,000m<sup>2</sup>) of light industrial and flex space**
    - 800,000ft<sup>2</sup> (74,000m<sup>2</sup>) of air cargo operations
      - **242-bed hotel**
    - 100,000ft<sup>2</sup> (9,300m<sup>2</sup>) of retail and restaurants
  - **15-year build-out plan includes infrastructure improvements around Phoenix-Mesa Gateway Airport, including water, sewer and power expansions as well as water retention basins**

### Future investments

O'Neill runs the airport on the theory that "a rising tide lifts all boats". The more business activity, the more business for everyone. "Everyone benefits from new customers," he says. "You are a product of your own success and that kind of activity is contagious. It is a matter of finding the right mix of tenants so that we can make money."

To attract more business, the Phoenix-Mesa Gateway Airport Authority (PMGAA) recently completed a US\$10m project that would replace 1,000,000ft<sup>2</sup> (92,000m<sup>2</sup>) of concrete to provide new aircraft ramp space. Its next big project is a US\$20m ATC tower. The airport is also planning a commercial passenger terminal on the northeast side of the property.

Other developments include SkyBridge Arizona, a large facility to pre-clear cargo to the Latin American market (see *New cargo hub to spur growth at Mesa*, right), which is set to significantly increase flight numbers at the airport. The current economic impact of the airport is assessed at approximately US\$1.3bn, however, as O'Neill says, this is about to change: "We will grow exponentially with the addition of SkyBridge Arizona. The Arizona State University Polytechnic Campus also plans to develop the Innovation Research Park, so this will further grow the airport."

Looking specifically at its business aviation facilities, the airport is about to begin work on a US\$1m complete renovation of the current FBO facility. AZA will also be developing new hangars for both tenant and transient companies, hangars that will accommodate even the largest business jets.

"This will not be lipstick on a pig," O'Neill says, justifying the decision to renovate the FBO facility rather than build new. "This will be a re-imagining of the existing facility to attract more corporate customers so that all the tenants on the field will benefit from the new customers using Phoenix-Mesa Gateway Airport." ○



The Gateway Aviation Services FBO has 19,000ft<sup>2</sup> of hangar space available for short- and long-term lease

**"This will not be lipstick on a pig. This will be a re-imagining of the existing facility to attract more corporate customers"**

J Brian O'Neill, airport manager, Phoenix-Mesa Gateway Airport

## New cargo hub to spur growth at Mesa

Phoenix-Mesa Gateway Airport will soon become home to the USA's first international air cargo hub to house both Mexican and US customs. Called SkyBridge Arizona, the first-of-its-kind service will transform AZA into an international e-commerce hub. Delivery times will be quicker for companies conducting business in Mexico and throughout Latin America. The aim is to eliminate the 18-day customs delay in shipping between airports in the USA and those in Mexico.

As part of the Unified Cargo Processing Program, the 60,000ft<sup>2</sup> (5,600m<sup>2</sup>) cargo logistics center will be based on 360 acres and once complete is expected to increase the number of cargo flights out of the airport, reaching 10,000 by 2036.

Ryan Smith, who heads up communications and government relations at the airport, says, "When the facilities are complete, cargo coming

and going from Phoenix-Mesa Gateway will be pre-cleared and can fly to any airport in Mexico. E-commerce is a game changer, and this will allow Mexican consumers to receive their orders within one to two days. Mexico currently has the same level of e-commerce activity as the USA did in 1998, so there's plenty of scope for growth."

SkyBridge has already committed to approximately US\$25m for site improvements, including a taxiway extension, roadways, sewer and water and other basic infrastructure. When completed, SkyBridge Arizona will be a US\$750m investment that could encompass between 3,500,000ft<sup>2</sup> (325,000m<sup>2</sup>) and 5,000,000ft<sup>2</sup> (464,500m<sup>2</sup>) of office, warehouse, logistics/cargo, hospitality/hotel and retail space.

SkyBridge is also developing a similar logistics center – air, rail and ground transport – in Guanajuato, Mexico, to do the same thing for USA-bound cargo.



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# city **f** **Mumbai** **cus**

Your guide to flying to India's largest city

Words | Kirstie Pickering

## Main airport in Mumbai

### Chhatrapati Shivaji Airport

**Operating hours:** 24/7

**Facilities:** Fixed-based operations provided by Continuum Aviation, iJet and Trans Asian Aviation India. Services include two lounges, two conference halls, two crew restrooms, customs and immigration, ground handling, landing and overfly permits, charter services upon request, catering

**Fuel:** Jet/Avgas

**Runway length:** 09/27 – 3,445m (11,300ft);  
14/32 – 2,925m (9,596ft)

**Distance from Mumbai:** 7km (4.34 miles)

Chhatrapati Shivaji Airport's (CSIA) general aviation terminal for private and non-scheduled flight operators (NSOPs) is located at Kalina on the southwest side of the airfield. The terminal was approved for international operations in April 2011, making CSIA the first airport in India to have a self-contained terminal for handling 24/7 domestic and international flight operations for private aviation and NSOPs.



## Mumbai





Mumbai is the most populous city in India, nestled on the west coast of the country. The city is India's financial and entertainment capital and home to the Taj Mahal Palace, Iskon Temple and Elephanta Island.



### Other airports near Mumbai

#### Juhu Airport

**Operating hours:** 7:30am-5:00pm  
**Facilities:** Fixed-based operations provided by Indamer Aviation. Services also include a heliport  
**Fuel:** Avgas  
**Runway length:** 08/26 – 1,140m (3,750ft); 16/34 – 730m (2,400ft)  
**Distance from Mumbai:** 7.7km (4.8 miles)



Juhu Airport handles all helicopter operations in and out of Mumbai. The airport can handle six helicopter operations at a time and currently handles about 100 a day. Work is currently underway to move all small private aircraft operations – such as Beechcraft B-200 and Cessna C-90 – from Chhatrapati Shivaji Airport to Juhu Airport to relieve congestion at CSIA.

#### Navi Mumbai International Airport (under construction)

**Facilities:** FBOs, fuel farm, three aircraft maintenance hangars, long-term aircraft parking, cargo terminal buildings, catering, aircraft maintenance site, car parking and more  
**Runways:** Two parallel runways, each measuring 3,700m (12,100ft)  
**Distance from Mumbai:** 21km (13 miles)

Construction started on Navi Mumbai International Airport (NMIA) in 2017 and will be completed in four stages. Phase one is expected to be completed in 2019, phase two in 2022, phase three in 2027 and phase four in 2032. Built 35km (32 miles) east of Chhatrapati Shivaji International Airport, the total investment for the new airport is estimated at US\$2.54bn.



# Going for goal

With Iceland's men's football team playing at the FIFA World Cup for the first time, **South Air** reflects on the Icelandic approach to tackling challenges and its impact at Keflavík International Airport

**T**his summer marked a monumental moment in Icelandic sports history as it was the first time the men's football team went to the FIFA World Cup. For a nation of around 350,000 people, this was huge news.

It is the mentality of the Icelandic team that captured the attention of the world during the UEFA Euro 2016, the first major tournament the men's team had ever qualified for. The women's team had qualified for UEFA Euro 2009, the first Icelandic football team to do so.

The men's team was a fan favorite as it qualified for the knockout stages, going as far as securing a win over England. This got them into the quarter finals, where they were knocked out by the tournament host, France. These results and the performance of the team were beyond anyone's wildest dreams and the nation is still riding the high from the success of that summer.

## Clear communication

The team at South Air shares this Icelandic mentality. Being a small company on the world stage, South Air knows it needs to do its best at every step of the handling process to stand out. This means being on-point with communications 24/7 as clients are from all over the world and response time is therefore critical.

The South Air team is aware that communication is crucial for a team to function properly. The demand from customers is always for more information on anything from the handling request to



the movement report. It means stepping up to every challenge that arises, tackling it and providing the best available outcome for the customer. The well-used saying 'There are no problems, only solutions' applies here and failure is not an option, although sometimes tactics have to adapt to the situation.

With a small but dedicated and experienced team of staff working around the clock to ensure everything goes smoothly, the South Air team strives to stay one step ahead and is ready to cater to the needs of every customer. Keflavík International Airport may not be considered one of the big airports in the world, but it is important due to its position in the Atlantic.

Above: **South Air also operates at Akureyri and Egilsstaðir airports**

Below: **The operator manages the only general aviation terminal in Iceland**

But it's not just the football stage that has Iceland drawing attention from the rest of the world.

## Wider appeal

Iceland's natural environment is a unique experience, with tourism growing rapidly in recent years. This has prompted Isavia – the national airport and air navigation service operator in Iceland – to expand Keflavík International and its main terminal to cope with the increase in traffic for both commercial flights and general aviation.

The airport is now better able to support smaller aircraft crossing the Atlantic during all seasons. Private jet travelers are also on the increase year-round, as quick winter luxury getaways are more popular than ever. Keflavík International offers easy access all year and is where South Air operates the only general aviation terminal in the country.

South Air also operates at Akureyri Airport in the north and Egilsstaðir Airport in the east, meaning it can offer services all around the country. These can range from smaller ferry flights to luxury travelers heading for a weekend away. ○

**SOUTH AIR**

To learn more about this advertiser, visit [www.ukimediaevents.com/info/bai](http://www.ukimediaevents.com/info/bai)

Reader Inquiry Number 101



# Certified excellence

Priding itself on its customer service offering in Cyprus, **Skylink Services** is the first facility on the island to receive IS-BAH Stage 1 certification, for its FBO facility in Larnaca

Cyprus-based Skylink Services is a provider of ground-handling services for executive aviation aircraft in the country. It began operations in Larnaca and Paphos in 1998 and has since expanded, opening Cyprus's only FBO facility in Larnaca in June 2010. This facility, which offers professional VIP aircraft and passenger handling services in its 1,600m<sup>2</sup> (17,000ft<sup>2</sup>) hub, is the first in Cyprus to receive the important IS-BAH Stage 1 certification.

## Best practice

Skylink employs personnel with multiple years of experience who are able to provide an elite service to customers and guests. Its professional staff receive regular training and continual updates on industry best practices, regulations and safety. Skylink has also expanded its customer service offering to ensure continuing improvement at all levels of professionalism and service.

George Mavros, managing director of Skylink Services, says, "Our customers have come to expect nothing but the highest standards of service when arriving in Larnaca, and being the first to receive IS-BAH certification clearly demonstrates that the company exceeds



expectations. Quality and safety are paramount to us.

"I would like to thank management and our committed team at Skylink for their hard work and dedication, which is the backbone of our achievements as a company. I sincerely appreciate the professionalism and boundless team spirit they demonstrate."

Skylink is also a member of World Fuel Services' Air Elite network of

Above: **The executive terminal facility at Larnaca Airport**

Below: **The FBO offers a spacious lounge, crew rest area and ground handling**

diamond service locations. Each FBO member must meet a number of airport, facility and service quality standards to qualify for membership. As part of these standards, the network's goal is for each member location to complete and obtain IS-BAH accreditation.

Mark Amor, vice president of commercial development at World Fuel Services, comments, "On behalf of the World Fuel Services team, congratulations to Skylink Services and its professional staff for this great accomplishment. We commend Skylink for its dedication to training, quality and safety in everything it does."

## Service offering

Currently representing more than 400 international companies worldwide that either own or operate executive aircraft, Skylink caters for aircraft ranging from very light jets to large aircraft, including the Boeing 747 and Airbus 340.

Its staff offer 24-hour VIP handling services, and the company says its high level of customer service results in a stress-free experience for both passengers and crew. ○

## SKYLINK SERVICES

To learn more about this advertiser, visit [www.ukimediaevents.com/info/bai](http://www.ukimediaevents.com/info/bai)

Reader Inquiry Number 102



# French evolution

Dijon-Bourgogne Airport's operator **Edeis** explores the French region's appeal for visitors and looks at how the facility is expanding its offering to visitors and businesses alike

**D**ijon-Bourgogne Airport, managed by Edeis, provides a gateway to the Burgundy region of eastern France. Its diverse offering of activities – both aviation-related and linked to a business park near the airport – make it a unique and highly dynamic site. Dijon Airport represents a new and diverse design of aviation hub, providing a new lease of life for the former French Air Force military base.

Edeis is managing the revitalization and development of the Dijon Airport site, which has vast land reserves that make it suitable for a wide range of development possibilities. The potential for rejuvenation also includes support for business aviation in this unique region. In 2015, the city of Dijon was granted UNESCO World Heritage status for its cultural value, which includes its wine-making capabilities.

## Evolving potential

Dijon Airport recorded a 43% year-on-year increase in traffic in 2017. More than 9,000 trips were recorded, including 880 in business aviation (+16%) and 174 medical flights (+5%). It regularly accepts flights from Asia and North America.

A partnership signed in 2017 with Jetex has considerably improved the quality of service and communication



with major aircraft operators. In order to improve services, Edeis will begin work on a €500,000 (US\$590,400) renovation of the terminal this summer. An elegant lounge, offices and improved people-flow will all be integrated within a 500m<sup>2</sup> (5,381ft<sup>2</sup>) space.

Dijon Airport is open 24/7, 365 days a year, meaning it is a flexible hub that

Above: **The airport is linked to a business park, extending its customer offering**

Below: **Flights to the hub were up 43% year-on-year in 2017**

accommodates a wide range of aviation activities including business aviation and public services operated by state bodies such as the armed forces and customs.

## Dynamic offering

Edeis monitors and promotes areas of land with private investors who may wish to develop their interests in Burgundy. The airport's operating company also relies on a 40ha (99-acre) business park that offers the potential for real-estate development. It has become one of the most dynamic business parks in Dijon.

After doubling in size within a year, there are now 51 companies that operate at the airport including the Breitling Jet Team, racing and vintage car companies, drone manufacturing and a range of training activities.

Events including electronic music festivals, car rallies and cycling races have also taken place at the airport. These events are beneficial for the airport both economically and socially. ○

**EDEIS**

To learn more about this advertiser, visit [www.ukimediaevents.com/info/bai](http://www.ukimediaevents.com/info/bai)

Reader Inquiry Number 103





# Informed decisions

Switzerland-based full-service FBO **Air Service Basel** encourages owners and operators to upgrade their aircraft before the 2020 ADS-B FAA mandate is enforced



## Vital statistics

**Airport:** Basel Airport  
**Operating hours:** 6:00am-10:00pm (extended on request)  
**Services:** Maintenance, snooze room, conference facilities, hangar and apron parking, CAMO+ program

Offering high-quality services since 1967, Air Service Basel's internationally recognized maintenance and repair station is equipped to maintain aircraft types from light single-engine pistons up to larger jets such as the Hawker 850 and Falcon 900 series.

Air Service Basel offers a variety of maintenance products and services on-site at its headquarters in Basel, Switzerland, and is additionally available to visit a customer's location with its mobile team.

### Focus and preparation

Air Service Basel's focus over the past quarter has been on promoting its Automatic Dependent Surveillance – Broadcast (ADS-B) upgrade capabilities for owners and operators to get equipped ahead of the 2020 FAA ADS-B mandate. Designed to improve worldwide airspace capacity, safety and efficiency, the mandate calls for all aircraft flying in controlled airspace to upgrade their avionics equipment with ADS-B Out by January 1, 2020 and by June 7, 2020 within Europe.

Air Service Basel's avionics manager, Martin Wieland, explains how the company has been contacting clients to ensure they are informed about the mandate and offering solutions.

"We want clients to understand what the mandate means for them and what options they have," he says. "I've been in touch with our regular clients

and published a blog to answer some common questions. We've also created a landing page explaining the mandate and what our solutions are."

The Swiss-based FBO is a certified dealer in avionics solutions including products from Rockwell Collins, Garmin and Honeywell, and is conducting private consultations to provide owners and operators with personalized solutions.

Air Service Basel claims around a third of its clients will need to upgrade their aircraft to comply. It predicts a severe backlog of aircraft and unhappy clients if owners and operators do not plan their upgrades ahead of the deadline.

According to the FAA, over 160,000 business aviation aircraft will need to be upgraded to comply. Considering that number and the amount of time and cost these projects could require, maintenance facilities are encouraging owners and operators to consider the installation now.

### In and out

ADS-B Out broadcasts information about an aircraft's GPS location, ground speed, altitude and precise data to ATC centers once per second.

ATC centers with ADS-B In equipment receive and process this data, which is much more advanced than that obtained from radar, and sends limited information every 5-12 seconds to aircraft operators. Currently the mandate is only obligatory for ADS-B Out technology, but experts are

Above left: **All aircraft need ADS-B Out by January 1, 2020**

Above right: **The interior of an upgraded Beechcraft aircraft**

Right: **Martin Wieland, avionics manager at Air Service Basel**

claiming it won't be long before ADS-B In technology will become mandatory too.

Air Service Basel is advising owners and operators it works with about the benefits of installing ADS-B In at the same time, avoiding later work and taking advantage of the benefits of accurate traffic data and improved weather and traffic controls embedded within the new technology. Pilots will gain value for minimal investment compared to what is needed for ADS-B compliance.

Air Service Basel predicts that each aircraft will need an average of two weeks on the ground. Modern aircraft with the latest technology may need only simple upgrades to their systems. Some will need a complete refit. The FAA requires that equipment is installed and certified by an approved facility such as Air Service Basel. ○

### AIR SERVICE BASEL

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 Reader Inquiry Number 104

# The legacy continues

**Bangor International Airport** reflects on five decades of service to the military and general aviation sectors

In July, Bangor International Airport (BGR) in Maine, USA, celebrates 50 years since its transformation from Dow Air Force Base to a commercial international airport. Previously home to the 101<sup>st</sup> Fighter Wing – which converted to a refueling wing and still shares space with the airport today – BGR’s key strategic location makes it unique among transatlantic stops for commercial, general aviation and military aircraft.

It is to Bangor City Council’s credit that its members recognized the post-military potential that the airport offered, confirmed in an independent report from the local university that concluded: “For the first time, this city has something tangible to offer out-of-state developers – our airport and its buildings.”

## Military roots

BGR’s early appeal was by no means confined to the time savings it offered, with refueling and customs clearance both available from day one. An 11,400ft (3,470m) runway – constructed a decade earlier to accommodate B-52 bombers – proved a big attraction with commercial jet aircraft operators and remains in use today by, among others, the Antonov An-225, the world’s largest airplane.

Today BGR ranks among the main transportation portals for the US military. More than 1.5 million armed forces have passed through its doors bound for or returning from Kuwait, Iraq, Afghanistan and other war zones, each receiving a warm reception or send-off from the all-volunteer Maine Troop Greeters.

Bangor is the closest US port of entry to Europe



Above: **Bangor’s remodeled terminal**  
Left: **The airport is a popular tech stop on the North Atlantic Great Circle route**

## Vital statistics

**Airport:** Bangor International  
**Founded:** 1968  
**Facilities:** Refueling, servicing, federal inspection, pilot lounge, weather briefing, executive conference room

## Breadth of offerings

Its location on the USA’s northeastern seaboard makes it the closest US port of entry to Europe, just 3,120 miles (5,020km) from London. The combination of its world-class service standards and ideal location has led to BGR’s reputation as a leading airport for tech stops on the North Atlantic Great Circle route.

“We’re well known for the efficiencies we offer, both to corporate and executive jet owners, operators and cargo carriers,” says Tony Caruso, airport director at BGR. “Because we have our own FBO called Bangor Aviation Services, we have complete control over how services are delivered and make certain we meet your aircraft ground-handling needs.”

The airport also offers US Customs and Border Protection, US Department of Agriculture, US Public Health Service, and animal and plant quarantine services.

“We also have a great weather record, staying open in the most adverse conditions when others are unable to operate,” adds Caruso. ○

### **BANGOR INTERNATIONAL AIRPORT**

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# BUSINESS AIRPORT INTERNATIONAL

LOOKS AT WHAT THE INDUSTRY IS DOING TO SAVE THE PLANET



**T**he focus of EBACE 2018, which took place in May in Geneva, Switzerland, was on increasing sustainability in the business aviation industry. One part of that was the launch of the sustainable alternative jet fuel initiative (see *Think tank* on page 22). Here's a roundup of some of the other eco-friendly programs and achievements in the industry over the past few months. ○

## Green initiatives



**Who:** Shell Aviation  
**What:** Introduced a first-of-its-kind electric pump jet refueling vehicle in its operations at Stuttgart Airport, Germany  
**When:** July 4, 2018  
**How:** The 20,000-liter refueler features a fully electric fueling system and pressure control. It uses a diesel engine solely for moving around the apron, switching it off while refueling takes place. The vehicle is being piloted with the support of Stuttgart Airport. Following the pilot, Shell Aviation hopes to deploy the technology across its extensive refueling network.


**Who:** Valcora  
**What:** Launched a dedicated biofuel program  
**When:** May 2018  
**How:** The Be Smart, Fly Bio initiative aims to encourage operators to switch to biojet fuel where available. As part of the program launch, new and existing Valcora card holders can purchase biojet fuel through the online platform at selected airports.

**Who:** Victor and Air BP  
**What:** Launched a carbon offset program for private jet charters  
**When:** April 2018  
**How:** Flights booked through Victor with participating operators (using Air BP fuel) are eligible for carbon credits, and these credits guarantee that any carbon emissions are offset through investment in eight independently regulated, carbon-reducing BP Target Neutral projects around the globe.

**Who:** Avantto Aircraft Administration and Air BP  
**What:** Launched a carbon offsetting program for business aviation in Brazil  
**When:** June 1, 2018  
**How:** The carbon emissions relating to the use of all of the aviation fuel supplied by Air BP to Avantto for the next 12 months will be offset via BP Target Neutral, in line with the companies' commitment to a lower carbon future.



**Who:** Granite Air Center  
**What:** Installed solar power technology on the main hangar rooftop at its facility in New Hampshire  
**When:** May 2018  
**How:** The FBO partnered with Norwich Solar Technologies to install the 218.1kW DC, net-metered photovoltaic system that provides Granite Air with long-term energy cost reduction and stability through the integration of clean, renewable solar electricity.

**Your comments**  [www.linkedin.com](http://www.linkedin.com)

What do you think? Are there any other eco-friendly initiatives we should know about? Can the industry do more? We'd love to hear your thoughts on this or any other topic affecting the business aviation industry, so visit [www.linkedin.com](http://www.linkedin.com) and search *Business Airport International* to join in with the debate.



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