

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

Business Airport

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April 2016

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Case study: VIP terminal at Dubai South | Chicago city guide | Interview: Corporate Angel Network

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Welcome

On March 22, Europe was once again shaken by terrorist attacks, this time at Zaventem Airport and Maelbeek metro station in Brussels, Belgium. A total of 32 people died in the worst terrorist attacks the country has ever seen.

Sitting on my sofa watching the events unfold on the news, I couldn't help thinking, 'But how could this happen at an airport?' Working as a journalist in the aviation industry for the past five years, I have followed the many regulatory changes and technological advances that have taken place at airports around the world. In the 14 years since September 11 the aviation industry has taken a firm approach to security and stopping those with ill intentions from boarding aircraft. However, the tragic events in Belgium go to show that more still needs to be done.

Although these events targeted the commercial aviation industry, business aviation also has a role to play in ensuring security on the ground and in the skies. On March 25, 2016, Van Nuys Airport in Los Angeles was the victim of a security breach that saw damage done to an aircraft and flights diverted away from the airport. No one was hurt in the incident, mainly thanks to the rapid reaction of airport staff and close cooperation with the local police department. As Canadian aviation consultant Rob Seaman argues in *Serve and protect* on page 22, "Humans are the lynchpin in security," and appropriate staff training can help business aviation airports and FBOs ensure the safety of their customers and their premises.

But it's not just those with ill intentions that pose a threat to business aviation operations. Nearly a million drones were sold in the USA alone in 2015 and they are becoming increasingly popular with recreational users. As Saul Wordsworth writes in *Asset or intruder?* on page 44, "Small unmanned aerial vehicles are available for as little as US\$50 and can be operated by anyone, without regulatory knowledge or airspace understanding." Some in the industry, including the NBAA, argue that UAVs pose a serious threat to aircraft and shouldn't share the same airspace as manned vehicles until they have equivalent certification and airworthiness standards as other aircraft.

However, drones may also present a business opportunity for operators, with companies such as Australian Corporate Jet Centers using UAVs for environmental studies, mapping and surveillance. "Previously for our environmental science client, we offered a helicopter or Citation with pilot and observer during daylight hours, with weather restrictions. Using a purpose-built UAV means the company can accomplish all its requirements with cost savings of 94%," comments Sam Iliades, CEO of the charter company.

While the industry remains divided on the safety of UAV operations, there is no doubt in my mind that appropriate training and full cooperation is essential to ensure the security of the business aviation industry, both on the ground and in the sky.

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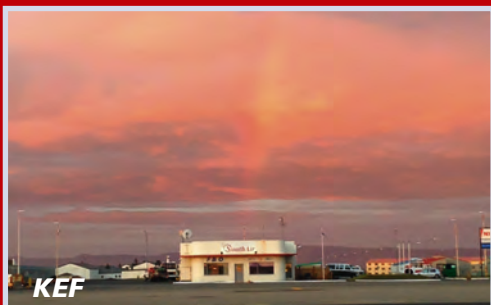
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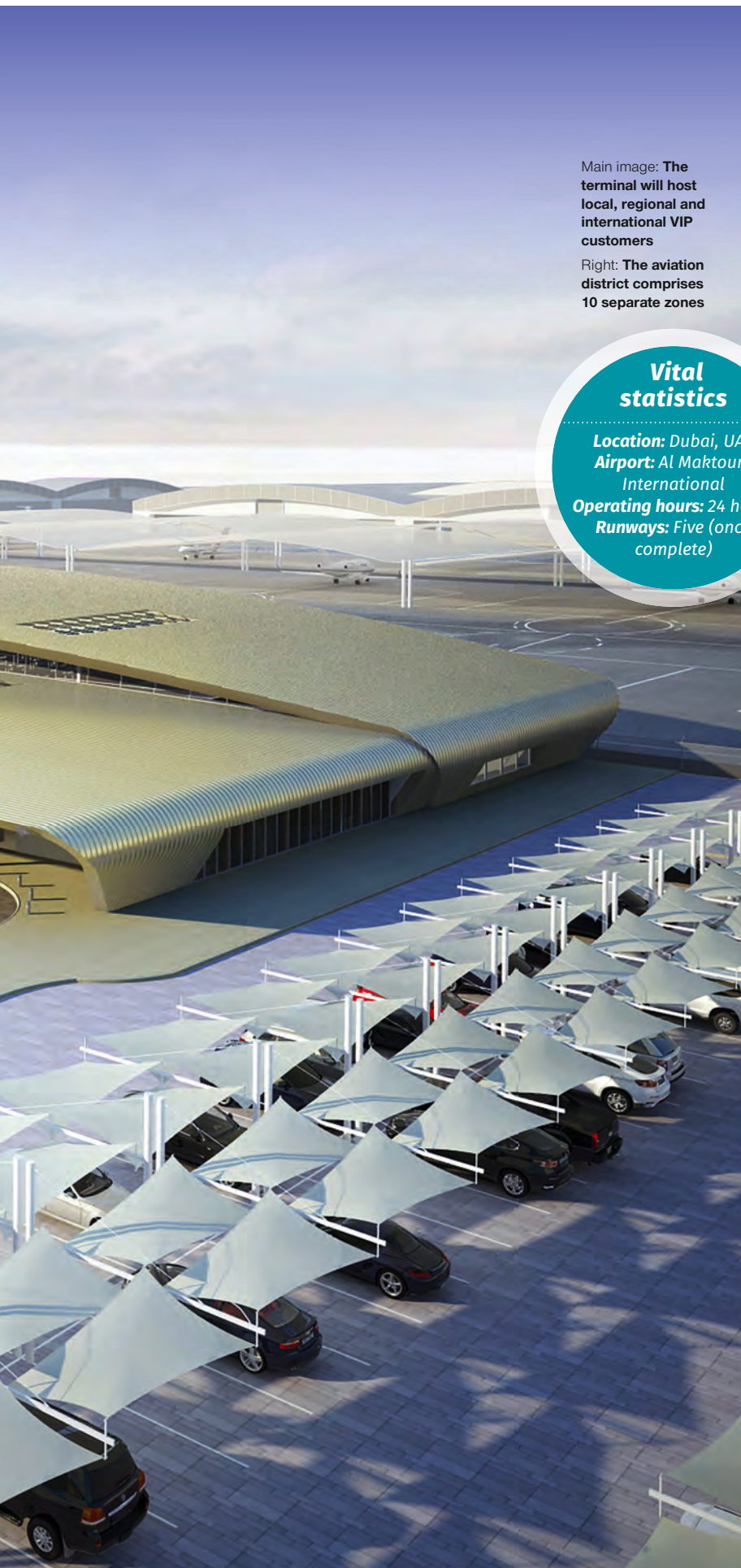
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AVIATION INDUSTRY

A US\$26m VIP Terminal catering specifically to general aviation will open later this year in the Aviation District at Dubai South, a 145km² (56 square mile) masterplanned city currently under development. According to the developers at Dubai South, the facility will be the world's first seven-star VIP Terminal. The 5,600m² (60,300ft²) standalone terminal will be officially launched in Q2 of 2016 and is projected to handle 14,000 flights per annum by 2017.

The terminal will host a number of FBOs, and Dubai South is currently in talks with some globally recognized brands, the names of which will be announced over the course of the year. "Each FBO will provide a range of world-class services 24/7 to support their clients," commented Ahmed Al Ansari, deputy chief operating officer, Dubai South. Services will include VIP ground handling, parking maintenance, cleaning, fueling, aircraft management and catering.





Main image: **The terminal will host local, regional and international VIP customers**

Right: **The aviation district comprises 10 separate zones**

Vital statistics

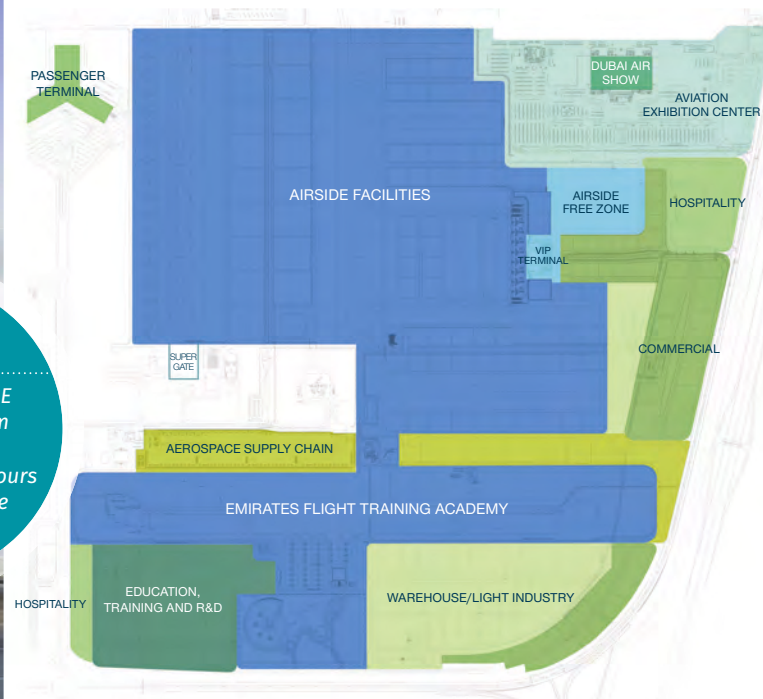
Location: Dubai, UAE

Airport: Al Maktoum International

Operating hours: 24 hours

Runways: Five (once complete)

ARRIVALS LOUNGE



Aerospace hub

Dubai South's Aviation District will host a growing industry

The Dubai South development comprises eight integrated districts: residential, aviation, exhibition, logistics, commercial, humanitarian, golf and Al Maktoum International Airport. The project was launched in 2006 and is owned by the Dubai Aviation City Corporation. It was rebranded in August 2015 from Dubai World Central, or DWC, to avoid confusion with Al Maktoum International, whose IATA code is also DWC. Once complete, Dubai South will have a population of one million and will be the venue for World Expo 2020, an international event expected to draw 25 million visitors.

The VIP Terminal is in Dubai South's Aviation District, which will be a key contributor to the aviation sector in Dubai, according to Tahnoon Saif, vice president, Aviation District, Dubai South. "Dubai South has already garnered a lot of interest from big international aviation players such as Boeing, Lufthansa Technik, Finaero, Emirates Flight Academy, Emirates Flight Catering and several leading FBOs, all contributing to a successful, fully integrated aerospace hub," he explained.

Measuring 6.7km² (2.5 square miles), the Aviation District is divided into 10 zones – airside facilities; education, training, R&D; airside free zone; aviation exhibition center; the VIP terminal; warehousing; aerospace supply chain facilities; Emirates Flight Academy; hospitality; and commercial offices). "The purpose is to create optimal conditions for seamless airside-landside functions for our partner companies," commented Saif.

The Aviation District will be a permanent home for the region's aerospace events, such as the biennial Dubai Airshow and the Middle East Business Aviation Association Conference.

"The purpose of the Aviation District is to create optimal conditions for seamless airside-landside functions"

Tahnoon Saif, vice president, Aviation District, Dubai South



Left: Large windows and bespoke furnishings create a luxury hotel lobby feel

Above: Gold screens provide privacy for customers

According to Ansari, there was a real need for a dedicated general aviation terminal in the region owing to high demand at Dubai International Airport (DXB), the main hub for commercial and business aviation in Dubai. "Business and VIP flights operated at DXB before the launch of the VIP Terminal at Dubai South, but given the shortage of space at DXB and heavy traffic from commercial airliners there, the airport wasn't the most ideal setting for luxurious flying. Moreover, the lack of capacity constrained business aviation growth," he explained.

By opening the new VIP Terminal, the stage is set for rapid growth in the sector. "For the FBOs, the VIP Terminal offers freedom to maximize operating efficiency in terms of optimum slot availability and substantial parking areas," Ansari said. "It will cater to their growth plans as they bring better service to their clients from local, regional and international markets."

On the airside, the VIP Terminal is directly linked to Al Maktoum International's first A380-compatible runway. It will operate 24/7 and has its own dedicated customs and immigration controls. Each of the FBOs will have their own dedicated landside lounge facilities, which allows the FBOs full liberty to extend specialized services to their VIP guests. There are also advanced discussions about establishing a heliport just landside of the VIP Terminal.

Dubai South is linked to Dubai via three highways and a Dubai Metro line will connect both by 2019.

Luxury design

With its seven-star status, the VIP Terminal has understandably been designed to the very highest standards, creating a luxury hotel lobby feel with a discreet and elegant atmosphere.

"We have used the finest materials and finishes – gold leaf motifs, marble, brass and premium fabrics. The walls and ceilings were designed to evoke the spirit of air travel and aircraft. The stretch ceiling is an all-white curvilinear structure that mimics the contours and forms of a plane's fuselage. The gold feature walls incorporate the profiles of private jets as both

"For FBOs, the VIP Terminal offers freedom to maximize operating efficiency in terms of optimum slot availability and substantial parking areas"

Ahmed Al Ansari, deputy chief operating officer, Dubai South

Money maker

Aviation is the engine of Dubai's economic diversification drive

Aviation, with related sectors such as hospitality and tourism, made up about 27% of Dubai's GDP in 2013 and generated 416,500 jobs, or 21% of the total employment in the city.

Travelers from around the world have taken note of Dubai's appeal for its ease of doing business, as well as its ability to act as gateway to the Middle Eastern, South Asian and African markets. Dubai's tourist and business travelers are a diverse group. A total of 9% of Dubai's 2013 visitors came from elsewhere in the UAE, and a further 29% from other Middle Eastern countries. Visitors from Europe accounted for 26% of the total, Asia and Africa 27%, and the Americas and Oceania 10% (rounded to nearest percentage point).

By 2020 the share of aviation and its related sectors is projected to rise to US\$53.1bn, or 37.5% of Dubai's GDP.

(Source: *Quantifying the Economic Impact of Aviation in Dubai*, by Oxford Economics, November 2014)

sculpture and a lighting feature. The stretch ceiling concept incorporates custom lighting; it is one of the largest stretch ceiling structures in the world," Ansari explained.

The terminal includes a selection of furniture featuring the highest-quality fabrics – even the foam padding in the seats was prototyped, tested and modified to ensure maximum comfort. "Side tables are made with selected marble and the table lamps with hand blown glass from the UK," added Ansari.

The terminal also includes glass divider screens comprised of two layers of glass laminated with imported gold translucent fabric to provide privacy while allowing light to pass through. Ansari said, "The unique abstract patterns of the laminated gold fabric echo the sand dunes of the United Arab Emirates. Privacy is critical for clients – the glass screens are positioned carefully to ensure that there are no direct views from one seating area to another."

The terminal will have sufficient room for future expansion to cope with the expected 7% rise in demand for business aviation in the Middle East between 2014 and 2033. ○



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SIGNATURE FLIGHT SUPPORT AND SEA PRIME FORM JOINT VENTURE FOR FBO NETWORK IN ITALY

Signature Flight Support is expanding its European network through a joint venture with SEA Prime. Signature has acquired a 60% share of the Prime Aviation Services FBO network, while SEA Prime will retain a 40% share. SEA Prime is 100% owned by SEA, the airport manager of Milan Linate and Milan Malpensa.

"We believe that this important agreement with Signature Flight Support, the largest player in the industry, will be instrumental not only in accelerating the expected growth at our airports, but also in generating new opportunities and international synergies," commented Chiara Dorigotti, general manager of SEA Prime.

The newly refurbished FBO in Milan Linate and satellite stations in Milan Malpensa, Rome Ciampino and Venice Marco Polo will be added to Signature's European network, which now totals 31 FBOs in EMEA and 199 globally. The FBOs will be fully branded Signature Flight Support locations.



Above: **Milan Linate is one of the top five airports in Europe in terms of general aviation aircraft movements**

Below: **Chiara Dorigotti, general manager, SEA Prime**



"Customers will benefit from the newly refurbished FBO in Milan Linate, with exquisite lounge accommodation, customs and immigration assistance, ground transportation, hotel and conference coordination and VIP security services, coupled with Signature's world-class customer experience and benefits. The perfect match," continued Dorigotti.

The partnership was formed one year after the relaunch of business aviation by SEA at Milan Linate, the busiest business aviation airport in Italy, with more than 22,000 movements per annum. The relaunch saw the refurbishment of the General Aviation Terminal in 2015 and is part of a €25m (US\$28m) investment plan for 2015-2020.

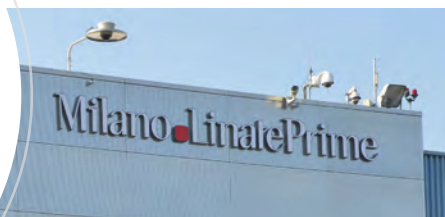
"These investments are a strong sign of our commitment. Last year [2015] marked a turning point for SEA Prime, which saw revenues and profit growth. Today we open a new chapter in which, by combining our assets, and the leadership of our partners, we foresee a new and important role for Italy in the business aviation sector," said Giulio De Metrio, chairman of SEA Prime and COO of SEA.

Mark Johnstone, managing director for Signature Flight Support, EMEA, commented, "Prime Aviation Services is a major addition to the Signature Flight Support network, providing our customers with premier choices for flight support service at four of Italy's top airports. We are proud to add it to the Signature family and will immediately offer our customers visiting our newest region Signature's world-class customer experience and benefits.

"We are confident that this partnership with SEA Prime will raise the bar for business and general aviation handling in Italy." ○

"This important agreement with Signature Flight Support will be instrumental not only in accelerating the expected growth at our airports, but also in generating new opportunities"

Chiara Dorigotti, general manager,
SEA Prime



FBO restyling

Redesigned Milan Linate Prime terminal offers ultimate comfort

Completed in May 2015, SEA Prime's refurbished general aviation terminal at Milan Linate Airport aims to provide visitors with a stylish welcome to the world's fashion and design capital.

The 13,500ft² building connects landside and airside, and features a new 8,000ft² ground-floor lounge that offers an immediate view of the apron and plenty of natural light. The 5,500ft² first floor has been designed to offer customers meeting facilities in a dedicated business center, maximizing both privacy and comfort.

The terminal uses state-of-the-art materials and furniture throughout including porcelain tiles for the floors, reflecting aluminum for the ceilings and Corian on the walls.

Above: **SEA Prime has partnered with BMW to offer transfers from the terminal to the aircraft**





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UPDATED TERMINAL OPENS AT GROVE REGIONAL AIRPORT
AS PART OF A US\$3M IMPROVEMENT PROJECT

Grove Regional Airport in Grove, Oklahoma, has completed a US\$3m airport improvement project including a 5,000ft² terminal building, a taxiway expansion, a connector taxiway and a 100,000ft² concrete apron. The City of Grove has also constructed an access road and a terminal parking lot.

The new terminal includes a pilots' lounge with private bathroom, two separate waiting areas for passengers and the public, a conference room and a storm shelter. The facility was officially opened on April 5, 2016.

Grove was recently reclassified from a municipal airport to a regional airport by the FAA and the Oklahoma Aeronautics Commission. "Other than Grove, northeast

Below left: **The expanded lobby area in the new terminal building**

Below: **Pilots have their own private lounge to relax in between flights**

Below right: **The airport received Federal grants under the Airport Improvement Program to fund the project**

Oklahoma is served by Tulsa International Airport and the regional airports in Miami and Claremore," said Lisa Jewett, airport manager.

"We had outgrown the east side of the airport, so we acquired land on the west side and expanded there," continued Jewett. "We also have more room for hangars on this side for any future expansion. We will continue to look to the future for our customers and the city."

The airport has grown from a 3,500ft grass strip established in 1960 to an airport that covers more than 210 acres and includes two terminals, an FBO, 27 private hangars and 20 T-hangars. Grove Regional Airport is able to serve all general aviation traffic and in the summer between 350 and 500 people use the airport each month.

"We have 70 based aircraft on the field, including the Oklahoma Highway Patrol," Jewett added.

The airport has already noticed an increase in traffic since the new terminal was completed in December 2015, according to Jewett. "We keep our fuel prices comparable to other area airports, plus we provide many services, such as catering, tie-downs, courtesy cars and free-of-charge bottled water. We do not charge landing fees."

The airport is now working with Garver Engineering in Tulsa on a capital improvement plan. Part of this plan includes further expansion on the west side of the airport, with more private hangars and T-hangars. "We would like to extend our runway to 6,000ft at some point, but that will be several years in the future," said Jewett. ○

"We keep our fuel prices comparable to other area airports, plus we provide many services, such as catering, tie-downs, courtesy cars and free-of-charge bottled water"

Lisa Jewett, manager, Grove Regional Airport



Vital statistics

Location: Oklahoma, USA
Operating hours: 8:00am-5:00pm
Runway length: 5,200ft
Apron: 119,525ft with 40 tie-down spaces for based and itinerant aircraft
Fuel: Jet A and Avgas/100LL

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Desmond O'Flynn

BUSINESS AIRPORT INTERNATIONAL GETS TO KNOW THE
CHIEF EXECUTIVE AT **WATERFORD AIRPORT** IN IRELAND



How did you get involved in aviation and how has your career evolved?

My first job in aviation was as marketing manager at Ireland West Airport Knock in 2004. After that, I worked as the CEO/director general of two regional French airports: Deauville-Normandie and Dijon-Bourgogne. I have worked as CEO at Waterford Airport since November 2013.

What are the best and worst elements of your job?

The best elements of my job are the variety of issues that have to be dealt with on a daily basis; and in general, the ever-changing aviation landscape – there really is never a dull moment! The worst element of the job is the ever-increasing amount of EU regulatory oversight in the areas of safety, security and air traffic control at airports, even at a small regional airport like Waterford.

What makes a successful business aviation airport/FBO?

There are four main things that make a successful business aviation airport: service, hospitality, ease of use, and convenience. We offer all four at Waterford.

How do you stand out from your competitors?

Waterford Airport, located in the southeast corner of Ireland, is a small regional airport and so the journey time through the airport is very short, whether you are

an arriving or a departing visitor. The airport is also less than 15 minutes from the main road network in Ireland. I would like to think that our staff are very friendly and will go the extra distance to look after all of our visitors, whether airside or landside.

Finally, the airport also gives visitors access, within minutes, to an almost unknown but beautifully scenic region of Ireland, known as the Copper Coast.

What is your dream holiday destination and what type of aircraft would you fly on to get there, if money were no object?

It would probably be Vietnam/Cambodia in a Bombardier Global Express. Would it make it to Vietnam from Europe without a refueling stop? If not, then a stopover in Dubai or Abu Dhabi wouldn't be so bad!

What is the next trend affecting the business aviation industry?

The growth and greater use of smaller business jets. Jets carrying four to six passengers are now relatively more affordable and can land at smaller airports, thus allowing busy business people to avoid the larger airport hubs that have become more congested in recent years.

What's your next step at Waterford Airport?

We plan to increase the length of the runway at Waterford so that the airport can welcome any size of business jet in the coming years. ○

"The best elements of my job are the variety of issues that have to be dealt with on a daily basis and, in general, the ever-changing aviation landscape"



Above: **Waterford Airport** is open 6:00am-8:00pm in summer and 7:00am-9:00pm in winter

Right: **The airport** began operations in March 1982





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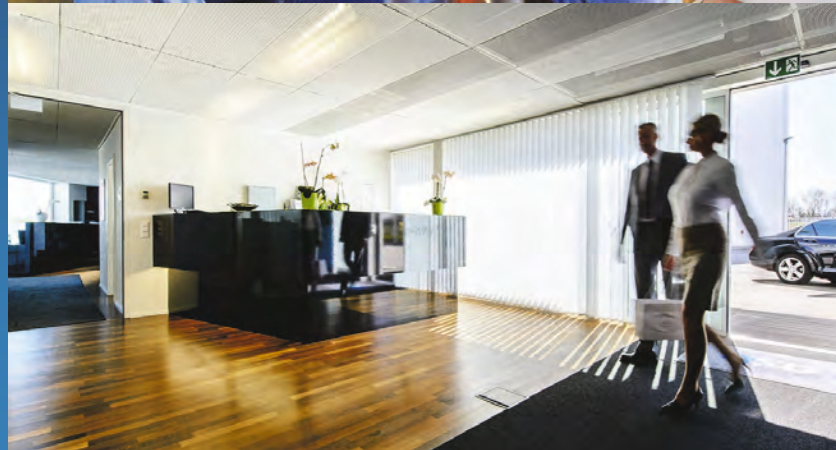
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“Whether the UK’s business aviation market benefits from Brexit reflects the wider debate of Brexit’s overall economic impact”

Richard Koe



Richard Koe, managing director of WINGX-Advance, examines what the UK’s exit from the European Union would mean for business aviation operators

The long-promised referendum on the UK’s continuing membership of the European Union is due in June this year, and both sides – those in favor of remaining and those preferring ‘Brexit’ – are now openly campaigning. The latest polls indicate that both outcomes are equally possible.

Most businesses and their collective industry sectors have realized they need to evaluate the potential impact on their markets of an increasingly realistic Brexit scenario. The business aviation industry is far from exempt from this consideration. Over half the business jet flights from the UK go to destinations in Europe, just as half the UK’s trade in goods and services is with its EU partners. What’s more, London is Europe’s principal hub for business aviation activity, primarily because it is also Europe’s foremost financial center as well as being the residence of the global ultra-rich. Meanwhile, as an EU member, the UK is fully compliant with EASA regulations. All this complexity is bound to change in the event of Brexit.

The UK is one of Europe’s most important business aviation markets. France and Germany have much larger general aviation industries, but the UK leads the field when it comes to purely business jets, in terms of fleet size and activity. Last year, for example, the UK had the largest commercial (AOC, including charter) business jet activity of any European country, equivalent to 65,000 flight hours on departures. The UK also has the lion’s share of employment linked

to business aviation manufacturing and maintenance operations, resulting in more than US\$1.6bn in wages and salaries.

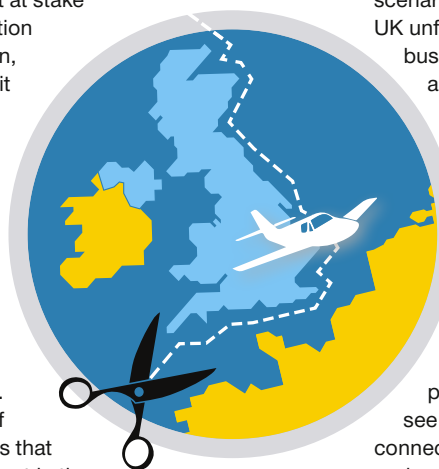
The UK has also had the best of Europe’s recent weak recovery in business aviation, reflecting its relatively stronger economic performance compared with the rest of Europe. As of February 2016, the last 12-month growth trend for UK business aviation activity was over 3%, compared with 0.2% for the rest of Europe.

While it’s clear there’s a lot at stake in terms of the UK’s contribution to European business aviation, whether it benefits from Brexit reflects the wider debate of Brexit’s overall economic impact. But neither side can contend that the transition would be smooth. Even in the last few months, there has been a slide in high-end London property prices, a sharp devaluation in sterling, and a rise in government borrowing costs. Ernst & Young’s barometer of business investment indicates that over 30% of planned investment in the UK might be shelved or postponed in the event of Brexit. Growth in flight activity has also flattened in the UK this year.

The pessimistic scenario anticipates that Brexit would lead to a severe deterioration in the UK’s terms of trade with the EU. The consequence in terms of shifting investment out of the UK and, more importantly, the potential exodus of the jet-setting ultra-rich

from London, would undoubtedly be damaging for business aviation. There is also the question of traffic rights, which UK scheduled and non-scheduled commercial operators would need to renegotiate. There were over 6,000 commercial business jet flights operated by G-register operators within Europe last year, all of which would be subject to air freedom rights.

There is of course a more optimistic scenario for Brexit. This would see the UK unfettered from what most small businesses consider burdensome and anti-competitive regulation from Brussels. However, this is unlikely to apply to EASA regulation, as the UK would almost certainly have to abide by EASA’s rules in exchange for maintaining its traffic and operating rights in the single market. But it is arguable that if Brexit gave impetus to the UK’s competitiveness as a global trade partner, business aviation would see the benefits in the increased connectivity between the UK and other regions of the world. It is these business aviation connections that have proved most resilient throughout the stagnant European aviation market since 2008. ○



Above: **The UK will decide whether it stays in the EU on June 23, 2016**

Richard Koe is managing director of WINGX-Advance, an independent business aviation specialist with expertise in business intelligence. The company provides data sourcing and analysis to inform commercial operations and strategy. Its focus is the real-time tracking and analysis of all aircraft movements and utilization.



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Money **maker**

For those looking to expand their
business operations in the USA,
Chicago may be the ideal location

Words | **Hazel King**



Vital statistics

Airport: O'Hare International**Operating hours:** 24 hours**Facilities:** Fixed base operation by Signature Flight Support**Fuel:** 100LL, JetA and JetA+**Runway length:** Eight runways between 7,500ft and 13,000ft**Distance from central business district:** 17 miles**Airport:** Midway International**Operating hours:** 24 hours**Facilities:** Fixed base operations from Atlantic Aviation and Signature Flight Support**Fuel:** 100LL and JetA1+**Runway length:** Five runways between 3,859ft and 6,522ft**Distance from central business district:** 11 miles**Airport:** Gary/Chicago International**Operating hours:** 24 hours**Facilities:** Fixed base operations from Gary Jet Center and B Coleman Aviation**Fuel:** Jet A, Jet A with additive, 100LL**Runway length:** Two runways measuring 8,859ft and 3,603ft**Distance from central business district:** 30 miles

Chicago is the USA's biggest financial center after New York City and plays an integral role in the economy of the whole country. "It is a central point for trading and distribution and it has

always played that role," explains Dave Coleman, head of aircraft sales and acquisitions at General Aviation Services and a member of the board of the Chicago Area Business Aviation Association (CABAA). "Chicago is at the heart of business in the USA and it is quite likely that any item that has been logistically moved throughout the USA has passed through Chicago's airports, rail or roadways."

The city has long been a hub of international business activity, and is home to more than 1,800 overseas-based companies and more than US\$100bn in foreign direct investment. According to data from World Business Chicago, a public-private partnership between the city and the business community, Chicago-area business expansions brought more than 21,700 new jobs and US\$6.8bn in investment to the region in 2014, and the city retained its position among the top 10 cities worldwide in terms of current performance and future potential in business activity, human capital, information exchange, cultural experience and political engagement.

"One of Chicago's strengths is its diversity in the economy and the industries represented," says Michael L Reever, vice president of government relations at the Chicagoland Chamber of Commerce. "Recently there have been corporate headquarters relocations to Chicago by big companies such as Kraft Heinz, GE Healthcare and ConAgra Foods. The reason for that is our well-educated workforce – Chicago has some of the best universities in the world."

"The relocation of these major companies to the area breeds possibilities for an increase in corporate flight departments," confirms John A Girzadas, president of B Coleman Aviation, which operates out of Gary/Chicago International Airport.

"Chicago is at the heart of business in the USA and it is quite likely that any item that has been logistically moved throughout the USA has passed through Chicago's airports, rail or roadways"

Dave Coleman, head of aircraft sales and acquisitions, General Aviation Services

**Visiting the city**

Chicago's diversity also applies to its cultural sector and the thriving art, music and hospitality scene. "We have great free cultural activities throughout the city and downtown, from jazz and blues festivals to the Taste of Chicago food festival, that attract people to come to live and work here," Reever enthuses.

Chicago is also an easy city to travel to and around, with six airports within 50 miles of the city – O'Hare, Midway, Gary/Chicago, DuPage, Waukegan National and Chicago Executive – and an efficient public transportation system. "Whether you're living in the suburbs or city center, it is important for the business community to be able to transport people to and from work efficiently and safely. We have a great public transportation system connecting the suburbs to the city and within the city center itself," Reever says.

Gary/Chicago International

Chicago has seen an uptick in aviation traffic, with 7.9% growth reported at the city's leading business aviation airport, Gary/Chicago International, in 2015, representing 23,785 aircraft movements compared with 22,029 in 2014. The number of airport tenants grew from 93 in 2014 to 107 in 2015, including the addition of Chicago Helicopter Experience.

Vital statistics

Airport: Chicago Executive

Operating hours: 24 hours

Facilities: Fixed base operation provided by Signature Flight Support, Hawthorne Global Aviation Services and Atlantic Aviation

Fuel: 100LL and Jet-A1+

Runway length: Three runways measuring 3,677ft, 4,415ft and 5,001ft

Distance from central business district: 26 miles

Airport: DuPage

Operating hours: 24 hours

Facilities: Fixed base operation provided by DuPage Flight Center

Fuel: Jet A and 100LL

Runway length: Four runways between 3,399ft and 7,571ft

Distance from central business district: 42 miles

Airport: Waukegan National

Operating hours: 24 hours

Facilities: Fixed base operation provided by Signature Flight Support

Fuel: 100LL and Jet A

Runway length: Two runways measuring 6,000ft and 3,751ft

Distance from central business district: 44 miles


DuPage Airport is a dedicated general aviation facility offering a first-class Flight Center



Just 30 minutes by car from downtown Chicago, Gary/Chicago International Airport is an ideal destination for business aviation operators. There are no commercial operations at the airport, meaning less congestion for business aviation customers, and ground handling and charter services are offered by the two FBOs on site – Gary Jet Center and B Coleman Aviation.

The Gary Jet Center is a 25-year-old, privately owned aviation services company, providing FBO services as well as aircraft management, maintenance and charter services to a variety of Chicagoland customers. The company offers over 110,000ft² of hangar space and can accommodate and service the corporate jet market in the Chicagoland area. In addition, Gary Jet Center holds two FAA Part 145 Repair Station Certificates and an FAA Part 135 Charter Certification with International Operation Specifications, enabling it to meet the highest requirements of the corporate and general aviation industries. It is also involved in the delivery of the first HondaJet (see *Welcoming the HondaJet*, on page 20).

B Coleman Aviation began operations at the airport in 2013 and offers FBO and MRO services as well as jet charter and asset management services through its subsidiary, Coleman Jet, an FAA Part 135 charter operator with international operations specifications. “Coleman Jet provides the opportunity to generate revenue and offset the cost of aircraft ownership,” says Girzadas. “We charter

trips to get you to your destination quickly and safely in one of our well-maintained luxury business jets – a Gulfstream G IV, a Challenger 601, a Bombardier Learjet 55 or a Bombardier Learjet 35.”

The company offers a 25,000ft² heated hangar and offers maintenance support 24/7. “We also have a dedicated full service MRO (FAA Part 145 CRS #8FOR228C) in West Palm Beach, Florida, and perform AOG repairs all over Florida and the Caribbean,” adds Girzadas. The company’s state-of-the-art FBO facility includes a 5,000ft² terminal and a rampside aircraft canopy that can handle any business jet. “We have completed a fuel farm expansion to provide plenty of storage for the demands of our growth. We have also partnered with a local helicopter charter operator to provide transfers to and from B Coleman’s FBO and their facility in downtown Chicago. This transfer takes eight minutes and has been a very attractive addition for some of our customers who have to be in and out of Chicago as efficiently as possible.” Future investments include expanding the hangar space to 146,000ft² across four new state-of-the-art hangars.

Airport developments

Other airports in the region have also been upgrading their facilities to cope with a rise in traffic. CABAA’s Coleman explains, “DuPage [in West Chicago] has recently undertaken a considerable number of improvements to



Welcoming the HondaJet

Gary Jet Center is managing, piloting and maintaining the first HondaJet

In February 2016, Gary Jet Center at Gary/Chicago International Airport announced it is managing and hangaring the first delivered HondaJet aircraft.

Additionally, two Gary Jet Center pilots were the first to be type-rated on the aircraft and attended pilot training with a full-motion, Level D flight simulator installed at the Honda Aircraft Training Center in Greensboro, North Carolina. A Gary Jet Center maintenance technician also attended and completed the first HondaJet 420 Initial and Avionics Maintenance Training program, enabling Gary Jet Center to provide maintenance and service for the HondaJet 420.

"We are very excited to be connected to both the first aircraft type built by Honda Aircraft Company and the first HondaJet delivered to an end customer," says Gary Jet Center president and CEO Wil Davis. "Gary Jet Center provides aviation services to a variety of customers and aircraft types, and we welcome the opportunity to add this HondaJet 420 to our fleet."

The HondaJet is the world's most advanced light jet, with revolutionary technology and design innovations – including the over-the-wing engine mount design – that help it achieve a higher speed, superior fuel efficiency and a more spacious cabin than conventional aircraft in its class.

its facilities to promote business aviation. It is adding new hangars for more tenants, for example. Chicago Executive has just added an engineered materials arrestor system to the runways, which enables operators to take advantage of the full runway length without the risk of overrunning.

"There are a lot of things going on around the metropolitan area to promote business aviation in Chicago. We do have some challenges at other airports that we're working on, but the reliever airports outside Chicago O'Hare and Midway are doing exceptional jobs in improving their facilities for business aviation."

Operational challenges

Chicago Midway International is an attractive option for business people visiting the city, owing to its close proximity to 'the Loop', the city's central business district. However, the focus by the Chicago Department of Aviation (CDA) is on making the airport more attractive to commercial airlines, to the detriment to business aviation operators. "Chicago Midway International Airport is a concern for the CABAA," says Coleman. "It had always been the prime business aviation airport in Chicago for many years before the commercial airline [Southwest] came in. When Southwest came in it caused a tremendous revitalization of the commercial operations at the airport and business aviation has continued to be a very strong presence, but recent actions by the city in terms of how it views business aviation at Midway has given us grave concern about the future of business aviation operations."

For Coleman and the CABAA, the main concern is the lack of opportunity for existing business aviation operators to gain long-term ground leases. "If you're only given a short ground lease, how do you justify spending millions of dollars on improving your facilities? You can't," he argues. "I think the city would like to see a lot of the Midway-based operators go elsewhere."

O'Hare International is Chicago's largest airport and handled a total of 66,998 aircraft in January 2016, 750 of which were domestic general aviation flights. There were no international general aviation flights that month. "O'Hare is also very constricted and constrained for business aviation, although with the three new runways there really is no limit on the amount of traffic at this point," Coleman says. "The only real challenge for business aviation at O'Hare is the cost. It's really quite expensive to operate there – this is mostly due to costs imposed by the CDA and high overheads that need to be spread out among the limited business aviation flights."

Flight routes

According to Coleman, the biggest challenge for operators who don't normally fly into and out of Chicago is understanding the city's complex airspace. "There are preferred routes into and out of the city that are for business aviation operators but are still in the process of being published," he adds. The CABAA's air traffic control committee has been working closely with the FAA to generate specific procedures that will provide business aviation operators with more succinct routes to get into and out of the airports. These new flight routes and the work the CABAA continues to do with the local community should encourage more people back into the business aviation industry. "We've come through a very difficult time in business aviation, not only in Chicago but around the world," says Coleman. "But I'm pretty bullish about growth in Chicago because aircraft values have slid and the cost of entry into business aviation has never been lower."

"The more educated and knowledgeable business aviation operators are about how to do it right, the healthier our industry will be. That's a role an organization like the CABAA plays – if we have more people coming to our events, the healthier and stronger the industry will be," he adds. ○

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Serve and

The business aviation industry must take a proactive approach to security to ensure it doesn't become a sitting target for terrorists

Words | Kathryn B Creedy

T

errorism was once again brought to the forefront of the aviation industry on March 22, 2016, when two bombs were set off in the landside area of Zaventem Airport in Belgium, killing 11 people and injuring dozens of others.

Another recent incident occurred in October 2015 when Metrojet flight 9268 from Sharm el-Sheikh, Egypt to St Petersburg, Russia was downed over northern Sinai following a bomb explosion. Of course, the September 11 terror attacks in 2001 are probably the most infamous example of aircraft being used to cause mass destruction.

In 2008 the UK government's independent security consultant, Lord Carlile, raised the issue of general aviation aircraft being used as terrorist weapons. In a general report on all threats to security he cited "the potential use of light aircraft as vehicle bombs against places of public aggregation", adding that this was of serious concern to police.

According to an article in *The Telegraph* in June the same year, the police were concerned about lax security at smaller airports and the thoroughness of checks made on executive jets flying into and out of British airspace.



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Increase awareness

Unfortunately it can take an incident to occur to make people aware of the dangers

"My guys never got the importance of security until we had a few incidents," says airport security consultant Rob Seaman. "We once had an individual who was mentally ill and tried to break in because he needed a helicopter to save President Kennedy."

Seaman recounts another incident that showed how things have changed: "Someone managed to gain access to the FBO after it had been locked up for the night. Security cameras feed through to multiple locations and the line crew was alerted. He was testing the doors and gates and even going behind the desk and

pushing buttons to see which one released the door. Three airport workers responded and the intruder even started asking questions about how many staff were on the airport, what hours they worked, how many students and aircraft are in the flight school."

Seaman continues, "After escorting him out, they happened to see a couple of police cars in the parking lot. They found out that the guy had an arrest warrant for similar behavior at other airports where he also had gained access to the airside. Whether you are a small or a large airport, you are just as likely to be a target."

"The business aviation industry is doing a great deal, from physical measurements, increasing awareness and conducting threat assessments, to things being done in the aircraft itself, to ensure the safety of passenger, crew and the general public"

Morris McGowan, Command Consulting Group

However, those in the general aviation industry have argued vehemently against Lord Carlile's concern. "There has never been a terrorist-related incident with business aviation," says NBAA spokesman Dan Hubbard. "Shortly after 9/11, government security officials commissioned a study on business aviation security and found that business aviation lends itself to increased security. It is a relatively small environment and people at the airport are familiar with one another, so there is a heightened recognition if something doesn't look right."

"General and business aviation is not without threats," counters Morris McGowan, partner at global security and intelligence firm Command Consulting Group. "But those who wish to do us harm are focused on the commercial industry. Even so, the business aviation industry is doing a great deal, from physical measures, increasing awareness and conducting threat assessments, to things being done in the aircraft itself, to ensure the safety and security of passengers, crew and the general public."

Vigilance is key

While business aviation may be less vulnerable to terrorist attack, airports, FBOs and general aviation pilots all have a responsibility in keeping it that way. Most general and business aviation facilities have adopted mandatory and voluntary measures to ensure aircraft, airports, crews and passengers are safe. The industry now has tamper-proof pilots' licenses as well as direct, year-round access to the TSA to report suspicious activity (see *See Something, Say Something* on page 26). Financial institutions are also required to submit transaction information to security authorities to review for the possibility of threat from purchasers of aircraft. In addition, charter companies have to submit their manifests to the TSA to vet passengers against the terrorist watch list, and all general aviation pilots are vetted by the TSA.

Although security measures have evolved, Rob Seaman, an aviation consultant at a Toronto, Canada business aviation airport that cannot be named, says: "I've been doing FBO training for 20 years. FBOs feed into the National Airspace System (NAS), so they have to be security conscious and in the past most of them weren't. But we've had an influx of rules and now airports are fenced and have

controlled gates, but that is not enough. You have to have constant vigilance to look for the unusual. The first thing I did when I came to this airport was change all the gate codes, which hadn't been changed for 15 years."

The airport in Toronto has flight training and 300 based aircraft, ranging from private to very large corporate jets, yet when Seaman started, no one supervised security. "We had two incidents in a year that woke everyone up and suddenly everyone got it," he says. "One was a tenant with a broken gate who just left it open without telling anyone. Then there was the lady driving down the runway thinking it was a shortcut to where she lived. If anything happens more than once it is a major issue."

Security breach

Intruder gains access to airfield at Van Nuys Airport in Los Angeles

On March 25, 2016, 45-year-old Jesus Ortega gained access to the airfield at Van Nuys Airport (VNY) by ramming his vehicle through a tenant access gate. He drove in a westerly direction to the east access road where he was seen by air traffic control staff in the VNY's tower.

Two airport operations staff conducting airfield inspections saw Ortega and attempted to stop him. At one point, Ortega drove across the runways and stopped, then put his vehicle into reverse, backing into a small single engine Mooney propeller plane.

With the assistance of Airport Police and Los Angeles Fire Department personnel, Ortega was taken into custody. He has been booked on two counts of felony vandalism and one count of trespassing onto an airfield. There were no reported injuries.

During the incident, air traffic control diverted a plane on final approach. The runways were inspected and re-opened shortly after the incident ended.



Diana Sanchez, public and community relations director at the airport said, "VNY's top priorities are safety and security. Through a well-coordinated effort between Los Angeles Airport Police, Los Angeles Police and Fire Departments, and Van Nuys Airport operations personnel, the incident was responded to quickly and was secured with no injuries and minimal impact to the airport."

“You have to understand that a company is putting some of its most valuable assets on an aircraft – its employees – and there is no incentive to take unnecessary risk”

Dan Hubbard, spokesman, NBAA

Communication is one of the most important things an airport can do to maintain security. “We had an aircraft owner who had scheduled a photo shoot without telling us,” Seaman recalls. “All of a sudden there were guys with M16 rifles on the ramp. They were fake but they were standing there doing a photo shoot. The owner didn’t get it.”

Technology

For airport security, the key is not just about securing facilities and intrusion detection, but about making sure that third-party services such as flying schools, charter operations, freight and air ambulance services, as well as fuel and catering suppliers, also have the right technology.

Christopher Bidwell, vice president for security at ACI-NA, explains, “They each have their own security responsibilities. Airports will have multiple layers of integrated procedures and technology. Most have fencing or some other barrier for intrusion prevention. Others will monitor the perimeter, have patrols, CCTV, lighting and active systems, such as smart fencing that will sound an alarm if someone compromises a fence and will show where it is. The FAA also uses ground radar to identify individuals or wildlife in certain areas of the airport.”

So should all business aviation airports be investing in top-level security systems? “It depends,” says McGowan. “In many instances you may not need a lot of security measures. A lot depends on what the airport looks like, what size aircraft it has, where it is located, the complexity of traffic and whether or not it has cargo facilities. There are tons of variables.”

Threats from below

Security goes beyond the airport environment, extending the entire length of the flight route and taking into consideration conflict zones. “Route safety is a huge concern but these conflict zones are well known,” explains NBAA’s Hubbard. “Aviation authorities regularly issue guidance and it is taken very seriously. You have to understand that a company is putting some of its most valuable assets on an aircraft – its employees – and there is no incentive to take unnecessary risk. In addition, business aviation mission profiles are not published. If someone has a nefarious intent, it is far more difficult to put a plan into action with a business aircraft.”

People power

Both business and commercial aviation also have a new weapon that limits the terrorist’s ability to succeed.

“Before 9/11, terrorists counted on passengers remaining inactive during an event,” continues Hubbard. “But we saw at that time that passengers are willing to take action and have also seen it in incidents since then.”

“That is why humans are the lynchpin in security,” argues Seaman. “We train staff to react to an incident, although we have guidelines to keep them safe. No one is allowed to confront an intruder on their own. We use a code word over the radio, and when anyone hears it they drop everything and respond with a show of force. We are also much more attentive to the type of questions suspect people ask, especially about personnel and security. That prompts us see them off the property and provide a picture to authorities for follow up.”

Reduced convenience?

Though the business aviation community argues that it is more secure than its commercial counterparts, more needs to be done. Seaman explains, “We don’t want to trust too much. For instance, say someone we know brings his friend out to take a flight. We think that since he knows this guy, he’s okay. We need to dig down for more information. In Canada we don’t have the level of security that business aviation airports in Europe have, where there is full baggage and pre-screening to the same level as commercial airports. I fear that we will eventually have to put this in place, which will take away the personal level and interaction we have today, such as the ability to load an aircraft from a car.”

So has increased security made business aviation less convenient for passengers? Not according to Hubbard. “First of all, many of these procedures are not new to business aviation travelers and there has been no evidence that they deter such travel.”

However, Seaman sounded a warning that general and business aviation ignores security at its peril: “If we don’t take security seriously, someone else will do it for us and we don’t want that. As long as we elevate the level of security awareness and action beyond what is expected, we are showing that we are responsible and involved, and don’t need government help with it, thank you very much. We have to help ourselves.” ○

See Something, Say Something

AOPA encourages a neighborhood watch approach to airport security

The Aircraft Owners and Pilot Association (AOPA) takes a multilayered approach to security, according to AOPA vice president Craig Spence. In fact, following 9/11 AOPA created its Airport Watch program, which has since been adopted across the industry.

“It was based on the neighborhood watch program,” explains Spence. “Who are better able to spot something unusual or different than the people there every day?”

The program has since evolved into See Something, Say Something and has been expanded to sports and concert venues, rail stations and seaports. “Taking a fresh look at how you do things always improves security,” says Spence. “We even advise FBOs to reach out to local law enforcement and provide a master key so that officers have a warm place to complete reports. That way you’ve got almost 24-hour coverage at no cost to the individual FBO.”

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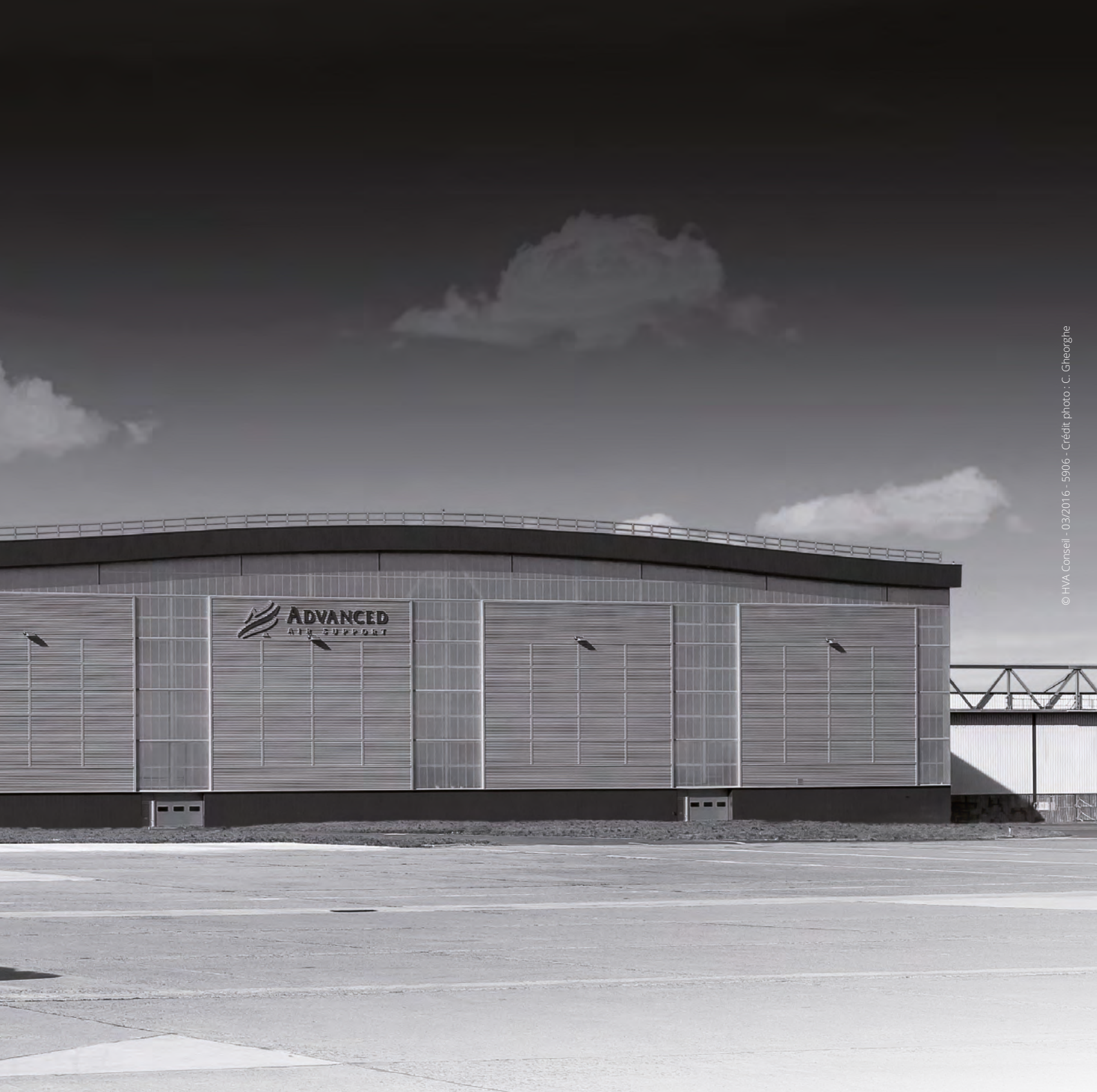
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France is gearing up to host the Euro 2016 football tournament this summer. How will the country's airports handle an influx of fans during one of its busiest times of the year?

Words | **Dan Smith**

Ready for

Le Rendez-Vous

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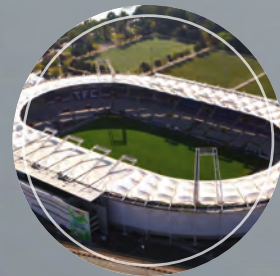
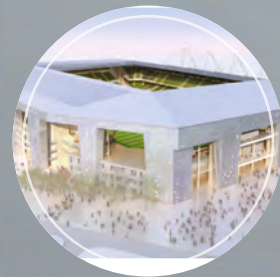
his summer, France will host the Euro 2016 football tournament from June 10 to July 10. Ten stadiums in nine cities across the country (Bordeaux, Lens, Lille, Lyon, Marseille, Nice, Paris, Saint-Etienne

and Toulouse) will welcome the 24 competing teams and more than 2.5 million fans from across the continent. With an expected €1bn (US\$1.1bn) to be spent over the duration of the tournament, Euro 2016 – 'Le Rendez-Vous' – will mean big business for France.

France is already Europe's biggest private aviation market, with more than 120,000 aircraft movements annually, but while Paris is popular with business aviation travelers throughout the year, other parts of the country have definite peak seasons. France's Mediterranean coast, for example, experiences peak demand during the summer months. The influx of Euro 2016 visitors at the start of this busy summer period is likely to affect traffic at southern airports such as Cannes, Nice and Marseilles.

"France has a lot of airports, so there is choice," notes Patrick Margetson-Rushmore, chief executive of London Executive Aviation (LEA), which regularly flies travelers to the country. "For example, you could fly to Cannes for the games in Nice, or Grenoble to get to Lyon. It will just take a little longer to get to the game."

Airports near the eastern border with Switzerland are very popular in the ski season due to their proximity to French and Swiss ski resorts in the Alps, so additional traffic from the Euro 2016 tournament shouldn't be an issue as they are quieter in the summer months. "Winter accounts for around 80% of our business," explains Marie-France Memeteau-Broaly, managing director of the SPACE FBO at Lyon's St Exupéry Airport. The airport is just 10 minutes from the Stade de Lyon, which will host four group matches





Lille

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02/20 – 5,183ft

Lens

Stadium: Stade Bollaert-Delelis

Capacity: 35,000

Nearest airport: Lille-Lesquin International

Distance to airport: 21 miles

Airport operating hours: 6:00am-10:00pm
(24 hours on request)

Runway length: 08/26 – 9,268ft;
02/20 – 5,183ft

Paris

Stadium: Parc de Princes

Capacity: 45,000

Nearest airport: Paris-Orly

Distance to airport: 11 miles

Airport operating hours: 6:00am-11:30pm

Runway length: 02/20 – 7,874ft; 06/24 –
11,975ft; 08/26 – 10,892ft

Bordeaux

Stadium: Stade de Bourdeaux

Capacity: 42,000

Nearest airport: Bordeaux-Mérignac

Distance to airport: 10 miles

Airport operating hours: 24 hours

Runway length: 05/23 – 10,171ft;
11/29 – 7,923ft

Saint-Etienne

Stadium: Stade Geoffroy Guichard

Capacity: 42,000

Nearest airport: Lyon-Bron

Distance to airport: 41 miles

Airport operating hours: 6:30am-10:30pm

Runway length: 16/34 – 5,971ft

Toulouse

Stadium: Stadium de Toulouse

Capacity: 33,000

Nearest airport: Toulouse-Blagnac

Distance to airport: 7 miles

Airport operating hours: 24 hours

Runway length: 14L/32R – 9,842ft;
14R/32L – 11,482ft



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Executive Handling in Lyon

Saint-Denis

Stadium: Stade de France

Capacity: 80,000

Nearest airport: Paris-Le Bourget

Distance to airport: 5 miles

Airport operating hours: 24 hours (no night take-off permitted for jets, night landing restrictions for Chapter 3 aircraft)

Runway length: 03/21 – 8,743ft; 07/25 – 9,843ft; 09/27 – 6,053



Lyon

Stadium: Stade de Lyon

Capacity: 59,000

Nearest airport: Lyon-Bron

Distance to airport: 4 miles

Airport operating hours: 6:30am-10:30pm

Runway length: 16/34 – 5,971ft



Marseille

Stadium: Stade Vélodrome

Capacity: 67,000

Nearest airport: Marseille-Provence

Distance to airport: 19 miles

Airport operating hours: 24 hours

Runway length: 13L/31R – 11,483ft; 13R/31L – 7,776ft



Nice

Stadium: Stade de Nice

Capacity: 35,000

Nearest airport: Nice Côte d'Azur

Distance to airport: 4 miles

Airport operating hours: 24 hours

Runway length: 04L/22R – 8,432ft; 04R/22L – 9,711ft



“Parking and slots availability will be limited, so we encourage our clients to send their requests as soon as they can to avoid disappointment”

Karim Berrandou, CEO, G-OPS

Located at the heart of Lyon and close to the Alps ski resorts, Lyon-Bron Airport is exclusively reserved for business aviation operations



Aéroports de Lyon / O Chassagnole

and two in the knockout rounds. “There is also a rail station inside the airport that provides direct fast train access to Paris and venues in the South of France,” she adds.

The championship will involve the entire Rhône-Alpes region and some teams located in Savoie will use Chambéry Savoie Airport as their base airport, which offers 441,000ft² of parking space for all aircraft types.

During the tournament, Chambéry Savoie Airport, which is operated by VINCI Airports, will be easily accessible for all flight types. “Our team is ready to welcome and assist all companies and passengers in the dedicated terminal. The VINCI Airports network is our strength and enables us to coordinate operations with the group’s 11 airports across France,” notes Iryna Tissot, manager of business aviation development for airports in the southeast of France.

Other airports close to host cities, such as Albert-Picardie, situated 47 miles from Lens, are not expecting a huge uptick in traffic. “We are not sure that the event will really increase our activity,” comments CEO Jean-Charles

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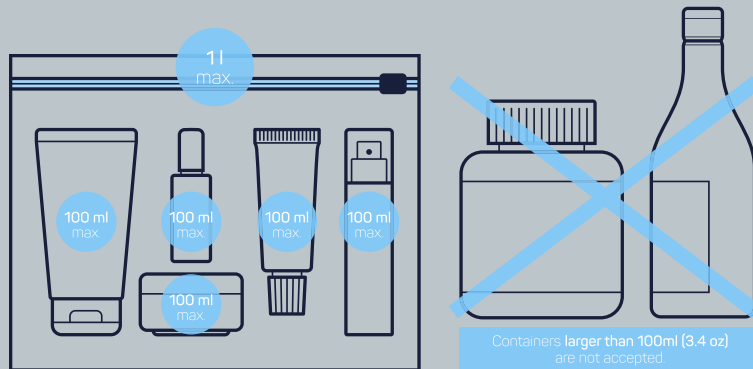
Stricter control

Aviation security has been stepped-up nationwide after the Paris attacks

Following the terror attacks in Paris in November 2015, life in the capital has largely returned to normal. Aviation, however, faces much stricter controls than previously, according to Marie-France Memeteau-Broaly of SPACE. "Flights originating outside French airspace, or leaving French airspace, are closely controlled by police and security

services, even at very small airports. Everyone needs a valid passport or ID to fly," she notes.

Internal flights are not affected, but liquids must be checked in a special machine, even on executive flights. "It's not a major hassle; our security procedures just take a little longer," explains Memeteau-Broaly.



Borel, "but we are ready for every possibility of increasing traffic. Our goal is to improve comfort and increase supply of services with the redevelopment of our terminal building."

Parking availability

For ground service support provider G-OPS, parking is likely to be an issue at many of the airports serving the Euro 2016 tournament locations. "All general aviation flights arriving or departing from these airports will require a slot prior to their operations [see *Slots and PPR required* on page 36]. Parking and slots availability will be limited, so we encourage our clients to send their requests as soon as they can to avoid disappointment," comments Karim Berrandou, CEO of the company. "Most airports and FBOs are implementing measures to adapt to this special event. For instance, Lyon-Bron will extend its opening hours and will remain open 24 hours if necessary during the event."

As the only French ground handler service support company with a presence at all French airports, G-OPS is very familiar with all local procedures and will be deploying its staff to assist with operator requests. "We have an office in Paris and another in Nice, so we will deploy supervisors in the field to ensure good coordination between operators and handling agents," Berrandou says.

The company will be sending its clients clear procedures about how to proceed when setting up slot requests and will also provide information about alternative airports in the region. "We will do our best to get operators parking space at their desired airport, but there will come a time when there will be no availability and the operator will have to drop its passengers, reposition the aircraft elsewhere and come back when the passengers want to depart. It also makes

sense for operators to use the smaller, regional airports for their journey as they may be less congested, and we will be able to advise on that – the clients will benefit from our expertise in France," continues Berrandou.

Parking is unlikely to be a problem at Europe's busiest general aviation airport, Paris Le Bourget, where Advanced Air Support has an FBO. The company has also become the first at the airport to receive ISAGO registration from IATA. "We have huge capacity – the largest ground area of any FBO at Paris Le Bourget Airport," notes Louis Malidor, director of Advanced Air Support. "In total we offer 16,700m² (180,000ft²) of secure and covered hangars, as well as 26,000m² (280,000ft²) of aircraft parking. We're ready to welcome everyone to the Euro 2016 tournament, whether they are flying a light jet or a wide-body aircraft."

Paris Le Bourget handles over 100,000 passengers in a normal year. The airport is just five miles from the Stade de France, in the Paris suburb of Saint-Denis, which will host seven games including the opening match on June 10 and the final on July 10.

Another option is to fly in to Brussels, London or Geneva and go by train or road to the game, but LEA's Margetson-Rushmore believes this might not be as easy as it seems: "Most people will want to do a same-day round-trip, so it makes sense to fly as close as possible to the venue. For one-day trips, there is no real benefit in flying to Geneva or



Aéroports de Paris/Alain Leduc



Slots and PPR required

France's civil aviation authority has requested that airports near the venues implement slots and prior permission required (PPR) for general aviation flights during Euro 2016

Special restrictions apply at airports controlled by COHOR, France's airport coordination authority, on the day of a game and the day after. COHOR will coordinate traffic at seven additional airports throughout Euro 2016. This is in addition to the airports normally controlled by COHOR, which include Charles De Gaulle, Paris-Orly, Lyon-St Exupéry and Nice.

For PPR, a fixed schedule is required and to-be-advised (TBA) schedules will not be accepted. "We've also been asked not to confirm bookings until mid-April," says Marie-France Memeteau-Broaly from the SPACE FBO. "Even then, commercial non-scheduled services will

have priority at some airports such as Lyon-St Exupéry."

The airports added to the COHOR list include Beauvais, Bordeaux, Lille, Lyon-Bron (a dedicated general and business aviation airport), Marseille, Saint-Etienne and Toulouse. Slot requests for these airports must be made by email to hdqcoxh.scr@cohor.org.

Slot confirmations or offers related to the Euro 2016 coordination period will only be provided when the applicable coordination parameters are finalized and published. In Lille, slots for flights on June 25-26 will be allocated from June 23; those for July 1-2 will be allocated from June 28.

Brussels as those airports close overnight. Getting from the game in France back to the airport in time is not feasible – you would have to factor in an overnight stay."

Memeteau-Broaly notes that Lyon-St Exupéry should be able to accommodate most one-day visitors: "If you are here for less than four hours, we expect to be able to provide parking for your aircraft. But if you want to stay longer, we may have to refuse the flight due to capacity issues." The airport has already held discussions about closing one runway to accommodate more business aviation aircraft. However, demand for space has been much lower than expected, so this is unlikely.

Flights by national teams competing in the tournament and those carrying referees are also likely to affect traffic. Six national teams will base themselves in the South of France, while another six will be based around Paris, which may cause some issues with slots and parking.

Parisian congestion

Paris Le Bourget is dedicated to business aviation and slots are not usually required, unlike at Paris Charles de Gaulle and Orly, as Advanced Air Support's Malidor explains: "Slots are usually only implemented for large events held at the airport, such as the biennial Paris Le Bourget Air Show. At the moment we have not received any notice of special regulations that will be in place for Euro 2016."

An added complication is that Paris has two venues that will host Euro 2016 games – the Stade de France in Saint-Denis and the Parc des Princes in the southeast of the city. However, matches are staggered so that only one of the two venues is in use each day. "Slots may be restricted at



Aéroports de la Côte d'Azur



Le Bourget," notes Margetson-Rushmore. "Requirements are likely to become clearer closer to the time, but we are already anticipating that slots will be in place for the finals."

Six of the competing teams (Albania, Iceland, Russia, Switzerland, Turkey and Ukraine) are not members of the European Union (EU). Operators flying fans from these countries to the games must apply for permission to fly into France from the CAA in Paris. "For flights within France there are no restrictions, and operators flying from other EU countries can file a special request direct with the airport," says Memeteau-Broaly. "It's not difficult to get permission; it's just a step that the operator will need to do well in advance."

France has a long history of aviation and staging major events. With all that experience, it is unlikely that there will be many problems during the Euro 2016 tournament, but operators still need to be prepared. Just plan flights as soon as possible to ensure your passengers will be there to – hopefully – see their team carry off the 2016 UEFA European Championship trophy. ○

Top: Seven airports have been added to the COHOR list for slot requests, including Marseille-Provence in the South of France

Above: Operators may have to drop passengers and crew and reposition their aircraft at quieter airports

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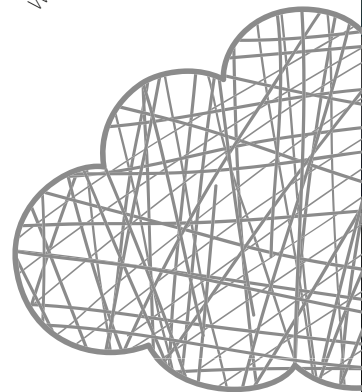
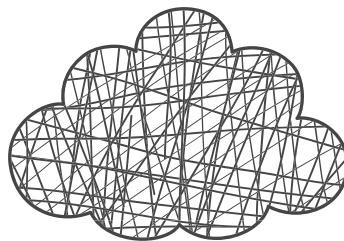
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On the right track

A new aircraft emissions standard will boost the business aviation industry's efforts to reduce its environmental impact and achieve carbon-neutral growth by 2020

Words | Kerry Reals



2020



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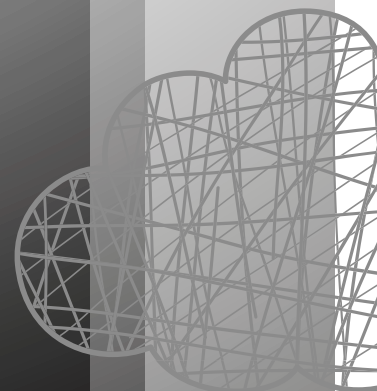
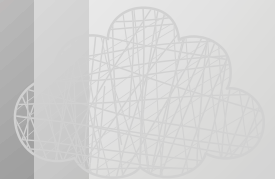
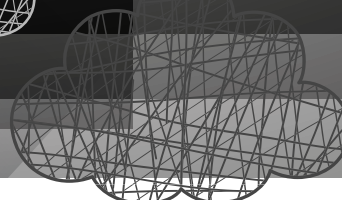
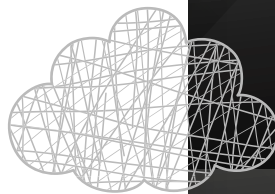
usiness aviation stakeholders are striving to meet ambitious targets aimed at minimizing the industry's impact on climate change. While the sector has already made strong progress toward achieving carbon-neutral growth, making this a reality from

2020 will require a combined effort from manufacturers, operators, airports and policymakers.

Two key regulatory changes are set to be finalized this year that will force operators to toe the line and rein in their emissions if they have not already done so: ICAO aims to formally adopt a recently agreed global standard for CO₂ emissions from new aircraft, and will agree on a global market-based measure (MBM) scheme to regulate aviation emissions from 2020. There are three types of MBMs in the aviation industry – levies, emissions trading and offsetting – and the scheme aims to provide a more flexible approach to CO₂ reduction than the traditional 'command and control' regulatory measures.

New CO₂ standards

In February 2016, ICAO agreed on a proposed Aircraft CO₂ Emissions Standard for new aircraft types certified after 2020. Aircraft currently in production will have to meet the standard on aircraft delivered after 2023 – if they make modifications that require re-certification – while all remaining in-service aircraft must comply by 2028, described by ICAO as the production cut-off date.



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The standard is based on an aircraft's fuel burn performance during the cruise phase of flight, which is then adjusted to account for the fuselage size. This is calculated using the CO₂ metric system agreed by ICAO's Committee on Aviation Environmental Protection (CAEP) in July 2012. Based on this system, the standard will aim to reduce aircraft CO₂ emissions by encouraging the integration of fuel-efficient technologies into aircraft design and development.

If ratified, the standard will apply to all jet aircraft with a maximum certificated take-off weight of over 5.7 metric tons – all but the smallest business jets – and to all turboprop aircraft with a maximum certificated take-off weight of over 8.6 metric tons.

"The intention is to drive all civil aircraft manufacturers toward more fuel-efficient technologies," says a member of an ICAO working group involved in the negotiations, who does not wish to be named. "Business aviation operators and others will have no choice but to buy more environmentally friendly aircraft because the manufacturers will be forced to make them."

It is expected that individual countries – and even individual airports – could eventually use the standard as a basis on which to set their own regulations for charging or banning aircraft that do not comply. Similar action has already been taken against aircraft that exceed noise thresholds. In 2013, for example, TAG Farnborough Airport in the UK announced it would ban aircraft that do not meet ICAO Chapter 4 noise standards and that it requires noise certificates before landing or take-off is approved.

"I can see a case quite a while into the future where less fuel-efficient aircraft could find themselves not being allowed to operate in certain airports," says the ICAO working group member. Operators are, therefore, being advised to prepare in advance.

EPA versus NBAA

The new standard may not be the only new emissions legislation to prepare for. The US Environmental Protection Agency (EPA) last year issued an endangerment finding, based on concerns that greenhouse gas emissions from aircraft could pose a threat to human health.

It issued a proposed rulemaking that represents the first step toward drafting a new US-led aircraft emissions

Carbon-neutral airports

Commercial airports lead the way in becoming carbon neutral

Amsterdam Schiphol is the largest airport to have achieved carbon neutrality under the Airport Carbon Accreditation (ACA) program. The Dutch airport says the process is less complicated than it might appear, and urges others to follow suit.

"The most important tip is, just do it," says Stef Aerts, a strategic consultant at Schiphol Group who was involved in the airport's journey to carbon neutrality. "Start monitoring your biggest energy flows. Once you start looking for energy savings, the options will find you. Don't make sustainability a big issue – keep it simple and improve step by step."

In the USA, the Massachusetts Department of Transportation (MassDOT) Aeronautics Division; the Nantucket Memorial Airport in Nantucket, Massachusetts; Volpe; and Honeywell Building Solutions are working together to make Nantucket the country's first-ever carbon-neutral airport. Under a

pilot program, the airport will upgrade mechanical equipment and lighting systems to more energy-efficient options and will look to renewable energy sources, such as solar panels.

Fumes emitted by aircraft on the ground also need to be considered. Airbus is working with Honeywell Aerospace and Safran to develop an electric taxiing system, although its application is geared more toward commercial aviation.

"It makes sense in somewhere like London Heathrow, but if you're operating from Farnborough you don't tend to wait for a long time behind 15 aircraft," says Dan Carnelly, marketing director for aircraft performance and environment at Airbus. "The technology is there for business aircraft, but operators have to strike the balance between the amount of fuel saved on the ground compared with extra fuel burned in the air as a result of the weight of the system."



Above: The use of electric airside vehicles is just one example of how Schiphol achieved carbon neutrality

Below: Airbus's ACJ320neo offers a 15% improvement in fuel burn over the existing ACJ320 model



standard. But the business aviation community is hoping that any such unilateral action can be avoided in favor of following the global standard proposed by ICAO.

"Our hope is that the ICAO standard will satisfy the EPA. We and other people in the aviation industry have all said we urge the EPA not to act and issue a final rule until after the ICAO Assembly at the end of September 2016," says Steve Brown, chief operating officer at the NBAA.

In comments filed under the EPA's docket, the NBAA highlights the industry's track record of implementing efficiency improvements (40% over the past 40 years), stresses its contributions to the world economy, and reiterates the three environmental targets set out in 2009 by the General Aviation Manufacturers Association (GAMA) and the International Business Aviation Council (IBAC).

These goals, which mirror those set by the commercial airline industry, are: improving fuel efficiency by 2% per year from 2009 to 2020; achieving carbon-neutral growth from 2020; and halving CO₂ emissions by 2050, relative to 2005 levels. The NBAA also points out that business aviation emissions are small, accounting for 2% of all aviation emissions and 0.04% of global man-made emissions.

Operators and manufacturers

Manufacturers have a key part to play in reducing emissions, through the design of more fuel-efficient aircraft engines, the use of lighter materials, and improvements to aerodynamics. But operators also have an important role,

Right: The all-electric, two-seater E-Fan 2.0 aircraft will enter service in 2017

as Ed Smith, senior vice president of international and environmental affairs at GAMA, points out: “Technological improvements to airframes, engines and aircraft are generally the manufacturers’ responsibility, and other improvements, such as better flight planning for more direct routing, one-engine taxiing, reduced use of APU’s and other operational efficiencies, are the responsibility of operators. Other improvements, such as the retrofitting of winglets, for instance, are shared.”

Aircraft manufacturers are keen to highlight the progress they are making toward fulfilling their side of the bargain. Airbus and Boeing have both embarked on narrow-body re-engine programs – the former with the A320neo and the latter with the 737 Max – that will filter down to the business jet side of their markets. The ACJ320neo, with its more efficient engines and wingtip-mounted Sharklets, offers a 15% improvement in fuel burn over the existing ACJ320.

The challenge is greater, however, for manufacturers of business jets with rear-mounted engines, due to the weight penalty associated with achieving a higher bypass ratio.

“When you take account of the extra weight, you can’t easily put those engines on traditional business jets. The Gulfstreams and the Cessnas are going to have a bigger challenge, so they will have to resort more to aerodynamics,” says Dan Carnelly, marketing director for aircraft performance and environment at Airbus.

Scalability issues also make business aviation efficiency improvements more difficult to implement than commercial aviation improvements, according to GAMA’s Smith. “The ability of business jet manufacturers to adapt their products is limited by the lack of scalability of technology advances for the business aviation fleet and economic feasibility,” he says.

Nevertheless, Bombardier describes its Challenger 350 aircraft, which entered service in June 2014, as “the most efficient business aircraft in the world”, emitting less CO₂ than its predecessor.

Aircraft take electric avenue

The industry’s first electric aircraft are taking flight

Manufacturers are working toward a future in which aircraft are no longer reliant on burning kerosene, instead switching to electric propulsion.

In China, the RX1E – a manned, two-seater aircraft powered by rechargeable lithium batteries – has been given the go-ahead to enter production. Meanwhile in Europe, Airbus is aiming for a service-entry date of late 2017 for its all-electric, two-seater E-Fan 2.0 aircraft.

Both aircraft are initially targeted at the pilot-training market. However, Airbus has greater ambitions for its E-Fan further down the line. “We see

small electric aircraft as a key step toward introducing electric propulsion on larger airplanes – up to the size of a 100-seat-category regional airliner,” says an Airbus Group spokesperson.

As Airbus works on its E-Fan, the world awaits the second part of an around-the-globe flight attempt by a solar-powered aircraft. Solar Impulse, founded by pilots Bertrand Piccard and André Borschberg, made the world’s first solar-powered oceanic crossing last year when it flew from Japan to Hawaii. It was grounded after its lithium batteries overheated, but is expected to take to the skies again in April.

“This has been achieved through various technological developments, such as the addition of new winglets. The redesigned canted winglets, which cut down on drag, reduce fuel burn and boost the range of the aircraft,” says Kahina Oudjehani, eco-design lead in Bombardier’s aerospace product development and engineering division. “The new Honeywell HTF7350 engine delivers increased thrust and contributes to the aircraft’s fuel efficiency, and its enhanced combustor substantially lowers emissions.”

“There is a lot of limited experimentation going on, but there is not currently a widely available source of biofuel for any sector of the industry”

Steve Brown, chief operating officer, NBAA

Green fuels

Further down the line, the increased use of drop-in biofuels (renewable fuels that can be blended with petroleum products and used in the current infrastructure) is expected to make a major contribution to the industry’s carbon-reduction plan. However, it will take time and government investment to reach a point at which alternative aviation fuels can be scaled up to commercially viable levels.

“Ultimately there has to be a certified drop-in biofuel of some type to help supplement what we have traditionally used,” says the NBAA’s Brown. “There is a lot of limited experimentation going on, but there is not currently a widely available source of biofuel for any sector of the industry.”

Achieving the kind of emissions reductions set out by the business aviation industry requires a team effort. New legislation, such as the aircraft CO₂ standard and ICAO’s much anticipated global MBM scheme, will go hand-in-hand with technological and operational improvements.

But there is optimism in the business aviation community that these targets can be met, as emphasized by GAMA’s Smith: “We are optimistic that manufacturers and operators are making substantial efforts to make the industry more efficient to meet our aspirational goals, and that our efficiency improvements will average out to meet the aspirational goal we have set.” ○

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early one million
drones were sold in
the USA last year.
The Association
for Unmanned

Vehicle Systems International (AUVSI) estimates that commercial drone operations could create 100,000 jobs and generate US\$80bn in the USA alone by 2025. The world's best-selling manufacturer, China's DJI, has gone from start-up to a billion-dollar turnover within 10 years.

"We are already seeing the use of drones everywhere from the inspection of oil pipelines to the monitoring of crops and livestock," says Steve Brown, chief operating officer at the NBAA. "Other examples include real estate and wedding photography, TV and film, wildlife migratory patterns and accident investigation."

Asset or *intruder?*

Regulators are working toward the safe integration of unmanned aerial vehicles into commercial airspace. What does this mean for business aviation operations?

Words | **Saul Wordsworth**



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Recreational users of drones weighing up to 55 lb must sign up to the FAA's Unmanned Aerial Systems Registration Service

However, some argue that UAVs need to be excluded from all airspace because if they are not, there could be risks. UAVs are an era-defining technology but for the most part are unlicensed. They are also extremely popular with recreational users, leading to any number of safety, legal and insurance issues. Small UAVs are available for as little as US\$50 and can be operated by anyone, without regulatory knowledge or airspace understanding. The NBAA has a long-held position that UAVs shouldn't share the same airspace as manned vehicles until they have equivalent certification and airworthiness standards as other aircraft. This is echoed by business jet operators themselves.

"We understand the enthusiasm of businesses and individuals for UAVs," says Jon Austin, a spokesman for private jet fractional ownership company NetJets. "They offer the potential to change the way many businesses operate. These aircraft have to be operated responsibly and with situational awareness, and doing so requires the combined efforts of UAV manufacturers, distributors, operators, airports, regulatory agencies and other airspace users."

Schooling

Education has been a major focus for the FAA, which recently partnered with AUVSI on the Know Before You Fly campaign to help educate UAV operators on safety and responsibility. Know Before You Fly works with manufacturers to put educational materials in product packaging and online to provide consumers with the

USI acquisition

ARGUS announces intent to acquire Unmanned Safety Institute

On March 1, 2016, aviation business intelligence specialist ARGUS International announced its intent to acquire Unmanned Safety Institute (USI), a privately held business that specializes in the safety training, certification and management of unmanned aerial vehicles operators. According to ARGUS, the acquisition couples nicely with its global presence in the aviation safety training, auditing, rating, and safety management system business.

Company CEO and president Joe Moeggenberg comments, "We have been monitoring the UAV industry for several years and recognized early on that the

rate of growth in this space will demand a strong safety infrastructure. We were very impressed with the experience that the USI founders brought to this business and the impact they have had in a short time relative to their safety training and certification program."

Aaron Greenwald, USI president, comments, "Aligning ourselves with a recognized global leader in aviation safety such as Argus will allow USI to more quickly grow our service offerings, geographic reach, and crossover offerings to the rotary and fixed wing industry, which is already adding UAVs to the list of aviation assets."



"Technologies developed by the UAV industry could help prevent collisions and ensure that UAVs are integrated into the airspace in a manner that ensures the safety of all aircraft"

Brian Wynne, president and CEO,
Association for Unmanned
Vehicle Systems International

Near misses

There are hundreds of close calls between UAVs and manned aircraft every year

In 2014 the FAA released data suggesting there had been 241 "near-collisions" (within 500ft) in the USA between drones and manned aircraft, including 25 "within a few feet". Last year these numbers trebled. Reports continue of UAVs flying close to manned aircraft, mostly during take-off and landing – there were 23 near-misses between passenger aircraft and drones at UK airports between April 11 and October 4, 2015, 12 of which were given an 'A' rating, meaning there was a serious risk of collision.

Although most studies disagree about the magnitude of the problem, these incidents are

deeply concerning in an industry where safety remains the top priority. Based on the impact of birds on aircraft, Virginia Polytechnic Institute and State University in Blacksburg, Virginia, USA, claims that drones weighing 2-6 lb "can cause critical damage". The inability to communicate with the drone 'pilot' exacerbates this problem.

The FAA is investigating several incidents of careless and reckless behavior but to date there have been few instances where rogue UAV operators have been fined. The FAA has the authority to impose civil penalties of up to US\$25,000 and could step up its enforcement

and levy fines on those who fly inappropriately, which may act as a deterrent. In addition the FAA could work more closely with local law enforcement to identify dangerous flyers and pursue criminal charges where appropriate. The Know Before You Fly campaign remains essential in educating drone owners.

"One number to bear in mind is that in 2014 there were 13,159 cases of bird strikes reported to the FAA," says Chris Proudlove of Global Aerospace. "While the risk of a mid-air collision between a drone and a manned aircraft shouldn't be dismissed, I believe that the risk is low."



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Left: UAVs can reach heights of up to 2,000ft, which could affect aircraft take-off and landing procedures

Below: New technology is being developed to create an air traffic control system for drones

guidance they need. These chime with long-standing international safety guidelines for model aircraft, such as 'never fly within five miles of an airport', 'never fly above 400ft or beyond line-of-sight (1,600ft)' and 'always fly sensibly'. The danger is that the vehicle will be sold without guidelines, hobbyists will launch the drone without first reading the guidelines, or operators will lose control of the vehicle. Almost all UAVs can reach heights of 1,500-2,000ft. "UAV operators are an emerging community of airspace users, many of whom have very little aviation knowledge," says Earl Lawrence, director of the FAA's UAV Integration Office.

"Technologies developed by the UAV industry could help prevent collisions and ensure that UAVs are integrated into the airspace in a manner that ensures the safety of all aircraft," adds Brian Wynne, president and CEO of AUVSI. "Sense-and-avoid systems would enable UAVs to detect other aircraft flying in the vicinity, enabling the pilot to safely steer the drone away from any potential conflicts. However, technology is not a substitute for educating users on how and where they should or shouldn't fly their UAV."

Legislation

Nor is education a substitute for legislation. The deployment of drone technology on a grander scale will depend heavily on the pace at which regulations for commercial UAVs are passed. In Europe, EASA is tasked with crafting and updating UAV rules for the EU. The agency will develop new rules and amend existing ones over the next year and potentially into 2017. In the meantime, many European nations have enacted their own guidelines. In the UK, for example, UAV operators conducting aerial work (operating a UAV for payment) must get permission from the CAA. In France commercial operators must file for a certificate, after which they can fly UAVs both within and beyond line-of-sight for up to 15km (nine miles). In Germany new rules were proposed in late 2015, one of which would require systems over 0.5kg (1.1 lb) to have a license plate. Meanwhile in the USA more than 25 industries are awaiting the FAA's final ruling regarding small, unmanned aircraft (under 55 lb).

"AUVSI has repeatedly called on the FAA to finalize the small UAV rule," says Wynne. "Last year we were disappointed that the FAA missed the September congressionally mandated deadline for UAV integration and has yet to finalize the small UAS rule for commercial and civil operations. As a result, US businesses are left sitting on the sidelines or operating under an onerous exemption process. The FAA has said publicly that it expects to finalize the rule by late spring of this year."



Governing bodies the world over have yet to resolve issues surrounding command-and-control, the communications link between a ground station and a UAV. Secure communication links are vital, both to control the UAV based on the objectives of the operation and to deliver data reliably to controllers on the ground. The FAA has identified command-and-control link research as a key need as the integration process moves forward. The FAA could even allow beyond-line-of-sight and night-time operations as already permitted in countries with liberal UAV laws, such as Australia, the UK and France, although as Lawrence explains, US airspace is perhaps more complex than others: "The issue for us is integrating UAVs, not cordoning off airspace as other countries have done," he argues. "Nobody else is doing integration in airspace with our level of complexity. While certain countries have developed guidance and published rules before us, this was in large part because their airspace is much less complex with much less general aviation traffic. The USA is involved and invested in resolving the technical challenges that all countries will need to address in order to safely integrate UAVs into the national airspace system."

Is this all a fuss over nothing? To date there has not been a single fatality as a result of UAV-aircraft collision. John Moreland is chief operating officer for EuroUSC International, Europe's leading approvals specialist for remotely piloted systems. "All too often UAVs are bought online or in a model shop without any information, instructions or questions asked," he says. "Do they pose a threat to business jets? It is well known that one could do a vertical climb of 2,000ft. Any danger is mostly mitigated by UAV size. It would be very unlucky for one to be sucked down the intake of a jet turbine. On take-off it is possible, but on landing the jets are pushing so much air out it is extremely unlikely."

Insurance

The principal hurdle with insurance is the definition of the word 'pilot'. This is currently being resolved by not covering the drone and only providing liability insurance to the operator. It has been estimated that only 3% of all UAV

Watch like a hawk

USA begins testing air traffic control system for drones

Drone start-up PrecisionHawk began testing an air traffic control (ATC) system for drones with the FAA in November 2015. According to a report by UK newspaper *The Guardian*, the company put experimental drones in the air alongside paragliders, marking the first time human pilots have officially shared US airspace with commercial drones.

Instead of using a traditional central radar to detect everything in the air, PrecisionHawk's system uses LATAS (low altitude traffic and airspace safety) technology, which is installed on each aircraft to report its location, altitude, heading and speed to software in the

cloud, which then automatically warns nearby drones to avoid it. The system uses 4G to send data to and from the cloud, and LATAS can triangulate signals from multiple cell phone towers to improve the accuracy of a drone's location.

According to the company, if there is no phone signal, LATAS can switch to the globally available Iridium satellite phone network. LATAS even incorporates ADS-B broadcasts to reduce the chance of collisions far from traditional ATC.

The innovative technology is still being tested and would require the FAA to mandate its use before it could be put into commercial operation.

operators are insured. "I don't believe you should be able to purchase a UAV without holding the relevant operators' license and insurance," says Sam Iliades, CEO of charter company Australian Corporate Jet Centers.

What about the impact on insurance for business aviation operators? "Underwriters are literally inventing how to insure from day to day," says Marion Hope, president of Hope Aviation Insurance. "Drones have not been here long enough to gain any knowledge of risk."

Business potential

"I think Australia's remoteness and vast expanses of barren land make the UAV a very viable option for conducting environmental services," comments Iliades. "It's really a major cost saving to use the UAV rather than a fixed wing aircraft or chopper."

Australian Corporate Jet Centers has worked with UAV developer VS Jets Drones to design specific equipment capable of collecting air samples for environmental studies, mapping and surveillance. "Previously for our environmental science client we offered a helicopter or Citation with pilot and observer during daylight hours with weather restrictions. Using a purpose-built UAV means the company can accomplish all its requirements with cost savings of 94%."

In Australia, Iliades often received Notices to Airmen concerning UAVs around airports. This information provides pilots operating at the airport with the UAV's operational parameters as well as the UAV pilot's telephone number for an added level of operational safety.

"The possibilities in our region are endless," says Iliades. "We have clients who are interested in express document delivery, running parts to mining sites, even organ transfer.

Right: UAVs may provide a more efficient, cost-effective alternative to light aircraft for some agricultural tasks



Being a fixed- and rotary-wing aircraft charter company, we understand the safety issues around this new phase of aviation. The UAVs we developed have dual transponders and a traffic collision avoidance system, making them safe to operate around manned aircraft."

"Developing a culture of airmanship among drone operators will be an evolving process, especially for recreational users"

Chris Proudlove, UAV risk expert,
Global Aerospace

The future

It is not only in Australia that drone opportunities are presenting themselves to the business aviation industry. US-based Duke Energy Corporation, a sustainable electric and gas company and member of the NBAA, already has a project team in place tasked with exploring possible UAV engagement for checking infrastructure, while Exelon Business Services (another NBAA member) from the USA has been granted Section 333 certification (confirmation of airworthiness) to employ UAVs on emergency storm response missions. Both are awaiting the FAA's final industry regulations. In the UK, Oxford-based Air Medical, an air ambulance service, is looking to deploy UAVs in conjunction with its helicopters.

This is an exciting time for UAVs. As the technology develops, more opportunities will present themselves. However, these will only be realized once regulators catch up with the operational and technical capabilities of these new machines and make UAV integration a top priority.

"The FAA needs to swiftly finalize its long-awaited small UAV rule and proceed with full UAV integration, which will create a clear regulatory framework and allow companies that follow the rules to fly," says Wynne. "Accelerating commercial UAV use will not only help businesses harness the tremendous potential of the technology, it will also help unlock its economic impact and job creation potential."

"Getting all aviation stakeholders to work together is key to establishing safe skies," says Chris Proudlove, UAV risk expert for insurance company Global Aerospace and author of the white paper *Unmanned Aviation Risk Management, Accident Prevention and Insurance*. "While drone operators have a primary role to play here, it is also incumbent on the manned aviation industry to take a major role. This means pilots maintaining safe altitudes in areas where drones may be operating. Developing a culture of airmanship among drone operators will be an evolving process, especially for recreational users. The whole aviation community has a role to play in this."

As Iliades sums up, "The future of this industry will depend on how manned and unmanned aircraft can operate together, and this will be the job of the regulators." ○



Left: Remote control helicopters are just one form of UAV popular with recreational users



Increasing awareness

Drone safety awareness weekend to take place at Farnborough

The CAA, National Air Traffic Services (NATS) and the Association of Remotely Piloted Aircraft Systems UK (ARPAS) have joined forces with the UK Drone Show and Farnborough International Airshow to create a Drone Safety Awareness Weekend that will be hosted during the public weekend of the Farnborough International Airshow (July 16-17, 2016).

Following an increasing number of incidents involving public drone flying, the purpose of the Drone Safety Awareness Weekend is to educate recreational drone pilots and the general public about the laws relating to unmanned aircraft in the UK, as well as give sensible advice regarding safe flying and possible dangers.



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The business aviation industry should embrace the trend for big data as a means of providing a more customized service to its clients

Words | **Bill Goodwin**

Businesses across every sector are turning to data analytics technology to find new ways of offering personalized services to their customers. Big data, as it has become known, enables organizations to get to know their customers, spot market trends, and identify new business opportunities in a way that was never before possible.

Commercial airlines are investing millions in technology to analyze and gather data on their customers so that they can offer higher-quality, more personalized services. Business jet operators, however, have so far been cautious about investing in analytics technology, partly because of cost, and partly because they know that their customers value privacy.

But as competition in the business jet industry increases, and the arrival of low-cost data analytics tools in the cloud makes the technology more affordable, big data is becoming increasingly hard to ignore.





*The **big** picture*



Bloombury/Shutterstock.com

Above: **Social media is one way of gaining information on customer preferences**



“Back in the good old days of aerospace, you had to be Delta Air Lines to afford big SAP implementation, but today you don’t need that. You can get that functionality so much more cheaply”

Matt Richards, managing director for aerospace and defense, KPMG

Revenue boost

Richards estimates that business jet operators could increase their revenues by as much as 30-40% by making smarter use of data about their customers and their business operations.

By forming partnerships with hotels, car hire companies and catering companies, business jet operators could use big data to create travel packages tailored to the exact needs of their clients. “This is something that your traditional commercial carriers have been doing for decades, and business jet operators are only starting to do,” Richards adds.

For example, imagine that a particular passenger is a wine connoisseur. A business jet owner who collected that information could arrange for this customer’s favorite vintage wines to be on board.

“Bring in other data from social media, news services, weather and traffic reports, and more possibilities open up,” says Mark van Rijmenam, founder of Dutch big data specialist Datafloq. “For example, if there are strong headwinds, the jet operator could advise a passenger to take off earlier so that they reach their destination in time.” Van Rijmenam gives another example: “You could say to your customer there is a traffic jam en route to the airport, so leave your home now if you want to catch your flight to your meeting in New York.”

Combining historic flight data with public data sources such as Facebook, Twitter and weather reports could also enable jet operators to predict future demand for flights. “If big events are taking place, such as the World Economic Forum in Davos[Switzerland], you can be pretty sure some of your customers will want to go there,” explains van Rijmenam.

Business potential

USA-based ClipperJet, which entered the market two years ago, sees a huge potential for big data, according to chief executive James Occhipinti. The company operates a

'country club model', in which the costs of flights are shared between members, in much the same way as the costs of a golf course are shared. Occhipinti's aim is to sell ClipperJet services to as wide a range of people as possible, including C-level executives and otherwise hard-to-reach clients. "I think big data and data mining with analytics applied is the way to do that," he says.

The company has hired consultants to help it gather and analyze data sources that could improve its business. One example is a passenger flying from LA to New York: "If we find out from capturing the data that that member is going to be bringing his son to his very first baseball game, I could have a baseball cap sitting on his son's seat, which would make a real impact," Occhipinti argues.

New insights

NetJets, a large fractional business jet operator with over 700 jets, also sees big opportunities for big data. The company has created an analytics team that uses a suite of analytics tools and the company's own flight management and scheduling software to provide new business insights.

The team, led by director of market research Jeff Baker, looks for patterns in the data, helping the company make improvements to every aspect of its operations. For example, the company has used data analytics to identify ways to improve its catering operations. An analysis of the data led to the discovery that suppliers in some remote locations were struggling to source the right ingredients. "The customer might have a bad experience because we are not crafting what we are offering as well as we could," Baker says.

The team has also helped the company decide where best to spend money on customizing FBOs for NetJets by analyzing customer satisfaction and flight volume data. "By pairing the two, we can essentially optimize the right level



"Bring in other data from social media, news services, weather and traffic reports, and more possibilities open up"

Mark van Rijmenam, founder, Datafloq



Improved service

FBOs could supply useful data to jet operators

Business jet operators believe that in the future FBOs could automatically share data on fuel prices and the services they offer crews and passengers with business jet operators.

ClipperJet's James Occhipinti, a practicing pilot, says he spends a lot of time looking through flight planning systems and selecting the FBOs for each trip: "If there was a proactive way for the FBOs to reach me and tell me what their capabilities and services are, so that I did not have to go looking for that information, then that just helps me do my job better."

Jeff Baker at NetJets goes further, arguing that in future business jet operators could improve their customer service by sharing data, not only with FBOs but also with catering suppliers and transportation companies. He adds,

"Occasionally you will get a situation where the transportation driver does not communicate exactly when they are going to show up at the airport, or we don't communicate to the driver, or the FBO does not communicate to the transportation company that the flight is 30 minutes late."

"Shared data networks would give customers a seamless experience, and potentially provide FBOs and business jet operators with the ability to offer more value-added services."

But FBOs' profit margins are low, typically 5% to 6%, according to Matt Richards at KPMG. That leaves the question of who would pay for the technology. The answer may lie in groups of business jet operators collaborating with each other and their suppliers to build the technology infrastructure.



Sharing data between FBOs could help operators find the best fuel prices



Left: Operators can create personalized travel packages by analyzing passenger data



“By pairing customer satisfaction and flight volume data, we can essentially optimize the right level of investment to make sure we are getting some sort of leap in the customers’ experience”

Jeff Baker, director of market research, NetJets

of investment to make sure we are getting some sort of leap in the customers’ experience,” Baker adds.

Another research exercise has helped NetJets improve the way it manages flight delays. The team took 18 months’ worth of comments from customer surveys and analyzed all those that mentioned the word ‘delay’ to identify the factors that annoyed the customers most. “That has dramatically changed the way we present options to customers when they are in those situations. It has affected all the way down to the phrases we use with our support representatives when they are talking with customers,” says Baker.

Privacy concerns

There will always be tension between gathering personal data and the need to preserve a customer’s privacy. “This is an area where we have tried to step very gingerly,” explains Baker.

A hacking attack, of the sort that hit United Airlines in June 2015, when a Chinese group stole personal data on passengers, would be disastrous for any business jet operator. Security experts advise business jet operators to choose an established data analytics company offering cloud services. In reality, they are going to be far more secure than anything a business jet operator can build in-house, according to KPMG’s Richards. “Maybe more importantly than that,” he adds, “you can offload some or even all the risk of data loss to your vendor, so it provides a risk-mitigation strategy. It also provides a much better and much more secure platform.”

Must-have data

Few experts doubt that big data will become a must-have for mid-sized business jet operators as the market becomes increasingly competitive. “The folk that are going to use big data are not the elite, high-end business jet operators,” argues Richards. “It’s those in the middle market that need that additional 5%, 10%, 15% revenue bump on each trip. Necessity will require them to get better in this area.

“As soon as one business jet operator gains a competitive advantage from big data, the others will follow. Business aviation is a follow-the-leader industry,” he concludes. ○

Not for everyone

Big data will not be useful for all business jet operators

Data analytics may not make sense for every business jet operator. European charter company KlasJet, for example, is a young company with three jets on its books and is small enough to know its customers individually.

Vitalij Kapitonov, CEO of KlasJet, believes the company is able to offer a personalized service to its clients without the need for the big data systems used by larger carriers. The company keeps a database to record what its customers choose to disclose about where they like to sit, what they like to eat and drink, and how they like to spend their time on board – but it sees no need for anything more advanced at this stage.

“As a business jet operator, we have fewer customers and passengers than the larger operators, so we do things manually. The sales manager can just check the information on the database on his own,” Kapitonov says.

As the company plans to grow its fleet to seven aircraft and above, then big data may eventually begin to make commercial sense, Kapitonov concedes.





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WEATHER

Come
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rain shine

How can business aviation airports and operators ensure they are fully equipped to remain operational during adverse weather?

Words | Kathryn B Creedy



In January 2016, Storm Jonas brought chaos to the east coast of the USA when it dumped more than 3ft of snow on towns and cities in just 48 hours. The storm resulted in 35 deaths across 10 states and caused economic losses of between US\$500m and US\$3bn.

Airports across much of the east coast had to close, with 13,000 commercial flight cancellations. However, these delays and cancellations proved a boon to business aviation – operators reported an uptick in queries from stranded travelers and operators looking to reposition their aircraft.

Despite receiving 30in of snowfall, which forced the airport to be closed to all traffic for a period of time, Manassas Regional Airport in Washington was able to resume operations while commercial airports in the region remained closed. “Whether we are used as a reliever airport for commercial operations during extreme weather depends on how many delays the commercial airports have,” says Jolene Berry, senior airport operations manager at Manassas Regional Airport. “General aviation is not much of a focus at commercial airports, so we get aircraft relocating to Manassas because we can return to service faster. After January’s snow, we were the first airport to open in the Washington area because of the staff and equipment we have and the fact that we worked non-stop to open the runway.”

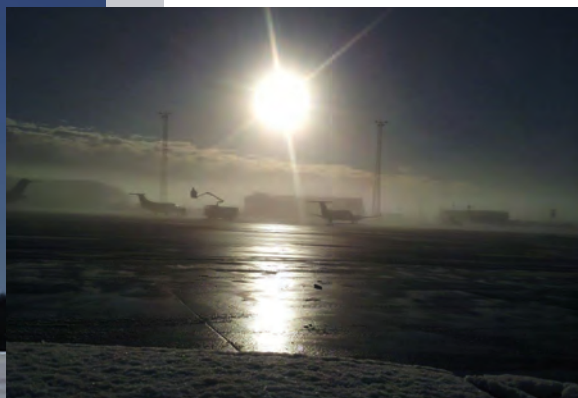
Shutting down during adverse weather events is costly for both airports and their passengers. According to the FAA, around 70% of commercial airline delays are weather related and such disruptions impose US\$16.7bn in additional costs on travelers, accruing through lost time as well as additional expenses such as food and accommodation. Business aviation airports that are able to accurately predict inclement weather and react quickly will benefit.



“We try to manage the risk from a bad weather system by alerting aircraft operators and allowing them to make the decision of whether they should make the trip”

Magni Freyr Guðmundsson, SouthAir

Main image and above: Manassas Regional Airport was the first in Washington to resume operations despite 30in of snow falling there during Storm Jonas in January 2016



Above: Keflavik Airport in Iceland is used to dealing with adverse weather conditions

Below: The aftermath of a tornado at Lakeland Linder Regional Airport

Sun 'n' Fun disruption

In March 2011 Lakeland Linder Regional Airport had to contend with a tornado

Perhaps no weather event captured the aviation industry more than the tornado that swept through one of the industry's premier events in 2011, destroying more than 60 aircraft at the annual Sun 'n' Fun event in Lakeland, Florida. But, according to Lakeland Linder Regional Airport assistant director Sandra Walsh, it would have been worse without the airport's disaster and recovery plan. "It was all hands on deck," she says, adding that more than 200 aircraft were put under cover. Fortunately the bad weather meant the normal Sun 'n' Fun crowds were low.

"We closed the airport within minutes of the tornado hitting and as soon as it passed, the operations and property teams went into action supported by emergency response teams from Lakeland, including police and fire rescue who were also fielding calls from the surrounding area."

Hangar roofs and doors were damaged and the tornado ripped through the area on the south of the property – right in the middle of Sun 'n' Fun. The airport's first tasks were to locate personnel and ensure they were safe, and to identify and transport the injured. Next was to call airport staff in the Miami area who had been through a hurricane to get advice and ensure that nothing had been missed in the recovery plan. Airport officials then documented the damage to ensure safety and did an environmental assessment because of the spilled fuel.

"Over 60 aircraft were damaged or overturned and most were totaled,"

comments Walsh. Airport officials documented the damage to the airport and aircraft and managed to open by 6:00am the next day.

"It was a remarkable recovery and the volunteers were extraordinary," says Walsh. "If we hadn't done that, the rest of the Sun 'n' Fun would have been for naught. We got wreckers in and created a bone yard for damaged aircraft near the fence line. Insurance adjusters were there within 10-12 hours. Virtually every taxiway light had been run over as the planes were moved during the night and we decided not to replace them. The tornado happened on Thursday at noon and by Monday morning almost every damaged aircraft was gone."

Lakeland Regional Airport sustained more than US\$100,000 in damage and Walsh reports that its airport insurance was adequate. "But," she adds, "it is important to inventory your assets in advance. The other important lesson was that cell phones didn't work and not all airport staff had a radio. After the event we established rendezvous procedures and we now have radios for all staff."



"With the right data and enhanced air traffic management decision support tools, 66% of delays are preventable," says George Spencer, Raytheon's air traffic systems manager. "It is critical that airport personnel work with the most accurate and timely weather information possible."

Communication

According to Berry, clear communication between all stakeholders is an important part of keeping aircraft, passengers and crew safe in the face of hazardous weather conditions. "It is just about being neighborly and keeping communications open, notifying tenants that we have a weather emergency plan in place or are about to shut down," she explains. "It is in everyone's best interest to keep information flowing, through NOTAMs and emails."

At Manassas, sustained winds above 45mph or greater means going to ATC zero (when the FAA decides it cannot safely provide the published ATC services within the airspace managed by a specific facility). "The tenants are glued to weather reports just as we are but we think it important to keep communication open," Berry adds.

Magni Freyr Guðmundsson from SouthAir, an aviation service provider in Keflavik, Iceland, which is experienced in operating in severe winter weather conditions, agrees: "It all boils down to experience and cooperation of all involved with the airfield operation – operators, tower, weather stations, security and FBOs," he says. "With time you'll get to know how the weather acts on and around the airfield. You plan and act accordingly."

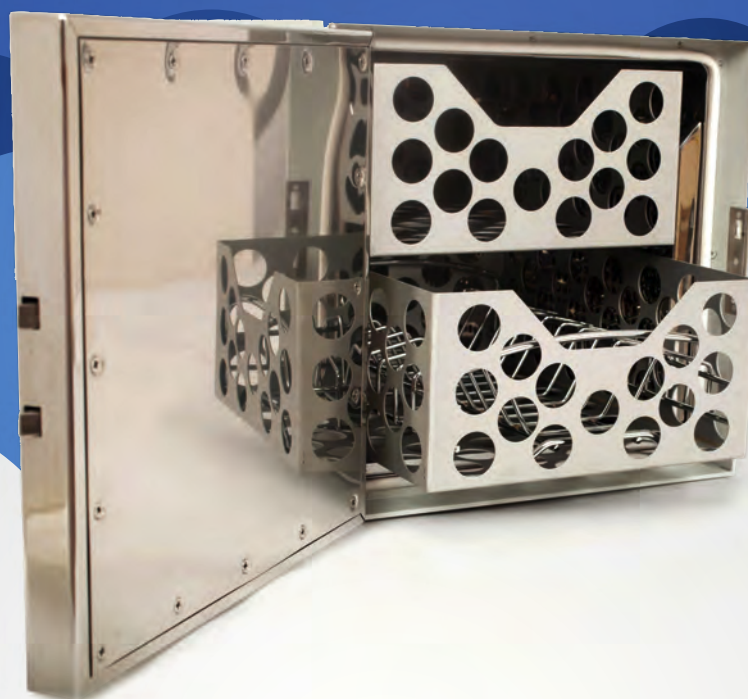
Operating in the wind and snow

For SouthAir, the areas of highest risk for operators during snow storms are when maneuvering the aircraft from landing to the ramp. "We have one of the best snow removal teams in the world, so it is unusual to have runways closed," says Guðmundsson. "Still, it can be dangerous for smaller aircraft taxiing from the runway to the ramp if winds are high. We often have calls to bring out fire or snow-removal trucks to create a moving shelter for the aircraft."

Once on the ramp, however, SouthAir tries to ensure that aircraft are parked near tie downs and that there is nothing that could become airborne and cause damage in high winds. "We try to manage the risk from a bad weather system by alerting aircraft operators and allowing them to make the decision of whether they should make the trip," Guðmundsson says. "But we do not hesitate to advise people not to come."

The challenge of operating in the North Atlantic is that weather can change in a heartbeat and diversion options are limited. "You always have to be aware of the weather in Iceland, but also the conditions in Greenland, Canada and the UK," Guðmundsson adds. "We do get extremes here and you can expect high winds at any time of the year, with snow, ice, sleet and low visibility all thrown into the mix. We can have sunshine, freezing rain and wind gusting past 60 knots [70mph] at the same time, so we try to plan accordingly and keep our customers informed."

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The oven incorporates baskets and crumb tray and the baskets can have plate racks inserted for storage.





Morristown Municipal Airport was flooded after hurricane Irene hit New Jersey in 2011

Responding to hurricanes

Morristown Municipal Airport copes with back-to-back hurricanes

The US Northeast was hit by hurricanes in 2011 and 2012 – Irene and Sandy – as well as the 30in of snow that was dumped in a single day this year. It was Irene that caused most of the damage when Morristown Municipal Airport in New Jersey flooded, shorting out its airfield electrical system and causing almost US\$100,000 in damages, including taking out a US\$25,000 ceilometer used to measure cloud height.

However, it also taught facilities and project manager Darren Large just how nimble and creative an airport has to be. The airport already had an emergency and snow plan. “So we knew what to do,” says Large. “We had to be creative, too. During Sandy we were faced with power outages, so we sent an employee in a pick-up truck to Connecticut to collect a portable industrial generator and we ran the fuel farm on that for almost a week. The rest of the airfield was run by our own fixed generator, so we had power for the lights and the buildings but we had no way to provide power to the fuel

farm without the portable generator. We were one of the few airports in the area that was open during Sandy, so we were available as a staging area for supplies.”

The area was also hit by a massive fuel shortage in the weeks following Sandy, when fuel storage areas in the region were flooded. Once again, creativity kicked in and 100-gallon fuel tanks were loaded onto pick-up trucks and sent to neighboring Pennsylvania for fuel to power the airport’s fleet of vehicles. The airport’s Jet-A and avgas suppliers also improvised, pulling fuel from upstate New York to support airport operations.

Large continues, “In the days after Sandy we had police, military and coast guard helicopters using Morristown as a staging area for rescue operations. They would bring people stranded in the flooding from as far away as Staten Island and we had to work with our FBOs on how to assist them. These people were transported to local hospitals and other rescue areas but we were a critical part of the rescue operations.”

Hurricanes and tropical storms

Hurricanes and tropical storms also adversely affect aviation. In August 2015 Tropical Storm Erika hit the Caribbean, causing widespread damage and fatalities as well as wiping out Dominica’s airport.

Princess Juliana International Airport (SXM) in nearby St Maarten, which was on hand to help operators in the region, has a sophisticated disaster plan in place following the worst hurricanes to hit the island: Luis in 1995 and Lenny in 1999. The airport handles over 60,000 flights a year, 15% of which are general aviation. As the main hub airport in the region, ensuring SXM remains operational throughout the year is key to both commercial and business aviation on the surrounding islands.

“Disaster planning starts before the season even hits,” SXM’s director of operations Larry Donker explains. “We have to be prepared early because the airport is critical to connect St Maarten to the rest of the world. This proactive approach ensures maximum preparedness. Getting the airport back up and running as quickly as possible is the main priority and we know we can do it within 24 hours. Aviation is critical to national and economic survival following a disaster. It is essential for receiving and sending aid and it will determine the outcome of the recovery.”

Prior to a tropical storm or hurricane, SXM removes any loose infrastructure and debris from airport property, cleans out drains and ditches, and secures jet bridges, maintenance and baggage vehicles and airline containers as well as aircraft. Key to disaster planning is communicating with airport stakeholders and coordinating with airlines, aircraft owners, FBOs and key media to ensure they are aware that the disaster plan is in effect. SXM also ensures all pumps and generators are functional and fuel tanks are full.

Reopening the airport is an equally intricate process and includes ensuring access roads are clear and aircraft and airfield inspection get underway quickly. Damage assessment and documentation are a prelude to runway cleanup and perimeter security. Equipment assessments

“Aviation is critical to national and economic survival following a disaster. It is essential for receiving and sending aid and it will determine the outcome of the recovery”

Larry Donker, director of operations,
Princess Juliana International Airport



Business jets in New Orleans were damaged by hurricane Katrina in 2005

Christoffer Hansen Vika



Above left: **Dominica Airport was severely damaged during Tropical Storm Erika in August 2015**

Above right: **The devastation left in the storm's wake**

are gathered and reported to the airport director, who then decides when to open the facility.

For operators in regions prone to hurricanes and tropical storms, evacuation may be the best plan of action. Hervé Nizard, owner of Air Tropical, an air charter operator and aircraft management company based in Guadeloupe, comments, "Either you trust your hangar or you evacuate. Of course the decision depends on the expected category of the hurricane."

He notes that aircraft based in nearby Dominica, where there are no hangars, must be evacuated: "During the hurricane season we all follow the weather forecast very closely. Most of the trans-Atlantic hurricanes have quite predictable paths, so a few days before they reach the Caribbean we know roughly which islands may be affected. Then you reposition your aircraft south of the predicted path or at least far enough away to ensure their safety."

"The same is true when a hurricane is a threat to your base. A couple of times our aircraft have been caught in the hurricane's path and have been destroyed, so you really need insurance that covers hurricanes."

Accurate information

According to long-range forecaster/planner Dave Houle, using an experienced weather provider, that can interpret weather and what it means for the specific operator or airport, is critical to gaining the best interpretation of weather, especially in long-range forecasts. "Online or canned weather programs do not provide the same level of information," he says.

Jonathan Dutton, aviation business manager for the UK Met Office, believes that technology and the various operations center packages available from weather providers, including good situational awareness on the weather for take-off and en route, is also vital to safe operations. "It is important to maintain situational awareness for precipitation, hail, rain, snow, winds and other hazards that may be a normal part of flying in a given region," he adds. "It is also important to get a detailed pre-flight briefing from weather professionals. Even with onboard radar, pilots have no idea what may be beyond

"Even with onboard radar, pilots have no idea what may be beyond their immediate area. They need to get a pre-flight briefing for the en-route weather that may be encountered"

Jonathan Dutton, aviation business manager,
UK Met Office

their immediate area. They need to get a pre-flight briefing for the en-route weather that may be encountered."

Large business aviation operators such as NetJets maintain dispatch and meteorology departments designed specifically to ensure not only a smooth ride, but also safety. "NetJets meteorologists use the best data they can find from a variety of mainstream sources and by using tools from weather-related business partners to forecast conditions around the world. However, when it comes to official meteorological weather briefings to our crew members, we follow the FAA guidelines that require designated certified sources," says Dana Weigle, director, flight support, NetJets.

Working with the local meteorological agencies is also important for ground handlers. "We start by gathering all the relevant information from meteorological terminal aviation routine weather reports (METARs) and terminal aerodrome forecasts (TAFs)," explains Guðmundsson from SouthAir, whose preparations are similar to most business aviation operations. "We call the Icelandic Meteorological Office if we feel we need more information about the nature of the incoming weather, and we contact the tower to get the latest update. Basically we try to gather as much information as we can."

The human element remains important for business aviation operators who want to protect their assets and provide the smoothest flight for clients. Indeed, the US National Transportation Safety Board recommends the provision of better weather information and training for general aviation pilots. However, pilot training is not always enough and the information provided by weather agencies should not be underestimated.

"We had a pilot inbound from Greenland," says Guðmundsson. "The airport was as good as closed because of the conditions and Reykjavik was just as bad but we got him in. When he arrived, I asked him if he had checked the METAR and TAF before taking off. 'Of course,' he said, 'but I couldn't believe it was as bad as it said!' You really shouldn't play the METAR/TAF down and if in doubt, call the operator at your destination. They can give you exactly the information you need." ○

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Corporate Angel Network is saving the lives of thousands of cancer patients across the USA. Peter H Fleiss, executive director emeritus, tells *BAI* more about the charity

Words | Hazel King

Corporate Angel Network has flown 50,000 cancer patients across the USA, including young children and senior citizens

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Above: Patients are flown to treatment centers using empty seats on participating corporations' private jets

"Our patients have typically run out of treatment options at their local facilities, so they need something special if they are to survive"

Peter H Fleiss, executive director emeritus,
Corporate Angel Network

This spring, Corporate Angel Network (CAN) will conduct its 50,000th flight. That's tens of thousands of patients that have been flown to life-saving cancer treatments across the USA using empty seats on corporate jets since the charity began operations in December 1981. That's quite an achievement. But the work won't stop there, according to CAN's executive director emeritus, Peter H Fleiss: "There are about 12,000 corporate jets flying around the USA and our goal is to get as many as possible to participate in CAN. We want to get at least enough corporations on board to be able to fly everyone who registers, which is about 500 new patients per month."

Currently the charity fulfills about half of the requests it receives each month, flying between 225 and 250 patients to specialized treatment in far-flung areas of the country. The charity is made up of 530 corporations that donate their empty seats to patients requiring specialist cancer treatment far from home.

"CAN has evolved over time through word of mouth, media stories, doctor and hospital referrals and free advertising. Once a CEO or chairman of a board of any of the companies that have signed up conduct their first patient flight, they often become enthusiastically evolved in the concept. They talk to the patients, see first-hand the hardship the patient and their family is going through, realize how lucky they are that they or their family aren't going through the same thing, and understand how their corporation is helping these patients, many of whom can't

fly commercially because of depleted immune systems. These executives mention their experiences to other major corporate executives who often sign up, and that is how we've got the ball rolling," Fleiss explains.

The charity flies patients all over the USA, to major cancer centers as well as smaller, bespoke treatment facilities. "We fly patients from every state. Cancer doesn't skip a state, and neither do we," Fleiss says. "Our patients have typically run out of treatment options at their local facilities, so they need something special if they are to survive.

"We're often able to take them to wherever their treatment might be – a clinical trial or a facility where somebody has developed a different procedure for their specific type of cancer. The top five treatment centers we fly our patients to are the University of Texas MD Anderson Cancer Center in Houston; Memorial Sloan Kettering Cancer Center in New York; Dana-Farber Cancer Institute in Boston; Duke University Cancer Center in Raleigh, North Carolina; and Cancer Treatment Centers of America."

Getting on board

CAN provides flights for passengers of all ages – from two-week-old babies to people in their 80s – and there are very few criteria to qualify for a flight. Patients are screened medically, must have written approval from their doctor that they are fit enough to fly, and they must have a confirmed scheduled appointment before flying. "Other than that, there really are no barriers to being accepted for the CAN program," Fleiss explains. All the flights are free and financial situations are not taken into consideration. Patients



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A patient's perspective

Peter Fleiss shares an extract from a letter from John, a 49-year-old a leukemia patient from Tennessee, who was flown to New York:

"Corporate Angel Network played a great part in my healing process. The day I boarded the CAN flight to New York for my clinical trials was more important to me than I have words to express. That day really boosted my self-esteem, my outlook on life, and gave me a more intense desire to live. At such a low point in one's life in the battle against cancer, I can tell you that the human spirit looks for hope and a better time ahead. The CAN flight was more than just transportation; it was just as much a part of my healing process as any pill I took."

are also able to bring a companion to accompany them on the flight and children can bring both parents.

For corporations, the process is just as easy, with only two requirements: "The corporations have to be flying pressurized aircraft and they need to have two qualified pilots on board," explains Fleiss. "They can easily get involved by going to our website [www.corporateangelnetwork.org] and registering online, after which one of our staff will contact them. Or they can call us to discuss the process. There's really nothing to it; we do all the work."

Participating corporations provide their flight schedules, many automatically from their flight management software systems, directly into CAN's custom operational software. This software then automatically, on a daily basis, matches patients' need to travel for treatment with the flight activity of participating corporations. "We have a full-time staff of six, and 30 part-time volunteers who coordinate the related medical travel needs of patients with the scheduled flight activity of our corporate participants. Many interact with the patients, doctors and flight departments," Fleiss explains.

Medical equipment is not required. CAN ensures that all patients are medically fit to fly prior to accepting them onto the program. Fleiss says, "We can't have a situation where a patient might get sick during a flight and we ensure that it won't happen. Our patients blend in with the other passengers on the flight – they are prepped on how they should dress and behave, and what they can and can't bring."

Rewarding work

For the corporations who get involved, flying CAN's cancer patients can be very rewarding, and many go out of their way to ensure the patient is comfortable. "The flight departments and the executives of the companies that fly our patients are all moved by what they're doing. The patients sometimes get treated as well as the executives. Often the flight department will find out what special food the patient likes and they go out of their way to source it," comments Fleiss.

Above: **Children can bring both parents with them free of charge on their flight**

"We had one situation where we flew somebody to Texas and they didn't have a lot of money. They were going to have to stay there for a month or two for their child's treatment. The flight department found this out and once the flight had landed in Texas, the pilots went and bought all the necessary supplies for the apartment where the family would be staying. They had become attached to the patient and the family."

Half of the USA's Fortune 100 companies are among the 500+ corporations that participate in CAN. NetJets, the major fractional operator owned by Berkshire Hathaway, provides an account to the charity. "Periodically we send a letter out to the NetJets owners and ask if they're interested in donating an hour or two to our account. This often results in the donation of hundreds of hours. We use those hours only to fly cancer patients. With donated NetJets hours we're often able to fly multiple patients on one aircraft so we get better efficiencies," Fleiss says.

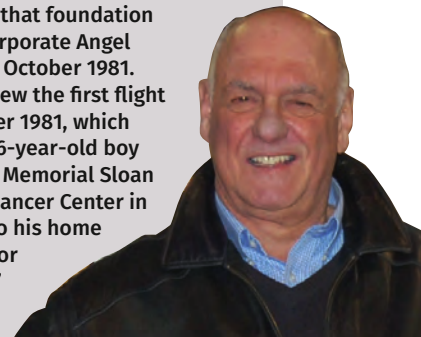
From the beginning

The story of Corporate Angel Network

Corporate Angel Network was established in October 1981 by three friends: Priscilla 'Pat' Blum, Leonard Greene and Jay Weinberg. "It was Pat's idea; she was a recreational pilot flying in and out of Westchester County Airport, which is a big hub for corporate aviation, and she noticed all these corporate jets flying in and out with empty seats. She knew what it was like to try and get to specialized treatment for cancer that wasn't local and how difficult it was, especially if you had a depleted immune system," explains Fleiss.

Blum and Weinberg approached Greene, an entrepreneur and

founder of Safe Flight Instrument Corporation, who loved the idea of using empty seats to transport cancer patients. He donated his foundation and its funds to the effort, and that foundation became Corporate Angel Network in October 1981. "Leonard flew the first flight in December 1981, which was for a 16-year-old boy going from Memorial Sloan Kettering Cancer Center in New York to his home in Detroit for Christmas," Fleiss says.



“The CAN flight was more than just transportation; it was just as much a part of my healing process as any pill I took”

John, 49, leukemia patient from Tennessee

More help required

Despite the nearly 50,000 flights already flown by CAN, the charity still has to turn down patients. Fleiss says, “Although we have more than 500 corporations on board and they fly a lot of patients, the challenge is to find enough corporations that are flying the required routes, on the needed days, and with empty seats available for our patients. Our goal is to fly everyone we register and that is why we keep trying to recruit more corporations. The higher our potential lift capacity, the more matches we’ll be able to make.”

CAN is working closely with media outlets, both mainstream and in the business aviation industry, to promote its work, and is even starting to embrace the social media side of things to spread the word. “I also have a staff member on the road who calls on flight departments that don’t participate with us, providing these companies with the necessary information to make a decision,” adds Fleiss. “The more we’re out there, the more people learn about us, and the more calls we get from corporations who want to get involved and patients who need our help.”

CAN receives no government funding, relying solely on grants and donations to fund its work. “Sometimes donations will be from people we’ve helped, although we don’t want any money from them, we just want to help them.” Fleiss says. “We don’t ask our corporations for donations because they’re already donating their empty seats, although a lot of them probably would donate if asked.”

Several aviation organizations hold events that raise money for CAN every year. The largest is held by NBAA during its annual convention. “The NBAA/CAN Soiree, a gala type event with live and silent auctions, is a major event for us. We receive the proceeds from the auctions,” Fleiss says. Last year’s Soiree in Las Vegas raised US\$500,000 for CAN, which will be used to help fly more patients.

“Without the support of the business aviation industry, we wouldn’t be able to provide such a wonderful, life-changing service,” Fleiss continues. “I’ve been working for Corporate Angel Network for 16 years and it truly is a rewarding experience. Although we can’t save everyone, we’ve saved thousands of lives in the past and will help thousands more in the future. Corporate Angel Network provides more than just a lift – it lifts the patient’s spirits as well.” ○

Between 225 and 250 cancer patients are transported to treatment each month and can bring a companion along for the ride

Corporation’s view

Wayne Dodds, director of aviation at International Paper Co., shares his experience of Corporate Angel Network:

“International Paper Co. joined Corporate Angel Network (CAN) in 1983. We were aware of the charity’s mission and thought we would be able to contribute to it as we were based at the Westchester County Airport in New York, which has numerous cancer treatment hospitals.

“It is easy to participate with CAN as they take care of all arrangements. We provide them our flight schedule and available seats and they do the rest. It is something we can easily do and I have been told many times by our executives that they are extremely proud to be involved in the program.

“International Paper has done more than 100 flights since joining CAN. One that I did many years ago

was different from others that I’ve been involved in. We were positioning to Westchester from Boston. A couple – both were blind – arrived with their young son who had cancer in his eye and was going to a New York hospital for treatment. They asked if I would put eye drops in his eyes as it was required and they were unable to do it. Obviously this is a rarity as most flights are uneventful. The patients and others with them are so appreciative to all of us for the transportation provided for them.

“CAN is a terrific humanitarian service that business aviation can be a part of, and at no cost. I recommend participation to any corporation with a company jet.”



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Shell Aviation launched the Aviation Centre of Excellence (ACE) program in 2014 to help FBOs and small- and medium-sized airports optimize their operations and safety processes for growth. The program focuses on five key areas and is designed to provide customers with advice on marketing assistance; supply security; safe and effective operations; and asset supply, management and maintenance. Customers also benefit from access to Shell's airport operating manual and world-class HSSE initiatives, flexible operations training, dedicated technical support, inspections and assessments.

Case study

Shell Aviation has supplied London Luton Airport with fuel for over 40 years, and has worked in partnership with the Luton Airport Authority to continually enhance operational safety at the airport. Now the fifth busiest airport in the UK, Luton has served more than 12 million passengers in the past 12 months alone – the highest annual number in the airport's 77-year history. As traffic continues to grow, so has the challenge to minimize the risks

of harm, injury and disruptions from fuel-related accidents and spills.

Shell Aviation works with Luton Airport's safety standards team to regularly assess the existing processes, operational safety instructions and airport notices for all fuel-related aspects of the airfield operation, developing new safety standards, practices and initiatives.

As of October 2015, Shell Aviation had achieved 3,436 injury-free days at Luton Airport. This safety record was one of the reasons why the operations team was presented with the Shell Aviation Global Diamond Goal Zero Award in 2014 as part of Shell's Goal Zero policy, a company-wide health-and-safety initiative, aiming at achieving no harm to people and no leaks to the environment. The prestigious award is given to one airport each year out of over 900 airports around the world served by Shell Aviation.

Business benefits

Operational excellence can present clear benefits that help airports and FBOs grow their businesses. Shell's recent exclusive fuel supply agreement reached with Melbourne Aviation Precinct (MAP) is an

Above: Shell introduced a safe, effective fuel-delivery system at Melbourne International Airport in Australia

example of this in action. MAP operates an area of the apron at Melbourne International Airport and chose to work with Shell to help expand its compelling, curfew-free, round-the-clock offer to private and corporate customers.

Shell Aviation set to work to put in place a system to support the safe, quick and effective delivery of fuel to corporate jets, investing in custom-fitted tankers that were configured specially for the job at hand to refuel jets in 35 minutes and deliver turnarounds in under two hours. This has given MAP a strong proposition that combines speed with 24-hour priority service as the base offering, with additional infrastructure and a full suite of services due to come online in 2018.

The Shell Aviation Centre of Excellence program's customers are spread across Europe, North America and Asia Pacific and the initiative includes airports such as Edmonton in Canada, Brest-Bretagne and Lille in France, Roskilde in Denmark, and Gazipasa in Turkey. ○

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Reader Inquiry Number 101

African support

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Tradewinds Aviation Services is a well-established ground service provider to airlines and airports in Kenya. It has operations at Jomo Kenyatta International Airport (JKIA), Moi International Airport, Kisumu International Airport, Malindi Airport, Eldoret International Airport and Wajir Airport.

Tradewinds Aviation prides itself on being one of the premier service providers of airline handling, security and cargo logistics and freight services in all major airports in Kenya and the wider region. In partnership with clients and airport operators, the company has developed a tailored range of services adapted to the specific needs of each location and customer. With a strong focus on safety, security and efficiency, customers are provided with a consistently high-quality product, delivered at a cost-effective price.

The company is able to handle all types of aircraft, ranging from light aircraft to Antonov AN225s. A dedicated team handles the executive and VIP jets, providing an additional escort service through immigration and customs. Current services provided by Tradewinds Aviation include: passenger handling, freighter handling, fuel supplies and coordination, overflight and landing permits, parking and navigation, hotel accommodation bookings, catering bookings, meet and assist, VIP charter handling, security, an IATA accredited training academy and VIP lounges.



Tradewinds also provides portering, aircraft cleaning and loading to carriers for the national carrier Kenya Airways. Freighter services in Nairobi cover all aircraft types, from Boeing 747-400F through to oversize and bulk loading aircraft categories. The group has a full complement of ground-handling equipment available, including high loaders, passenger steps, ground power units, pushback tractors, toilet and water carts, pallet transporters and dollies.

The company is currently the only ground handler at JKIA with executive

Above: **Tradewinds Aviation Services** provides passenger handling at airports across Kenya

Right: **Specialized cargo handling** services are on offer



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Reader Inquiry Number 102



Left: **The Mara Lounge** at Jomo Kenyatta International Airport



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Bigger and better

SouthAir is expanding its facility at Keflavík International Airport to make trips to Iceland more comfortable for business aviation travelers

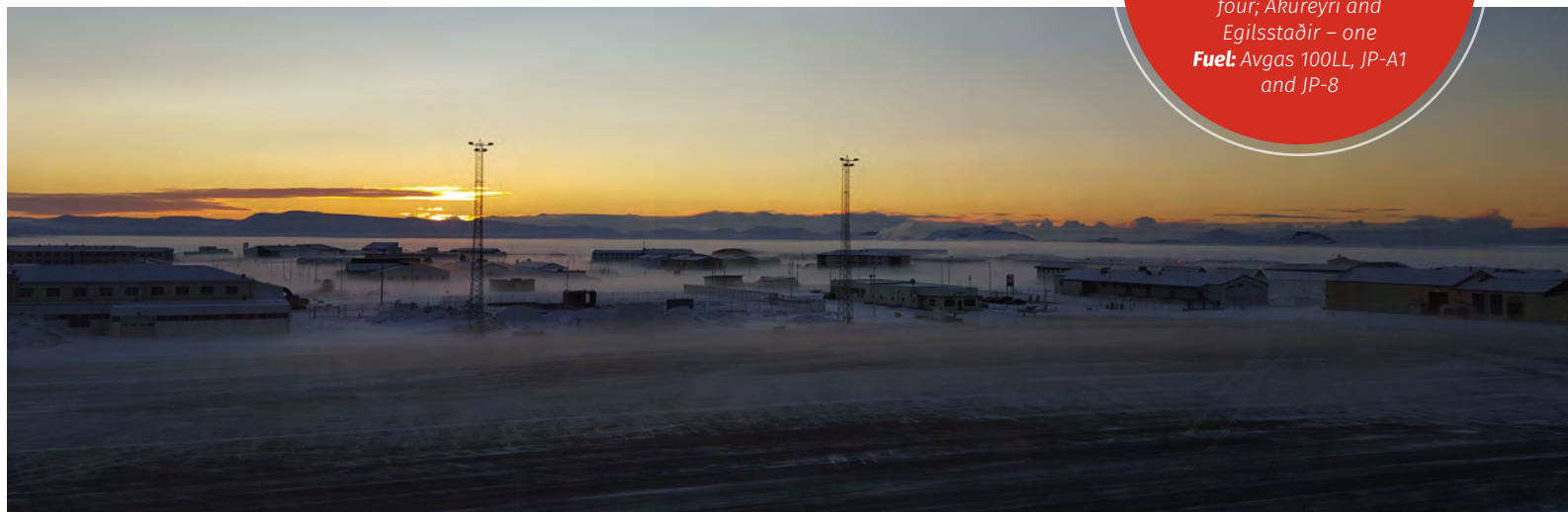
Vital statistics

Location: Keflavík, Akureyri and Egilsstaðir, Iceland

Operating hours: 24 hours

Number of runways: Keflavík – four; Akureyri and Egilsstaðir – one

Fuel: Avgas 100LL, JP-A1 and JP-8



When ISAVIA (the national airport operator and air navigation service provider in Iceland) introduced its masterplan last year, which offered a glimpse into the proposed airport changes and expansions scheduled for Keflavík International Airport in the next couple of decades to keep up with increasing air traffic in Iceland, SouthAir had already started working on its own plan for the future. The growth in traffic at the airport hasn't just been from commercial aviation – general aviation is also on the rise.

Having already set up FBOs at Akureyri Airport in the north and Egilsstaðir Airport in the eastern part of the island, which offer services to customers in search of alternate destinations in Iceland, SouthAir has now decided to expand its operations in Keflavík.

While the airliner handlers at the main terminal are busy fighting over parking

spots and slots for the upcoming summer season, the staff over at SouthAir are seeking ways to make better use of all the space it has available on the Eastern Ramp, where most of the general aviation is processed.

First and foremost is the plan to move to a new and considerably larger building on the Eastern Apron, only a couple of hundred meters from its current location. The new building used to serve as the terminal for the US Navy when the Eastern Apron was under US Navy control, but with the Navy's departure in 2006 it has since seen little use. The building is three times the size of SouthAir's current terminal and its position and layout offers possibilities that the company's current housing can't offer. SouthAir is aiming to offer an even more comfortable experience for its customers as they arrive in Keflavík, be it for a quick fuel stop or to visit the country.

The new building will also enable SouthAir to cater better to the various projects taking place in the region, such as the series of large-scale meteorological

studies that have been conducted by NASA, the UK's National Centre for Atmospheric Science and the German Aerospace Center, as well as many more operations of all types and sizes.

Assistance with military exercises by various countries belonging to NATO is also a part of SouthAir's operation and the new terminal will enable the team to focus more on these projects, while keeping up the high standard of hospitality shown to its general and business aviation customers, who desire privacy and a relaxing atmosphere.

Probably the biggest change to SouthAir's operations is the fact that the new terminal is scheduled to be both landside and airside, as opposed to the current facility, which is only airside. This offers greater comfort for the passengers and crews departing Keflavík through SouthAir's facility by being able to clear security at the FBO itself. SouthAir will be the only FBO in Keflavík with airside and landside access.

The new building is merely the first chapter of many in SouthAir's plan to adjust to the ever-changing flow of the general aviation industry and to stay one step ahead of the curve, something it has been doing since the founding of the company back in 1972. ○

Above: **Keflavík International Airport is the gateway to Iceland**

Below: **SouthAir is expanding into a bigger facility at Keflavík Airport**



SOUTHAIR

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Reader Inquiry Number 103

Strength in numbers

The development of its business aviation traffic is a key objective for **VINCI Airports** and its network in southeast France

In 2015, business aviation traffic represented 39,500 passengers and more than 12,600 aircraft movements at Chambéry Savoie, Clermont-Ferrand Auvergne, Grenoble Isère, Toulon Hyères and Le Castellet airports (Le Castellet joined the group on April 1). Operator VINCI Airports is keen to develop its offer for the business aviation sector by better anticipating clients' and passengers' expectations. The group will be working to improve the quality of service across its dedicated terminals and to introduce new services to meet the changing needs of its customers.

The five airports mentioned above benefit from exceptional geographical locations: Chambéry Savoie and Grenoble Isère offer business aviation clients unrivalled proximity to the French Alps and prestigious ski resorts; Toulon Hyères and Le Castellet provide access to Provence and the Côte d'Azur region; and Clermont Ferrand Auvergne is a gateway to the Auvergne region and its famous industries.

As the closest airports to the French Alps, Chambéry Savoie and Grenoble Isère offer direct access to the slopes by helicopter or limousine. Every winter approximately 14,000 passengers – a constantly growing number – are seduced by the airports' dedicated terminals and tailor-made services. Driven by the desire to provide the best service, both airports will be renovating and improving their infrastructures for the winter 2016/17 season.

Toulon Hyères and Le Castellet airports, at the heart of the Var in

Below: Toulon Hyères and Le Castellet airports are situated at the heart of the Var and close to Saint Tropez



Operators flying to the French Alps should use Chambéry Savoie or Grenoble Isère airports



Left: The new FBO at Clermont Ferrand Auvergne Airport

Group effort

VINCI Airports, an emerging leader in the international airport sector, manages the development and operations of 25 airports: 11 in France, 10 in Portugal (including the hub of Lisbon), three in Cambodia, and Santiago Airport in Chile. Served by more than 140 airlines, VINCI Airports' network handled around 52 million passengers in 2015, an increase of 11.4% over 2014, and recorded revenue in excess of €820m (US\$925m). Through its expertise as a comprehensive integrator and the professionalism of its 5,400 employees, VINCI Airports develops, finances, builds and operates airports, leveraging its investment capability, international network and know-how to optimize the management of existing airport infrastructure, facility extensions and new construction.

In December 2015 VINCI Airports acquired Aerodom, a concessionaire company operating six airports in the Dominican Republic through to 2030. The airports handled 4.5 million passengers in 2015. In a consortium with the Japanese company ORIX, VINCI Airports has also signed a 44-year concession contract with the New Kansai International Airport Company (NKIAC) for the Kansai and Osaka international airports, which handled 37.7 million passengers in 2015. Starting from April 1, these eight airports will be fully operated by VINCI Airports, increasing the number of airports in the network to 33, with an annual traffic volume of more than 100 million passengers.

Vital statistics

Locations: France, Portugal, Cambodia, Chile, Dominican Republic and Japan
Airports operated: 33
Annual revenue: £925m (2015)
Annual passengers handled: 100 million

southeastern France, offer quick and easy access to Saint Tropez and the rest of the Côte d'Azur. Toulon Hyères Airport can handle all aircraft types and offers a complete FBO service. Traffic increased by 19% in 2015, reaching 9,600 passengers.

Le Castellet Airport is open 24 hours a day and is 100% dedicated to business aviation. Its premium facilities and VIP hangars meet all customer needs.

Clermont Ferrand Auvergne Airport, located in the heart of France, has seen substantial growth in business aviation traffic and is the ninth busiest business aviation airport in France. A new terminal was completed in 2015 to cater for the rising number of passengers.

Although each airport benefits from its own unique identity, which corresponds to its location and clients, this individuality is strengthened by the support provided by VINCI Airports. The group offers a strong network and a range of expertise which help maintain a high quality of service, ensuring that customer requirements are met at each of its airports. ○

VINCI AIRPORTS

To learn more about this advertiser, visit www.ukipme.com/info/bai
 Reader Inquiry Number 104

Perfect pit stop

Helsinki is the ideal location for technical stops between East and West, and **Finavia Business Flight Center** provides smooth and easy operations for all business jets

Finavia Business Flight Center at Helsinki Airport serves business and private jets and aviators. The FBO is operational 24 hours a day and guarantees a quick response to all handling requests. Crew changes and fuel stops are easily made at the terminal and all arrival and departure formalities are taken care of by the experienced staff.

Business Flight Center supervisor Erik Lindholm has been with the company since 1998 and has closely observed the growth of business aviation. "Maybe the biggest change has been that the range of the newest business jets is considerably longer today than it was 20 years ago. Nowadays only one fuel stop is required to reach the Far East or North America," he says.

The main focus for Finavia Business Flight Center is on developing its services for a growing number of technical stops at Helsinki. "Of course, the customers coming to the city are as important for us, but the technical stops are the main thing that we are developing," Lindholm comments. "We are trying to make crew changes and the whole passenger experience as quick and easy as possible."

The business terminal at Helsinki Airport is very efficient. Its location is peaceful and all services are provided on-site. The distance between the aircraft



ramp and the terminal is short, which makes arrivals and departures very easy. "There are nice facilities for both passengers and crew members at our terminal. There are also high-class VIP lounges available, but our real goal is that passengers should not have to use the terminal facilities; they should be able to go direct to their aircraft with no delays," Lindholm explains.

For the crew members there are three lounges available. The newest lounge is called the Relaxation Room, owing to its use of relaxing materials and comfortable

Above: **The Business Flight Center is operational 24 hours a day**

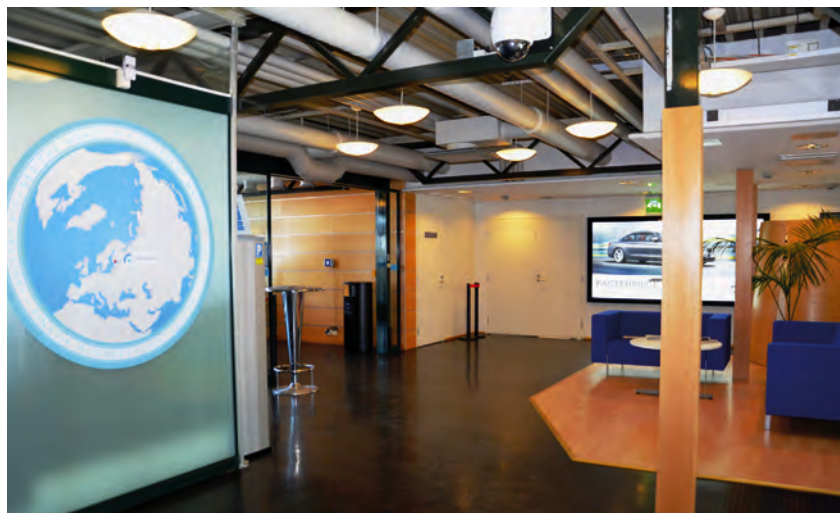
Right: **Erik Lindholm, Business Flight Center supervisor**

Below: **One of three lounges available at the FBO**



décor. "The room makes you feel you are under the northern sky with some nice views of the aurora borealis [Northern Lights]," says Lindholm.

Finavia Business Flight Center provides ground-handling services, airport slot booking, hotel and transportation reservations, and VIP services on request. The operations team is available day and night to facilitate these requests. ○



Left: **Passengers can pass quickly through the peaceful, spacious terminal**

FINAVIA

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Reader Inquiry Number **105**

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Equity Aviation Services (T) Ltd (EAS) has been operating for 16 years. The leading ground handling company to provide comprehensive solutions for handling Corporate Jets, VIPs, Diplomatic Flights, Charters and Ad-Hoc Flights, landing in Tanzania and East Africa since 2000, more focus has been directed into our quality of service to our clients, dedicating our expertise by making our customers top priority. We are proud to highlight our success and development of a new location and more services to more countries in Africa as shown below in the new location.

PRODUCTS

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- Immigration / customs clearance
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- Ground transport
- Passenger steps
- Toilet / water services
- Crew briefing
- Aircraft Interior Cleaning
- Aircraft washing
- Hotel arrangement
- Tarmac transport for Passenger & crew
- ATC slot if required
- computerized weather, Nav and flight plan
- Catering order arrangement
- Ice/flowers/fruit basket/news paper



AFRICA



TANZANIA

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Island of dreams

From superb FBO handling to superior yacht fueling services, **St Thomas Jet Center** provides private jet travelers with everything they need when traveling to the Caribbean

The United States Virgin Islands are typically described as being a “gateway to the Caribbean”. As soon as summer ends in the Mediterranean, St Thomas and the other US Virgin Islands begin preparing for the high season. Travelers flock to the beautiful turquoise waters, continuous sun and lush tropical surroundings of the US Virgin Islands, where they can enjoy superb sailing and yachting facilities, check into private villas, or simply enjoy the casual pace of the very sought-after Caribbean islands in their own style.

Jets to yachts made easy

The newest mega-yacht marina in the Caribbean, Yacht Haven Grande, is located in the stunning St Thomas harbor. St Thomas Jet Center, the premier FBO at Cyril E King Airport, quickly and smoothly provides transfers from private jets to yachts. This combination of services is all in a day's work at St Thomas Jet Center. Operated by hands-on owners Michael and Susan Hancock, St Thomas Jet Center not only provides FBO service and facilities for private jet and charter

customers, it also offers rental cars through its modern fleet of late-model Ford vehicles on site for crew and passengers alike.

St Thomas Jet Center's newest company, Tri-Island Energy, offers marine bunkering of the low-sulfur fuel preferred by all professional yacht captains. Tri-Island fuels yachts at virtually every location on the island. All fuels meet USA/EPA standards, offering peace of mind for the professional yacht captain. From jet to yacht and back again, customers are promised one seamless experience, one seamless operation.

Local air charter standing by

Customers flying into the St Thomas Jet Center FBO can also quickly and easily board a smaller aircraft Capitol Air charter flight right from the lobby. With multiple aircraft flying to more than 30 Caribbean destinations, this additional service adds to the convenience that St Thomas Jet Center customers have come to expect. For convenience, Capitol Air operates an interactive website enabling customers to browse for and reserve flights. For

Below: **The beautiful island of St Thomas attracts business jet and mega-yacht customers during the high season from December to March**

Vital statistics

Location: St Thomas, USVI, Caribbean

Operating hours: 24 hours with notice

Runway length: 7,400ft

Fuel: Contract fuel available

last-minute excitement, Capitol Air also offers special deals through Facebook and Twitter. Flights into smaller airports, transfers between commercial and private flights, moving parts, pets and cargo, day trips or last-minute getaways are all in a day's service.

Capitol Air is the only air carrier based in the US Virgin Islands certified to fly direct into St Barths, one of the highest profile seasonal destinations for business aviation customers and less than an hour away by air.

US Virgin Islands satisfy

The combination of available services in St Thomas for customers flying in or boarding a yacht is simply unbeatable. From experienced, friendly and professional jet services from St Thomas Jet Center, rental cars for up to seven passengers on standby, and marine fuels on demand from Tri-Island Energy to air charter services via Capitol Air, Michael and Susan Hancock can meet all of their customers' travel needs. ○



Steve Simonsen Photography

ST THOMAS JET CENTER

To learn more about this advertiser, visit

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Reader Inquiry Number 106

Nationwide approach

With operations at four airports across the UK, **Manchester Airports Group** offers a comprehensive service to general aviation customers flying into and around the country

Manchester Airports Group (MAG) is the UK's largest airport group and operates four airports across the country: Manchester, London Stansted, East Midlands and Bournemouth. More than 50 million passengers pass through these busy terminals each year.

Conan Busby, business development manager for general aviation, is responsible for the small but exclusive proportion of passengers that use MAG's premier business aviation facilities across its airport network. "Each of our airports is quite a busy community in its own right and they offer great facilities for passengers in the terminals – in fact, terminal facilities are something that set us apart from the competition. What we try to do with our business travel market is to further push that and work with our service partners to offer top-end exclusive facilities for our general aviation customers," Busby says.

Group model

MAG works hard to take advantage of its group operating model to offer benefits to its customers – having four airports allows it to leverage world-class service partners and offer genuine 24/7/365 capability. It also means that when customers deal with MAG, they can get real geographical reach wherever they want to fly – from the North and the Midlands down to London and the south coast. And all of MAG's airports can handle the largest jets, including the B747-8i. Combined with its high-class airfields that are famed for their resilience, MAG's customers can be confident that every need will be met.

"Our group model is one of our biggest strengths," explains Busby. "We



span a variety of markets in the UK, from businesses looking to take advantage of the newly energized 'Northern Powerhouse' – for which Manchester Airport is the global gateway – to London Stansted, which is conveniently located to the northeast of a city that is rapidly expanding in that direction."

All bases covered

MAG's acquisition of London Stansted Airport three years ago has prompted phenomenal growth at the UK's fourth-biggest airport – its scheduled operation is benefiting from other airfields in the Southeast being full, and its full-service general aviation offering is one of the highest quality and most discreet in the country. Only last summer, US First Lady Michelle Obama used the facilities on her trip to London. The airport's location northeast of the city makes it convenient

Above: **Inflight The Jet Centre** is one of five FBOs at London Stansted Airport

Below: **Parking and hangar space** at Bournemouth Airport

for the financial districts in the City and Canary Wharf, and it is also the gateway to the successful and growing East Anglia region and the vibrant London-Stansted-Cambridge corridor.

Bournemouth Airport, meanwhile, serves a wealthy catchment base and offers an array of facilities for flying schools and aircraft maintenance.

Busby himself is based at MAG's East Midlands Airport, which nestles between the cities of Leicester, Derby and Nottingham, and is hoping to welcome a wave of European football traffic when Leicester City, a surprising No. 1 in the English Premier League as this magazine went to press, make their Champions League debut next season. He is proud of the track record of both his local airport and MAG as a whole in general aviation.

"We know our reputation lives and dies by the experience we give our customers," says Busby. "The number of regular customers we have demonstrates to us what we and our world-class FBOs do well – and it's especially good when we see people using a number of our airports as they aim to fly to and from various areas of the UK." ○

MANCHESTER AIRPORTS GROUP

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Reader Inquiry Number 107



Established in 2003, ATSD is an on-site professional partner and FSP (flight service provider).

After 12 years in business, ATSD has become one of Europe's largest providers of flight planning services.

Flight preparation has become increasingly difficult due to various limitations and restrictions in European and international airspace/airport structures, making flight planning and the arrangement of related services very time-consuming.

ATSD has set up a network with civil aviation authorities and handling agencies around the globe to provide a fast, efficient and smooth operational service to clients. Each year, the Dispatch Team provides more than 12,000 international flight briefings to various clients.

ATSD provides services to corporate aviation, commercial aviation, single pilots and aircraft owners.

All ATSD clients get access to the company's internal database via a browser-based tool: ATSD Flight Lookup. Alternatively, clients can use the ATSD App 1.0 for portable IOS devices. With both tools, clients are able to follow up the status of their placed flight orders, retrieving operational information and flight briefings.

ATSD is available 24/7 and will gladly take care of your flight preparation, providing you or your crew with all relevant data such as FPLs, OVFPs, route-related WX and NOTAM briefings, airport slots and necessary permits, and much more.



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Flight-Assist reveals new branding and website to celebrate 10 years of operations

Worldwide flight support provider Flight-Assist, which celebrates its 10-year anniversary in 2016, has unveiled its new company branding accompanied by a brand-new website.

"These are exciting times for us," remarks Ian Dooge, founder and CEO of Flight-Assist. "The past 10 years have seen some tough times for aviation and some companies have not been as successful in weathering the storm. What is the secret of our success? Well, we may be smaller than some providers, but put simply we love what we do and take absolute pride in doing it well. Being able to also achieve this at a price that offers our clients substantial savings over our rivals is of paramount importance to us."

According to Dooge, what sets the company apart from its rivals is its experienced team. "It is made up of people who have spent years in the business of trip planning for private operators and airlines and



Above: Flight-Assist provides bespoke trip support to all its business aviation customers

know what customers want and expect," he explains.

"Our aim is to keep things simple and personal by providing our clients with 24-hour access to a dedicated client manager – one person who knows everything you did last year and what you're

planning to do next week. We feel that this is a vital step toward ensuring a seamless service, and unlike with larger providers, avoids your having to constantly explain the same thing you discussed two days earlier with someone who's now not on shift.

"Client confidentiality restricts what we can divulge in terms of our achievements, but as well as the regular commercial and general aviation operators we serve, we have been part of some true milestones in history – from round-the-world flights to new airliner testing and deliveries."

The company's list of achievements is as broad as its range of expertise: "Whether we are making short-notice air ambulance flights happen, or ensuring the required protocol of government and military movements is adhered to, being able to offer a cost-effective service while demonstrating our knowledge and experience is something we take great pride in," Dooge concludes. ○

FLIGHT-ASSIST

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Reader Inquiry Number **108**

For flying visitors to the beautiful country of Norway, GA Partner offers professional ground handling services to meet all its clients' needs

According to travel guide *Lonely Planet*, "Norway is a once-in-a-lifetime destination and the essence of its appeal is remarkably simple: this is one of the most beautiful countries on earth."

The guide describes Norway's epic landscapes as "among the most beautiful and varied in Europe and the sheer drama of the fjords is alone worth the effort of coming to this remarkable country". One of the most popular cities for visitors to Norway is Bergen, on the southwestern coast. Surrounded by seven hills and seven fjords, Bergen has as its centerpiece the beautiful UNESCO World Cultural Heritage site Bryggen. Nature is never far away in Norway, be it mountains, fjords or the sea, and the country also offers a dynamic cultural life.

GA Partner in Bergen is a professional ground handler focusing solely on executive, VIP, state, cargo, ambulance and military flights. The company strives to bring the best service to its customers and to do so with discretion and a smile. Looking at customer feedback, it seems the business is doing something right. Since its launch in 2013, GA Partner has grown its business and now serves more than 75% of the private jet market at Bergen Airport. GA Partner provides all necessary equipment, state-of-the-art vehicles on the apron and licensed vehicles for transport on public roads. If there is a limousine booked for passengers, GA Partner will ensure that it gets access to the aircraft. Even if immigration and customs is required upon arrival, passengers



Above: Norway is well known for its breathtaking scenery

are en route to their destination within 10-15 minutes of landing. If a passenger wants guided tours or has other needs, GA Partner aims to facilitate them. The company's facilities offer a comfortable crew lounge with wi-fi, hangarage,

helicopter tours, VIP catering and concierge services.

Bergen Airport is open 24/7 and is situated a 25-minute drive from the center of the city. A two-hour drive from the airport and you are in the wilderness of the mountains or the spectacular Nærøfjord and the beautiful Flåm, which features the Flåmsbana, a 12.5-mile long railway line between Myrdal and Flåm.

GA Partner can coordinate visits to the oil city of Stavanger and the capital city Oslo, in cooperation with Sundt Air Executive Handling, which offers a professional FBO service in both of these cities. ○

GA PARTNER

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Reader Inquiry Number **109**

With 16 years' operating experience, **Equity Aviation Services** provides comprehensive ground-handling services across Africa

Equity Aviation Services (EAS) has been operating for 16 years in Africa. It is one of the leading ground-handling companies to provide comprehensive solutions for handling corporate jets, VIPs, diplomatic flights, charters and ad hoc flights landing in Tanzania and East Africa. Since 2000, more focus has been placed on EAS's quality of service to its clients, making customers the top priority.

EAS is proud to highlight its successful development of new locations and additional services to more countries in Africa. The company now provides ground-handling services in Kenya, Uganda, Rwanda, Burundi, Congo-Brazzaville, Algeria, Botswana, Burkina Faso, Cameroon, Central Africa, Chad, Djibouti, Egypt, Equatorial-Guinea, Eritrea, Ethiopia,



Above: **Equity Aviation Services** provides on the ground support for all types of aircraft

Gabon, Gambia, Ghana, Guinea, Ivory Coast, Lesotho, Liberia, Libya, Madagascar, Malawi, Mali, Mauritius, Morocco, Mozambique, Namibia, Nigeria, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, Sudan, Swaziland, Togo, Tunisia and Zimbabwe.

The full range of services offered includes: fixed-base operations; ramp and passenger handling; meet and assist; surface transport; permits; fuel; charter; cargo service; aviation security; executive terminal; aircraft marshalling; passenger and crew lounge; and immigration and customs clearance. ○

EQUITY AVIATION SERVICES

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Reader Inquiry Number **110**

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- A look at some of the biggest issues affecting fuel sales at FBOs and business aviation airports
- A guide to flying to Italy
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CAN UNMANNED AERIAL VEHICLES BE SAFELY INTEGRATED INTO COMMERCIAL AIRSPACE AND WHAT OPPORTUNITIES DO THEY PRESENT TO BUSINESS AVIATION OPERATORS?



The use of unmanned aerial vehicles is on the rise – almost one million UAVs were sold in the USA in 2015, and the Association for Unmanned Vehicle Systems International estimates that commercial drone operations could create 100,000 jobs and generate US\$80bn in the USA alone by 2025 (see *Asset or intruder?* on page 44).

But are UAVs a help or a hindrance when it comes to business aviation

operations? Some in the industry, such as Australian Corporate Jet Centres, argue that they are a force for good and can streamline operations. Others, such as the NBAA, believe such pilotless systems won't be safe until they are subject to the same regulations as piloted aircraft. *Business Airport International* asked our readers for their views on the future of UAV operations and what can be done to ensure the continued safety of commercial airspace. ○

Your views



Eddie Allison, accountable manager at Advanced Aerial Media, said, "Drones can absolutely be integrated safely into existing airspace. For the smaller sub-20kg (44 lb) UAV, the UK has existing rules that clearly lay out the procedures. The trick is making enough of the private and commercial users aware of these. Some additional technology is coming from most good manufacturers that prevents drones flying near airports and other sensitive sites. Of course, there will always be those who ignore the rules and therefore police forces must also be clear on these rules and the powers they can use to ensure safe flying."



Graham Stephenson, senior aviation consultant, commented, "The authorities need to make sure that, with the sale of every drone, a guide to flying and the associated legal responsibilities and regulations is enclosed. The seller could also be required to get a signed document from the buyer that they are

aware of their responsibilities and the possibility of criminal proceedings being taken if the legal requirements are not met.

Airports that already have active bird control should add the control of UAVs to their target list to ensure that this risk is mitigated by local awareness action. If there is any report of UAV activity near an airport, a NOTAM should be issued immediately so that the risk becomes a known hazard that is being addressed. Operators should include UAV activity in their risk register. For each airport they visit, they should include this factor in their risk assessment."



Joe McDermott, senior business aviation consultant at Global FBO Consult, wrote, "Most UAV operations fall into one of these categories: private/recreational; commercial operations by people with no aviation training; or commercial operations by people with aviation training.

I am over-simplifying, but UAV flights undertaken by someone with a private pilot license or commercial pilot license for

helicopters will generally be done with due respect for regulations and safety requirements. UAV flights I have witnessed were undertaken by a commercial helicopter pilot and carried out with all the safety that such training brings. Untrained 'pilots' of UAVs, especially the more powerful commercial types, will have no understanding of aviation regulations or safety and, in my view, pose a serious potential danger to other airspace users, particularly when operating close to airports and airfields.



Fabio Gamba, CEO at EBAA, commented, "Mid-air collisions are the worst-case scenario, especially when we are talking about small objects that are almost impossible to detect visually. The feeling of impunity

and the absence of legislation, coupled with amateurish electronics, make a dangerous cocktail for safety. Ingestion into one engine, and the subsequent thrust loss during the initial phase of flight, is also another big danger for operations. The consequences are not likely to be catastrophic, as modern jet aircraft are designed to continue safe flight with one engine loss, but there can be serious consequences.

We're obviously not saying that everything is wrong about drones – on the contrary. For instance, drones can be used to enhance preflight checks by giving flight crew visibility of aircraft parts that are normally out of sight. Obviously extreme care and proper rules must be followed as drones can easily damage aircraft and their vicinity through direct impact or by ingestion."

Your comments



What do you think? Have you had a close encounter with a drone? What more should the authorities do to improve airspace security? We'd love to hear your thoughts on this or any other topic affecting the business aviation industry, so visit www.linkedin.com and search *Business Airport International* to join in with the debate.

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