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INSIDER

THE OFFICIAL MAGAZINE OF NBAA

MARCH/APRIL 2024



GPS SPOOFING

PG 16 How Concerned Should You Be?

INTERNATIONAL ISSUE

SECURITY PREPAREDNESS

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AIRSPACE RESTRICTIONS

Flight Planning in a Complex World

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PRESIDENT'S PERSPECTIVE

Advocating for an Increasingly Global Industry



ED BOLEN
President and CEO

Since its founding, NBAA has continuously worked to foster the growth of business aviation in the U.S. and around the world. As the business marketplace, and therefore

our industry, become ever-more globally integrated, the association's work involves policy matters not just with implications for operations in the U.S., but for missions in other countries as well.

Take, for example, our recent advocacy concerning Ireland's Dublin Airport (DUB), where the airport authority is threatening a ban on general aviation – including business aviation – to maintain an annual cap of 32 million passengers.

NBAA has partnered with the Irish Business and General Aviation Association (IBGAA) and the European Business Aviation Association (EBAA) to win support among Irish government officials for U.S.-based companies operating business aircraft there. We've teamed up with these organizations to preserve access for business aviation – just as we do in the U.S. – recognizing that when one airport denies access to business aviation, it potentially sets a dangerous precedent for shutting down access at additional airports – an untenable situation.

Another international concern is recent GPS spoofing activity reported in airspace outside the U.S., which has prompted the FAA to warn about possible electronic jamming attacks, especially in airspace above the Middle East and Caucasus regions, that could affect Terrain Awareness and

International concerns clearly demonstrate that the future requires our industry to match the accelerating pace at which the business marketplace is becoming global.

Warning Systems (TAWS).

In fact, NBAA is working with the FAA, OEMs and other experts who are monitoring these attacks to keep you updated on what you need to know. A feature article on page 16 of this International edition of Business Aviation Insider offers the latest information and the industry's best guidance on mitigating this potential threat.

Finally, a great deal of valuable insight on these issues is shared at NBAA events – most prominently at our annual International Operators Conference. This year's IOC in Orlando, FL, will include the latest information on global risks and prevention – including GPS spoofing, mitigating airspace closures, dealing with cybersecurity threats and other important topics that impact your operations.

Overall, these and other international concerns clearly demonstrate that the future requires our industry to match the accelerating pace at which the business marketplace is becoming global. It's important that NBAA's efforts to serve our industry reflect that reality. You can count on us to do exactly that in the years ahead. ✧

BUSINESS AVIATION

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Contact NBAA's **Ashley Granada** at agranada@nbaa.org for more details
on joining the FBO Partnership Network.

FLIGHT BAG



NBAA FEDERAL EXCISE TAXES GUIDE

Updated in December 2023 to reflect the tax rates for calendar year 2024, the guide provides the latest information on how federal excise taxes (FET) apply to business aircraft activity.

nbaa.org/fet



DEPARTURE/ARRIVAL RUNWAY SAFETY BRIEFING CARD

This checklist consolidates critical threats, considerations and planning points in a one-page format ready for use on the flight deck.

nbaa.org/runway-briefing

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Resources: International Operations

For those who fly globally for business, NBAA offers resources and news, including ever-changing requirements and more.

nbaa.org/intl

NBAA CUSTOMS CHECKLISTS

To help business aircraft operators meet domestic and international customs requirements, NBAA's Domestic Operations Committee created a resource to provide operators with a guide to some of the most common logistical considerations involved in international flight. This resource contains customs checklists for inbound and outbound flights, as well as considerations for customs and international operations.

nbaa.org/customs-checklists

SAFETY ASSESSMENT OF FOREIGN AIRCRAFT

U.S.-registered business aircraft flying in Europe are subject to Safety Assessment of Foreign

Aircraft (SAFA) inspections when operating in European Union member states. To ensure a successful inspection, NBAA recommends operators review the rules and procedures for SAFA compliance.

nbaa.org/safa

OCEANIC FLIGHT INFORMATION

For those conducting flight operations in oceanic airspace, NBAA's resources include guidance for operating in the North Atlantic, West Atlantic, Gulf of Mexico and Pacific.

nbaa.org/oceanic

SECURITY RISK ASSESSMENT FOR BUSINESS AVIATION

This security risk assessment process, developed and produced by the NBAA Security Council, provides a simple product for assessing risk in a variety of business aviation-related areas. nbaa.org/securitymatrix

3%

fewer business jet
and turboprop flights
worldwide in 2023,
compared to 2022.

Source: WingX

By the Numbers: Global Business Jet/Turboprop Flights in 2023

Annual departures of business jets and turboprops in North America and Europe dipped in 2023, while all other regions showed significant increases.



SOURCE: WINGX

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The advertisement features a family of four (a woman, a man, and two children) walking away from the viewer on an airfield towards a private jet. The woman is carrying a child, and the man is carrying a bag. The jet is a white business jet with its cabin door open. The background shows a clear sky and other aircraft in the distance.



SHANNETTA R. GRIFFIN, P.E., associate administrator for airports, leads a team of more than 600 employees around the country and manages an annual budget of \$3.35 billion, which includes an operating budget of about \$112 million. She is responsible for the Airport Improvement Program grants, which total around \$8 billion annually, as well as two major research programs. She is also responsible for administering national airport safety and standards, planning, engineering, environmental processing, financial assistance and compliance programs for more than 3,300 public-use airports nationwide.

Prior to joining the FAA, Griffin served as the chief commercial officer for Ohio's Columbus Regional Airport Authority. She managed the authority's revenue generation, including parking and ground transportation, air service development, concessions, land development, real estate and cargo development.

FAA's Top Airport Official Discusses Safety, AAM and Vertiports

Q: With runway incursions and wrong surface events frequently in the news recently, how is the FAA Office of Airports leading efforts to reduce these events?

We recognize that one close call is one too many and we are working hard to drive the number of such incursions to zero. The FAA Office of Airports continues to prioritize and promote awareness and proactivity in runway safety and operations among airports.

After analyzing more than six years of national runway incursion data between 2007 and 2013, we initiated a comprehensive multiyear Runway Incursion Mitigation (RIM) Program in 2015 to identify, prioritize and develop strategies to help airport sponsors mitigate risk. To date, more than 100 locations have implemented mitigations, with an approximately 70% overall reduction in runway incursion events. For years, we have funded airport and safety projects through our Airport Improvement Program (AIP). The historic Bipartisan Infrastructure Law (BIL) has given us the opportunity to fund additional safety projects.

Recently, the FAA:

- Announced investment of over \$200 million for runway lighting at large and small airports.
- Launched a safety summit to address the current runway and surface safety events with multiple stakeholders and to identify solutions.
- Fast-tracked three initiatives to address specific safety concerns on the airport surface.

- Invested over \$221 million to reduce runway incursions at 20 airports.

Q: How do you see airports transforming in the near future to accommodate advanced air mobility (AAM) and electrification? What is the FAA doing to prepare for the new infrastructure to support this next generation of vertical aviation?

These are exciting times to be in aviation as we continue to see rapid innovation across the aviation ecosystem.

In the next few years, the FAA expects to see more traditional aircraft transitioning to electric, hydrogen and hybrid propulsion, and the industry adopting aircraft that will operate under the vertical takeoff and landing (VTOL) and short takeoff and landing (STOL) models.

A growing number of airports, communities, developers and AAM operators are planning for landing and takeoff sites both co-located on and separate from airports. We have developed new performance-based design guidelines for vertiports to provide key information to begin development of facilities that will support operations of AAM aircraft that are electrically powered with vertical takeoff and landing capabilities.

While only a few markets may see those early operations, I can't emphasize enough that it's imperative that airports start planning for the increased electrical demands that AAM aircraft, and electric aircraft in general, will bring to the airport environment, not excluding electric vehicles. The Office of Airports will continue to be a partner with our airports and

other stakeholders through the dynamic change our industry is facing.

Q: One of the most significant developments in 2023 was the release of FAA's final rule on airport safety management systems (SMS). Can you discuss why this rule is important to general aviation (GA) airports and can you share any advice for those facilities?

When full implementation is achieved, we foresee the airport SMS rule integrating with safety management systems for

Part 135 and some Part 91 operators and other safety initiatives currently in place. This will result in increased communication and collaboration to present a positive safety culture. The final rule on airport SMS is applicable by regulation to certain 14 CFR Part 139 airports; however, the fundamentals of safety management systems also applies to GA airports.

We designed the Part 139 SMS rule to be scalable to airports of different sizes, complexities and structure and we are confident this program could even be adopted by GA airports as well.

Some of our leading GA airports have

modeled their safety programs after Part 139. We hope to see other GA airports adopt the Part 139 Airport SMS rule in the same manner.

For the early adopters of what we are calling our External SMS Program (139 SMS), including airports in other countries that have mature SMS programs, we are hearing about great benefits and success that are directly and positively impacting airport safety. ✦

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nbaa.org/news-hour

REGIONAL REPRESENTATION

International Bizav Groups Address Shared Challenges

International advocacy is key to ensuring business aviation's benefits and priorities are understood and appreciated in the face of many common challenges.

European Business Aviation Association (EBAA) Secretary General Holger Krahmer noted his association works with many other international business aviation groups, including NBAA, on issues both across Europe and around the globe.

"This collective approach enhances the effectiveness of our advocacy on the international stage," Krahmer said, "facilitates the exchange of best practices and insights and allows us to tackle shared challenges and adapt successful strategies across different regions."

Collaboration between these groups is also key when presenting the industry's voice before the International Civil Aviation Organization (ICAO), which determines aviation policy around the globe.

"Whatever ICAO decides will ultimately affect our community, so we want to be in those discussions from the beginning," said Kurt Edwards, director general of the International Business Aviation Council (IBAC).

"It's important for us to get together with all our member groups to exchange ideas and experiences on shared issues and challenges and come together with unified ways forward," said Edwards.

While matters such as industry safety, ensuring open access to airports and airspace and promoting environmental sustainability are common to business aviation around the globe, educating local officials about the industry's value to communities is particularly important in

"It's important to get together with all member groups to exchange ideas and experiences on shared issues."

KURT EDWARDS

Director General, International Business Aviation Council

emerging markets such as Africa and the Asia-Pacific.

"We've also found those regions look at sustainability differently," Edwards said. "We tend to view sustainability as primarily environmental, but there are economic and societal elements as well. The ability to work with government leaders and local authorities to explain business aviation's benefits takes on greater importance."

Krahmer also noted leveraging international partnerships helps bring deeper understanding of the varied cultural and regulatory environments across regions to better inform EBAA's advocacy strategies and initiatives.

"Given the global nature of business aviation, collaboration is essential to influence and shape international standards and regulations that affect our industry," he said. "Together, we will ensure that these standards adequately reflect the needs and realities of business aviation." ❖

Review NBAA's resources on advocacy at nbaa.org/advocacy.



IGBAA CHAMPIONS BIZAV IN IRELAND

International aviation has been a rich part of Ireland's history since the first non-stop flight from the U.S. to Europe landed in a peat bog more than a century ago. The Irish General and Business Aviation Association (IGBAA) draws on this legacy in promoting the importance of GA and business aviation across the country.

"We want to position Ireland as a center of excellence for business aviation," said Joe Buckley, founding executive director of the IGBAA. "Part of our mission is to educate the Irish government and decision-makers on the value of business aviation for the Irish economy."

The group also intends to present a development plan for business aviation to the Irish government.

IGBAA is also fully committed to the industry's "environmental responsibility to mitigate climate change," Buckley said. "We fully endorse and stand behind the Business Aviation Commitment on Climate Change (BACCC) and will promote Ireland as a leader in this area of sustainability."

Since Ireland is a leading hub for commercial aircraft leasing and a host for international industries, Buckley said "IGBAA is perfectly positioned to connect the rest of the world to Ireland."

ibgaa.com.



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INDUSTRY CHALLENGE

Two eu-LISA passenger entry programs are expected to launch in 2024. A similar program launched in the UK and will expand in 2024 or 2025.

NBAA RESPONSE

NBAA is coordinating closely with EBAA, the Canadian Business Aviation Association and relevant EU agencies involved to ensure smooth implementation of the eu-LISA programs, as well as the British Business and General Aviation Association to monitor the rollout of the UK ETA program.

New EU, UK Passenger-Entry Registration Requirements Coming

Operators planning to fly to Europe later this year should be aware of new passenger-entry systems for 26 countries in the Schengen Area. The new systems will be managed and overseen by the European Union Agency for the Operational Management of Large-Scale IT Systems in the Area of Freedom, Security and Justice (eu-LISA). The Entry/Exit System (EES) and European Travel Information and Authorization System (ETIAS) will verify passenger details prior to entry.

EES is expected to be operational in the third or fourth quarter of 2024 and ETIAS is expected to follow about six months later. The European Commission is expected to provide specific launch dates after a July meeting.

Rick Snider, director of contracts and compliance at Flight Pro International, explained the systems will roll out in two phases. Phase one implements EES, with entries and exits processed electronically, versus passport stamps. This phase will have little impact on U.S. travelers to Europe since they are typically visa exempt.

Phase two rolls out ETIAS, which is similar to the U.S. Electronic System for Travel Authorization (ESTA) visa waiver program.

All air carriers must comply with the new systems. While Part 91 operators are not necessarily required to participate, experts say it might be best to register for the systems.

NBAA's Director of Flight Operations and Regulations Brian Koester, CAM, said, "Our communications with the eu-LISA carrier group indicate that office doesn't expect Part 91 operators to participate, in part due to advocacy from NBAA and other industry partners."

Adam Hartley, product owner in global regulatory services at Universal Weather and Aviation, Inc., discussed the "private" flights outside the regulation's scope, according to the eu-LISA

"Registering for the system and submitting manifests can help ensure your passengers have what they need and won't be denied entry upon arrival."

RICK SNIDER

Director of Contracts and Compliance at Flight Pro International

carrier group. The concern early on is a possible disconnect between eu-LISA expectations and local customs offices.

"Operators that have already started this path to register and develop processes to comply should continue," Hartley said. "This is not something you can stand up with short notice."

Experts advise exercising good change management and determining other areas of your operation that should be addressed.

"Everyone entering the Schengen Area will be using this system, regardless of whether the operator registers to submit manifests," Snider added, encouraging Part 91 operators to register and plan to use the systems.

The United Kingdom has launched a similar program requiring an Electronic Travel Authorisation (ETA) for Qatari and Jordanian nationals. It's expanding to all passengers entering the UK in late 2024 and 2025. The British Business and General Aviation Association remains engaged with government agencies as they continue to determine the details of the program. ❖

Review NBAA's resources on passenger entry requirements in Europe at nbaa.org/eu-entry.



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PRO TIPS



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Young Professionals: Navigating Through Career Slumps

For various reasons, business aviation career paths often hit a slow patch, putting young professionals in a frustrating sort of job limbo.

Gulfstream G280 pilot Robbie Moon remembers hitting his slump about a decade into his business aviation career. “I worked 10 years at a company that simply didn’t have any upgrades,” Moon recalls. His advice for young professionals in similar situations: “First, show up both physically and mentally to bring your best game to the job you have now,” Moon says. “Read those technical manuals no one else does. It will put you head and shoulders above your peers. Don’t base your career plans on today’s aviation industry. The music can stop pretty rapidly.”

“Always say yes,” says Megan Knox – operations manager for M&N Aviation in Denver.

“When you’re offered an opportunity, whether you’re familiar with the subject or not, just take it and run – to challenge yourself,” she said.

“When you’re offered an opportunity, whether you’re familiar with the subject or not, just take it and run to challenge yourself.”

MEGAN KNOX

Operations Manager, M&N Aviation

Knox also recommends volunteering. “It’s a great way to network,” she says. “Local volunteering shows your current bosses what you’re capable of. Search your own company for career advancement possibilities. If your company can’t cover the costs for professional development, look for scholarship money.”

Ex-flight attendant Brandi Drain – now director of inflight services for Clay Lacy Aviation at California’s Van Nuys Airport (VNY) – suggests self-reflection. “Take a

close look at the things you do well and continuously work toward getting better,” Drain says. “It’s really important to find a mentor who sees potential in you that you might have missed.”

Some might consider starting a business. Joe Peebles, owner-operator of Atlanta repair shop JP AeroTechnics, quickly learned the skills for running a business were very different from those of a technician. “People told me I was crazy to give up the security of a regular paycheck. I learned a lot from the mistakes I made in my prior businesses,” Peebles says. “The truth is that work is hard. But I think life is hard whether you work for yourself or someone else. Make the decision that makes you happy. But remember to balance your work with your family life. I forgot that early on.” He now employs six.

“Don’t be afraid to leave your current job for a career challenge, or to go outside your comfort zone,” says Jay Gallagher, managing director at Aviation Search Group.

Overall, Moon says, it comes down to you. “Remember, you can’t control all the outcomes. All you can control is your daily behavior.” ❖

Learn more about the Young Professionals in Business Aviation (YoPros) at nbaa.org/yopro.



The Future of Business Aviation Is Here

Across the globe, young people are grabbing the reins of the industry and taking it to ever-greater heights. NBAA's Young Professionals in Business Aviation (YoPro) program is once again privileged to shine a light on their efforts. Help us recognize the next generation of business aviation leaders and innovators by submitting a nomination for the 2024 Business Aviation Top 40 Under 40.

nbaa.org/40u40

GPS Spoofing

Should Operators Be Concerned?

Aspate of reported incidents of GPS “spoofing” in certain airspace regions last year unnerved many international business aircraft operators. How can operators tell when they’re being spoofed, and how concerned should the industry be about this issue?

First, it’s important to distinguish spoofing from GPS jamming. Many operators have already experienced the latter phenomenon, which involves overwhelming the relatively weak signals from the Global Navigation Satellite System (GNSS) with far more powerful, ground-based streams, blocking data received by navigational systems on the flight deck.

GPS spoofing, on the other hand, “is a much more sophisticated attack,” said Ben Mohr, offering director for alternative navigation products at Honeywell. “The attacker simulates a valid GPS signal that your receiver will track and might put your aircraft in the wrong location. That can lead to some really serious consequences.”

To date, most reported spoofing attacks have come from the Middle East – most notably Iraq, Iran and Israel – and in the vicinity of Azerbaijan and up through the Black Sea region. However, operators should be cognizant of the potential for spoofing anywhere.



GPS Spoofing

Should Operators Be Concerned?

"We've also seen spoofing events reported around Turkey, the eastern part of the Mediterranean, around the Baltic Sea and up toward Murmansk, and in Finland," added Jens Hennig, vice president of operations for the General Aviation Manufacturers Association (GAMA). "Operators in known conflict regions should already have processes in place addressing the broader risk of flying in those areas."

A spoofing attack may also take several forms. A "non-coherent," or asynchronous, attack resembles GPS jamming by overpowering legitimate GPS signals with a stronger counterfeit that the receiver interprets as the actual signal stream.

"This is very easy to do with equipment available commercially," said Nat Iyengar, a Hong Kong-based Gulfstream G650 captain and vice chair of NBAA's International Operators Committee (IOC). "You can even record the [spoofed] GPS signal as you're driving a car," and then broadcast that signal to an aircraft, quickly confusing aircraft flight crews.

A "coherent," synchronous spoofing attack more closely mimics an authentic GPS signal derived from the aircraft's actual position, allowing bad actors to alter the aircraft's course gradually. That makes such spoofing more difficult to detect, but it's also harder for a spoofer to execute.

RECOGNIZING THE SIGNS

Immediate recognition of a potential spoofing situation is key to mitigating the risk. Spoofed GPS signals may affect not only aircraft position information, but also ground speed and altitude indications, as well as the aircraft's clocks. The erroneous position information may also set off

"Operators in conflict regions should already have processes in place addressing the broader risk of flying in those areas."

JENS HENNIG

Vice President of Operations, General Aviation Manufacturers Association

the aircraft's terrain alerting systems and lead to other confusing aircraft behaviors.

"Multiple systems on newer aircraft use GPS in some form or fashion," added Iyengar. "That could be anything from calculations for enhanced ground proximity warning systems (EGPWS) to the moving map for passengers."

Depending on your aircraft's avionics suite, synthetic vision systems may revert to a conventional "blue over green" artificial horizon display, and the indicated GPS position might freeze or move slowly. CHECK GPS, FMS-GPS DISAGREE or similar warnings may annunciate, and the

aircraft's clock might display the incorrect time. Crews may also notice the aircraft turning to intercept the spoofed GPS course.

"The counterfeit GPS signals overpower the normal GPS signals from the constellation, so you're going to get a whole consistent set of GPS signals that are affected," added Simon Innocent, commercial navigation offering director at Honeywell. "All those parameters that are acquired by the GPS receiver on the aircraft are all going to be affected in a consistent manner."

"The displayed altitude may be the altitude at which [the spoofer] recorded the false signal" for a non-coherent attack, added Iyengar. "Airspeed indications may read the speed of the car or truck used to record the spoofed signal, and the timestamp will be for the period when they recorded it."

Contrary to some initial reports, the aircraft's internal reference system (IRS) and other navigation sources should remain unaffected, providing flight crews with important fallbacks to restore their aircraft's correct course. The confusion stemmed from the use of "hybrid" navigation modes that integrate GPS data with the IRS

"The displayed altitude may be the altitude at which [the spoofer] recorded the false signal. Airspeed indications may read the speed of the car or truck used to record the spoofed signal, and the timestamp will be for the period when they recorded it."

NAT IYENGAR

Gulfstream G650 Captain and Vice Chair, NBAA's International Operators Committee



to position the aircraft more precisely.

"There is a clear flow down from dependency on GPS, which in some cases may not even be there, to using the IRS system to augment their positioning," Hennig added. "Crews may also have DME and VOR DME stations available, and – in the worst case – basic dead reckoning functions."

"The flight management system (FMS) typically gets affected because it's using either GPS or hybrid IRS," Innocent said. "The good news is there are plenty of signs available on the flight deck to understand what's going on ... including crew alerting system (CAS) messages. Flight decks often have monitors to compare aircraft position between different sources, and crews will be alerted when there's a disagreement."

CAUTION ADVISED

While GPS spoofing has so far proven to be more a relative nuisance than a serious safety issue, operators need to be aware of the risks. In February 2024, the FAA issued its Safety Alert for Operators (SAFO) on GPS spoofing attacks. The European Union Aviation Safety Agency (EASA) issued a similar Safety Information Bulletin last year.

Acknowledging the possible loss

of situational awareness during a spoofing attack, the SAFO "recommends flight crews put additional emphasis on closely monitoring aircraft equipment performance for any discrepancies or anomalies, promptly informing ATC of any apparent GPS/GNSS degradation, and being prepared to operate without GPS/GNSS navigation systems." The FAA also created a working group with operators and manufacturers to further explore mitigations.

On the OEM side, the ultimate goal is to have robust backups available for the aircraft to draw from when an erroneous GPS signal is suspected. As one example, Honeywell's Vision-Aided Navigation system uses a downward-facing infrared camera to compare real-time imagery against satellite mapping to provide an absolute position update over land and more quickly detect deviations.

"Our goal when we began with [this system] was to provide continuity of operations even in a GNSS-denied environment," Innocent noted.

Hardened GPS receivers are another option, Mohr said. "There are systems out there that are designed specifically to shield against jamming or spoofing that I think will end up being part of the solution," he added. "A third possible solution may be alternative navigation sources that use a completely different sensor" than current systems.

While such solutions "are primarily focused on military users right now," Mohr said, "we do see them moving into the commercial space as well.

"There is no silver bullet to replace GPS," Mohr added. "It's a fantastic technology, and it will take a combination of different sensors to provide the same type of capability GPS provides."

In the meantime, Iyengar reiterated caution for flight crews. "GPS spoofing may not have proven so far to be as big a deal as initially feared," he said, "but crews should be advised to stay clear of that airspace, if possible." ❖

"There is no silver bullet to replace GPS. It's a fantastic technology, and it will take a combination of different sensors to provide the same type of capability GPS provides."

BEN MOHR

Offering Director for Alternative Navigation Products, Honeywell

Review NBAA's communications, navigation and surveillance resources at nbaa.org/cns

MAKING A PLAN

FOR BUSINESS AVIATION SECURITY



Security threats to business aviation are everywhere, so businesses and individuals must make sure to have an active and effective plan in place.

Business aviation operates today in an increasingly dangerous and challenging world. For that reason, aviation security has become an integral part of everyday life. And, as the scope of the potential threats to security grow – from potential physical attacks on aviation assets, to cybersecurity issues and even the possible dangers posed by artificial intelligence (AI) – the responsibility for developing detailed security plans falls squarely on the shoulders of those working in business aviation.

However, the security needs of each organization vary depending on how and where they do business. For that reason, preparing a complete, detailed security plan that addresses the needs of each company's employees and clientele requires ongoing analysis and adaptation as times and the nature of potential security threats change, say the experts.

"Every client has unique needs and expectations as to what their security service should provide them," said Brian Leek, managing director, global protective solutions of Crisis24, a GardaWorld company, offering integrated risk management, crisis response, consulting and global protective solutions. "When working with corporate clients and high net worth individuals (HNWI), there is always a level of risk to manage, no matter the circumstances. Risks are incredibly varied and can be geopolitical, social, cyber, weather or medical-related, among others."

NBAA supports the continued adoption, implementation and enhancement of many security requirements, programs and best practices that reduce business aviation's vulnerability to terrorist threats. Risk assessments are a critical part of any organization's security process. Proper risk assessment provides security teams with the necessary data points to mitigate or accept any residual risk.



BASIC IDEAS

In developing a comprehensive security plan, companies should keep two basic ideas in mind, according to Don Chupp, president and CEO of Fireside Partners, Inc., which provides emergency response services and support to business aviation and private families.

"Number one is, if you have some degree of awareness that there is a threat, then you have the inherent responsibility to contemplate a planning structure," Chupp said. "As things move and evolve, we must move and evolve our planning resources. You do that on an organizational level, and you also lean on your service providers to keep up with the modern requirements."

The risks and security needs are ever evolving.

"We can't do our business like we did 10 years ago," added Chupp. "The new security battlefield is our responsibility. Your responsibility as an organization is to develop a plan."

Second, organizations need to thoroughly analyze their security needs.

"They need to identify what their priority drivers are and identify them before they start writing procedures, otherwise they're writing procedures against a compass point they haven't identified," Chupp said. "Once you identify those priority drivers, you'll find writing a plan a much easier affair when it comes to security."

UNDERSTANDING CYBERSECURITY

In today's world, security threats are as much a product of cyberspace and AI, as they are of physical threats, such as an attack on an aircraft or office.

"The new security battlefield is in cyberspace and physical

space,” added Chupp. “So, speaking of the former, bad actors have the ability to negatively influence everything from reputation to business and disruption to denial of services, because we’re so reliant on technology. So, a security attack on any of those systems has detrimental and far-reaching effects.”

In fact, Fireside now runs cybersecurity aftermath drills. “This is not the IT infrastructure I’m talking about,”

“In most countries you can’t show up from outside that country with armed guards on the airplane,” said Chupp. “So, the strategy around asset protection where you can’t have physical armed assets every step of the way is something you have to think about. And again, the threat is not always some physical human being who is going to intrude on your flight crew or passengers.”

And, of course, every flight is different, with a different

“We can’t do our business like we did 10 years ago. The new security battlefield is our responsibility. Your responsibility as an organization is to develop a plan.”

DON CHUPP, President and CEO of Fireside Partners, Inc.

Chupp said. “It’s what do you say to your employees whose computers have all shut down. Or what do you say to your customers and when. And, what are you required to say in some instances when you become aware that data has been breached. That requires just as intentional of a plan as any other emergency response plan you think about.”

INFLIGHT SECURITY PREPAREDNESS

For FBOs, company flight departments and other business aviation operators, planning for inflight security risks obviously are paramount, especially when flying internationally over potential trouble spots.

“Travel to high-risk areas, whether domestic or international, affects how we apply our protective schemes of coverage,” said Leek. “Our security protocols remain commensurate to the assessed threat. Working with a security firm that is highly experienced at both the domestic and international levels is important, as this means working with operators that are familiar with the environments as well as what it takes to operate in hot zones.”

Chupp said an effective inflight security plan must take into consideration a variety of scenarios, not just during takeoff and landing but during the entire trip.

“In our world, we don’t just look at the point of departure and arrival, we look at everything in between because if you have a mechanical emergency, you may have to put down in any of these places, many of which the U.S. doesn’t have an embassy in.”

Armed guards aboard flights aren’t always a solution, either.

set of factors to be considered when addressing security needs.

“We ensure we evaluate the full spectrum of risks to be prepared for anything, no matter how unlikely,” said Leek. “Our starting point with any client preparing to travel is to have a good understanding of their purpose for travel, their preferences and priorities so that we can tailor our protective services to fit their requirements.”

Keeping the identity of passengers private is important because HNWIs and senior executives for major corporations can be targeted by bad actors and activists.

“We see some clients when booking private air travel just assume their travel itinerary is being well-secured,” said Leek. Flight confidentiality “tends to be less of a concern when dealing with a client’s proprietary or in-house flight operations teams than with for-hire leasing or fractional ownership and their contracted FBOs for the trip.”

Increased activism by groups opposed to business aviation also is an increasing potential threat.

“The tracking of aircraft belonging to high-profile individuals and major corporations is being increasingly adopted by activist groups seeking to disrupt their travel,” added Leek. “For those conducting these acts, it is a means of gaining publicity and drawing attention to their cause.”

Tracking software and tools, which are easily available commercially, makes tracking flights easier than ever.

“Moreover, public awareness of this technology has recently expanded, indicating a growing future trend of tracking high-profile individuals and enterprises,” Leek said. “Despite best efforts to counter this tracking technology, such as registering for the FAA’s Limiting

Aircraft Data Displayed list (LAAD), these measures offer only limited protection and privacy at best. As such, we inform most of our clients to assume their aircraft will be tracked and then we take the cautionary measures needed. This starts by maintaining strict control of the principal's travel schedule."

A NEW THREAT: CLIMATE ACTIVISM

Climate activism by groups targeting business aviation is on the rise and creating a growing sense of concern among security professionals and business aviation organizations.

"Escalating concerns over climate change have led to a surge in global activism, with particular focus on industries that produce carbon emissions, including commercial and business aviation," according to a recently released report by MedAire, a company specializing in travel risk mitigation for the aviation and yachting industries. "As a result, activist groups have emerged and will use disruptive tactics to bolster their message."

Business aviation interests should take extra precautions when traveling to potential activism hotspots, including Western Europe and even areas of North America, according to John Cauthen, MedAire security director, maritime and aviation.

"I think that airports, FBOs and individual operators are becoming more keenly aware of the security threats posed by activists and the need to factor mitigation measures into operational planning," Cauthen said. "First and foremost, they need to understand who these groups are, where they're operating, what their objectives are and why they're targeting business aviation."

MedAire recommends several steps that airports, FBOs and operators should take to better protect their crews, assets and passengers from potential harm:

- » Proactively gather information about protest groups and related activities that may disrupt aviation operations.
- » Enhance security measures to deter potential threats, including using locks, tags and seals when the aircraft is unattended to prevent unauthorized access and choosing parking locations at the maximum distance from the airport's perimeter to reduce exposure to potential threats.
- » At certain locations, hiring private security may provide an additional layer of protection for your aircraft.
- » Providing crew members with the proper training to handle disruptions is essential. This can include learning de-escalation techniques to calm tense situations or emergency evacuation procedures to ensure everyone's safety.
- » Review your insurance policy to ensure it covers potential damage resulting from protests.
- » Maintain clear and open communication with stakeholders, such as clients and employees, before, during and after a protest event to manage expectations, alleviate concerns and maintain trust. ✦



NBAA's Security Council a Valuable Resource

The NBAA Security Council provides association members with advice and guidance on matters relating to business aviation security. Created after the Sept. 11, 2001 terrorist attacks, it is composed of security professionals and representatives from all facets of business aviation.

The council's goal is to maintain and protect airspace and airport access in today's environment of heightened security, to establish and communicate business aviation security best practices, and to ensure the safety and security of business aviation aircraft and passengers. It develops and maintains a security best practices document and maintains the security section of the NBAA Management Guide, a reference designed to assist existing business aviation departments with their operational, maintenance and administrative requirements and to provide useful guidance for establishing

and operating a flight department.

The NBAA Security Council's officers include:

- » Eric E. Moilanen, Premier Corporate Security (Chair)
- » John Rodriguez, LFG Aviation (Vice Chair)
- » Douglas Carr, NBAA (Staff Liaison)

Review NBAA's Best Practices for Business Aviation Security manual at: nbaa.org/security-best-practices.

INTERNATIONAL AIRSPACE RESTRICTIONS



IN AN INCREASINGLY COMPLEX WORLD

“Flight planning has changed a lot from four years ago. Airspace restrictions have meant we’re having to relearn how to safely get from point A to point B with all the uncertainty that’s out there.”

CHAD PATNODE

Flight Operations Manager, Pfizer

With frequently changing airspace restrictions amid international conflicts, successful business aviation trips require ample time, knowledge and planning.



Back in 300 BCE, when the Greek mathematician Euclid was developing Euclidian geometry’s theorem – “the shortest distance between two points is a straight line” – he certainly had no way of knowing how wrong his rule would be for those of us planning an international flight in the 21st century.

But today, with rapidly changing airspace restrictions, any flight of any length has a good chance of being anything but a straight line. And as the world of international business travel returns to its pre-pandemic levels, the challenges of getting from here to there are only increasing.

“The desire for international travel has certainly expanded for us,” explained Chad Patnode, flight operations manager for Pfizer. “Really, as of about a year ago, when China fully re-opened after COVID, we’ve been back to a fully global operation.”

While the desired pre- and post-pandemic departure and arrival destinations have remained basically the same, the steps required to plan and complete these trips are vastly different.

“Flight planning has changed a lot from four years ago,” Patnode continued. “Airspace restrictions have meant we’re having to relearn how to safely get from

point A to point B with all the uncertainty that’s out there.”

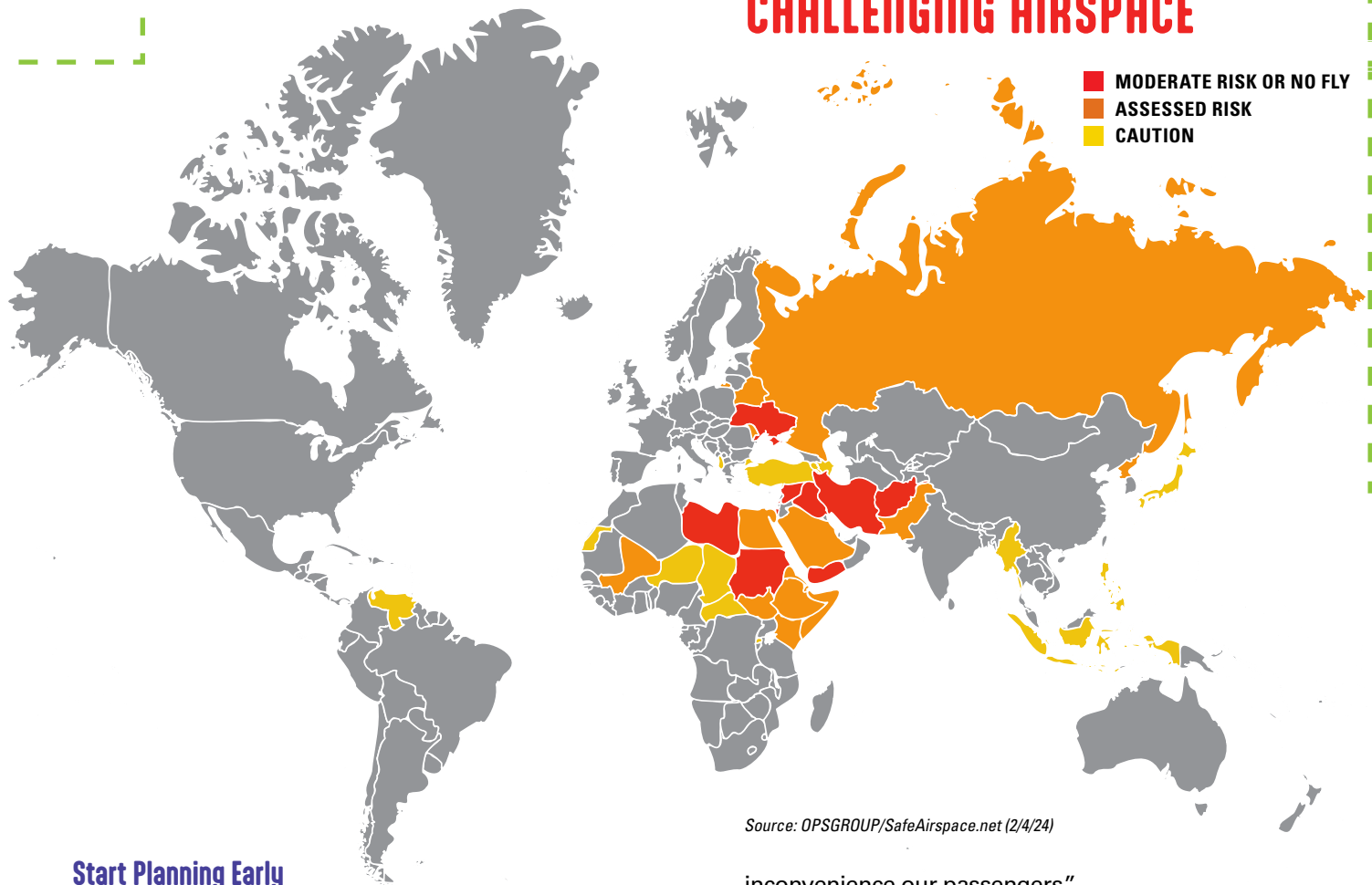
“For example, you can’t appreciate how big Russia is until you have to avoid its airspace. That’s really impacted us,” Patnode said. “We have flights now that are hours longer than they used to be, so we sometimes have to plan now for added fuel and crew swap stops.”

Nathan Shelley, assistant manager of flight planning operations for Universal Weather and Aviation, Inc., echoed Patnode’s comments and added, “We’ve become very quick to respond to changes and have had to use a lot of outside-the-box thinking since the closure of Russian airspace and turmoil in the Middle East.

“The Great Circle Route has always been our routing of choice, but now we have to avoid it all,” he continued. “Even operators flying the North Pacific Region have to stay away from the Kamchatka Peninsula.

It may not look like much on a map, but it can be a big deal in January when you encounter the headwinds in that region. It’s doable, but you have to be very adaptable.”

CHALLENGING AIRSPACE



Source: OPSGROUP/SafeAirspace.net (2/4/24)

Start Planning Early

Patnode and Shelley stressed the need to start your international flight planning well in advance of a flight.

"With regards to flight planning and setting passenger expectations, we've become over-communicative with our customers these days," Shelley said. "As their international service provider, clients rely on our experts to be their know-all and tell all, and we always strive for that level of performance. Today, it just takes more time and effort to collect all the details."

"We've always been the kind of operator that does our trip planning well in advance, but today the planning starts at the reservation stage, several months out or longer," Patnode explained. "We're especially mindful of trips to countries where we may not have flown to since pre-COVID. So much has changed that can impact a trip."

"Once we learn of a trip, we try to involve the passengers and their administrative team early on and make them part of our planning," he continued. "If they're going to meet with government leaders, those kinds of meetings are set in stone far in advance. We might suggest we leave a day or two earlier than they may have thought."

"Or if they're doing a multi-city trip, we may be able to re-order those stops so they're more efficient flights," Patnode said. "But if you wait until all of their schedules are arranged, it's complicated to make changes and not

inconvenience our passengers."

Both Patnode and Shelley stressed the importance of informing passengers about the need to detail every day's activities.

Of course, knowing the departure, destination and arrival details is just the beginning of your international odyssey. Gone are the days of tapping that information into your software of choice and having it supply a usable flight plan.

However, there are online tools that can be helpful to your planning efforts. For example, Shelley said Universal Weather and Aviation now has a "trip feasibility" tool that operators can use.

"It's become a huge thing for our clients when it comes to things like which countries you will have to fly over or near," he explained. "Can you comfortably get from here to there? For example, on one popular route, there's a small sliver of Afghanistan that you will fly over – it only takes five minutes – but you need to know about what you may be dealing with."

"We coordinate with our trip handlers and international service providers and start running draft flight plans through our team early," Patnode said. "I'll also go to FlightAware and see what routes the airlines are taking, and we'll contact other operators that we know have recently gone to the same destinations to see what they can offer."

Anticipate Changes

Of course, when it comes to long international trips, the actual flight plan is just one part of the puzzle. No matter how well you plan, things will always change. Weather, medical emergencies, mechanical issues and executives' schedules are just some things you may have to deal with on the fly.

"We're not just looking at departure and arrival airports," Patnode said. "We have to pre-plan for alternate airports along the route. There aren't a ton of options when operating in the Middle East today when a good day turns bad."

Now that long flights are getting longer, there can be issues with deciding where to locate replacement crews or where you can have longer layovers. Not all airports are the same.

"Operating into smaller airports in other countries is far different than in Western Europe and the U.S.," Shelley said. "Do they have quality fuel, or will you need security for your aircraft? There are many elements in play outside of the actual flight itself."

"Oftentimes, the actual flight planning is the most predictable part of any long trip," he added. "There are just so many other moving pieces to an international trip today."

"Knowing all the details will help your passengers avoid disruptions and increase your flight department's value," Patnode said. "Even a simple international trip is complicated today. In my experience, the executives on the airplane truly appreciate our help with making their travel easier." ✈

Review NBAA's international flying resources at nbaa.org/intl.

RESOURCES TO CONSIDER



HANDLING INTERNATIONAL AOGS LIKE A LOCAL

Every international trip will have its share of pop-up issues that you can prepare for, but operators also need to have a plan to deal with mechanical issues. Because you never know when bad things may happen to good airplanes, there are a few steps you can take to be ready should the unfortunate happen.

- Look at your aircraft's logs to see if any scheduled maintenance is required during your trip that can be completed before you depart.
- Ask operators of similar aircraft how they have dealt with AOGs in remote locations.
- Contact the authorized service centers for your aircraft located along your route and notify them of your schedule.
- Locate and contact any large flight departments that operate similar aircraft. They may have tools or spares available you can use.
- Contact any suitable airports along your route and inquire about the types of maintenance capabilities located there.
- Contact maintenance providers along your route and get detailed information about their capabilities.
- Pre-arrange with an experienced international air carrier so you have a source if you need to overnight replacement parts. Because of customs rules, overnight package handling isn't the same in many countries.
- It's a good idea to pre-arrange with a courier service if you need parts hand-delivered.
- Keep in mind that many components, like avionics, are subject to export limitations that require special handling.

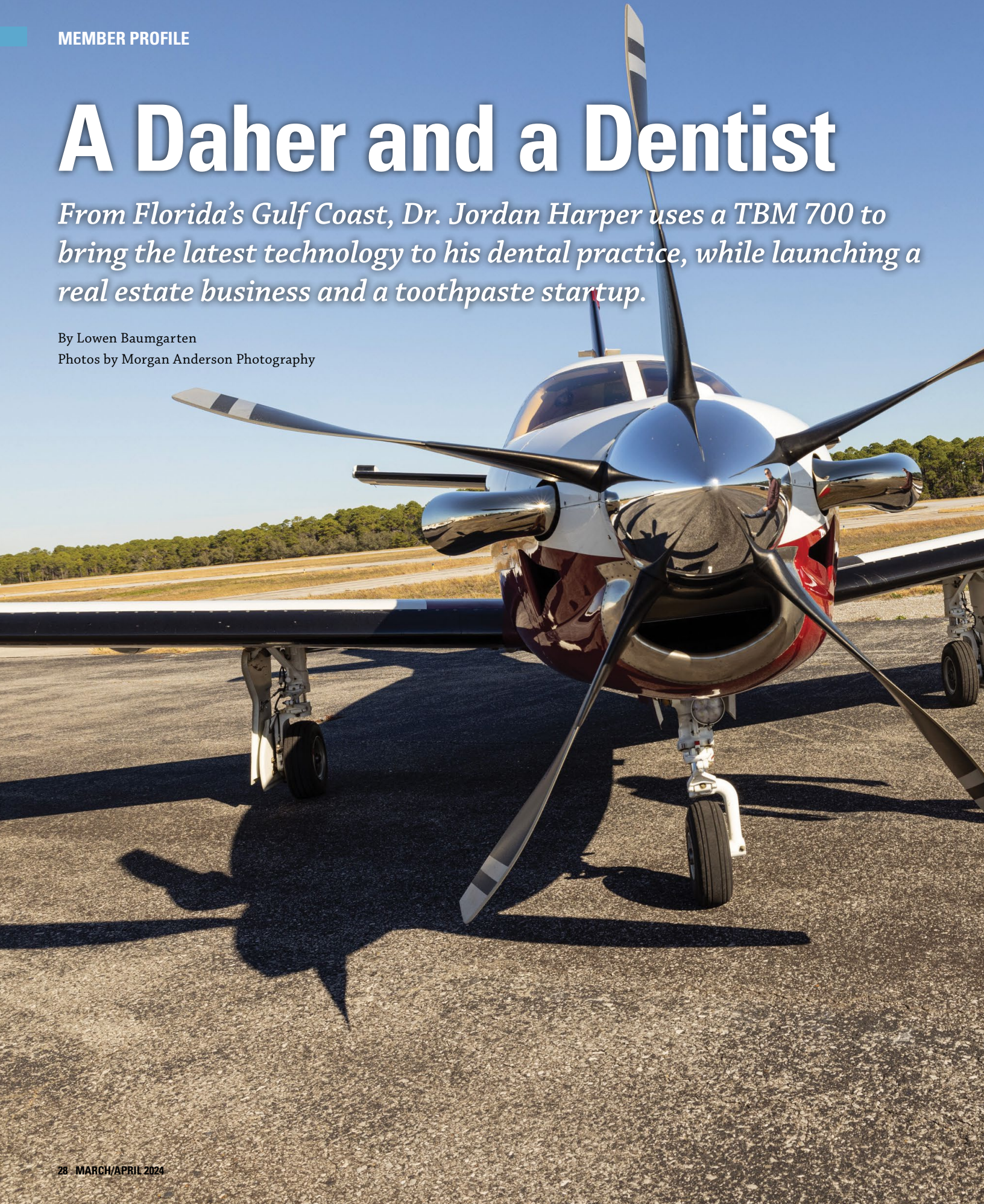


A Daher and a Dentist

From Florida's Gulf Coast, Dr. Jordan Harper uses a TBM 700 to bring the latest technology to his dental practice, while launching a real estate business and a toothpaste startup.

By Lowen Baumgarten

Photos by Morgan Anderson Photography





Business aviator and dentist Dr. Jordan Harper (left) flies about 200 hours annually to advance his practice and develop other businesses.

MEMBER PROFILE

It's pretty amazing to think of all the things a motivated professional can do with a business airplane. We've profiled entrepreneurs flying to meet partners across the country, leaders taking their plane to conferences – or scouting investment opportunities. Dr. Jordan Harper does all three.

A dentist with a Daher TBM 700C2, Harper flies about 200 hours a year from Destin, FL, to advance his practice, develop investment properties and launch a new toothpaste company.

"Having the TBM allows me to say yes to more things, whether it's meeting a supplier or checking on a property," said Harper. "Yes, I can be there in two hours."

"Flying a personal aircraft makes it easier to conduct business in different places than where you live," said Harper. "It makes our backyard that much bigger."

PUTTING HIS PASSIONS TOGETHER

Harper flies the TBM to at least two dental conferences every year, the Florida Dental Convention in Orlando and Dentsply Sirona DS World in Las Vegas. His first airplane, a Cirrus SR22T purchased in 2017, needed a tech stop to return from Las Vegas, and was more limited by mountain weather and Florida thunderstorms.

"The TBM has very long legs. We can easily make it nonstop eastbound," said

"Flying a personal aircraft makes it easier to conduct business in different places than where you live. It makes our backyard that much bigger."

DR. JORDAN HARPER

Dentist and Business Aviation Pilot

Harper learned to fly his last year of dental school, realizing it could connect him with ventures beyond his hometown. Powering through ground school reviews alongside his medical textbooks, he maintained top grades and started flight training immediately after graduation. Meeting his instructor six days a week, he completed his private pilot certificate in two months.

Now, Harper's practice serves about 4,000 of his neighbors in the bayside community of Niceville, FL. The Destin-Niceville area is an ideal place to raise a family – but isolated from the rest of the country. There are only four direct airline connections to the Destin-Niceville area and Atlanta and New Orleans are each a five-hour drive.

Harper. "And in Florida, I needed to get above the popcorn clouds." He upgraded to the turboprop in 2021. Rarely traveling with more than two or three business partners, and occasionally his small family, he needed to add range, speed and pressurization, but not much cabin space. With fully replaced glass-panel avionics, the TBM was a perfect fit.

That speed and range have helped Harper find partners for the toothpaste company he is launching. His main business partner is in Miami – otherwise a 10-hour drive with no direct airline flights to Destin.

They are developing an all-natural toothpaste tablet, ideal for travel, made from minerals the body uses to reinforce a tooth's enamel, instead of fluoride. The day

MEMBER PROFILE



Friends say Harper is dedicated to training. He quickly trained up from an SR22T to his current TBM 700C2.

we met Harper, he was planning a flight to Buffalo, NY, with his Miami-based partner, to tour a small laboratory that could help manufacture their new product.

With Harper flying the TBM, they can make the trip in two days.

"Jordan exemplifies that flying a turbo-prop is not out of reach for a small business owner, and he instills confidence that it can be done safely," said Alex Gertsen, CAM, NBAA director of airports and ground infrastructure. "I've had the privilege to meet him in his first year of dental school. Seeing the way he has integrated his passion for aviation into his career and made flying part of his life is inspiring."

PERSONAL RISK MANAGEMENT

Safety is always foremost on Harper's mind, especially as his business interests have expanded into Colorado, where he flies the TBM to rental property that he has developed.

"For aeronautical decision-making, I definitely have my own weather minimums," explained Harper. "In Florida we don't have mountain wave conditions or snow, but out West, you have to deal with those factors a lot. I have boots, and the

"We flew with a group called Operation Airdrop, coordinating with the Salvation Army to find out what people needed most. Formula, diapers, sleeping bags... we made a run to Walmart and loaded the plane to our max takeoff weight."

DR. JORDAN HARPER *Dentist and Business Aviation Pilot*

airplane is flight into known icing (FIKI) capable, but my personal minimums are I either fly around it or stay on the ground."

Because icing and mountain flying are his biggest concerns, Harper typically does his annual recurrent training in Colorado, rather than at home.

"High and hot conditions, and how that affects your runway calculations, [and] short runways, which are not unusual in the mountains – that's where I focus to sharpen my spear," Harper said. "I want to train with my instructor in those types of scenarios, so I'm better prepared if something unanticipated happens."

He still works with the same instructor

he has trusted since his TBM purchase, valuing the rapport they have established on the flight deck together.

"Jordan is dedicated to training, and it shows," said NBAA's Gertsen. "He went from a dreamer in dental school to an instrument-rated pilot in just a few years, upgrading from a turbocharged piston to a turboprop in no time at all."

After his instructor, the next resource Harper turns to is the TBM Owners and Pilots Association. He spends time on the forums, sharing knowledge and learning from other owner-operators, based on various mishaps or their experience with the aircraft's performance. That informs

Operational safety is important to Harper (below). He often shares his knowledge with other members of the TBM Owners and Pilots Association.



his personal approach to safety and risk.

“From a personal risk management standpoint, the big gotchas in flying are weather, night flying, mountain effects, and fatigue,” said Harper. “You can usually do one of those things safely; with two of those factors, it gets risky. When it gets to three, that’s a complete no-go.”

With fatigue, Harper said it is not worth pushing it. “You can’t have get-there-itis. Anytime I’m driving to the airport, I’m checking myself. Spend the extra night and go early the next morning when you’re fresh.”

LENDING A HAND

With all the possibilities opened by his flying, Harper has invested in several other properties around the country, and with his real estate partners, is always looking

for lots and buildings to develop. On top of his full-time dental practice, that makes him a frequent weekend warrior.

Even so, he is never too busy to chip in when the call goes out for disaster relief. In 2017, Harper was still flying the SR22T, when Hurricane Harvey hit. On the Cirrus owners message boards, he saw fellow pilots organizing flights to get emergency supplies to cut-off communities. Less than three days later, he was flying to Houston.

“We flew with a group called Operation Airdrop, coordinating with the Salvation Army to find out what people needed most,” said Harper. “Formula, diapers, sleeping bags... we made a run to Walmart and loaded the plane to our max takeoff weight.”

When storms again battered the Gulf Coast in 2018, Harper mobilized once more. In a two-week period, he flew three trips to nearby Panama City, FL – similarly cut off by road – to help people overwhelmed by Hurricane Michael. Operation Airdrop has since gone national, and Harper is ready when needed. ✧

Learn more about Dr. Harper's business at nicevillefamilydentalcenter.com.



BRINGING BACK THE LATEST MEDICAL KNOWLEDGE AND TECHNOLOGY

In dentistry, continuous improvement is just as important as in aviation.

“You’re always learning in my profession,” said Dr. Jordan Harper. “They call it a dental practice for a reason, right?”

That is why going to dental conferences is so important for Harper.

“On the show floor, you really get hands-on with the latest tools, talking to suppliers about how this device or new procedure can improve my practice, make me more efficient,” explained Harper. “It’s a huge benefit to patients.”

Most recently, he flew his TBM 700C2 to the Florida Dental Convention, where he heard about a new dental imaging technology, a cone beam computed tomography (CBCT) machine. Three months later, he flew to another conference in Las Vegas and demoed one.

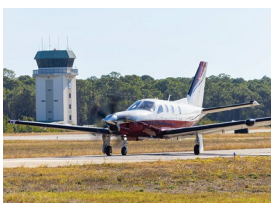
“This technology is incredible, because you can see 360 degrees around the tooth, where sometimes, things get hidden on a two-dimensional X-ray,” said Harper.

He purchased the CBCT machine and brought it back to his practice. “I used it this week, actually, to diagnose what I thought was a potential tooth infection,” Harper said. “You couldn’t see it on an X-ray, and I asked the patient if we could take a 3D image with the tool I bought. And sure enough, she had an infection in the root of her molar, and we took care of it.”

SNAPSHOT: DR. JORDAN HARPER



Aircraft: One Daher TBM 700C2



Base: Headquartered at Florida’s Destin Executive Airport (DTS)



Personnel: Dr. Jordan Harper is the president and owner-operator.



Flight Crews: Tips for Getting Started With CPDLC

Now that the initial trials of Controller Pilot Datalink Communications (CPDLC) – the basic equivalent of pilot-to-ATC texting – have ended, the system is available for business aviation aircraft operating in many parts of U.S. domestic enroute airspace.

CPDLC texting significantly reduces the number of radio transmissions and frequency congestion between cockpit crews and ATC, as well as the chances for clearances being misunderstood.

Not all U.S. ATC centers are currently participating in CPDLC. Los Angeles, New York, Albuquerque, Memphis, Cleveland and Boston Center are expected to be fully functional by the summer of 2025. The most up-to-date list can be found at the FAA's Data Comm page. And in the U.S., the CPDLC logon code is KUSA.

The recently published FAA InFO 23008 points out that an OpSpec, MSpec, or other authorization is not required to operate in domestic airspace. Aircraft operating internationally still require an A056 authorization. "All operators have the responsibility of knowing individual

"We want to ensure that operators understand what that process involves, and some of the complexities that are part of that process."

HEIDI WILLIAMS

NBAA Senior Director for Air Traffic Services and Infrastructure

avionics capabilities and FAA domestic airspace datalink communications (CPDLC) requirements," according to the agency. These include VHF Digital Link Mode 2 Approved to TSO-C160a or an equivalent that meets the specification of automatically tuning to multiple frequencies as well as a push-to-load capability for loading route changes into the navigation system as they are received.

"With this change in policy guidance,

there is a process operators will need to comply with," said Heidi Williams, NBAA's senior director for air traffic services and infrastructure. "We want to ensure that operators understand what that process involves, and some of the complexities that are part of that process."

One of the first steps to operational readiness for operators is to compare their aircraft's current avionics against the En-Route CPDLC Participation List at faa.gov. Aircraft listed in the red column cannot participate in CPDLC at this time. Further communications with the OEM are the next step. Aircraft listed in the yellow or green columns may participate. Yellow listed aircraft have avionics that have not successfully completed the minimum number of enroute CPDLC transactions, or they include non-safety-of-flight performance issues that will still allow continued participation in enroute CPDLC pending a permanent fix.

For aircraft not on the list, the OEM and the avionics supplier must conduct interoperability testing that requires about six hours. Next, the aircraft should be updated on the yellow list within a month. The participation list also details reasons behind operability problems with many avionics systems as well as some of the pathways to compliance.

A common pathway "requires the evaluation of the accumulated 10,000 operational transactions is complete and satisfactory." Aircraft with critical CPDLC-related avionics issues, and aircraft with unacceptable air-to-ground enroute CPDLC performance, will be in the "red" level and excluded from enroute CPDLC. However, they may still be allowed to participate in the datalink clearances program.

Finally, operators should complete a U.S. Domestic En Route CPDLC participation form available at faa.gov. The form itself is submitted to L3Harris. If avionics change in a way that could affect CPDLC performance, operators must resubmit this form to confirm the update. ✚

Review NBAA's data communications resources at nbaa.org/datacomm.

NBAA THANKS ITS LEADERSHIP COUNCIL MEMBERS

NBAA is celebrating its 75th anniversary as the leading advocate for business aviation with a series of initiatives designed not only to recognize the milestones marking the industry's pioneering spirit, but to inspire the next generation of leaders to be a part of the business aviation community. Visit nbaa.org/leadershipcouncil to learn more about how you can become a Leadership Council member, and join this esteemed community of business aviation advocates:

- Abbott
- AbbVie
- Adobe, Inc.
- Airbus Corporate Jets
- AirComp Calculator, LLC
- Altria Client Services, LLC
- Apogee Physicians, Inc.
- Aramco Associated Company
- American Express
- Atlantic Aviation
- AT&T
- ATP
- Avfuel Corporation
- Aviation International News
- Aviation Partners, Inc.
- Aviation Personnel International
- AviationManuals
- Avinode
- Bank of America
- Boeing
- Boeing Business Jets
- Bombardier
- Cessna + Beechcraft by Textron Aviation
- Chick-fil-A
- Chubb Flight Operations
- Cirrus Aircraft
- The Coca-Cola Company
- Collins Aerospace
- CommScope
- ConocoPhillips Global Aviation
- Cooling & Herbers, P.C.
- Corteva Agriscience
- Crew Aviation LLC
- Cummins Inc.
- Dallas Jet International
- Dassault Aviation
- Deer Valley Ski Resorts
- Dell Technologies
- Disney Aviation Group
- The Dow Chemical Company
- Duncan Aviation, Inc.
- DuPont de Nemours, Inc.
- Eaton Corporation Flight Operations
- Embraer
- Emerson Flight Operations
- Enterprise Holdings, Inc.
- FedEx Corporate Aviation
- Fiserv, Inc.
- FlightSafety International
- flyExclusive
- ForeFlight
- Fort Lauderdale Executive Airport
- Garmin International
- General Communication, Inc.
- General Dynamics
- Gogo Business Aviation
- Go Rentals
- Guardian Jet, LLC
- Gulfstream Aerospace Corp.
- HADID
- Harley-Davidson Motor Company
- Hewlett Packard Enterprise Company
- Home Depot Aviation Dept.
- Honda Aircraft Company
- Honeywell International
- Hunt Consolidated, Inc.
- IBM Flight Operations
- Immaculate Flight LLC
- JP Morgan Chase & Co.
- Jason Talley
- Jet Aviation
- JETEX
- Jet Support Services, Inc. (JSSI)
- JETNET LLC
- Law Offices of Paul A. Lange, LLC
- Leonardo
- LFG Aviation
- Liberty Mutual Insurance Co.
- Mayo Clinic
- McDonald's Corporation
- MedAire, Inc.
- Mente LLC
- Mente Group LLC
- Mesinger Jet Sales
- Nationwide Aviation Business Center
- Netflix
- NetJets Inc.
- Owens Corning
- Pfizer Inc.
- Phillips 66 Aviation
- Piedmont Triad Airport Authority
- PlaneSense, Inc.
- PNC Aviation Finance
- Pratt & Whitney Canada
- The Procter & Gamble Company
- Quality Resources, LLC
- Raytheon Technologies
- Richardson Aviation
- Rolls-Royce
- S C Johnson 'A Family Company'
- Sanderson Farms, Inc.
- Satcom Direct
- Sedgwick Claims
- Management Services, Inc.
- Schweitzer Engineering Labs
- Shanghai Hawker Pacific Business Aviation Service Centre
- Shell Aircraft Limited
- Sheltair
- Signature Flight Support
- StandardAero
- Stevens Aerospace and Defense Systems, LLC
- Stonebriar Commercial Finance, LLC
- Target Corporation
- Tudor Investment Corp.
- UAS International Trip Support
- Universal Weather and Aviation, Inc.
- Unmanned Safety Institute (USI)
- Valero Energy
- Verizon Aviation
- Viasat
- Volato
- VSE Aviation
- Walmart, Inc.
- West Star Aviation Inc.
- Wheels Up Partners, LLC
- Wilson Construction Company
- World Fuel Services

As of March 2024

You can also learn more by contacting NBAA's Lyndse F. Costabile at 904-860-1886 or lyndse@idc.nbaa.org.



Flight Crews: Mexico's New Entry Authorization Process

Mexican officials believe a new entry authorization process, along with an increased focus on ramp checks, will help mitigate instances of illegal charter and cabotage operations.

Starting in January 2024, U.S. operators entering Mexico were met with new requirements.

The single entry and multiple entry permits in use for several years were replaced by Single Entry Authorizations (SEA), or Autorización de Internación Única in Spanish. Although these new authorizations are called "Single Entry," they're typically valid for multiple entries during a 180-day period. Some local authorities might issue an authorization for a longer period.

"While it's called a 'single entry authorization,' that name is misleading," said Luis Nambo, lead global regulatory specialist at Universal Weather and Aviation, Inc. "This authorizes an operator to enter Mexico multiple times within 180 days. It's a bit of a hybrid between the single entry permit versus multiple entry permits of the past."

"It's a bit of a hybrid between the single entry permit versus multiple entry permits of the past."

LUIS NAMBO

*Lead Global Regulatory Specialist,
Universal Weather and Aviation, Inc.*

A new requirement for the authorization process is the submission of a Layout of Passenger Arrangements (LOPA). This requirement can be met with a copy of the cabin layout from the Aircraft Flight Manual.

Rick Gardner, owner and director of aviation services at CST Flight Services, reports a rocky rollout of these new policies, in part due to ports managed by military personnel less familiar with civil or business aviation.

"We saw AFAC [Federal Civil Aviation Agency] implement a new set of

Have these documents available for ramp inspections, even if they were provided to a handler in advance.

Aircraft Paperwork

- Airworthiness certificate
- Aircraft registration certificate
- Complete insurance policy and policy receipt

Crew Paperwork

- Medical certificate
- Airman certificate

Additional Requirements

- Maintenance logbook (copy of most recent pages)
- Journey logbook

ambiguous guidelines with a lot of officials who are new to civil aviation," said Gardner. "The rollout took on a life of its own due to ambiguous guidelines and issuance before holiday seasons."

Operators should confirm current SEA requirements for specific ports with their local handlers to ensure compliance and plan to apply for a SEA at least two days prior to entry into Mexico, as processing times and validity periods vary.

Experts also expect requirements and procedures to evolve as local officials and AFAC evaluate the SEA processes.

The AFAC also continues to dedicate resources to ramp checks. Operators and pilots should be prepared for ramp checks anytime they fly into or within Mexico.

"An aircraft can be grounded for hours if the paperwork is not complete when a ramp check is carried out," said Emilio Padilla Escoto, manager of operations at MANNY.

"We have seen ramp checks become stricter as Mexico is reinforcing safety and security, as well as trying to avoid illegal charters," Padilla said. "This is a problem, especially when the customer has a [U.S. Customs and Border Protection] appointment in the United States or the passengers are unable to depart." ❖

Review NBAA's international operations resources at nbaa.org/intl.



Cancer Patients Fly Free

Can You Spare a Seat?

Corporate Angel Network (CAN) is a 501(c)(3) nonprofit organization whose mission is to provide cancer patients with free transportation to treatment centers throughout the United States.

CAN works closely with over 500 of America's top corporations, including half of the Fortune 100, to match empty seats with patient flights. Thanks to the generous support of these companies, CAN has coordinated more than 67,000 flights since its founding in 1981.

Contact CAN to learn more about registering a cancer patient or to donate an empty seat on an aircraft.

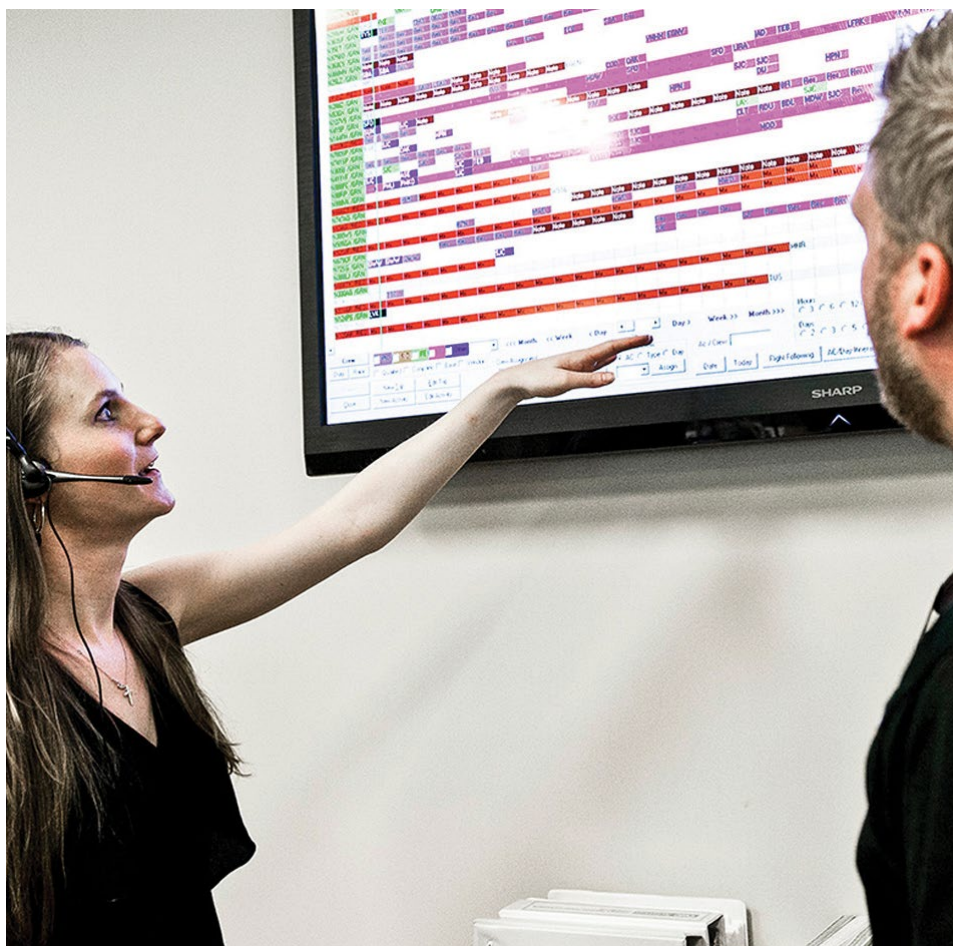
corpangelnetwork.org



“It’s wonderful that organizations like the Corporate Angel Network are able to help connect those most in need of flights to those who are flying.”

-Henry Maier, President and CEO, FedEx Ground

MEMBER CENTRAL



Earn Your Scheduler Certificate on Your Schedule

Take your career to the next level! NBAA provides an online course to earn your Business Aviation Scheduler Certificate on your own time. Whether you're new to scheduling or simply looking to advance your scheduling experience, this certificate will help you get where you want to be in your career. The course walks through critical areas of the scheduling experience at an introductory level, making it perfect for entry- to mid-level schedulers, or anyone else involved in the scheduling process.

Topics covered include aircraft scheduling, safety and security, crew scheduling, mission control, global regulations and more.

After completing the course, participants will have a working knowledge of the best practices surrounding scheduling business aircraft. Successful program participants will receive a certificate and a digital badge to validate their knowledge with their peers.

The Business Aircraft Scheduler Certificate also is approved for credit under the Certified Aviation Manager Program (CAM). Those who complete the course and pass the final assessment will be awarded four points towards their CAM application or CAM recertification. ✨

Learn more at nbaa.org/scheduler-cert.



Member Benefits

EXPLORE THE BENEFITS OF NBAA'S VISA & PASSPORT DISCOUNT PROGRAM

Collaborating with G3 Global Services, NBAA extends exclusive discounts and savings on a comprehensive range of travel document procurement services to its members. NBAA members can access the same high-quality G3 services utilized by Fortune 1000 clients and aviation partners.

The discounted services include aviation/crew visas, business/tourist visas, work visas, resident permits, passports, document legalizations, translations, birth certificates, notary services and more. Boasting 30 years of experience, G3 Global Services stands out as an industry leader, ensuring passengers and flight crews are well-prepared for their journeys to subsequent destinations.

nbaa.org/g3

FIND NEW CAREER OPPORTUNITIES ON THE NBAA JOBS BOARD

The NBAA Jobs Board serves as a valuable and efficient platform connecting business aviation organizations in search of talent with industry professionals seeking employment.

Job seekers may explore openings from more than 6,000 featured employers, set up job alerts and showcase their resumes. Additionally, the platform provides valuable resources for networking, utilizing social media, refining interview skills and enhancing resumes.

nbaa.org/jobs



Professional Development

On the heels of a highly successful Professional Development Program course last fall in Utah, NBAA is hosting two PDP courses this spring in conjunction with local and regional business aviation groups.

On March 15, “Leadership Excellence for Business Aviation” will take place at Western Michigan University in Battle Creek, MI, and on April 18, “Leading With a Vision” will take place at Business Jet Center, Dallas Love Field (DAL), in Dallas, TX.

“NBAA is excited about creating avenues for its members to advance in their business aviation careers, right in the communities where they reside and work. This initiative aims to foster local growth and support within the industry,” said Molly Hitch, NBAA senior manager, professional development.

“PDP courses present members with the chance to invest in both their personal

and professional development. By participating in these courses, members can earn credits that contribute toward CAM applications and recertifications, enhancing their overall career growth and qualifications,” she added.

The March 15 course in Michigan will focus on what it means to be a leader in business aviation, including building relationships, mindful communication, inclusive collaboration, self-awareness and fostering a culture of safety and service. Register at nbaa.org/pdp/michigan.

The Texas April 18 course – led by Scott A. Moore, CAM – will examine how to be recognized as a leader in your organization and increase your personal leadership skills. Register at nbaa.org/pdp/texas.

Learn more about NBAA’s PDP program and review upcoming courses at nbaa.org/pdp.



Events Calendar

March

March 12-14

2024 NBAA Schedulers & Dispatchers Conference (SDC2024) | Fort Worth, TX

March 26-28

2024 NBAA International Operators Conference (IOC2024) | Orlando, FL

April

Apr. 30-May 2

2024 NBAA Maintenance Conference | Portland, OR

May

May 15

2024 NBAA Business Aviation Taxes Seminar | Dallas, TX

May 28-30

2024 European Business Aviation Convention & Exhibition (EBACE2024) | Geneva, Switzerland

June

June 12

2024 NBAA White Plains Regional Forum | White Plains, NY

[NBAA.ORG/EVENTS](https://nbaa.org/events)

New Certified Aviation Managers

More than 800 business aviation professionals from all segments of the industry have earned the Certified Aviation Manager (CAM) credential. The CAMs listed below are among the latest to join this elite group.

Joshua Brooks, CAM

Pilot
UP Management, LLC

Chad Tueller, CAM

Chief Pilot
3C Aviation

Alan Rockey, CAM

Aviation Manager
SBM Management Services
LLC

Jeremy Schneider, CAM

Director, Aviation
Fortune Brands Innovations

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nbaa.org/advertising

Boom Supersonic Aims for Net-Zero Carbon by 2025

President Kathy Savitt says Boom's supersonic initiatives could impact business aviation.

Boom Supersonic is committed to achieving supersonic flight in a sustainable manner, anticipating the launch of its Overture airliner by the end of the decade.

"We believe that sustainability is essential to the future of supersonic flight and travel overall," said Boom President Kathy Savitt. "Our environmental sustainability priorities stem from an ambitious but achievable commitment to be net-zero carbon by 2025 – an approach rooted in driving systemic change. These efforts have helped Boom to achieve carbon neutrality beginning in 2021."

Boom's Overture is designed to reduce emissions and will be manufactured using renewable energy from production through flight and end-of-life recycling. The aircraft also is designed to run on up to 100% sustainable aviation fuel (SAF). In fact, Boom is a champion of SAF, partnering with industry leaders AIR COMPANY and Dimensional Energy to secure 10 million gallons

annually for its net-zero carbon flight test program.

While Boom is currently focused on airline travel, with an order book of 130 orders and pre-orders from American Airlines, United Airlines and Japan Airlines, Savitt sees the potential impact of the company's innovative supersonic initiatives on the business aviation sector with dramatic time savings. Supersonic flight cuts travel times in half over water and even decreases time over land by 20% compared to today's subsonic aircraft. Boom projects meaningful speed-ups on routes, such as New York to Paris in under four hours and Tokyo to Vancouver in four and a half hours.

"For the business aviation community, time is the ultimate resource and Overture is the differentiator that unlocks it. Supersonic [flight] has the potential to transform how we live and work when distance is no longer a barrier," Savitt explained.

Public buy-in is a key to Boom's success and to the success of supersonic air travel overall. Most people have only the Concorde, with its high costs and minimal commercial success, as an example of supersonic civilian aircraft.

"Developed in the 1960s, Concorde was a technological marvel and we stand on her shoulders as we progress towards a supersonic future. However, Concorde was never built for sustainability, either economically or environmentally," said Savitt.

Savitt is optimistic about Boom's future, saying the company has, from the beginning, prioritized sustainability, scalability and economic viability. Overture meets ICAO Annex 16 Chapter 14 noise certification requirements and leverages 50 years of technology advancements to deliver optimal performance and profitability for operators. ✦

President Kathy Savitt leads Boom's global commercial functions, including customer and passenger experience, sales and marketing, strategic partnerships and external stakeholder initiatives. Over her 35-year career, she has served as a founding general partner at Perch Partners and as a senior officer at Fortune 500 companies such as Yahoo, American Eagle and Amazon.





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