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Changes coming to Part 135 training

by Kerry Lynch

The FAA is expected to soon release an Advisory Circular that will pave the way toward a standardized training curriculum for Part 135 operations. Industry leaders learned of the FAA's plans during last month’s Air Charter Safety Symposium. More than 135 charter executives registered for this year’s Air Charter Safety Foundation (ACSF) event. They also discussed needed safety measures for Part 135, as the industry reacted to damning revelations from the May 2017 Learjet crash at Teterboro Airport.

This year’s symposium provided an overview of changes for Part 135 training through Part 142 centers. The FAA last fall released a draft AC that industry executives believe will enable one of the most significant changes in training approaches for charter operations in years. Under the approach, a collaboration of industry experts and the FAA will jointly develop a standardized curriculum for each type of aircraft for which simulator training is available.

This is expected to affect a broad swath of operators. Upwards of 95 percent of Part 135 jet operators and 65 percent of all Part 135 operators use Part 142 centers.

The draft AC, based on the recommendations of a government/industry aviation rulemaking committee, drew about 200 comments, resulting in a few changes, said FAA aviation safety inspector Mark Valette. While progress slowed slightly during the government shutdown, David Underwood, regional director of regulatory affairs for FlightSafety International, said he expects the final AC to be out shortly.

Once released, an industry/government Training Standardization Board will be stood up—likely later this summer—to submit training standards on an aircraft-specific basis. Teams will be gathered to look at curricula for various aircraft. Valette encouraged attendees of ACSF to get involved. In fact, Valette said, in his experience, “Collaboration with industry has never been as great.”

Read Our SPECIAL REPORT

FBO survey

Flight activity has continued to grow, albeit at a slower pace than before, but providers keep the focus on ensuring customer satisfaction. In AIN’s annual survey, readers rate how those facilities are delivering on their promise.

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Daher unveils another TBM model ➤ page 12

Industry

Boeing buys EFB app maker ForeFlight ➤ page 56

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Fix in development for 737 Max ➤ page 61

FBOs

Million Air opens new facility at HPN ➤ page 36

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Industry looks ahead to eVTOL revolution ➤ page 8
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The hub will serve customers in India and Africa.

The airframer touts its safety culture in the wake of an accident.

The facility is part of an $80 million investment that includes

that shares ‘similarities’ with one last year.

operators are equipping, but the rotor sector is lagging.

operators are equipping, but the rotor sector is lagging.

The Safety Board renewed its call for flight data monitoring and crew resource and safety management systems.

Dramatic changes ahead as Part 135 safety lands on NTSB

The HondaElite brings new performance and global expansion possibilities to Honda Aircraft, and AIN saw those improvements during a recent demo flight.

The facility is part of an $80 million investment that includes another hangar at the New York-area airport.

The airframer touts its safety culture in the wake of an accident.

The facility is part of an $80 million investment that includes another hangar at the New York-area airport.
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As We Go To Press

JETNET SEES GROWTH IN SUPersonic BizJet Market

There is a “sizeable and growing market” for supersonic business jets (SSBJs), according to market research from JetNet IQ. “Each time we analyze this market segment, customer interest and overall demand have increased. Our projected demand is for three SSBJ deliveries per month,” said JetNet managing director Rolly Vincent. About 72 percent of those surveyed by JetNet IQ believe an SSBJ will be in service in 10 years, 71 percent agreed that speed is the next frontier in business aviation, and 31 percent would be more likely to consider purchasing one if the FAA allows supersonic overland flight.

WHITE HOUSE SELECTS DICKSON TO LEAD FAA

The White House’s March 19 announcement to nominate Stephen Dickson to a five-year term as FAA administrator was broadly welcomed by a cross-section of industry leaders, who characterized the former Delta Air Lines executive as a champion of safety with deep industry knowledge. The move comes more than a year after the last permanent FAA administrator, Michael Huerta, completed his five-year term, but also as the agency has come under scrutiny in the aftermaths of two fatal Boeing 737 Max crashes.

ARGUS SEES BIZAV FLIGHTS DIP IN FEBRUARY

Business aviation activity slowed overall by 1.4 percent in the U.S., Canada, and the Caribbean in February, with both Part 135 and 91 flights down, according to the latest Argus TraRaq report. Calling the overall decline in February unexpected, Argus reported that fractional activity posted the only year-over-year increase during the month, up 5.5 percent. Part 91 activity decreased by one percent, while Part 135 activity marked a 4.2 percent decline. February was the ninth consecutive month in which Part 135 activity was down. Argus was projecting flight activity would level out last month, expecting a 0.2 percent increase from March 2018.

PHILIPPINES REGULATORS TO INCREASE SERVICE CHARGES

The Civil Aviation Authority of the Philippines (CAAP) is looking to increase the rates of most of its services tenfold. Under the new proposed rates, the issuance of annual air operator certificates would increase from PHP6,500 ($122) to PHP62,000. Domestic flights, such as demonstration or test flights, of foreign-registered aircraft will rise from PHP2,500 and PHP250 processing fee to PHP24,000 and PHP2,400, respectively. The Asian Business Aviation Association supported the move, saying it believes the fare hike will improve the country’s aviation safety standards, but recommended they be implemented in a staggered manner.

DOT IG FINALIZING REPORT ON FAA AIRCRAFT REGISTRY

At press time, the U.S. Department of Transportation Office of Inspector General’s (DOT IG) was preparing to release a draft audit report of the FAA civil aircraft registry, according to DOT IG program director of aviation audits Marshall Jackson. He said the FAA will then have 30 days to review and comment on the report before the watchdog agency makes the document public in late April. The audit seeks to assess the FAA’s modernization progress of the registry and policies for providing public access to records.

EMBRAER TO NAME NEW CHIEF EXECUTIVE

Embraer will name a new CEO on or before its Ordinary General Assembly on April 22, following the end of Paulo Cesar Silva’s two-year elected term. The company added the board will recruit a new chief executive externally. Silva joined Embraer 22 years ago to structure the company’s sales financing area. For six years he served as president and CEO of Commercial Aviation and became president and CEO of the Embraer Group in 2016.

GULFSTREAM MAKES FIRST ALTERNATIVE JET FUEL SALE

Gulfstream Aerospace has made its first sale of sustainable alternative jet fuel (SAJF) to a G550 operated by a U.S.-based multinational corporation last month. The customer purchased 20,000 pounds of SAJF from Gulfstream’s Long Beach, California facility. California-based World Energy, which has a refinery about 10 miles from Gulfstream’s facility at Long Beach Airport, provides SAJF to Gulfstream. It said that each gallon of SAJF burned achieves more than a 50 percent reduction in greenhouse gas emissions relative to petroleum-based jet fuel.

USAIG INCENTIVIZES IS-BAO, BASC ACCREDITATIONS

Aviation insurance underwriter USAIG said Performance Vector (PV) Plus policyholders with no losses after a year will yield a 5 percent premium return for having IS-BAO or BASC accreditation. This is additional to potential 5 percent premium returns for twice-yearly pilot simulation-based training and fleet use of an approved FOQA/TDM program. Operators that employ all three best practices to address PHI’s outstanding debt obligations.” PHI also said that it is in discussions with various helicopter lessors “to address certain of its above-market lease obligations.” The savings from the latter could be minimal, as of last year PHI reported leasing just 17 helicopters. Most of the leased aircraft are Sikorsky S-92As.

The company said it is working on a reorganization plan and hoped to emerge from bankruptcy this summer. That plan could still include the sale of PHI Air Medical, as the company noted in its bankruptcy filing that “an asset or equity sale to improve PHI’s liquidity or to facilitate a restructuring of its indebtedness” remains an option under consideration.

Growth, then Downsizing

PHI was founded in 1949 with $100,000 and three Bell 47s in Lafayette, Louisiana. During a period in the 1980s it operated the third-largest helicopter fleet in the world. By the time controlling interest was sold to Gonsoulis in 2001 for $35.5 million, the company had gone through a series of downsizings. In early 2018, PHI acquired HH2’s operations in Australia, New Zealand, Papua New Guinea, and the Philippines in an attempt to boost revenues. Of late, PHI’s fortunes had waned considerably. For the first nine months of 2018, the company lost $55.6 million on revenues of $498.4 million; for 2017 the company made a small gain of $7.5 million on revenues of $575 million; however, its oil-and-gas segment lost $28.7 million that year; in 2016, PHI lost $26.68 million on revenues of $564 million; and its 2015 revenues were $804.2 million with a $26.9 million profit.

Without the profits from its Air Medical division, PHI’s overall financial results in recent years would have been much worse. However, both revenues and profits from Air Medical have been steadily declining as the reimbursement climate in that sector becomes increasingly difficult.

PHI’s bankruptcy is the third amongst major helicopter service companies in recent years. Both CHC Helicopters and Erickson filed bankruptcy in 2016. Helicopter leasing company Waypoint, which had a large exposure to offshore helicopter services companies, filed bankruptcy last November. Waypoint’s assets were later acquired by Australia’s Macquarie Group at a steep discount, for $650 million, in a deal announced late last year and that closed in March.

As of last year the company operated 148 light helicopters, 55 medium helicopters, and 35 heavies—all Sikorsky S-92As. PHI said it hopes to emerge from bankruptcy this summer.

In a widely anticipated move, on March 14 helicopter offshore services company PHI filed for Chapter 11 protection in the U.S. Bankruptcy Court for the Northern District of Texas. PHI’s move was triggered by its failure to repay $500 million worth of unsecured 5.25 percent senior notes due March 15 and held by the Delaware Trust Company. PHI telegraphed a likely bankruptcy filing as early as last October when it terminated a previously announced cash tender offer for the repurchase of those notes and had been under pressure from creditors and investors to sell off its profitable air medical division to satisfy that obligation.

In its preliminary bankruptcy filing with the Court, PHI listed total indebtedness of approximately $750 million, which includes the $550 million and unsecured notes and $130 million in a senior secured loan that matures in September 2020 and is underwritten by an entity controlled by PHI CEO Al Gonsoulis. Gonsoulis received total compensation of $4.89 million from PHI in 2017. Other major creditors listing in the bankruptcy filing include Sikorsky unit Helicopter Support, GE Aircraft Engines, and Airbus Helicopters.

PHI said it will continue to operate normally during bankruptcy restructuring with its existing cash and $70 million from a new Wall Street investment firm, Blue Torch Capital. The Blue Torch loan was obtained on March 13 and is secured by aircraft. Blue Torch operates a $750 million “Capital Credit Opportunities Fund” that specializes in making high-interest loans to “companies in transition.” The Blue Torch loan is part of PHI’s $700 million overall indebtedness.

PHI said the bankruptcy filing includes only its principal U.S. entities and excludes foreign entities in Mexico, Canada, Trinidad & Tobago, Cyprus, Ghana, Israel, Saudi Arabia, the Philippines, Australia, and New Zealand. PHI said it remains in discussion with the holders of its $500 million worth of unsecured notes “to consider alternatives to address PHI’s outstanding debt obligations.” PHI also said that it is in discussions with various helicopter lessors “to address certain of its above-market lease obligations.” The savings from the
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Industry leaders evaluate coming eVTOL revolution

by Mark Huber

Emerging electric vertical takeoff and landing (eVTOL) aircraft “will not only revolutionize vertical flight, but society as a whole,” Mike Hirschberg, executive director of the Vertical Flight Society, predicted during a session on eVTOLs at last month’s Heli-Expo. He cited a confluence of regulatory, technological, and industrial developments that he thinks makes this the right time for eVTOLs, including the trend toward performance-based regulations, advances in electric motors, batteries, computer models and simulations, and increased investment in technology.

At present, Hirschberg said there are no fewer than 155 different eVTOLs under development. And, he noted, the timetabled set by Uber Elevate is not unreasonable—eVTOL prototype aircraft flying by next year with commercial service beginning as early as 2023.

According to Bell vice president of Innovation Scott Drennan, the business case is easy to make for this new class of aircraft. Citing data from the investment bank Goldman Sachs, NASA, and Uber, he said the global rideshare market will grow from $36 billion in 2016 to $285 billion in 2030, with the potential for 750 million urban passenger trips across 15 major cities by 2030. Further, this data suggests the global market could support 900 to 1,500 air taxis as early as 2025 and that it would support 9,000 to 12,000 by 2035.

Drennan made the case that Bell’s Nexus concept vehicle is what urban air travelers would expect—a “robust and redundant” vehicle with a speed of 150 mph and range of 150 miles. As enticing as the passenger market might be, he said the potential of “beyond the last mile” high-priority cargo delivery was even greater and that Bell was already partnering with NASA to demonstrate urban mission transport.

Airbus’ Zach Lovering, vice president of urban air mobility, predicted the demand for eVTOLs would soar as ground congestion throughout the globe continued to worsen. “It takes two hours to drive to the airport from downtown São Paulo and only 10 minutes to fly there in a helicopter,” he noted. “The future of mobility is vertical,” he said. Like Hirschberg, Lovering thinks the technology stars are aligned for eVTOL, citing distributed electric power systems, digital design and manufacturing, advanced avionics and autonomous systems, infrastructure development, connectivity, and on-demand business models as key enablers going forward.

Lovering noted that Airbus A350 is already flying its Vahana eVTOL and recently achieved forward speeds of up to 50 knots with the aircraft. Nevertheless, he believes that there are limits to vehicle autonomy. “I think there will always be humans in the loop,” he said. “I don’t think anyone would trust Siri to talk to ATC.”

Danny Sitnam, who operates Helijet in Vancouver, cautioned that potential eVTOL fliers “don’t want another flight test experience” and that safety was paramount to industry success. “The risk has to be wrung out and the safety has to be impeccable,” he said.

Sitnam envisioned eVTOL as a useful bridge to other forms of passenger air transport in areas with acute ground transportation congestion and as essential humanitarian tools in the lesser developed world. Citing his own experience founding Helijet in the 1980s, he also noted that the eVTOL industry also needed “patient capital.”

Rex Alexander, president of helicopter industry company Five Alpha, emphasized that local officials, particularly fire marshals, hold the keys—and are potentially the greatest obstacles—to any eVTOL infrastructure development, including rooftop vertiports. “They have the most teeth,” he said.

Alexander said an ASTM International committee was hard at work writing standards for vertiports that could be adopted by regulators going forward, but as of now, there are no formal standards for vertiports. He said the design of vertiports in an urban environment was critical to mitigating the effect of wind and turbulence on vehicles and assuring passenger ride quality.

Michael Dymt of Nexa Capital Partners pointed out that not only will UAM infrastructure be expensive, “it will take time to build.” A lack of UAM infrastructure could strangle the emerging eVTOL industry in its crib, he added.

Nexa is currently looking at 78 cities for UAM investment using 28 layers of data and 11 different operational models. Dymt believes this is the largest problem facing the industry, not certifying the vehicles themselves. “We think the certification issues will get tackled. I think we’re all going to get there,” he concluded.
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GAMA reflects on shutdown, praises FAA coordination

by Kerry Lynch

Industry leaders attending the General Aviation Manufacturers Association’s (GAMA) recent State of the Industry event agreed that the business aviation market entered 2019 on a stronger footing, but also conceded that the partial government shutdown that ushered in with the New Year will take months to resolve. “This has been an interesting start of the year,” said GAMA president and CEO Pete Bunce during the annual GAMA event held in late February.

Bunce had previously pointed to the work slowed during the shutdown, particularly on the certification front, and has detailed that the restart required manufacturers to readjust schedules to get back into an already full queue for FAA resources. But he also credited FAA senior leadership for providing as many resources as possible, as the law permitted, during the shutdown to coordinate on workflow.

Bunce further noted that the shutdown underscored the importance of organization delegation authorization (ODA). Over the past decade, GAMA has been pushing for greater use of ODA to make certification processes more efficient. Without it, “we would have been dead in the water” during the shutdown, he said. “That doesn’t mean it wasn’t painful,” but under the partnership with FAA and with programs such as ODA, “we were able to work our way through.”

Gulfstream president and GAMA chairperson Mark Burns agreed that ODA was “invaluable” but acknowledged the shutdown did backlog projects. Gulfstream parent General Dynamics had reported that the shutdown pushed certification of the company’s G600 into the second quarter.

Burns noted that there were a number of lessons learned that the industry is working out with the FAA. “We need to capture the lessons learned,” agreed Bunce, pointing out one area that was spotlighted was just how much paperwork the FAA is involved in. “This is an area that can be examined to see ways to ease that involvement.

Upbeat on Future

But at the same time, Burns, who detailed industry deliveries that were up across the board in 2018, was equally upbeat about prospects of the year, discussing the improved position of the industry coming into 2019. “2018 was a good year,” he said, adding the U.S. economy was certainly a factor as well as growth in Europe. “As we start 2019, we are in a stronger position than we were at the start of last year.”

While they reviewed the results, the leaders also discussed the evolution ahead for aircraft, the push toward biofuel and development of future workforces, among other issues confronting the industry.

Bunce highlighted the rapid development of the electric and urban mobility community, pointing to changes even within the association. GAMA formed its Electric Propulsion and Innovation Committee (EPIC) in 2015 to focus on emerging technologies and urban mobility. What began as a core group of 11 companies has grown to 79 global companies that are “looking at where this new revolution in aviation is going,” he said, emphasizing that a consensus exists among the community that “this is as important to aviation as the dawn of the jet age.”

Bunce further stressed that the timeline is accommodating. “A lot of people didn’t think this was going to happen until well into the 2020s. It is happening now,” he said, noting executives recently held meetings with top regulators at the FAA about certification basis for these vehicles.

Anna Dietrich, an eVTOL policy expert who co-founded Terrafugia, agreed, saying, “The time is now.” A number of credible players have joined the market, Dietrich said. As for certification, Dietrich said eVTOL developers are benefiting from the Part 23 rewrite, which was intended to facilitate the development of new technologies. However, she cautioned that getting these vehicles into the air will not happen overnight. The industry will have to take a crawl-walk-run approach on integration, beginning with set corridors that have yet to be controlled and expanding from there.

On biofuel, Bunce pointed to activities during last year’s EBACE show in Geneva. They included a joint industry declaration committing to promoting the development of sustainable alternative jet fuel (SAJF); he also cited the release of the Business Aviation Guide to using SAJF. The industry since followed up with the event in January in California, where SAJF was offered at all the FBOs at Van Nuys Airport and manufacturers such as Bombardier and Gulfstream brought aircraft to demonstrate flights with biofuel. The next step for such a demonstration is at this upcoming EBACE, Bunce said. “It is up to us as an industry to figure out how to build demand so we can start getting supply,” he said. “If we do not do this, we will not be able to meet the mandates we have for environmental sustainability.” While acknowledging business aviation is a small contributor to overall CO2 emissions, he noted a lot of attention is being paid in Europe and elsewhere to this sector. “It’s imperative for us to move forward with this initiative.”

Industry leaders at the GAMA event also highlighted the need for a new workforce development. A major theme was through attracting new interest in the schools and development of STEM programs. The industry is in competition for future workers, he said. “We need to communicate [an aviation position] is a good job and its an exciting job,” Bunce said.
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For Part 135, NTSB wants mandatory FDM and SMS

by Kerry Lynch

The National Transportation Safety Board (NTSB) last month renewed its call for the FAA to mandate flight data monitoring and to implement measures to improve training and safety management on all Part 135 operations. In all, the NTSB made three new and reissued six previous recommendations as a result of its findings on the May 15, 2017 crash of a Learjet 35A (N452DA) near Teterboro Airport in New Jersey (TEB). Both the pilot-in-command (PIC) and second-in-command (SIC) were killed on the Part 91 position-flight after they lost control of the aircraft during a circling approach to TEB’s Runway 1 and crashed into a nearby commercial building and parking lot.

During its March 12 board meeting in Washington, the NTSB agreed that the probable cause of the accident was “the PIC’s attempt to salvage an uncontrolled flight after they lost control of the aircraft.” The Safety Board cited as a contributing factor the decision of the PIC to act as the pilot flying, the PIC’s inadequate and incomplete pre-flight planning, and the flight crew’s lack of an approach briefing.

The NTSB additionally pointed to operator Trans-Pacific’s lack of safety programs, which the agency said, “would have enabled the company to identify and correct patterns of poor performance and procedural noncompliance.” Further faulted were ineffective FAA safety assurance system procedures, which failed to identify company deficiencies, the Safety Board added.

The fatal crash occurred on the crew’s third and final scheduled flight of that day. Earlier, the crew had flown from TEB to Laurence G. Hanscom Field (BED) in Bedford, Massachusetts, and then from BED to Philadelphia International Airport (PHL), before the return to TEB. While the PIC checked the weather at the beginning of the day, he did not check the weather again before that last leg from PHL to TEB, where winds were reported as strong and gusty at the time of the accident. Company policy stipulates that pilots check weather within three hours of departure. In addition, the crew’s flight plan for the 28-minute PHL to TEB leg called for an altitude of 27,000 feet. The NTSB noted that the flight plan’s flight time and altitude entries “were incompatible with each other, [suggesting] that the crew devoted little attention to pre-flight planning.” Further, since the crew had limited time during the flight to brief the approach, no such approach briefing was conducted—despite company policy.

Cockpit voice recorder data indicated that the SIC was the pilot flying (PF) on that last leg, even though the SIC did not meet the company’s minimum level of experience for such flight. The PIC regularly coached the SIC, coaching that the NTSB believes “likely distracted the PIC from his duties as PIC and pilot monitoring, such as executing checklists and entering approach waypoints into the flight management system.” The NTSB found that “collectively, procedural deviations and errors resulted in the flight crew’s lack of situational awareness throughout the flight and approach to TEB.” The airplane’s navigation equipment had not been properly set for the instrument approach clearance that the flight crew received, but neither pilot realized this and, as a result, improperly executed the vertical profile of the approach.

The 940’s range of up to 1,730 nm is the result of a new turboprop engine and a redesigned, aerodynamic wing. Lighter, more efficient engines and improved aerodynamics have allowed Daher to increase range from 1,200 nm on the 910 to 1,730 nm on the 940.

Daher unveils its TBM 940 at latest owners’ seminar

by Jerry Siebenmark

Daher recently launched the TBM 940, an upgraded version that succeeds its top-of-the-line 930 with new features that include an integrated autotrottle, automatic deicing system, and cabin improvements. The airframe announced the new model last month at the TBM Owners and Pilots Association Safety Seminar in Pompano Beach, Florida. “This new TBM family member underscores our firm commitment to constant improvement for the ownership and operational experience with our very fast turboprop aircraft,” said Daher Airplane Business Unit senior v-p Nicolas Chabbert.

The 940’s autotrottle is the first to be installed on a single-engine turboprop weighing less than 12,500 pounds, Daher claims, and adjusts the airplane’s speeds based on the preset flight profile. The autotrottle also allows the 940 to be operated at the edge of approved power regimes for the Pratt & Whitney Canada PT6A-66D.

The airplane also gets more automation on the deicing system, which is automatically activated—and displays an amber alerting system message—when icing or ice accumulation is detected and the pilot doesn’t take action. The cabin gets redesigned seats, additional thermal insulation in the cabin sidewalls, a central shelf with side storage, an additional 115-volt electric outlet at the right rear seat panel, and a USB port bringing the total to six passenger and three pilot ports.

The 940’s range of up to 1,730 nm is unchanged from the 930. FAA and EASA certification of the airplane, priced at $4.13 million with standard equipment, is expected this month. Through the end of 2018, Daher has delivered 267 TBM 900-series airplanes, which includes the 910.

News Briefs

Bombardier To Quadruple Singapore Mx Center

Bombardier Business Aircraft will more than quadruple the size of its Singapore service center—from 100,000 sq ft to 430,000 sq ft—and nearly double employment there to support an increasing fleet of its airplanes in the region. The expansion will include new customer facilities, a 35,000-sq-ft integrated parts depot, heavy structural and composite repair capabilities, expanded component, repair, and overhaul facilities; and advanced interior finishing.

FAA Evaluates Universal’s Helicopter Vision EFVS

The FAA is evaluating the use of Universal Avionics’ Heli-ClearVision as an enhanced helicopter vision system to improve helicopter safety and provide operational benefit in day, night, and low-visibility conditions. Heli-ClearVision includes the Skylens head-wearable display and the SkyVis helmet-mounted display, which are capable of displaying primary flight display flight symbology, conformal information, and synthetic, enhanced, and combined vision. Universal Avionics’ hardware was integrated into the FAA’s Sikorsky 5-76 flying testbed helicopter at the FAA’s William J. Hughes Technical Center at Atlantic City International Airport in New Jersey. Testing planned for early this year includes day, night, and twilight flights with Skylens and SkyVis.

Gulfstream Aerospace Expands Leadership Team

Gulfstream Aerospace has promoted v-p of flight operations Colin Miller to senior v-p of innovation, engineering, and flight, and v-p of initial and final phase manufacturing Greg Collett to senior v-p of manufacturing and completions. Miller took the baton from Dan Nale, who retired April 1 after nearly 35 years at Gulfstream. Miller joined Gulfstream in 2013 as an experimental test pilot and has since been a part of the development, testing, and certification programs for the G500 and G600.

Streamlined LOA Approvals in the Works

Business aviation stakeholders and the FAA have teamed on a letter of authorization (LOA) streamlining initiative that aims to accelerate approvals that Part 91 operators need to use RIVSM, RNP, CPDLC, MELs, and other core capabilities. The effort is focused on new aircraft, which lose key operational authorizations upon delivery. Under the initiative, OEMs are developing standard statements of capability, training providers are working on a standardized training compliance matrix, and the FAA will adjust inspector guidance. Additionally, upon electronic submission, the application will be available to all departments whose sign-off is required, replacing the prior sequential review process.
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Operators are moving on ADS-B equipage, but progress is slow in some segments

by Kerry Lynch

After years of expressing concern about lagging equipage rates for the 2020 ADS-B mandate in the U.S., General Aviation Manufacturers Association president and CEO Pete Bunce recently gave a reason for optimism. Equipage rates had jumped significantly on the fixed-wing front, he reported, and said, “We’re tracking very well.”

But at the same time, Bunce highlighted continued concerns about rotorcraft equipage, which, at just 30 percent equipped in February, has been well behind fixed-wing. And industry leaders point to pockets of fixed-wing fleets—particularly older, legacy aircraft—that have much slower equipage rates. This reinforces the concern that come Jan. 1, 2020, aircraft may be sidelined.

As of February 1, more than 73,000 U.S.-registered aircraft were equipped out of a target of 100,000 that fly in the controlled airspace where ADS-B will be required, GAMA reported during its State of the Industry event in February. That number was approaching 76,000 a month later.

Fixed-wing Sector on Track

More than half of the piston side is now equipped, Bunce had reported, and continued to equip at a rate of about 1,000 aircraft a month. This was comparable to equipage rates from back when transponders were first required.

Turboprops have remained on track, while business jets also have picked up the pace. He estimated that in February 63 percent of business jets that fly in the system were equipped, and equipage has been continuing at a rate of about 500 aircraft a month. At this rate, he said, “We will be in good shape.”

“The last three months are continuing to improve each month with respect to equipage rates,” added Jens Hennig, v-p of operations for GAMA. “In December, January, and February, the numbers have been improving, and 63 percent is comparable to February.”

In addition, there has been an acknowledgment that the costs for upgrades may be dissuading owners of legacy fixed-wing aircraft from equipping, noted the National Air Transportation Association (NATA).

Flight-tracking service provider FlightAware has been monitoring installations, finding that the lowest among the equipages are legacy aircraft such as the Gulfstream III.

Heidi Williams, director of air traffic services and infrastructure for NAAA, agreed that some owners would weigh cost decisions. But she added that upgrade paths are now available for the vast majority of aircraft. A key issue is to ensure that the operator is properly educated on the mandate itself and what is available for compliance.

Zuccaro noted that in most cases, advances in products have dramatically reduced the cost of equipage since the mandate was announced, making the installation much more affordable on both the general aviation and commercial sides.

“If I was still operating, I would think long and hard about that decision to delay,” he said. “You are going to need it whether you like it or not, so I would say, equip.”

Expect Shop Bottlenecks

A key issue for those who have delayed their installations is whether there will be enough equipment ready and technicians to install it in time to meet the deadline.

“It’s like everybody is piling up against the wall that they are facing, and somebody is going to find out, ‘No, you can’t get it by the deadline, we don’t have that many people, and we don’t have the equipment in the shop to put it in,’” the HAI leader said. NATA stressed that its repair station members have been actively working to ensure compliance. “While many facilities still have availability, aircraft owners should be aware that as we approach the 2020 deadline there may be a surge in last-minute demand for installations,” the association said.

David Paddock, senior v-p for U.S. regional operations for Jet Aviation, who spoke on a panel during the GAMA State of the Industry event, said that installations have definitely picked up the pace, but he reiterated warnings about shop availability as time draws closer to the deadline.

“If the owners and operators chose not to get the installs completed in a timely manner, it is not realistic that we would have unbound capacity,” said Ric Peri, president of government and industry affairs for the Aircraft Electronics Association.

Peri added, though, “It is nice to see the predicted uptick actually coming to fruition,” calling the uptick promising.

As for the shops, most are anticipating continuing installations well into 2020, and to be kept busy with other mandates and NextGen upgrades throughout the year. Williams agreed with the general consensus that 100 percent compliance may not be likely by 2020. The FAA already has begun discussions on providing a pathway for those who can’t get shop space in a timely manner, she said. While it is uncertain what that may be, one possibility may be some sort of time-limited narrow exemption for a small number. Such a topic was included on the next government/industry Equip 2020 meeting.

GAMA: eVTOL Interest, Development Accelerates

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While details of such an effort surface, FAA stresses that it will continue to work to ensure privacy protections are afforded to operators and that they will have access.

Despite the potential for a narrow exemption, Peri gave a warning on whether the equipage rates were adequate: “For those who chose to procrastinate, I suggest they won’t think so.”

Eythor Sturlson, senior v-p for U.S. regulation for Jet Aviation, attributed some of the increase in installations to the general interest in electric aircraft.

“GAMA: eVTOL Interest, Development Accelerates

The electric and urban mobility community is rapidly expanding as more major companies jump into the fray and development of aircraft is occurring faster than originally thought, said GAMA president and CEO Pete Bunce. The association formed its Electric Propulsion and Innovation Committee in 2015 to focus on emerging technologies and urban mobility, and what began as a core group of companies has grown to 79. Bunce said these companies are “moving at a new revolution in aviation is going,” emphasizing there is a consensus that “this is as important to aviation as the dawn of the jet age.” He pointed to Morgan Stanley study that projects a total “addressable market” of $1.5 trillion for autonomous aircraft by 2040.

Bombardier Funds Design, Green Tech Research

Bombardier is investing $167 million over three years into two cooperative aerospace research projects involving advanced aircraft systems design and development and more environmentally friendly technologies. Both projects are part of the company’s government, academic, and research institute collaborations. The first, AE210, will focus on expanding the use of computerized models to test aircraft systems and components from design through certification. Its goal is to bring products to market faster and at lower development costs. Meanwhile, the Smart Affordable Green Efficient (SAGE) project is exploring possibilities for “smarter, more efficient, and effective technologies” that reduce the environmental footprint. One area being explored under this project is development of aircraft wings that optimize aerodynamics and weight, reducing costs and fuel consumption.
NEVER HIT PAUSE

Work without interruption. Meet with your team while inflight. Low latency enables the face-to-face connections that increase productivity everywhere.
FSI selects sites for unmanned training

by Jerry Siebenmark

FlightSafety International will establish unmanned systems training centers in the Las Vegas area and Wichita, it announced on February 20, nearly a year after unveiling plans to enter that market. Its unmanned systems training catalog also will be expanding to include practical training in operating unmanned aerial systems (UAS).

The FlightSafety UAS Learning Center near Las Vegas will have operations in the suburban of Henderson as well as at Searchlight Airport (1L3), about 50 miles south of Henderson. The public-use airport located in Clark County is owned by the federal Bureau of Land Management and traffic there doesn’t interfere with flights at McCarran International Airport or Nellis Air Force Base, FlightSafety director of unmanned systems training for commercial and government Nora Ann Mishler told AIN. “You can fly there any time without restrictions,” she said, describing it as “primarily a UAS airfield” with good weather almost year-round.

Wichita was chosen as the second site for a UAS Learning Center because FlightSafety already has the personnel in place to offer unmanned systems training. “We just have a wealth of our own internal experience in Wichita,” Mishler said. “If you look at the organization as a whole, the majority of those folks are kind of situated there.” A specific location for the Wichita site has not been identified, Mishler said, but will be before the end of the year. FlightSafety operates three centers there from four facilities: Wichita Cessna Learning Center, Wichita East Learning Center and Wichita Maintenance Learning Center.

FlightSafety International will begin offering flight training in unmanned aerial systems as part of the development of its unmanned systems training and sites.

Both of its UAS Learning Centers will be led by manager Clinton Strong, who was most recently assistant center manager of the Wichita East Learning Center. He also has experience in commercial unmanned systems, previously owning and operating a UAS business.

Building on Military Experience

Unmanned systems flight training will be offered in partnership with Praxis Aerospace Concepts, which has a “wealth of UAS experience in military and commercial,” Mishler said. “[The partnership] helps us move into this space and do it with the expertise and quality that people come to expect from FlightSafety.” The first “hands-on” flight training course at Henderson, a 10-day-long Professional Remote Pilot Fundamentals course, will begin March 18. The course is designed to ASTM standards, Mishler noted.

FlightSafety entered the military unmanned systems training market about three years ago, Mishler said. But it wasn’t until May 2018 when it announced plans for commercial training.

“Our Unmanned Systems Training program will include a comprehensive series of remote-pilot ground and flight training courses designed to help UAS operators achieve the highest levels of safety and proficiency,” FlightSafety co-CEO Ray Johns said at the time of the announcement.

The aviation training company already had built-in demand for such training, Mishler said. “For several years our current customers were asking what we plan to do in this space and were really seeking professional training,” she said. “We think there’s obviously a business case.”

She added FlightSafety’s entry into the market now is ideal because of the expected development of new regulations by the FAA for large UAS contained as directed by Congress in the agency’s reauthorization bill that was passed late last year. “I think we’re entering it at just the correct time and hopefully we’ll help shape some of the large UAS training requirements too,” Mishler said.

On the commercial side, FlightSafety offers unmanned systems electronic learning courses in resource management, fatigue management, safety management systems, and Part 107 exam preparation. Those will expand over the next few months to include remote pilot fundamentals as well as courses in aerial photography, weather fundamentals, and basics on batteries, Mishler said.
“Your engines have a lot to say, and we are collecting that data to come up with solutions to benefit you,” Mahendra Nair, v-p of Americas sales at GE Aviation, said at the GE Aviation Waypoint conference, held February 19 to 21 in Dallas. Sponsored by GE Aviation’s Digital Solutions team and bringing together more than 600 customers and user representatives from the airlines, business and general aviation, MRO, and leasing entities to discuss and explore digital innovation in aviation, Waypoint 2019 focused on moving forward toward a more digital tomorrow.

A focus point of the conference was customer sharing of engine data and how GE is using that data. While there was some private talk among attendees about reluctance among pilots and pilot unions to share individual flight operation data for fear of reprisal, GE representatives made the case for improving fleet operations through the use of aggregate data.

Nair used the GE90 commercial aircraft engines, which contain about 23 sensors, as an example. “In 2013, some of our Middle East operators had an operational disruption that was related to GE90 hardware. When we initially looked at the data, our standard response would be to issue service bulletins [to all GE90 operators worldwide]. By using the [then Austin Digital, now GE Aviation Digital] suite of engine management system tools, we were able to issue the first FAA-approved analytic-enabled service bulletin that narrowed down the maintenance burden to a few engines at a few operators.”

Predictive Data for Bizav

While Nair’s comments—and most of the conference—were targeted toward the commercial airline market, there were interesting nuggets of information for business and general aircraft operators as well, evidenced by Gulfstream and Bombardier pilots who attended the conference. Though speakers generally mentioned Flight Operational Quality Assurance (FOQA) in an airline context, GE offers a Corporate FOQA digital solution with aggregated data from more than 350,000 corporate flights on more than 500 business aircraft, ranging from Bombardier Learjets to Boeing BBJs.

“Now is the time to look at how to pull data off the aircraft, start analyzing, and do predictive things,” said John Mansfield, chief digital officer for GE Aviation during a general session panel discussion. “We have great domain expertise within aviation: the capabilities, the people, and customers who help us. We have an opportunity to use our capabilities to work directly with our customers and solve some really intriguing problems that we couldn’t have afforded to do four or five years ago.”

“From the customer view, the question is, ‘When do I act on my asset and what is the mitigation?’” said Dinakar Deshmukh, v-p of data sciences and analytics at GE Aviation, during one of more than 60 breakout sessions ranging from general trends in digital innovation to specific workings of GE Aviation Digital’s AirVault and Asset Performance Management solutions. “It’s a seemingly simple question, but to arrive at the answer, a lot is working in the background: figuring out root causes, data collection, parameter selection, model building, operationalization, implementation, and all for a particular asset.”
Read original safety reports; the devil is in the details

I know we all face such a daily torrent of information that it’s difficult to keep up with our own work information, let alone the news of what’s happening around us. That includes the aviation career fields that we are in or even the airports we fly into. Some people have described the information overload as trying to drink water out of a fire hose. Sometimes I feel like I’m trying to drink straight out of the hydrant. Yet, even with all this gush of information, it’s important to stay up-to-date with what’s happening in the world of aviation and sometimes to seek out even more information to get an accurate picture. It might help our own operations avoid a costly or even tragic error.

I encourage my students at Vaughn College of Aeronautics and Technology to look beyond news reports and, if it’s a subject they’re interested in, to try to find the original source documents. The media’s depictions have their own particular slant and shortcuts and usually do not give enough technical information for those of us in the field. I was thinking of the importance of reading original reports as I was reading an article sent to me by a Canadian friend.

It discussed the unusual number of runway incursions at Pearson International Airport in Toronto involving its parallel runways and a Transportation Safety Board report analyzing the problem and proposing recommendations. The Canadian TSB is an independent safety agency, the equivalent of the U.S. NTSB.

A few things caught my attention in the article. One was the high number of runway incursions over a five-year period. Both the U.S. and Canada use the International Civil Aviation Organization’s definition of runway incursion: any occurrence at an aerodrome involving the incorrect presence of an aircraft, vehicle, or person on the protected area of a surface designated for the landing and takeoff of aircraft.

According to the article, between June 2012 and November 2017, there were 27 runway incursions at Pearson, Canada’s busiest airport, involving its parallel runways. As a student of human factors, I was intrigued by the quote from the chairwoman of the TSB: “All 27 incursions examined involved flight crews who understood they needed to stop, and that they were approaching an active runway.” Even though they had this critical information, they still failed to avoid entering an active runway without air traffic control clearance. This made me curious to find out what exactly was going on with the flight crews in the cockpit that this happened so many times.

I was also curious to see that one of the three recommendations made by the TSB was specifically directed at the FAA. So I sought out the Board’s actual report on runway incursions for more information. The incursions studied in the TSB report related only to aircraft and specifically to aircraft that landed on the outer runway, exited on one of the rapid-exit taxiways, and did not hold short of the inner runway at the designated holding position. These incursions were deemed to pose the highest risk of collision between aircraft. While there were other runway incursions at Pearson during this time frame, they were not analyzed in this report.

The report found that notwithstanding the fact that all the flight crews had been instructed by air traffic control to hold short of the runway, and despite intending to stop, the crews “had missed the visual cues identifying the respective locations of the runway holding positions.” To pass the runway holding positions, the flight crews had missed the runway “elevated signage, elevated stop bars, runway guard lights, painted mandatory hold signage, enhanced taxiway centreline lighting, enhanced holding position markings, and illuminated stop bars.” That’s a lot of visual cues to miss.

The TSB recognizes the number of changes made over the years to try to reduce the number of runway incursions at this location, including all the visual cues referenced above. However, since implementing all these strategies has not been successful, the TSB believes physical changes to the taxiway layout are necessary to reduce the risk. Since any physical changes to the airport will take time, if they’re ever made, the TSB recommends additional, interim measures including the recommendation that the FAA work with operators to amend standard operating procedures so that post-landing checks are sequenced only after landing aircraft are clear of both active runways when closely spaced parallel runway operations are in effect, rather than the current common practice of sequencing the checks once landing aircraft are clear of the landing surface.

It seems to me that this is information regional airlines, especially those flying to Toronto’s Pearson International Airport, should know and consider; notwithstanding what the FAA ultimately decides to do. It’s never too early to implement safety recommendations that could improve your operations and avoid a catastrophic runway incursion.

The opinions expressed in this column are those of the author and not necessarily endorsed by AIN.

John Goglia is a safety consultant. He welcomes your e-mails at: gogliaj@yahoo.com

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HAI hires JSfirm for job opportunities

A year after rolling out a study highlighting a looming workforce shortage, Helicopter Association International (HAI) unveiled a partnership with job search specialist JSfirm to create a job bank on the association’s website.

Under the agreement, the website will house JISfirm job listings, with member company postings highlighted. JSfirm has housed hundreds of thousands of jobs, said Abby Hutter, JSfirm manager of marketing and partnerships, adding this will greatly expand the reach for helicopter professionals. “Through HAI’s network, we will enhance the ability to make jobs readily accessible to current and future helicopter professionals.”

The listings are expected to go live on the Rotor site this spring. HAI member companies new to JSfirm will get a 90-day free listing while existing customers who are HAI members will receive a 20 percent discount.

HAI v-p of business development Karen Gebhart (l) and Abby Hutter, JSfirm manager of marketing and partnerships, discuss JSfirm’s partnership with HAI to boost industry job hiring.

For HAI this presents an opportunity to tap into a significant employment resource at a time when worker shortages are intensifying. “We have a real concern about our future job shortages—we need pilots, we need maintenance technicians, we need engineers, we need management, we need all kinds of people to be involved in the future of our industry,” said Karen Gebhart, v-p of business development for HAI.

HAI president and CEO Matt Buzzaro underscored the association’s concerns about workforce shortages. “The shortage of pilots and mechanics is real, it’s here and we’re trying to address it in an aggressive manner,” Buzzaro told AIN.

During last year’s Heli-Expo, HAI released a study finding that, during the next 18 years, the U.S. helicopter industry will face a shortage of more than 7,600 pilots and of 40,600 aviation mechanics.

K.L.
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CAE is a global leader in training for the civil aviation, defence and security, and healthcare markets. Backed by a record of more than 70 years of industry firsts, we continue to help define global training standards with our innovative virtual-to-live training solutions to make flying safer, maintain defence force readiness and enhance patient safety. We have the broadest global presence in the industry, with over 9,000 employees, 160 sites and training locations in over 35 countries. Each year, we train more than 220,000 civil and defence crewmembers, including more than 135,000 pilots, and thousands of healthcare professionals worldwide.

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Flight activity continued to grow in the world’s largest business aviation market in 2018, but at a slower pace, according to statistics from industry data provider Argus International. Last year’s activity rose by nearly one percent over 2017’s, topping the 3 million-flight mark for the second consecutive year, while flight hours increased by 0.7 percent. Those proved less than the 5.5 percent increase in flight activity reported in Argus’s TraqPak 2017 business aviation review.

I’d characterize as strong, but I’d hedge that statement to clarify that it’s only in a regional sense,” said Douglas Wilson, president and senior partner of industry consultancy FBO Partners. He noted that while regional markets in the country and their FBOs are doing well, when looking at the national picture and averaging the strong markets with those lagging, the view dims somewhat. “Call it a low-grade fever at this point, annoying, but far from life-threatening,” he added.

In its annual FBO fuel sales survey and industry forecast, released at the end of January, Aviation Business Strategies Group found that 75 percent of its respondents experienced positive fuel sales year-over-year, while 43 percent reported increases in transient ramp traffic. “For the third consecutive year, we’ve seen an increase in fuel sales by more than half of the FBOs responding to our survey,” said company co-principal, and industry veteran John Enticknap. “This includes some standout [increases] of more than 8 percent year-over-year, by nearly 20 percent of the FBOs reporting.”

Nearly 60 percent of the audience predicted they would again increase their fuel sales over 2018’s totals. Yet survey participants were less bullish on the direction the economy was headed than they were in 2017, with 61 percent now taking a positive view, compared with 73 percent the previous year.

What was a frothy consolidation market among the major FBO operators earlier in the decade has cooled, after Landmark Aviation, a major player in the market, was acquired and absorbed by Signature Flight Support. “The U.S. FBO industry continues its consolidation, albeit at a slower pace,” said Stephen Dennis, CEO of Aviation Resource Group International.

From the mid-1980s through entry into the 21st century, the majority of FBO consolidation was carried out by existing operating companies, with the focus of expanding their networks. However,” he told AIN, “at the turn of the century, FBOs became the investment of choice of private equity. Consequently, many of the acquisitions in recent times have been made by new operating companies funded by private equity.”

Longtime FBO operators such Jet Aviation have continued to expand, with the General Dynamics subsidiary adding several locations over the past year through its purchase of Hawker Pacific and KLM Jet Center. However, newcomers such as Lynx FBO (backed by Sterling Group private equity), Modern Aviation (by Tiger Infrastructure Partners), along with a once-again reconstituted Ross Aviation (KSL Capital Partners), provided much of the consolidation activity over the past year. These companies added four, three, and eight FBOs, respectively, to their networks over the past year.

Indeed, that infusion of private investment capital has changed the playing field in the FBO industry. According to one expert, as a result of these companies’ need to grow, they are paying price and earnings multiples that in many cases are more than double the valuation models that the industry has long followed.

Wilson also noted that the industry may soon experience a shortfall of general managers, citing many factors, including the pilot and mechanic shortage. “Years ago, many line service employees with hopes of becoming pilots one day, found a home within the management structure of an FBO,” he said. With the airlines increasing demand for pilots, those individuals are earning their licenses and departing for the cockpit, rather than a corner office in the FBO.

Another concern is in the model of airports expecting multimillion-dollar development projects from FBOs in return for long-term leases. “I’m not suggesting there shouldn’t be a meaningful investment at lease renewal,” Wilson explained, “but in some cases that airport-mandated capital requirement is forcing FBOs to accept a position of significant leverage, simply to do business. If those customers are not willing to pay more, if prices do not increase and the economy does slide into a recession, there may be some FBOs out there that are not positioned to weather the next storm.”

Report by Curt Epstein, charts and data by Dave Leach

FBO Survey 2019: Facilities serve growing market

Flight activity continued to grow in the world’s largest business aviation market in 2018, but at a slower pace, according to statistics from industry data provider Argus International. Last year’s activity rose by nearly one percent over 2017’s, topping the 3 million-flight mark for the second consecutive year, while flight hours increased by 0.7 percent. Those proved less than the 5.5 percent increase in flight activity reported in Argus’s TraqPak 2017 business aviation review.

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Nearly 60 percent of the audience predicted they would again increase their fuel sales over 2018’s totals. Yet survey participants were less bullish on the direction the economy was headed than they were in 2017, with 61 percent now taking a positive view, compared with 73 percent the previous year.

What was a frothy consolidation market among the major FBO operators earlier in the decade has cooled, after Landmark Aviation, a major player in the market, was acquired and absorbed by Signature Flight Support. “The overall health of the FBO industry I’d characterize as strong, but I’d hedge that statement to clarify that it’s only in a regional sense,” said Douglas Wilson, president and senior partner of industry consultancy FBO Partners. He noted that while regional markets in the country and their FBOs are doing well, when looking at the national picture and averaging the strong markets with those lagging, the view dims somewhat. “Call it a low-grade fever at this point, annoying, but far from life-threatening,” he added.

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Report by Curt Epstein, charts and data by Dave Leach

FBO Survey 2019: Facilities serve growing market
FBO SURVEY RULES AND METHODOLOGY

This report of AIN’s FBO survey covers fixed-base operations worldwide.

History
AIN has been conducting surveys since 1981, asking about the service that FBOs provide their customers and reporting the results from these surveys. Initially, we sent out a paper survey questionnaire by mail to qualified subscribers in the US—pilots, flight attendants and dispatchers—the people who used or made arrangements with FBOs. In later years, qualified subscribers in the remainder of North America and the rest of the world were added.

In 2006 we moved the FBO survey online. We have continued to add FBOs each year and now offer subscribers a comprehensive list of 4,500 FBOs worldwide.

The Survey
This year’s annual FBO Special Report marks the fourth in which we have reported overall averages on a cumulative basis and the first in which the FBO survey site was live for the entire year.

The survey site allows subscribers to keep a list of personalized FBOs and from this list they can easily change or affirm a prior rating and leave an updated comment. During this survey period we saw a dramatic increase in ratings compared with last year.

The scores in this report and on our website reflect the cumulative average of scores from 2013 through today only. Although the most recent rating of an FBO is counted on a per-user basis and only FBOs that have received 30 or more ratings are eligible for their scores to be published.

From April 1, 2018, until Feb. 9, 2019, we asked subscribers to update and give new ratings for FBOs they had visited in the preceding 12 months. We contacted readers via e-mail, announcements in our e-newsletters, and in the January issue of Aviation International News. The bulk of this promotion took place from Dec. 1, 2018, through Feb. 9, 2019.

The site asks readers to evaluate FBOs they visited the previous year in five categories: line service, passenger amenities, pilot amenities, facilities, and customer service representatives (CSRs). For each of these categories, the participant is asked to assign a number from 1 to 5, with 1 being the lowest and 5 being the highest.

Observations
Each year we review ratings to ensure their accuracy. On our new site we have a system to flag, review and, if necessary, remove ratings identified as dubious by factors such as e-mail address, IP address, and concentration of scores.

Score Calculations
An FBO’s overall average is calculated by adding all the individual category ratings received by that FBO and dividing the resulting sum by the total number of all category ratings received by the FBO. In other words, if a particular FBO was evaluated by 50 people (and assuming that all 50 evaluators gave that FBO a rating in each of the five categories), then the FBO would receive a total of 250 category ratings. These 250 category ratings are added together and then the sum is divided by 250 to arrive at the overall average for this FBO.

Overall averages are calculated using the cumulative average of all ratings given from 2013 through this year. This year’s results will show an FBO’s increase or decrease versus the FBO’s cumulative rating from one year ago.

REMINDER
DON’T WAIT — AIN’s FBO survey is now open for year-round feedback. It takes only a minute, and you can do it while waiting for passengers, on the shuttle bus to/from the hotel or any other time that is convenient for you. Log on to www.ainonline.com/fbosurvey to rate your experiences at the FBOs you visit.

Top Rated FBOs in the Americas (by overall average)

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*FBOs with same category change are listed in alphabetical order.

Most Improved FBOs over the Past 12 Months

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<th>FBO</th>
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<th>OVERALL AVERAGE</th>
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*FBOs with same c change are listed in alphabetical order.
The top scoring facility in this year’s survey demonstrates the all-around consistency AIN’s survey respondents look for in their FBO experiences, with Pentastar Aviation ranking among the very top in three categories: Pilot Amenities, Facilities, and CSRs, and it was one of only two FBOs to score 4.70 (out of a possible 5) or above in all five categories this year. The company, which began operation in 1964, works hard to keep its complex attractive and up-to-date, whether that represents something as mundane as painting its corporate offices. Its high ranking in the facilities category, together with the company’s staff of 250, which he said, “is not just a garage, Lackey told AIN. “It’s where people work and have a business and careers, so we kind of provide that first-class facility for them to exist in every day and they appreciate that, and see the value. That’s why they’re there and why we’re growing.”

A one-stop shop, Pentastar, which occupies 22 acres on the field, also operates an FAA Class IV, Part 145 repair station. The location, which is staffed 24/7, also features an interior design showroom for cabin refurbishments.

The Avfuel-branded FBO offers 130,000 sq ft of hangar space and is home to 26 turbine-powered aircraft, ranging from a BBJ to an EC135 helicopter. The building, which is also used as the FBO’s secure DCA departure lounge under the DASSP protocol, has direct gate access from one of the FBO’s parking lots, and features its own luggage carousel.

Another feature that sets it apart is its in-house catering department FiveStar Gourmet, which experienced a banner year in 2018. “Our facility is not just a garage,” Lackey told AIN. “It’s where people work and have a business and careers, so we kind of provide that first-class facility for them to exist in every day and they appreciate that, and see the value. That’s why they’re there and why we’re growing.”

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Another feature that sets it apart is its in-house catering department FiveStar Gourmet, which experienced a banner year in 2018. “Frankly, last year was our best year ever in catering,” said company president and CEO Greg Schmidt. “We do in fact deliver to a number of airports around the area in addition to serving other FBOs here at PTK.”

Jet Aviation’s West Palm Beach, Florida FBO maintained its high ranking in the AIN FBO Survey this year with a second-place overall rating, in a tie with three other FBOs.
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What makes this FBO special is the people who run it, and this is reflected in Jet Aviation's scores for CSRs (4.8) and line service (4.78). According to general manager Nuno Da Silva, "The critical differentiating factors...are primarily our people and their longevity at Jet Aviation Palm Beach [the average FBO employee experience is 20 years]." The high experience level of its employees enables Jet Aviation PBI "to provide a safety-driven environment. Finally, our personalized service by anticipating our clients' needs and creating an experience every time they visit us. We don't believe in the word 'No' and rather we find a solution to our clients' requests always." The Phillips 66-branded FBO (fuel provided by World Fuel) employs 48 and is open 24/7.

An IS-BAH stage II-registered facility, Jet Aviation PBI believes that hiring the right person is an important first step. Employees are then trained in the NATA Safety 1st and Ritz-Carlton customer service programs as well as internal Jet Aviation training. "Over the years our team has contributed to a fun family culture and environment, which enables us to maintain a very low turnover rate," said Da Silva.

The PBI facility will see new developments this year, including a new 40,000-sq-ft hangar with 10,000 sq ft for offices; groundbreaking was held on March 22, and it will open by the end of the year. The FBO's interior will be upgraded to Jet Aviation's global design and finish standards.

The 18,000-sq-ft, two-story terminal, includes a massage chair-equipped pilot lounge, with showers, coffee area, and a flight planning station. The FBO's current five hangars enclose 160,000 sq ft and can fit airplanes as large as Boeing BBJs. Jet Aviation PBI offers visitors in the main lobby freshly baked cookies, coffee, tea, and cocoa as well as freshly made lemonade and Rich's ice cream.

Jet Aviation PBI has been in business since 1985, starting with two hangars. "Our business overall has been steady, and the TFR [temporary flight restriction] from temporary travel restriction from presidential travel] effect on particular weekends has caused a trend of business slowdown for PBI."

### 4.74 American Aero

**Fort Worth Meacham International Airport (FTW), Fort Worth, Texas**

Despite having just occupied its permanent facility in 2017, American Aero has already had two top 5 percent finishes in the AIN survey. One of two FBOs at FTW, the Signature Select facility with its 19-acre leasehold ranked among the top in the categories of pilot amenities (4.79) and CSRs (4.83).

The FBO's terminal occupies 8,600 sq ft in the refurbished aviation department building at FTW, and is sheathed in electronically activated photochromic glass that darkens automatically, providing shade from the strong sun. That system allows the company to save on utility costs to cool the interior, which is also clad in sound-dampening materials and has embedded white noise speakers, to improve the lobby environment for customers.

Among its amenities are a pilot lounge with showers, a soundproof snooze room, a dining area with china and silverware, a 25-seat A/V-equipped conference room, a well-stocked refreshment bar, high speed Wi-Fi, Volvo crew cars, covered parking spaces for 80 vehicles, a TSA-approved secure lounge with en suite bathroom and direct ramp access for use under the DASSP program for flights to Washington Reagan National Airport. And starting this summer, U.S. Customs service will begin adjacent to American Aero's ramp. In the service galley, the FBO has a 90-second dish washer, making it ideal for quick turns, and on the ramp, the fuel trucks are equipped with wireless data transmission and metering, relaying the information instantly to the CSR desk.

In addition to 11 acres of ramp, the complex, which normally operates from 6 a.m. until 10 p.m., also has more than 300,000 sq ft of hangars, which are home to 37 turbine-powered aircraft ranging from a G560 to an Eclipse 550. Over the past year, the Avfuel-branded facility noted a 20 percent growth in fuel sales.

Angela Thurmond began as a CSR, before being recently promoted to general manager. "All of our staff here has been Ritz-Carlton trained in customer service and of course, training is a continual process, she told AIN. "Our mission is to provide an exceptional customer experience at every single touch point."

Safety has been one of the company's mantras, and the facility was the world’s first to achieve Stage III registration under IBA's International Standard for Business Aviation Handling (IS-BAH). "When we tug your airplane, instead of having one guy on a tug, we have somebody on the tug and wing walkers always, just to ensure that the airplane doesn't get a mark put on it," said company vice president Bob Agostino. "Since we've been open, we have not scratched the paint on anything."

### 4.74 Wilson Air Center

Memphis International Airport (MEM), Memphis, Tennessee

Wilson Air Center operates a chain of four FBOs in Tennessee, Texas, and North Carolina, and two of them were ranked by AIN’s readers in the top 5 percent in this year's survey. The company's flagship facility at Memphis International Airport, which tied for second overall, occupies more than 17 acres, and among its most popular features is its 26,000-sq-ft airside canopy, which can shelter multiple arriving and departing aircraft, up to a Bombardier Global. The facility, one of two service providers on the field, is open 24/7/365, and it placed among the top of all FBOs this year in the passenger amenity category (4.75).

The terminal includes two conference rooms, a large business center, pilot lounge with snooze room and quiet room, 30,000 sq ft of offices, crew cars and onsite car rental.
Exceeding Your Expectations

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EMEA – Amsterdam | Berlin SXF, TXL | Dubai DWC, DXB | Dusseldorf | Geneva | Jeddah Medina | Munich | Riyadh | Rotterdam | Vienna | Yanbu | Zurich

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Improvements on tap for this year include a complete renovation of the lobby and restrooms. The company’s staff is trained and certified to do TSA screening for large charter aircraft and with its own airstairs, air-start units and belt loaders, it can handle anything up to a Boeing 767 on its ramp.

The facility also specializes in serving military aircraft, with such hardware a near-daily sight on the ramp. The Shell Fuels-branded FBO has 35 full-time staff, and a host of part-time workers to help in periods of heavy demand. With the city hosting the FedEx/St. Jude Golf Tournament this year, company president Bob Wilson expects a large turnout of private aircraft.

When it comes to customer service, Wilson has but one rule: take care of the customer. “I ask them to go above and beyond to make sure the customer’s needs are met,” he told AIN. As a recent example, when a private aircraft had to divert to Memphis on a very hot day, one of the customer’s bulldogs began to exhibit signs of heat stroke. The FBO’s crew immediately jumped in to help it with ice, water and cooling fans, until it began to breathe more easily. “The customers were impressed for our ‘can-do’ attitude,” said Wilson.

**4.72 Henriksen Jet Center**

**Austin Executive Airport (EDC), Austin, Texas**

With Texas’s capital city experiencing massive growth, it’s little wonder that privately owned Austin Executive Airport and its Henriksen Jet Center is mirroring that growth. Over the past year, the FBO, which is making its second consecutive appearance among the top 5 percent in the survey, saw a 25 percent increase in business, according to Jodie Kaluza, who serves as the manager of both the dedicated general aviation airport and its FBO.

In operation for eight years, the airport is now home to 35 jets and 20 turboprops, running the gamut from a Global 6000 to a King Air. Those aircraft are sheltered in 140,000 sq ft of hangars, which can accommodate any size business jet. Indeed the location’s fifth community hangar, which came online over the past year is now fully occupied. Construction on a private hangar for a local flight department just began, but with 50 acres developed out of nearly 600 available at the airport, there is plenty of room to expand.

For the second year in a row, the location, which is open 24/7, earned the top score among FBOs in the passenger amenities category (4.79) and also tallied among the highest in the facilities category. Its modern 22,500-sq-ft, two-story terminal features a Rolls-Royce/Snecma Olympus engine that once powered the Concorde, and a fully restored 1914 Indian motorcycle as focal points in the soaring lobby atrium, which is accented with locally quarried limestone. Amenities include a theater room with stadium seating, a pilot lounge with two “Zen” relaxation rooms, showers, A/V-equipped 12-seat meeting room with a custom aviation-themed conference table, and a coffee and refreshment bar.

On the airside, a 55,500-sq-ft canopy, which can shelter aircraft as large as a BBJ, welcomes arriving aircraft and provides a respite from the blistering Texas sun. The FBO also offers complimentary air conditioning carts to help cool down aircraft cabins on those sweltering days.

Last February, the airport inaugurated its own control tower, which is staffed from 6 a.m. until 10 p.m., and its surrounding airspace was changed to Class D.

When it comes to customer service, Kaluza and her crew prefer the personal touch. “I don’t want people to feel like they are just a customer walking through,” she told AIN. “We want to develop relationships and bring them back through that.”

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**4.71 GlobalSelect**

**Sugar Land Regional Airport (SGR), Houston, Texas**

GlobalSelect in Houston is once again the only municipally owned and operated facility to bust into the top 5 percent of this year’s survey. And further, it scored first overall in pilot amenities (4.82) and facilities (4.88) among all FBOs. It was second overall in passenger amenities at 4.76.

Part of the answer for GlobalSelect’s prize rating in facilities could come from the company attitude: not all improvements have to be big ones. “Every two years or so we think of how we can update areas of the terminal building,” said Elizabeth Rosenbaum, assistant director of aviation. “Last year we updated the lobby bathrooms, some of the furniture in the lobby, and the massage chairs in the crew lounge. Next year we hope to update the crew lounge kitchen area and the theater room equipment.”

Director of aviation Phillip Savko told AIN about developments and improvements even beyond the FBO campus that can add value to visiting customers. “While working on the master plan, we are looking at ways to develop commercial property to provide additional amenities such as a hotel, restaurants, and gas stations to benefit our current customers and attract new ones.”

And GlobalSelect makes sure those customers know exactly where they just landed. “From the moment you walk in, you know you are in Texas,” said Rosenbaum. “The furniture and decor that you will find in our lobby is something that you would have in your home. Whether simply giving directions, finding a hotel room, or making a recommendation for a restaurant, we want our customers to be happy.”

The FBO has 500,000 sq ft of terminal ramp space, and the terminal has a total of 20,000 sq ft. Savko said there is 81,773 sq ft of hangar space, able to accommodate aircraft up to the size of a G650. There are also 99 T-hangars. GlobalSelect is home base to 43 jets, 13 turboprops and two helicopters.

Fuel is supplied by Titan Aviation Fuels providing Shell-branded product. “Last year we budgeted to sell 3 million gallons of fuel, but we sold 3.2 million, a record for GlobalSelect. This year we estimate that we should sell 3.3 - 3.4 million gallons,” said Rosenbaum.

Savko added, “Sugar Land Regional Airport [the fourth-largest airport serving Houston] is completing phase two of the new taxiway, an important safety component because it provides proper separation between the taxiway and the runway. There is 5,600 linear feet of new taxiway pavement and the project is 70 percent complete.”
Always happy to see you, always by your side. That’s Atlantic.
4.70 Business Jet Center
Dallas Love Field (DAL), Dallas, Texas

The business aviation industry is well represented in Texas, as evidenced by four FBOs from the Lone Star State landing in the top tier in this year’s survey, by far the largest concentration of any region in the U.S. Among them is Business Jet Center (BJC) at Dallas Love Field, which has just experienced its fourth consecutive record-breaking year in fuel sales, according to co-owner Michael Wright, who added that the Phillips 66-supplied facility also set a record in terms of operations last year, with more than 32,000.

Since 2000, BJC, which ranked this year among the top in the passenger amenities category, has occupied its modern, 33,000-sq-ft, three-story terminal, featuring a well-stocked complimentary refreshment area including a year-round ice cream assortment, three crew lounges, a trio of snooze rooms (each with restroom and showers), three conference rooms, a large event room, a game room, a pet relief area with a fire hydrant, several Mercedes-Benz crew cars, and a triangular arrivals canopy large enough to shelter aircraft up to a Global.

The family-owned facility, the only one of the four FBOs on the field that hasn’t changed hands since 1997, is home to 35 turbine-powered aircraft, housed in more than 245,000 sq ft of hangar space, which can handle the latest big business jets. A new 49,000-sq-ft hangar is under construction, with an anticipated opening this summer.

The FBO is open 24/7 and has a staff of 80. Its CSRs work both behind the lobby desk and outside on the tarmac, according to Cat Wren, the company’s manager of sales and marketing. “We believe that it is important for our clients to be greeted on arrival by a CSR, so that our line service team can focus on the technical aspects of their job and increase our overall efficiency,” she told AIN. “This system has proven to be effective in a world where service can sometimes be an afterthought.”

In response, the company recognizes and rewards its team for exceeding expectations in service and safety with bonuses and other incentives.

“Luxury begins with customer service,” Wren explained. “The BJC family really strives to make sure every customer has a better FBO experience than ever before.”

4.69 Atlantic Aviation
Charles B. Wheeler Downtown Airport (MKC), Kansas City, Missouri

The Shell Fuels-branded facility, which has 50 employees, is in the process of installing a new fuel farm on the eastern side of the airport to better serve its fueling demands and provide it with redundancy, as the location fuels all the corporate, commercial and military aircraft at the airport. “Our philosophy on pricing is not based on typical single-location FBOs,” company president Bob Wilson told AIN. “We want to give our customer the best pricing for products and accommodations they receive. We normally are in the middle or just below the pricing norm for our location area.”

The 9,000-sq-ft, LEED-certified open floor plan terminal landed among the top performers this year in the pilot amenities category (4.71). It offers a coffee bar; a snack bar featuring local favorites Moon Pies, Blue Bell ice cream and RC Cola; conference rooms; pilot lounge with kitchenette, shower facilities and snooze room; courtesy shuttle; business center; concierge; crew cars, and for those wishing to stretch their legs, crew bicycles. To accommodate its frequent military customers and their training needs, the facility also has a separate, dedicated area with briefing rooms and a lounge.

“We are the front door to Chattanooga and want to provide the best first impression,” said Wilson. “We want to treat all of our customers like they are family members.”

He cited a recent instance when NetJets called to identify one of its pilots, who was retiring after their flight into CHA. As the jet taxied in, it was greeted with a water-cannon salute from the airport’s fire department, and once in the terminal, he was presented with a cake, a premier bottle of Tennessee’s own Jack Daniel’s whiskey, local chocolates, and other goodies.

4.70 Wilson Air Center
Lovell Field Airport (CHA), Chattanooga, Tennessee

Wilson Air Center at Chattanooga Lovell Field Airport is the lone FBO on the field, and the second out of the company’s four FBOs to reach the top 5 percent in this year’s AIN FBO Survey. The company last year completed a new 28,000-sq-ft hangar and office complex, bringing it to 56,000 sq feet of fully occupied hangar space, with more hangars in the design and planning phase.

Virtual since the day it opened its permanent facility as the independent Hangar 10 in 2010, the FBO purchased by Atlantic Aviation in 2014 has raised the bar for aviation service at Charles B. Wheeler Downtown Airport, perennially ranking among the top FBOs in AIN’s annual survey.

This year, the facility placed among the highest in the category of pilot amenities (4.77). Among its popular offerings are a trio of snooze rooms—each with a bed, television and private bathroom—sponsored by local hotels. A large gym with locker rooms and showers occupies a prominent location in the 26,000-sq-ft, two-story terminal. The building also has two A/V-equipped conference rooms, which seat 8 and 12. Recently added in the FBO’s covered parking area was a charger for electric vehicles.

Through a deal with the regional arts council, the halls and spaces of the facility are continually refreshed with artwork from local artists that changes quarterly. “You get
A PREMIER AVFUEL-BRANDED FBO

Monterey Jet Center—less than eight miles from the Pebble Beach Golf Links—boasts an expansive 200,000 square feet of hangar space to accommodate up to a DC-9 and more than 10 acres of open ramp space. This impressive facility is on par with the safety-focused, first-class services provided at the FBO, backed by more than 20 years of aviation experience.

- 7,175' Runway
- Quick Turns
- GPU
- Rental Cars on Site
- Flight Planning
- Conference Room
- Complimentary Wi-Fi
- Full Kitchen
- Catering

www.MontereyJetCenter.com | Avfuel Contract Fuel and AVTRIP available

Powering your flight with more than just fuel. Learn more at avfuel.com.
really great stuff coming in your door,” said general manager Ben Moore. “Some people like it, and if you don’t like it, then in three months it changes out.”

The location recently completed the final stage of its master plan, with the addition of a fourth hangar, bringing it to 64,000 sq ft of aircraft storage, capable of sheltering aircraft up to a Global 7500. Atlantic added a U.S. Customs facility on to that newest hangar providing added convenience for its based clients. One of the hangars also has an attached 7,000-sq-ft “self-service” terminal, with a private lobby, solely for based customers.

According to Moore, with 26 based aircraft from a Global 5000 on down, the location’s hangars are now at full capacity, as is its 10-acre leasehold. “I think if we had the ability to continue building hangars, we have the demand for it, but we just can’t expand any more due to our lease agreement with the city,” he told AIN.

In January, the city hosted the NFL’s AFC Championship game for the first time. The event attracted more than 60 private aircraft to Atlantic’s 4.5-acre ramp, as the hometown Chiefs saw their Super Bowl dreams end in an overtime thriller.

4.68 Meridian

Teterboro Airport (TEB), Teterboro, New Jersey

While the Northeastern U.S. represents a major concentration of the business aviation market, the only FBO from the region to land in the top 5 percent in this year’s AIN FBO Survey is Meridian, the lone independently-owned FBO at Teterboro Airport. The Corporate Aircraft Association-preferred facility, which occupies 175 acres at the bustling general aviation airport, scored among the highest this year in the categories of pilot amenities and CSRs.

The 30,000-sq-ft terminal offers a wide array of amenities including a comfortable glass-sheeted lobby, two A/V-equipped 14-seat conference rooms, a theater room with recliners, coffee bar, catering preparation kitchen, pilot lounge with billiard table and four snooze rooms, business center, flight planning area, kitchenette, gym with locker rooms and shower facilities, and crew cars.

Superior customer service has long been a calling card for the location. “I think anyone who knows us knows [what] friendly, really service-oriented employees that we have’” said Steve Chandoha, president of Meridian Teterboro. “Our people really make the difference for us and I think that the customer values that.”

The Shell-branded facility, which is open 24/7, set a record for fuel pumped there last year. It is currently working to achieve Stage 1 registration under the IBAC’s International Standard for Business Aviation Handling (IS-BAH) by year-end.

Last summer the FBO, which has 16 based business jets, ramping from a Bombardier Global 6000 to a Gulfstream G200, completed a $12.5 million redevelopment project, which replaced an obsolete 18,000-sq-ft hangar with a new 40,000-sq-ft structure, essentially doubling its aircraft storage capability, and adding 8,000 sq ft of office space. “It was significant for us,” explained Chandoha, adding it allows the company to better serve its customers. “We have more hangar space for them, more jet maintenance capacity when they need it, and of course, more space and resources for managed aircraft as well.”

The facility is also a TSA-designated gateway for flights into Washington Reagan National Airport under the DASSP. With several FBO options on the field, Chandoha stated one mission when it comes to Meridian’s clients. “Just assuring that when the customer leaves, they know that they made the right [FBO] choice when they came to Teterboro.”

continues on page 70

Top Rated FBOs in the Americas by Region

**NORTHEAST**

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**MIDWEST, GREAT LAKES**

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**4.66 TAG Farnborough Airport**

Farnborough Airport (EGLF), UK

Ever since TAG Aviation Holding acquired the freehold of Farnborough Airport in 2007, renaming it TAG Farnborough Airport, the FBO it operates at the airport has been winning awards, among them topping AIN’s annual FBO survey as the highest rated service provider outside North America for 12 consecutive years. Before that, it had started with a 99-year lease and invested more than £200 million creating one of the most iconic airports in the world—and dedicated to business aviation only.

Brandon O’Reilly, Farnborough’s long-time CEO, noted the airport recorded 30,729 movements in 2018, a record, and a year-on-year increase of 13.8 percent in 2017 and up 8.2 percent on Farnborough’s previous busiest year in 2007, just before the economic crash. The airport saw a major increase in transatlantic traffic, with flights to and from the U.S. up by 24.5 percent in 2018.

O’Reilly added that for January 2019, movements at the airport were up 4.4 percent year-over-year compared with 2018, “representing 90 additional movements. That’s the busiest January on record for us.”

The FBO tallied its highest score in the facilities category (4.83), ranking second among all FBOs in this year’s survey, and placed among the top in pilot amenities as well. Its 52,000-sq-ft terminal features a café, a quiet lounge in the crew area, a bed-equipped snooze room, and crew gym, with shower facilities in both the gym and adjacent main terminal. To handle high-passenger-load private charters as well as sports teams or entertainers, the operator added a separate passenger lounge, able to accommodate up to 80 passengers on the top floor of the three-story terminal. The airport has a fast-track entrance for passengers and crew, and direct car access to the ramp is permitted. Customs and immigration service is located in the terminal.

The FBO, which operates from 7 a.m. until 10 p.m. on weekdays, and 8 to 8 on weekends, has 260,000 sq ft of heated hangar space and is home to approximately 40 private jets.

Farnborough also expects to collect approximately 50 percent of Northolt’s business when the West London airfield closes for runway work later this year—and there is plenty of capacity for further traffic growth, as the airport is permitted to grow movements to 50,000 per year. Another boost to traffic is expected when Gulfstream completes its new main European MRO there in 2019, with 100 aircraft per year. Another boost to traffic is expected when Gulfstream completes its new main European MRO there in 2019, with 100 aircraft per year.

When asked about the possibility of maintaining its position as the top international FBO, O’Reilly commented: “If that’s the case, it’s a vote for our employees, customers, Farnborough, and the UK. We’re humbled, and we never take it for granted.”

### Top Rated FBOs in Europe, the Middle East, Africa, and Asia Pacific

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*FBos with same overall average are listed in alphabetical order*

**4.58 Universal Aviation**

London Stansted Airport (EGSS), UK

The London market is one of the strongest and most competitive business aviation venues, and Universal Aviation at Stansted Airport is among the top choices as a gateway. With an overall score of 4.58, it placed second among all FBOs outside North America. Its focus is on elite service, with its highest scores in customer service representatives (4.76) and line service (4.75).

Sean Raftery, senior director of international business, told AIN, “Business jet operators need to know that someone is taking care of them at all times, before, during and after their trip. They rely on our extensive knowledge and our strong relationships with the regulatory authorities which help benefit the customer. A passenger arriving at London-Stansted can be off their aircraft and on their way to their meeting within minutes of landing.”

Jason Hayward, general manager, said, “We place a great deal of focus on the facility, but it will never be as important as the team that actually make the process work. We were awarded IS-BAH Stage 1 in 2017 and are now working towards Stage 2, which we aim to have in place by the second quarter this year.” Universal has 60 employees among its UK staff in various roles, and the FBO operates daily from 7 a.m. to 10 p.m. with 24-hour service on request.
Top Rated FBOs in Each Category

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Top Rated FBOs in the Rest of the World by Region

Europe

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“Raftery added, "We believe we have a joined-up view of the complete customer mission, rather than just the ground-service elements. We are also closely connected to our Global Regulatory Services Team and support our clients with the regulatory obligations such as UK Air passenger duties (APD). We are a certified, registered, and approved APD admin center. We have the look and feel of a nice quality hotel but operate as a VIP terminal building.”

Premium service customs and immigration is available privately in the FBO or onboard the aircraft, Raftery said. “We also offer full trip-support services from the facility, including weather, flight-planning and permits. This is via our Global Regulatory Services Team and support our clients with the regulatory obligations such as UK Air passenger duties (APD). We are a certified, registered, and approved APD admin center. We have the look and feel of a nice quality hotel but operate as a VIP terminal building.”

Universal has been in business at Stansted since 1984.

4.47 XJet
London Stansted Airport (EGSS), UK

Private aviation operators headed to London Stansted are clearly well served with two of the airport’s FBOs ranking among the top international facilities in this year’s AIN survey. XJet earned its highest score this year in the CSR category, taking lessons learned from its first stateside FBO. “We don’t have employees; we have partners,” said company founder and CEO Josh Stewart. “We spend a lot of time in training and developing them to where we deliver a unique type of customer service. They are authorized and encouraged to make decisions on the spot to provide a seamless experience for our customers.”

Last year was somewhat of a transitional year for the company, which sold its flagship facility at Denver’s Centennial Airport, pushing its London location to the fore. “There’s been growth, even though I think there’s some uncertainty around Brexit,” noted Stewart. “Everyone is sort of holding their breath.”

The FBO, which has been in operation for four years at Stansted, offers a 20,000-sq-ft terminal, full slate of amenities including: a passenger lounge, in-house art gallery, two premium VIP suites with direct private access and their own bathrooms, an espresso bar as well as a bar for alcoholic beverages, a recently upgraded aviation-themed pilot lounge featuring tables constructed from engine nacelles, two snooze rooms with shower facilities, and an 18-seat A/V-equipped conference room.

“The European market is very different from the U.S. in that a lot of these flights are international and you have to clear customs and immigration, and there are a lot of security checks,” Stewart told AIN. “So the facilities are of prime importance because people could be utilizing them for a couple of hours, where often in the U.S., with just domestic flights, they fly in and out very quickly.”

Newly added is a check-in lounge for large charter flights such as sports teams or entertainers, and an additional security screening area to expedite passenger flow.

The facility, which operates 24/7, is home to 14 private jets including a Boeing 767. It also has a 50,000-sq-ft hangar, one of the largest in Europe, which can accommodate a pair of 747s at the same time, and more than three and a half acres of ramp. It owns all the equipment needed to handle the largest charter aircraft, including covered air stairs.

“Our London operation is heavily focused on heads of state, royal flight departments, sports teams, and celebrities, so we’re never going to be the highest volume FBO on the field,” explained Stewart. “We’re after those folks that really want and demand a higher level of service, privacy, and exclusivity.”
With 30 years of proven expertise and data, we know precisely what it takes to maintain and support your aircraft at every stage of its life cycle.

**Acquisition** advice to depend on. **Maintenance** programs to stabilize your budget and add value to your aircraft. **Parts** delivered to you on time and in budget. **Leasing** solutions you can rely on.

**IT’S TIME FOR A BETTER APPROACH.**
Jet Aviation's new location at Amsterdam Schiphol Airport placed among the top international locations in this year's AIN FBO Survey, despite a time of significant change for the FBO, formerly known as KLM Jet Center. "Our basic philosophy has not changed," said Edwin Niemoller, who remained with the facility as director of FBO operations with Jet Aviation Netherlands. "Crews need to focus on their flights and should not have to worry about their catering, slots, transportation, and so on. Our job is to ease the minds of the crew by taking care of this business and ultimately helping them look good in front of their passengers."

The 35-year-old FBO at Schiphol is the flagship for Jet Aviation Netherlands, the other location is at Rotterdam The Hague Airport (RTM). Its dedicated business and general aviation services include aircraft handling, deicing, and fueling, the latter of which comes through fueling services Jet Aviation acquired as part of the KLM transaction, "eliminating any waiting or queuing times," Niemoller said.

Jet Aviation Schiphol’s top score in the survey was for line service. “We certainly have a strong focus on operational excellence and safety,” Niemoller told AIN. “We are extremely good at getting the aircraft to depart on time, according to the wishes of the final customer. This also means blending all services and deliverables into one seamless product.”

The FBO has 25 employees, and it is open 17 hours a day, from 6 a.m. to 11 p.m. local time. Hangar space at Schiphol is provided through a partnership with JetSupport. The operation is currently aligning its processes with its new owner, but Niemoller said it intends to receive Stage 1 registration under IBAI’s International Standard for Business Aircraft Handling before the end of 2019. “Having been part of a large commercial airline organization [KLM] for over 30 years, we are certainly compliant with the most important aspects of the aviation business,” he noted.

Announced in October 2018, the switch to a new corporate parent is under way, Niemoller said, adding that “many of us agree that the new uniforms are a decided improvement!”

"The transition is still in full swing and, though it’s challenging to manage alongside the day-to-day operations, good strides are being made,” he said.

### FBO Chains: Top Rated Locations by Overall Average

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<thead>
<tr>
<th>FBO NAME</th>
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INTERNATIONAL PARIS AIR SHOW

Paris • Le Bourget • From 17 to 23 June 2019

WHERE AEROSPACE LEADERS GET DOWN TO BUSINESS
Million Air debuts new FBO at Westchester County site

by Curt Epstein

The bar for FBOs at New York’s Westchester County Airport has been raised, after Million Air held the gala grand opening of its new facility at the New York-area business aviation hub at the end of February. The event featured a private hangar concert by singer Chris Isaak and a mini static display with a Citation M2 and Longitude, Embraer Legacy 450, and a Bell 429 along with several luxury automobiles.

It culminated 16 months of construction on the 29,000-sq-ft, two-story Adirondack-inspired building, the first new FBO terminal to be built at the airport in many years. “I really believe that we have advanced the facilities and experience at least two decades,” said company president and CEO Roger Woolsey.

“As a pilot myself, I travel all around the world, and we really tried to build and create something exceptional, a place that appropriately represents the sophisticated traveler and an environment not duplicated anywhere in the world.”

The facility includes a 7,000-sq-ft, four-lane, enclosed and climate-controlled porte-cochere, a staffed complimentary Starbucks coffee bar, three A/V-equipped conference rooms, six fireplaces, a pilot lounge with en suite showers and two snooze rooms, flight-planning area, a room-sized golf simulator, and 22 tenant offices, including a 4,000-sq-ft suite occupied by flight training provider Performance Flight. Of those offices, only two remain vacant, according to Woolsey.

“We have been working with the local county, literally for a decade,” he said, adding that the FBO’s local customers were solicited early in the planning process for the terminal as well. “We tried to blend some of the amenities and design of their favorite country clubs and hotels and have traveled from California to Mexico and New York to visit some of these facilities. We have put more planning into this facility than any FBO we have ever built.”

During an opening-night tour, Woolsey described the details in the building’s construction to AIN, adding that it incorporates more than 25,000 pounds of locally quarried stone to achieve the rustic, yet elegant interior look. “Our goal was to make the FBO building a destination, as opposed to a place pilots and passengers pass through,” he explained, noting how some of the first passengers that came through the new facility loitered by one of the fireplaces in the great hall for nearly an hour. “When I asked the passengers if they needed any assistance or were waiting on anyone else they told me no,” said Woolsey. “Their pilot and aircraft were ready for departure; they simply loved the ambiance and wanted to relish it before their departure.”

The Houston-based company’s $80 million investment at HPN also included a new 52,000-sq-ft hangar, which was completed last May, and 100,000 sq ft of additional ramp space. The facility’s former 10,000-sq-ft terminal will be retained and converted into additional tenant space. To kick off a second phase of development at the location, Million Air is anticipating final approval to break ground on a new, 80,000-sq-ft hangar by the second quarter of the year.
The lightweight MyGoFlight SkyDisplay head-up display (HUD) should receive FAA certification “by late spring,” according to MyGoFlight CEO Charles Schneider. The HUD receives flight information from installed avionics and “allows pilots to fly with their head up and eyes out,” according to the company. “The purpose of the HUD is to increase pilot safety, enhance visual awareness, and reduce pilot workload.”

The SkyDisplay HUD weighs less than two pounds and is small enough to fit in single-engine aircraft through light jets. Although the HUD is non-conformal, which means that the symbology doesn’t exactly match the terrain in the outside world, the HUD’s flight path marker (FPM) and flight director cue mirror navigation and attitude information and thus can be used to fly instrument approaches with great precision.

Some delay in the certification program occurred during the U.S. government shutdown, and MyGoFlight has elected to seek approval for its HUD as a portable electronic device, including certification for the installation provisions. Initial certification will be for Part 23 aircraft flown under Part 91 regulations. MyGoFlight will later help Part 135 operators obtain approval to fly with the HUD, according to Schneider.

MyGoFlight has sold 18 of its introductory batch of 25 positions, for installation in airplanes that include Cirrus singles and the Vision Jet, a Cessna 421 twin, a Citation Mustang and a CitationJet. The introductory price is $25,000, which includes installation by MyGoFlight in Denver, Colorado; training; and one year of the MGFCare warranty and software-upgrade program. Certain airplanes might also require an analog-to-digital converter, depending on the autopilot, Schneider said.

Bombardier completed the sale of its flight and technical training business to CAE in a deal valued at $645 million, the Canadian airframer announced in March. Net proceeds from the sale are expected to tally $500 million. The companies announced the proposed transaction in November. The two companies extended their authorized training provider relationship until 2038.
Building a team of highly engaged, motivated professionals is a critical part of any company’s success. Employees are the very foundation of any organization and, regardless of industry, lack of engagement contributes to high turnover, which is costly and can negatively affect a company’s culture. But, with aviation, there’s another wrinkle to consider: lack of employee engagement can affect an organization’s safety record.

For smaller corporate or private aviation teams, the risks associated with disengagement and subsequent turnover are too great to ignore. Even seemingly small issues can not only result in costly delays; they can also put employees’ lives in jeopardy.

Though a strong, safety-oriented culture is just one benefit of a highly engaged team, statistics show that engaged employees are 38 percent more likely to stay. When employees feel like they have a voice, are contributing and feel valued, they’re less likely to look for other jobs.

In the long run, it’s important to set expectations during the hiring process, those expectations must be reiterated during mid-year and annual performance reviews. Even setting aside a few minutes to make sure everyone is clear on job descriptions and what is expected of them can make a huge difference in engagement. Every person is a critical part of the team, so when each segment of the department understands their own roles and responsibilities as well as those of the other team members, teams will thrive.

Interact with staff members. Directors of aviation have a lot on their plates, which means they can often be head-down on important business. However, it’s still important to be both visible and approachable, especially in the case of non-flying directors. That can be as simple as getting away from a desk and walking the hangar and the office space on a regular basis. By observing and interacting with team members, they’ll be able to identify friction or small signs of disengagement, giving them opportunities to help employees course correct before a resignation letter appears.

This type of visibility builds rapport with those who are regularly in the hangar and shows investment in an employee’s ability to perform his or her job. Not only that, it ensures team members succeed in the long run.

Communicate and build camaraderie. Sometimes staff meetings can feel tedious, but they’re a key part of getting a scattered team together and building camaraderie. Monthly is ideal, but if that’s not realistic, even a quarterly all-hands-on-deck meeting helps facilitate engagement. While it’s important to cover operational business, these meetings should also be fun! By hosting a group breakfast or lunch, performing team-building activities or even bringing in a relevant speaker, staff meetings can be transformed from boring to exciting.

Whatever the activity, center it around the state of the flight department and encourage group sharing, no matter the position someone holds. Have a team leader discuss what’s working with communication and bring ideas for improvement per department, including pilots, maintenance, scheduling/dispatch, and flight attendants. If meetings are designed to strengthen team bonds and give everyone a voice, employees will feel valued, and valued employees stay.

Many companies now offer employees the chance to work remotely, and that’s all thanks to technology. While some aviation positions simply aren’t possible to perform remotely, others are, and leveraging technology to bring everyone together is a key part of building a successful team. For example, if some team members can’t be physically present at the hangar for a monthly staff meeting, offer a user-friendly, inclusive option, such as WebEx or Zoom. Even something as simple as offering an online forum where employees can post articles and share professional and personal information gives team members a chance to facilitate dialogue, regardless of physical location. Not only that, it removes some of the mundane elements of communication, such as monthly communication emails.

These are just a few ways that industry leaders are helping to build and retain strong teams that thrive. Even small changes can net big results, and when it comes to employee engagement, those changes are always worth it in the end.

Colleen Kelly is vice president of talent management at Mente Group.

Boeing last month announced a $3 million grant to help pay for scholarships for flight and maintenance technician training, as well as for certification costs associated with pilot and technician programs. This $3 million will be used to create a permanent endowment, which will fund the scholarships and program costs. The scholarship money will be available for all students, according to Boeing, “with a focus on increasing the number of women, military veterans, and minority students enrolled in both programs.” The grant is part of Boeing’s efforts to support STEM programs and women, military veterans, and minorities.

“It’s essential that industry and higher education work together to increase the pipeline of aerospace talent,” said Boeing chairman, president, and CEO Dennis Muilenburg, speaking at the 18th Annual U.S. Chamber of Commerce Aviation Summit. “Our partnership with Embry-Riddle demonstrates Boeing’s commitment to the continued growth and diversification of the global aerospace industry,” he said. “Through this grant, we’ll help more students—with more diverse backgrounds—learn with greater efficiency and perform more effectively once on the job.” 

Boeing’s 2018 Pilot & Technician Outlook projected that, worldwide, 790,000 new civil aviation pilots and 754,000 new maintenance technicians will be needed over the next 20 years. This includes commercial and business aviation, including helicopters.

Colleen Kelly, vice president of talent management, Mente Group

When employees feel like they have a voice...they are less likely to look for other jobs.”

Boeing invests in scholarships for Embry-Riddle flight and mx training

Leonardo Trekker gets FAA nod

The FAA granted type certification approval for Leonardo’s AW109 Trekker light twin last month. The aircraft shares the airframe and Fadee Pratt & Whitney Canada PW207C engines of the AW109 Grand but substitutes fixed landing skids and a Genesys Aerosystems glass cockpit. The helicopter can be configured for a variety of missions from single-pilot VFR to dual-pilot IFR operations.

Leonardo said that the helicopter, for which it holds more than 60 orders, is suitable for law enforcement, emergency medical, utility, and passenger service operators. FAA certification followed EASA approval in late 2017. M.H.
UK flight-sharing site grows, addresses safety concerns
by Ian Sheppard

UK Flight-sharing site (and app) Wingly now counts more than 15,000 private pilots signed up from all over Europe and more than 300,000 passengers in its community. The company recently rolled out a “complete redesign” of its website, saying it makes it “even easier for pilots to share their passion for flying with others.”

The changes include simplifying how pilots can post flights and improving the cost calculator. This, said Wingly, “leverages our database of aircraft and flights down to the aircraft registration to define the precise cost-shared amounts. Moreover, this method significantly reduces the possibility of overstating costs, so as to ensure pilots strictly adhere to the cost-sharing regulations.”

Flight sharing has remained controversial with European business aviation charter operators and associations. One particularly controversial feature on Wingly’s site had been the “flight request” page, but this feature has disappeared from the new site, Wingly confirmed. But Wingly added its disappearance had “nothing to do with…the business aviation lobby.”

It said the flight requests “were developed as a test last summer for Version 1 and not scheduled in our Version 2 plan, for which the development had started long ago, before we initiated the flight request. The results of the tests have been quite positive, and the requests fulfilled were always for leisure flights requested by passengers that pilots were already offering. We were limiting the types of flights people could request. We are now studying to see how we can improve this feature and if and when we will release it on the new version of our website and app.”

Wingly said it participated in a recent “annual meeting” with EASA and the UK CAA. “It was very positive; they still support what we do, as we are allowing pilots to fly more, and this increases their flying currency. This makes them safer and more experienced pilots.”

Regarding the U.S., where the FAA has effectively outlawed flight sharing, Wingly said, “There is ongoing positive work about cost-shared flights after the [recently passed] reauthorization bill and they are closely watching how [we] operate under the European cost-share regulations. They are also closely studying the work we did with EASA and the CAAs to arrive where we are today. We hope they will define similar regulations on their soil.”

Wingly told AIN that “so far, we have had 16,000 passengers in flight with no incident or accident.” They are “leisure flights…mainly being sightseeing or day excursions and subject to the pilot’s discretion.” It said there is a 40 to 50 percent cancelation rate due to “weather conditions or when the pilot deems it unsafe to fly,” so pilots are, Wingly claims, not put under pressure to undertake any flight. “Moreover, we strive to educate our passengers about the particularities of light-aircraft flying. Both parties are made aware that the flights can be canceled up to the very last minute with a full refund; and the potential risks involved.”

Also, after months of testing with helicopter pilots across the UK, Wingly has now included helicopters. “Passengers can now filter their search for cost-shared flights by either helicopter or fixed-wing aircraft. We hope this gives a lot of visibility to the helicopter pilots, who can also benefit from sharing the costs of their even more expensive hobby.”

Royal Jet upbeat on Middle East, Africa
by Peter Shaw-Smith

Abu Dhabi charter operator Royal Jet continues to tighten its belt as it remains optimistic about the Middle East market, particularly in Saudi Arabia, as well as Africa.

Today, it operates eight BBJs, the last of which joined the fleet during Dubai’s Middle East Business Aviation (MEBAA) Show in December 2016. “Royal Jet took two additional BBJs, to bring the total to eight, in 2016, and also operates two Global 5000s, which have been in the fleet for four years,” president and CEO Rob DiCastri told AIN in February. “We are finally selling our Gulfstream G500.”

Royal Jet is owned by Abu Dhabi Aviation and the Presidential Flight Authority. Business in the company’s home city of Abu Dhabi, the UAE capital, is driven by a number of factors, including royals and government delegations. He reported, “Historically we were very reliant on the [royal family and] Presidential Flight.” However, he acknowledged, “We’re trying not to be too reliant on any one customer group. Third parties, such as other governments [and] ministries, [are also important]. It’s a wide combination: some corporate [trips take place] in the smaller aircraft.”

DiCastri, who joined Royal Jet from Saudi Arabia in late 2016, said that a government-instigated anti-corruption drive in the kingdom had slowed business. “There’s a lot of activity going on internally, I think,” he said. “Is there a lot of international flying, VIP, like there used to be? Will that come back? It depends on how the whole clean-up finishes and whether people start being a little [bolder] or being able to go out and be seen in private jets.

“Right now I think it’s the government that is moving ahead with lots of different activities, and they are high profile. They are the ones doing the big events, [bringing in] the big entertainers…and sporting activities…That’s something that we haven’t seen before.

“They held a big golf tournament in King Abdullah Economic City; it was on the European tour. [Entertainer] Mariah Carey was in there, [as was Greek composer] Yanni. They are focusing on domestic entertainment and sports, on people locally. It’s very interesting because it’s different than before.”

DiCastri said Africa offers opportunity. “There’s a lot of business, potentially, in the BBJ-size aircraft. We’re doing more of that lately. [It’s] government and ultra-high-net-worth individuals. It’s all VIP.

“I don’t think in Nigeria we’ve done anything. But in other countries, and I probably won’t name them, there’s a bit of a vacuum, a gap in Africa in terms of the larger aircraft. Our niche is the BBJ. We’re not going to…put a Global 5000 in there or a Gulfstream, because there are plenty of those. But there’s not a lot in the entourage-type aircraft that have more seats and space.

“When you’re going into the BBJ, that’s one of the markets you’re [looking at]: the film companies and their tours, the rock bands, and the big concert tours, or sports delegations.”

He said the Abu Dhabi 2019 Special Olympics World Summer Games is another target. “There are thousands of delegations, delegations from hundreds of countries coming in,” he said. “They have got to get in here somehow. Etihad can handle a lot of it, of course. But there’s going to be a demand for those types of [trips] when there are big events like that happening.”

DiCastri said fleet renewal will be important regionally. “That’s why they say there’s ‘x’ number of aircraft to be delivered to the region in the next 10 years. There are aging aircraft everywhere. We have an aging fleet. We have a couple of new aircraft, but a number of our BBJs are older. We need to do a couple of [refurbishments]. We need to do some more to upgrade them.

“It all depends on the customer demand. If the customers are happy with what they’re getting, if the pricing is right, if the service is as good as it has ever been, they are still coming.”
the facility to accommodate the latest class of ultra-long-range business jets, such as the G650. It includes a new service kitchen with catering preparation area, dishwashers and ice dispensers, and also has some surprises underneath. A basement contains a well-equipped gym; and, “I think I’m pretty safe in saying we are the only FBO in the world where we have a real wine cave underneath the hangar floor,” Emmoth told AIN. It’s carved into the bedrock, with a humidity monitoring system. “If the customers have any requests for a nice champagne, most likely we will have it in stock in the wine cellar and will be able to deliver that for them to take on the airplane.”

Combined with the earlier existing hangar, the FBO now has more than 37,000 sq ft of hangar space, which contains approximately 10 based turbine-powered aircraft, ranging from a Global Express to an amphibious-float-equipped Cessna Caravan. The company also added a new equipment bay, eliminating the need to open and close the hangar to move vehicles.

The 5,400-sq ft terminal has a homelike atmosphere with a large passenger lounge featuring a fireplace, grand piano, and aquarium. But the most famous attraction is a parrot, Emmoth’s pet, which has lived at the facility since it opened. Its cage remains open all day, allowing the bird to decide if it wishes to remain inside or be social. It has become the FBO’s official mascot, to the delight of its customers.

4.44 TAG Aviation

Geneva International Airport (LSGG), Geneva, Switzerland

The activities of what is now TAG Aviation’s FBO activities at Geneva Cointrin Airport started in 1989, with Aeroleasing Handling. With market share increasing to more than 50 percent, it became the main FBO at the airport. According to Erturk Yildiz, FBO handling manager, TAG Aviation Europe, “Today we are still assisting 47.3 percent of all Geneva business and general aviation traffic.” After the 2007-8 economic downturn, Yildiz said, the FBO was able to weather the storm. “We resisted the recession strongly, and our management kept all our staff in place, so as not to lose our know-how.” He said the FBO also managed to retain its market share.

Last year the FBO handled 16,343 movements representing 37,616 passengers. He described the level as “stable,” given that the number of movements it handled in 2017 was 16,938. TAG-managed aircraft represent approximately 10 percent of those movements.

Yildiz said the main challenges are now “slots and parking.” The Geneva Airport system allows slots to be booked only five days before, so “we make sure that we have enough available staff to book slots as soon as the system allows.” FBOs at Geneva don’t have their own private parking, but arrange airport parking through Geneva Airport. “With parking, we knock on every available door—private parking, hangar space—to find a solution for our clients during busy periods,” Yildiz told AIN.

The location earned its highest score this year in the passenger amenities category (4.61), and in terms of lounge facilities, TAG’s Geneva FBO offers three passenger lounges, two crew lounges, and one snooze room. All have “recent and modern” furniture and equipment, said Yildiz. The FBO has its own ground-servicing, fuel, and deicing equipment as well.

Yildiz said that the airport authorities have been “helpful” to business/general aviation, which represents some 30 percent of total airport movements. “They understand very well the importance of business aviation for Geneva.” Although TAG Geneva is in a different situation from TAG Farnborough, where TAG is the airport owner and only FBO operator, Yildiz said, “[Although] TAG GVA FBO is competing with three others, the service mentality is the same.” In terms of maintenance approvals TAG Geneva is an approved service center for Dassault and Bombardier aircraft.

4.40 Execujet

Zurich Airport (LSZH), Zurich, Switzerland

Execujet has had a presence at Zurich Airport since 2001, when it occupied the former Ruag facility. It is one of four FBOs on the field, but the only one that has its own standalone terminal, as its competition operates from the airport’s general aviation terminal. The two-story, 10,800-sq ft building offers a private passenger lounge, in-house customs and immigration, a landside and smaller airside pilots lounge, shower facilities, kitchen, storage room, lockers, and a 10-seat AV-equipped conference room, along with indoor and outdoor vehicle parking, all of which served to give the FBO its highest score in the facilities category.

The location also has a private one-acre ramp directly adjacent to its terminal, allowing convenient aircraft parking or easy passenger drop-off or pick-ups, even for larger aircraft.

The FBO, which operates from 5 a.m. until 10:45 p.m., and has a staff of 22, was the first in Switzerland, as well as Execujet’s first location, to achieve registration under IBA’s International Standard for Business Aviation Handling; and it is currently Stage 2. Through its own refuelers, the Execujet line staff provides exclusive fueling on its ramp for Shell Aviation.

The facility also has a nearly-27,000-sq ft hangar, which is home to a handful of business jets ranging from a G50 to a Phenom 100. “We are the only one that can actually offer hangar space, subject to availability,” said Basil Gamper, the company’s general manager for its Zurich, Berlin, and Munich locations. “We have yearly contracts with our tenants, but if they are abroad, there is always the option [for transient aircraft] to get into the hangar, especially during wintertime, where there is high demand to avoid deicing.”

For Zurich FBOs, the highlight of the year comes in January when the annual World Economic Forum (WEF) is held in the nearby resort town of Davos. It attracts hundreds of private aircraft and thousands of passengers to the region. “During the entire year we handle in Zurich approximately 20 movements a day and we sell around 25,000 liters (6,600 gallons) of fuel,” Gamper told AIN. “During the WEF, it can get up to 150,000 liters per day and movements are between 50 and 75, so there is big additional traffic during this week.” He added that the Zurich location will draw staff reinforcements from its sister facilities in Berlin and Munich during that time.
Drones deliver from shore to ship

by Mark Huber

Airbus has launched shore-to-ship trials with its Skyways parcel delivery drone in Singapore, the first time drones have been flown in real port conditions to deliver time-critical maritime supplies to working vessels at anchorage. The first delivery was made 0.8 nm from the shoreline of Singapore’s Marina South Pier to the Swire Pacific Offshore’s anchor handling tug supply vessel M/V Pacific Centurion with a payload of 3.3 pounds of 3D-printed consumables. The roundtrip flight took less than 10 minutes.

Skyways trials are being undertaken with partner Wilhelmsen Ships Services, which resupplies commercial vessels in ports with a fleet of launch boats. During the trials, the Skyways drone will lift off from the pier with a payload capability of up to 8.8 pounds and navigate autonomously along predetermined “aerial corridors” to vessels as far as 1.6 nm from the coast.

Airbus and Wilhelmsen signed an agreement in June 2018 to develop an end-to-end unmanned aircraft system for safe shore-to-ship deliveries. A landing platform and control center were set up at the Marina South Pier in November 2018 through the facilitation of the Maritime and Port Authority of Singapore, which also designated anchorages for trial vessels. The Civil Aviation Authority of Singapore worked with Airbus and Wilhelmsen to ensure safety of the trials.

“Modern technology such as the unmanned aircraft systems are just a new tool, albeit a very cool one, with which we can push our industry ever forward and improve how we serve our customers,” said Marius Johansen, v-p of commercial at Wilhelmsen Ships Services. Airbus noted that using drones in place of launch boats can slash delivery times by a factor of six, lower delivery costs by 90 percent, mitigate accident risks associated with the use of launch boats, and save energy.

Airbus’s Skyways is an experimental project aimed at establishing seamless multi-modal transportation networks in smart cities. The company said it will soon begin another trial project, this one to deliver parcels autonomously in an urban environment with drones, at the National University of Singapore.
The 46th annual NBAA International Operators Conference (IOC) drew a record-setting 700-plus corporate pilots and flight-support specialists to San Francisco in late February for four days of presentations and discussions aimed at helping international operators fly safely, securely, efficiently, and legally—the IOC’s mission.

Changes to the North Atlantic airspace and track (NAT) system; a fix for Letter of Authorization (LOA) approval delays; and updates on emission monitoring programs were among the hot topics covered in the more than two dozen presentations, featuring 60-plus subject matter experts. The perennial regional reviews—continent/country profiles including key airports and operational issues—this year took note of Japan’s bizav preparations for the 2020 Olympics and the airspace dispute between Singapore and Malaysia that has derailed use of the former’s new ILS at Seletar Airport, among other issues. Updates on avionics highlighted developments including global tracking via Airspace—a region that many attendees (the overwhelming majority Part 91 operations) either fly through or have clients they support who do.

Despite all the resources available, the distances today’s long-range jets travel and the vagaries of en route weather and the myriad airspaces they traverse continue to make international operations challenging. IOC has become the go-to event for those eager to keep up with critical news and developments.

Weather Ahead

A weather briefing, providing a quick but fairly deep dive into seasonal weather in various regions and continents, commenced each day’s presentations, and this year they emphasized the impact global climate change is expected to have on aircraft operations. These include stronger convective activity; increased frequency of high-level icing; changes at airports and over routes of flights; jet stream alteration and amplification; more persistent negative operational weather; and extreme turbulence, said meteorologist Mike Wittman of Evo Jet Services.

Current weather models can’t yet replicate the changing conditions, making forecasting increasingly difficult. Nat Iyengar, a Hong Kong-based senior pilot with Jet Aviation, noted in the Southeast Asia Regional Report seeing temperature shifts as large as ISA +10 to +20 deg C within 100 miles, resulting in “a really big impact on performance.”

Warming in the Arctic, where global temperature increases are most pronounced, is changing and slowing the patterns of the northern hemisphere jet stream, Wittman said, with persistent weather systems that remain in one place among the results.

Accelerating LOA Approvals

New and preowned long-range aircraft today are equipped with systems and capabilities mandatory for global operations: RVSM, RNP, CPDLC, and other core capabilities stakeholders and the FAA call “the Big Ten.” But until Part 91 owner/operators get LOAs from the FAA approving their equipage, procedures, and training, they can’t use the systems, and the LOA process takes an average of six months.

The FAA and NBAA unveiled at IOC what they call an LOA streamlining initiative focused on new aircraft, based on an in-development standardized application format. Under the initiative, OEMs are developing standardized “statements of capability,” trainers are developing a standardized “training compliance matrix,” and the FAA will adjust inspector guidance, said Fred Armstrong, FAA’s manager of performance-based flight systems. Additionally, it is submitted electronically, and the application will be available to all departments whose sign-off is required, replacing the prior sequential review process. The current schedule calls for workshop meetings to resume in late March and continue through the year, followed by “change management execution.” The FAA reauthorization passed last year requires the FAA to streamline its approval process.

NAT Changes

The North Atlantic Track High Level Airspace (NAT HLA) remains in the midst of a years-long implementation of new rules and technology designed to squeeze more traffic into the airspace, which carries the bulk of air traffic between the U.S. and Europe. Currently Phase 2B of the North Atlantic Data Link Mandate (NAT DLM) trials is in effect, requiring FANS 1/A in the entire NAT, FL320-FL390 inclusive. To meet that ICAO mandate, aircraft must have Performance Based Communication and Surveillance (PBCS) equipment comprised of a minimum of Required Communication Performance (RCP) 240; Required Surveillance Performance (RSP) 180; and Required Navigation Performance (RNP) 4 approval. Three core NAT tracking is reserved for PBCS-approved aircraft, and the test may expand beyond those tracks after March 28, 2019.

As of January 30, 2020 aircraft in all ICAO NAT regions will need FANS 1/A from FL290 and above, but it won’t be required in airspace monitored by radar and/or ADS-B, airspace north of 80 degrees latitude and New York Oceanic FIR. Meanwhile, Advanced Surveillance-Enhanced Procedural Separation (ASEPS) trials are scheduled to begin in the NAT on March 28, and will reduce longitudinal separation to as little as 14 miles, and reduced lateral separation trials will begin six months later. ASEPS incorporates new emergency contingency procedures.

Though complex, with proper planning, even a novice can navigate the NAT, as pilot Peter Bing showed in the North Atlantic Regional Review, presenting some of the datalink messages he received on a recent flight to and from Europe in a Challenger 300.

SAFA & MELs

Two years ago at IOC, Laurent Chapeau, head of the Ramp Inspection Office at French Safety Oversight Authority, responsible for his country’s SAFA (Safety Assessment of Foreign Aircraft) inspections that all inbound and outbound non-EU registered aircraft are subject to, created a firestorm when he said Part 91 U.S. operators were required to have a Minimum Equipment List (MEL) for their individual aircraft. Under FAA rules, the OEM’s Master Minimum Equipment List (MMEL) for the aircraft type is sufficient. Chapeau was back this year to provide an update on the SAFA program and the MEL issue. Adopted by the EU in 2012, SAFA inspections aim to ensure international operators are conforming to ICAO safety standards, and now Canada, Australia, and a handful of other countries, though not the U.S., have instituted them.

The inspections cover 53 specific items related to the flight deck, cabin, cargo, and aircraft condition. French inspectors examine about 1,500 private aircraft per year, and Chapeau said in the last two years only one aircraft was assessed the most severe, a Category III finding, which can ground an aircraft. Inspection items that have caused problems include lack of policy and procedures for en route fuel checks and improper calculation of fuel reserve requirements, Chapeau said. But the MEL remains an issue, and no workaround is in place.

Doug Carr, v-p regulatory and international Affairs at NBAA, said some 9,500 U.S. operators are subject to the MEL rules, but final guidance from the FAA has been delayed by the recent government shutdown. In the interim, presenting a SAFA inspector with proof an MEL application has been submitted to the FAA may result in no finding, but Chapeau couldn’t guarantee all his inspectors would treat the situation this way.

Airspace Restrictions

The flare-up of tensions between Pakistan and India over the recent temporary closure of regional airspace illustrated the issues many of the pilots and flight handlers attending IOC commonly confront. “Twenty years ago, not many people flew over that airspace,” Pete Lewis senior v-p of global trip operations at Universal Weather and Aviation, one of the IOC sponsors, told AIN. “Some might remember the old Purple routes, when it was difficult to get a permit, but it’s well-traveled today.” Lewis noted, “Airspace closures around the world are not terribly unusual,” and said “plenty of alternatives” for safe routing are available, adding that with proper planning resources, in this area as in others, operators needn’t “get afraid about traveling.”

IOC awarded almost $20,000 in scholarships to four students and young professionals looking to enhance their business aviation careers in the field of international operations.

by James Wynbrandt
Global Emissions Control Programs

After dropping off the radar, emissions control programs are back in focus, and an International Regulatory Update session explained the three schemes now in place: The European Emissions Trading Scheme (EU-ETS); the ICAO-nominated Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA); and Switzerland’s homegrown ETS, effective January 1, 2018.

Under EU-ETS, a cap and trade plan established in 2012, any aircraft emitting more than 10,000 tonnes of CO₂ annually will have to pay for carbon credits for the oversage; aircraft below the threshold are exempt from payment, but must still register. A chart listing more than a dozen aircraft and their CO₂ emissions accompanying the presentation showed, based on 400 flight hours per year, a Cessna Mustang emits 348 tonnes; a Falcon 2000LXS, 1,081; and a Gulfstream G650 emits 1,932 tonnes. Monitoring for EU-ETS has been extended through 2023, through payments are suspended while CORSIA’s global approach is assessed.

CORSIA, the Civil Aviation Authority (CAA), and Switzerland are exempt from emissions control, and those exceeding the baseline will have to pay for carbon credits for the oversage. A chart listing more than a dozen aircraft and their CO₂ emissions accompanying the presentation showed, based on 400 flight hours per year, a Cessna Mustang emits 348 tonnes; a Falcon 2000LXS, 1,081; and a Gulfstream G650 emits 1,932 tonnes. Monitoring for EU-ETS has been extended through 2023, through payments are suspended while CORSIA’s global approach is assessed.

The flight dispatch team at Dubai-based Jetex Flight Support was also monitoring the situation and advising customers, said Caterina Taylor, manager, North American business development.

Keeping Pace with Technology

For all the technology at a pilot’s command, Ryan Frankhouser, regional director—Americas at UAS, in Pre-Trip Technology, said aviation lags well behind other industries in digital adaptation. Examining business aviation’s role in emerging technologies, Frankhouser issued a call to action, challenging pilots and industry professionals to tell service providers what they want and need in digital tools, and to comment on those already available; otherwise, the time and money needed for development won’t be invested. He urged attendees to “police” service providers to ensure they use and protect personal data responsibly, and to be unafraid of “disruptive innovation.” James Albright, chief pilot for a Part 91 flight department and former self-

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Homcoming

For all the rigors of international operations, lack of clarity among U.S. Customs and Border Protection (CBP) inspectors can make returning home a challenge, when it comes to rules governing inbound non-scheduled air operations. For example, inspectors may demand General Declaration forms, which don’t apply to such flights. The latest on this perennial hot topic: the in-development GA Operators Guide, which will spell out CBP rules covering such inspections, has been “a bit delayed,” and will now be published piecemeal. Among the updates covered in U.S. and Canadian Customs: Facilitating Travel, National Security, and Profitability. The GA Operators Guide’s glossary will come first, and should in itself resolve many misunderstandings, said Laura Everesty, senior manager, government and industry affairs at Universal Weather and Aviation. She’s been working with Eric Rodriguez, CBP program manager for general aviation, as outside and inside point persons on agency issues affecting business aviation. Perhaps the biggest misunderstanding are on the inspectors’ side. In an instant poll, 50 percent of responding attendees reported spending multiple days studying foreign regulations when planning a trip; but 34 percent said they spend one hour or less studying U.S. regulations in preparation for their return.

The next goal, working with CBP, is to create a non-commercial APIS for all bizav and GA flights, a “single tax system” that once introduced in the U.S., “could have ICAO’s blessing and be offered to the World Customs Organization as a global solution,” Everesty said, adding that customs inspectors in many other countries understand the difference between these and commercial operations even less than do U.S. CBP officials.

Ryan Flanagan with the CBP’s alternative funding programs office, provided an update on the Reimbursables Services Program (RSP), which enables private entities to pay for services beyond what CBP can offer under its budget (e.g., after-hours or remote-location clearance), as long as services delivered to the public aren’t all that. In 2016 the program was expanded to allow any private or government entity to join, at no cost to enroll or remain on the rolls. Costs charged are pegged to local CBP salaries; in the San Francisco area, $100,000 would pay for about 659 hours of CBP service, Flanagan said.

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international flight departments in order to keep their operations safe and sustainable. NBAA recently created a mentorship program that features a formal mentoring contract, goal development tools, and handbooks for both mentor and mentee. Best practices for formal mentorships include setting goals, regular scheduled meetings, and an end date, the presenters said.

Homcoming

For all the rigors of international operations, lack of clarity among U.S. Customs and Border Protection (CBP) inspectors can make returning home a challenge, when it comes to rules governing inbound non-scheduled air operations. For example, inspectors may demand General Declaration forms, which don’t apply to such flights. The latest on this perennial hot topic: the in-development GA Operators Guide, which will spell out CBP rules covering such inspections, has been “a bit delayed,” and will now be published piecemeal. Among the updates covered in U.S. and Canadian Customs: Facilitating Travel, National Security, and Profitability. The GA Operators Guide’s glossary will come first, and should in itself resolve many misunderstandings, said Laura Everesty, senior manager, government and industry affairs at Universal Weather and Aviation. She’s been working with Eric Rodriguez, CBP program manager for general aviation, as outside and inside point persons on agency issues affecting business aviation. Perhaps the biggest misunderstanding are on the inspectors’ side. In an instant poll, 50 percent of responding attendees reported spending multiple days studying foreign regulations when planning a trip; but 34 percent said they spend one hour or less studying U.S. regulations in preparation for their return.

The next goal, working with CBP, is to create a non-commercial APIS for all bizav and GA flights, a “single tax system” that once introduced in the U.S., “could have ICAO’s blessing and be offered to the World Customs Organization as a global solution,” Everesty said, adding that customs inspectors in many other countries understand the difference between these and commercial operations even less than do U.S. CBP officials.

Ryan Flanagan with the CBP’s alternative funding programs office, provided an update on the Reimbursables Services Program (RSP), which enables private entities to pay for services beyond what CBP can offer under its budget (e.g., after-hours or remote-location clearance), as long as services delivered to the public aren’t all that. In 2016 the program was expanded to allow any private or government entity to join, at no cost to enroll or remain on the rolls. Costs charged are pegged to local CBP salaries; in the San Francisco area, $100,000 would pay for about 659 hours of CBP service, Flanagan said.
Kaman aims to have the first pilot-optional helicopter certified by the FAA, the Connecticut-based airframer said last month at Heli-Expo 2019. It expects to have such a version of its K-Max heavy-lift helicopter available for commercial use by 2020.

The aircraft, with its unique intermeshing twin rotors, was first certified in 1994 for manned operations, but two were used in a demonstration project by the U.S. Marine Corps in Afghanistan in 2011 to test unmanned capabilities in combat zone cargo deliveries. “It started out as a limited objective experiment and was supposed to fly for 30 days,” said Romin Dasmalchi, the company’s senior director of business development. “It was such a resounding success that three years later they decided to redeploy back to the U.S. after the work was done in Afghanistan.”

Those two aircraft, known as CQ-24A in their military designation, survived their deployment under challenging operating conditions with an operational readiness better than 95 percent, hauling more than 4.5 million pounds of cargo to remote outposts—essentially 900 ground vehicle loads. In that role, the two aircraft protected the lives of soldiers by keeping them off of mine-strewn roads and reduced the possibility of ambushes. Upon the helicopters’ return to the U.S., they were put into preservation by the USMC. Kaman is again working with the Marines on the latest version of unmanned technology for battlefield logistics and will soon return the pair to flight status.

Dasmalchi said the idea for the future K-Max will be to create a pilot-optional modification that will allow the user to decide whether the mission calls for a manned pilot or unmanned configuration. “The unmanned system that we’re building, you could think of it as a modular kit,” he explained. “If you have an existing K-Max, you could purchase the unmanned kit and it could be installed for you, then you could operate both manned or unmanned.” The option would also be available factory-installed for new aircraft.

Flight testing for the unmanned equipment will begin by the end of the year according to Dasmalchi, who described it as being able to act autonomously. “It is controlled by a laptop, not by a joystick where somebody physically manipulates the aircraft,” he said. “You’re just going to hit the button on the computer and the machine is going to fly and execute the whole mission.”

While it expects to receive FAA certification for the system next year, what exactly that will entail has yet to be determined. “The existing unmanned K-Max, the ones that the Marines used, were on an experimental certification,” Dasmalchi said. “We don’t know yet what requirements the FAA will do for the unmanned. We know the FAA is making a push to certify this class of UAS.”

Though the manufacturer shuttered its production line for the turbine-powered K-Max in the early 2000s, Kaman restarted it in 2015, and after a 17-year hiatus began new deliveries of the $7.25 million aircraft. It has since delivered 10, bringing the worldwide fleet of the specialized helicopter to 32.
NTSB: Part 135 needs SMS, FDM

 Learjet crossed an intermediate fix and the final approach fix hundreds of feet above the altitudes specified by the approach procedure.

 The controller vectored the flight for the ILS Runway 6 circle-to-land to Runway 1 approach. But when the crew initiated the circle-to-land maneuver, the aircraft was 2.8 nm beyond the final approach fix and the crew was unable to line up with the landing runway. This should have prompted a go-around, NTSB said, but neither pilot called for one and the PIC—who by this time had taken control of the airplane—continued the approach. The aircraft, below approach speed, stalled and crashed one-half mile south of Runway 1.

 Previously, the NTSB revealed that during the 30-minute cockpit voice recorder reading, the captain had uttered 131 expletives, 115 of which involved the “F-bomb.”

 “This captain would say things like: ‘What the bleep; we’re a bleeping Learjet; get us bleeping higher; we won’t bleeping make it if we got 4,000; she’s a bleeping idiot; get us someone else if she can’t do it,’” said John DeLisi, director of the NTSB’s Office of Aviation Safety, substituting the expletive with bleeping.

 The crash “raises important questions about what can be done to improve the safety of Part 135 operations,” NTSB chairman Robert Sumwalt said during the hearing on the investigation. “This accident illustrates the potential safety benefits of applying knowledge gained in Part 121 investigations, and adapting solutions already introduced in Part 121 flight, to Part 135 operations. The chairman pointed to FDM, CRM and safety management systems (SMS) and added, “If Part 135 aviation had the same tools as Part 121…we might not be here today.”

 In addition, Sumwalt highlighted the pilot-in-command’s use of expletives as “just one symptom of a shocking lack of professionalism.” In fact, the 131 hashtagged expletives in a half hour, “averages to one expletive every 14 seconds,” he said. “There are so many hashtags in this transcript, it reads like a social media feed.” A “far more problematic issue” was the flight crew’s disregard for procedural compliance, noted Sumwalt. A previous NTSB study of more than 100 airline accidents “found that the highest-ranked accident prevention strategy was for pilots to follow standard operating procedures.”

 The NTSB said the accident highlighted four primary safety issues: the need for flight-data monitoring (FDM) programs in Part 135 operations; the need for the FAA to implement procedures to identify Part 135 operators whose pilots do not comply with standard operating procedures; the need for Part 135 operators to monitor pilots with performance deficiencies; and, the need for better guidance for Part 135 crew resource management (CRM)

 As a result of its findings, the NTSB issued three new recommendations, including a requirement for Part 135 operators to implement programs to provide additional training and oversight of crewmembers with demonstrated performance deficiencies. The NTSB also called for guidance for effective CRM training programs and for the FAA to review Learjet 35A operations manuals to determine whether they contain manufacturer-recommended approach-speed wind additives.

 The NTSB additionally reiterated six previous recommendations seeking mandatory flight-data monitoring, pilot leadership training programs, and SMS programs. Further, the recommendations call on the FAA to improve its oversight systems.
Women in Aviation event welcomes next generation
by Amy Loboda

It appears that business and corporate aviation has gotten the message: the Women in Aviation International conference is an excellent venue for mining new hires in any aviation or aerospace discipline. More than a dozen business aviation-focused companies and dozens more training institutions were among the participants in hiring briefings, educational sessions, and the exhibit hall at this year’s 30th anniversary conference, held in Long Beach, California, last month. Long Beach holds its own place in the history of women making waves in the aviation world, having been the home of thousands of Rosie the Riveters and the WASP 6th Ferrying Group (commanded by Barbara Erickson London) during World War II. Now it’s known for hosting an event attended by 4,500; where more than $875,000 in training and educational scholarships were awarded to WAI members of all genders and ages.

That number brings the total scholarships awarded by WAI to more than $12 million over its 30-year history.

“We have 33 countries represented at this year’s WAI conference,” said Dr. Peggy Chabrian, president of Women in Aviation International, as she introduced the first of 156 scholarship winners.

Piper Sigrest, University of Michigan aerospace engineering major, received the WAI Achievement Award for Students. Sigrest, who grew up in a family of pilots, can’t wait to get back up in the sky, having had a flight training hiatus between high school and graduate school.

Republic Airways spokesperson Megan Ley presented the “Nothing but Blue Skies” scholarship to recipient Mickael Ashworth from Lewis University. Last year, the company created its own flight school, Lift Academy, based out of Indianapolis, Indiana, to address its hiring struggles. The school now has about 100 students. These were just a few of 156 scholarships awarded during the three-day conference.

From inspirational general session speakers such as SpaceX COO Gwynne Shotwell and Southwest Capt. Tammie Jo Shults; to educational panel discussions led by aviation lawyers and business professionals, and “minute-mentoring” sessions, as well as a dedicated youth aviation outreach day, there was plenty of wisdom meted out.

Jo Damato, v-p of education strategy and workforce development at NBAA, and Phil Demer, NBAA western regional rep, shared their take on today’s fast-paced business aviation industry with a full room. Just an hour later Desert Jet founder Denise Wilson and entrepreneur Abingdon Mullin, CEO of The Abingdon Co., were part of a panel about founding small businesses and growing within the industry. In yet another business aviation-focused panel, Michelle Knoll, Julie Clark, and Andrea Riemer, all international captains flying with Pfizer Aviation, shared their experiences in the corporate aviation world.

Knoll told the group, “Life is about choices, and in the aviation world there are many. Business aviation is cool! The collaboration of flight crew and the work team is empowering, especially when you realize you’re responsible for all aspects of trip planning, from routing, diversion airports, fuel requirements, international regulations, fatigue management to contingency planning.”

Meanwhile, WAI did not shy away from tough topics. WAI board chair Marci Veronie, v-p of sales and marketing at Avera mco Insurance, went right to the point at the WAI membership meeting, explaining “our emphasis is on diversity here—from LGBTQ inclusion to sexual harassment.” (See sidebar below.)

Other educational sessions covered topics from military to civilian transitions, how to balance work and home demands, stress-management techniques, leadership skill acquisition, to the basics of drone operations, avionics troubleshooting, and big data. There were tracks designed to provide continuing education for A&P mechanics and Inspection Authorization holders, certified aviation managers, and K-12 educators, among others. Airline pilot and writer Karlene Petitt presented her doctoral thesis, now book, The Art of Cutting Corners—When deviance becomes the standard, as an education session.

WAI session tackles discrimination, harassment

This year, WAI responded to its membership, which is skewing ever younger, by addressing several challenging topics for the industry through education sessions.

In 2018 WAI sent out a membership survey regarding sexual harassment issues in an education session. Kathleen Yodice, attorney; Sheetal Chib, director of Sexual Assault Crisis Services at theYWCA of Greater Los Angeles; Jacki Thompson, attorney, FordHarrison; and Jennifer Black, HR consultant with F&H Solutions Group analyzed the results and provided excellent advice for those who have been affected by such harassment and discrimination. Yodice revealed that half of women and nearly a third of men working in aviation who responded to two different surveys last year put out by WAI reported sexual harassment at work. Advice shared in the session included making sure to document all instances of behavior that could be considered offensive and report it to HR for investigation. Risk factors for abuse include alcohol, going away to conferences, entertaining clients, and vague rules about office relationships.

The panelists implored attendees to educate themselves and others, maintain awareness, always be professional, and speak up to create a culture of respect. It is also critical to support the people who come forward to ask for help and report an issue. Believe them, and work to help them. In a second panel session titled “Leadership through inclusion,” WAI members from a half dozen different companies spoke about how to truly diversify a workforce, and the issues that ensued. These men and women, many who are executive leadership, spoke about discrimination they encountered over their careers and how they rose to leadership positions and then worked to change the system.

“There is a difference between diversifying your workforce and actually being an ‘inclusive’ company,” explained panelist Capt. Kathy Durst, chief pilot, American Airlines. She explained that inclusive means you make your employees who are different from the norm feel invited, cared for, and at home.

Both education sessions were live-cast on the WAI Facebook page.

We have 33 countries represented at this year’s WAI conference.”

Dr. Peggy Chabrian, president of Women in Aviation International

“A.L.
Focus on the Future

WAI’s conference is known for the quality of its speakers and 2019 did not disappoint. On the roster were Dr. Christine Darden, a pioneering African-American mechanical engineer who helped create the NASA sonic boom minimization program; Shults, who safely landed a severely crippled Boeing 737 after a catastrophic engine failure that resulted in the death of a passenger; Dr. Ellen Stofan, Mars director, Smithsonian National Air & Space museum; Shorwell, president and COO of SpaceX; Heidi Capozzi, senior v-p of human resources, Boeing; and Nagin Cox, NASA Jet Propulsion Lab. Shults’s moving testimony about her struggles early on to become a naval aviator, and how those skills came into play the day her airplane was crippled, drew a rousing standing ovation from attendees.

The final day of the conference was punctuated by the excitement of 250 girls from the local area on site for WAI’s Girls in Aviation Day. The children visited 20 activity stations, heard about 10 different aviation careers from a career panel, met role models, and simply had fun learning about aviation and earning their aviation fun patch in the process. The older girls had the opportunity to meet with college representatives, including those from the U.S. Air Force Academy, Embry-Riddle Aeronautical University, Kent State University, Ohio University, Western Michigan University, St. Louis University, and Delta State University. Later in the day they held a scavenger hunt in the conference exhibit hall, giving them a chance to interact with all of the 175 companies on display there.

In the hall, there was a heavy emphasis on university, trade school, and academy training programs. Business aviation, too, has found that both WAI’s exhibit hall and separate hiring briefing sessions were excellent venues for informally interviewing potential employees.

Throughout the week the U.S. Air Force was conducting interviews for its “Pathway to Pilot” at the show, and all the U.S. military aviation divisions were well represented, with a special emphasis on the U.S. Coast Guard, which was celebrating the inauguration of the first women Coast Guard aviators into the WAI Pioneer Hall of Fame. Other participating entities included Jeppesen, Pratt & Whitney, GAMA, GE Aviation, and a dozen different regional, national and international passenger and freight-hauling airlines. Manufacturers with display booths included Boeing, Collins Aerospace, Cirrus Aircraft, Garmin, Bose, David Clark, and more. Corporate flight departments were also represented, from Walmart Aviation to FedEx, XOJet, NetJets and JetSuiteX, Ploger, and Desert Jet, to name a few.

“This is our absolute favorite event,” said Michelle Bauman, senior v-p of human resources, XOJet. “Supporting women in aviation has always been important to us. Right now the industry average for female private pilots is about six percent while we are at eight percent. Thirty-three percent of our leadership on the aviation side is female. So this event gives a better opportunity to recruit even more women.”

Nick Leonitis, CAE’s group president for civil aviation training solutions, told AIN, “Over the next decade, the civil aviation industry will need 300,000 new pilots. We want to take a proactive approach to promote a better gender balance and tap into a wider pool of talent. We are looking for dedicated candidates here who can inspire a new generation of professional pilots, and we look forward to accompany these future ambassadors, and passionate women throughout their journey.”

Dallas-based JetSuiteX’s v-p of corporate soul (HR) Kevin Horan hinted that the company’s hiring outreach at WAI is part of a larger plan to expand operations at the company, which is a hybrid of airline and private jet charter operation.

WAI is ready to help these companies with its scholarship clearinghouse, noted to be one of the largest collections of aviation industry-sponsored training and educational scholarships in existence. It also garners power through the organization’s unity with sister groups such as Women in Corporate Aviation (see sidebar, right) and the Association for Women in Aviation Maintenance (AWAM), the National Gay Pilots Association (NGPA), the Organization of Black Airline Pilots (OBAP), the Whirly-Girls, the Ninety-Nines, Professional Women Controllers Association (PWC), International Society of Women Airline Pilots (ISA +21), and more, all of which were participants at the conference.

The WAI endowment fund is about to breach the $1 million mark, offering sustainability for future scholarship awards and youth outreach programs such as Girls in Aviation Day. Applications for 2020’s scholarships are accepted starting in August through November 12, 2019, at wai.org/scholarships.

Next year’s conference is planned for March 5–7, 2020, at Disney’s Coronado Springs Resort in Lake Buena Vista, Florida.
‘Hub Dubai’ remains key in VistaJet’s global plans
by Peter Shaw-Smith

Global charter operator VistaJet saw Middle East flights up 38 percent last year, as the Malta-based company announced the opening of its umbrella group, Vista Global Holding, in Dubai, and the expansion of its charter office there, which also serves as a platform for business in India and Africa.

“The Middle East is a very important hub for us for Asia, Europe, and Africa,” Ian Moore, chief commercial officer, told AIN. “We are not a single-region operator.

“In terms of Middle East economic softness, we tend to transport people through the region and saw a 38 percent increase in 2018 on our business [there]. The number of passengers was up 24 percent. That gives a good idea of key growth in the region and the importance of the Middle East.”

VistaJet was on hand at last year’s MEBAA Convention showing off its Global 6000. The aircraft can accommodate 14 passengers, but for customers in the region, it generally flies with two to five passengers.

“Passengers can buy as many hours per year as they need, and call upon us with as little as 24 hours’ notice,” he said. “We don’t have shared seats or shared payments, and instead, the principal ‘owns’ the aircraft for each particular flight and is accompanied by the people they want in their party.”

VistaJet is in the initial stages of developing its East Africa presence, giving the region what it regards as Middle East status. “A lot of our clients are now going to, and coming from, that region,” he said.

“We feel that if we are doing flights to and from East Africa, there must be wealth being created. There is an effort into that part of the world, but it is a little early to say it’s a success. Our firm belief is that we can explore it through our Middle East office. The metrics are based on commodities, and we want to see where they trend in the next 12 to 18 months... We need to be able to connect markets.

“We have done quite well in the Indian market, which is probably one of the most well-traveled. There’s the importance of the Middle East for the India, Europe, and Asia markets, and the introduction of Vista Global at the Dubai International Financial Center (DIFC). That really underpins the importance of this region.’

Ownership Options

Last year, Vista Global opened its worldwide headquarters at the DIFC, bringing four entities, VistaJet; Vista Lease, due to begin operations this year; recently acquired XOJet; and solutions provider TechX Aviation Analytics, under one roof, further demonstrating its commitment to the region.

“We are very happy with the location we set up recently,” Moore said. “Dubai was the obvious place for us to do that. Frankly, the speed at which we have got up and running in the UAE, and particularly Dubai, has been amazing, firstly, as a private aviation company, and, secondly, as a global company.”

Vista Global is understood to have placed a large order for Global 7500s, the majority of which will go through leasing arm, Vista Lease. There are also a large number of aircraft available for sole use, which underscores the commitment to asset-light exposure. VistaJet and XOJet together own 116 aircraft.

“The unique thing about Vista Global is that we don’t need to turn anyone down. We can ask what the customers want and direct them to the right company offering,” he said.

Moore said Middle East operators who want to own an aircraft but never charter it are not unique to the Middle East. “You have similar European, American, African, and Asian operators,” he said.

“What we are seeing more and more is a younger generation of people [willing to make their aircraft available for charter]. More and more people are pursuing the revolutionary step above ownership. We have always seen a charter market in the Middle East. It’s a different market, and there is an increasing amount of people who see [that] buying an aircraft isn’t the best financial solution for them.”

Moore said VistaJet customers’ average age is 50. “[They] are a younger-minded generation looking at the worldwide trend of shared ownership, such as Airbnb, because of the hassle of owning your own aircraft. [Owned] aircraft take more time and effort than the time they are saving.

“We really want to be talking to all corners of the world, and Dubai is one of its most important hubs. Before, we had many hubs in Europe and the U.S. and were very focused on the West. Locating in Dubai tells the world we are open for business in every market. We are not a European or North American business, but a global business. Presence and times zones help us share the message with the rest of the world.”

The Middle East is a very important hub for us for Asia, Europe, and Africa.”

VistaJet operates a fleet of 72 all-Bombardier aircraft and one helicopter, with an average age of under three years. Moore “believes there is more demand in the region,” he said. “We have an increased focus on India and Africa.”

The VistaJet Dubai team now comprises three Arabic speakers and three Anglophones. “The focus is on developing the region further, and this is best done by people inside the region. In the past, we mostly did the business from our Europe office, but we feel this is an opportunity for us to put more people on the ground, spending time with brokers and direct customers.”

He said most customers hired the aircraft solely for themselves. Although VistaJet’s flagship Global 6000 can seat up to 14 passengers, flights in the Middle East usually involve two to five passengers.

Bombardier’s new Global 7500 last month achieved what the manufacturer is billing as the world’s longest flight by a purpose-built business jet. The aircraft logged 8,152 nm after taking off from Singapore at 7:12 a.m. local time on March 4 and landing in Tucson, Arizona, at 8:19 a.m.—setting a speed record for this sector in the process.

The aircraft landed with 4,300 pounds of fuel, falling well within NBAA requirements with nearly 90 additional minutes of flight time possible.

The Global 7500 entered service on December 20, 2018. Designed for long intercontinental flights, it boasts the industry’s largest business jet cabin and a maximum speed of Mach 0.925. This week’s flight exceeded the aircraft’s advertised range of 7,300 nm.

“The Global 7500 was built to break all the records,” commented Bombardier Business Aircraft president David Coleal. “It achieved the industry’s longest mission ever in business aviation after only two months in service. We’ve demonstrated its unequalled long-range and high-speed capabilities, but also its ability to break records confidently with healthy fuel reserves remaining.”

After the aircraft completed type certification with Transport Canada in September 2018 and with the FAA in November 2018, the European Aviation Safety Agency signed off on the new model in early February.
Modern flight departments and operations are eager for solutions that embrace 21st century technology and accessibility, especially for the critical task of maintenance tracking. With a culture that offers instant information via always-connected mobile devices, flight departments are looking for and implementing an array of new systems and processes that harness quick communication, real-time data transfer, and eSignatures. This new approach is ushering out legacy systems for maintenance tracking as well as inventory control and operations.

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As OJets approaches its first birthday this month, the Singapore Serialized-based charter company says its ambition is to take the Asian market by storm and offer its Asian-based customers high-quality lift around the globe.

Chairman and co-owner Phil Mulacek, who with Marc Vinson bought the bankruptcy assets of a previous operator, told AIN that having AOCs in Europe and the U.S., allows OJets to offer unique reach. He described it as: “like a big hawk, with torso in Asia and wings spreading to the U.S. and Europe”—the world's two leading markets. In this way, its (mainly) Asia-based clients have unfettered access to North America and Europe.

Mulacek said OJets has a solid financial base and owners who have “more than 30 years” of experience running a corporate flight department for his previous company, InterOil, which had a $5.2 billion market capitalization and was firmly embedded in the region’s oil-and-gas sector. InterOil had a flight department running fixed-wing aircraft and helicopters for “more than 15 years, with up to 15 aircraft [flights] a day shuttling some of our 1,800 employees back and forth, and to remote parts of the world.”

Not only does Mulacek purport to understand the region, he said he also appreciates the value of business aviation in providing flexibility and access. In fact, it was when its own flight department leased aircraft in the region that it realized “how poor Asia was” in what it could offer in the way of business aviation.

**Charter Investment**

In April 2018, OJets’s operations started using a Bombardier Global 6000 and a Challenger 650. The company had acquired a 30 percent interest in Elit’Avia Malta, part of Slovenian business aviation services provider Elit’Avia, enabling it to use its Maltese AOC (thereby giving its fleet three Global 6000s and one Global 5000), according to Philippe Crevier, who recently joined OJets as senior executive v-p. Crevier was previously v-p and general manager of Jet Aviation Singapore.

Originally, it had planned to acquire 100 percent of Elit’Avia, with the latter’s co-founder Nick Houseman becoming OJets CEO. This later changed and Mulacek took over management of Ojets, its focus being on owned-aircraft charter while Elit’Avia dedicated itself to managing aircraft for owners.

“The economics of Elit’Avia did not meet our final criteria for further investment,” Mulacek said at the time, adding, “We will manage our charter investment directly. We built a $5.2 billion business as sole owners and are confident we can manage the $300 million aircraft enterprise to the growth we target.” However, OJets and Elit’Avia are working together with Houseman back at the latter and supporting Ojets’s growth, said Mulacek.

The first two Olets aircraft were acquired with the assistance of China’s Minsheng Financial Leasing Co. Since then it has added four more Globals to its operation to add Part 135, “to take passengers,” meant it started to recruit people with experience, such as Art Dawley, as director of operations (previously at Desert Jet), Todd Stranzcek (previously with Textron Aviation) as general manager of maintenance, and Philippe Crevier.

Mulacek said Ojets is preparing to unveil membership schemes, as it believes this appeals more than anywhere to the Asian clientele, who want to be able to rely on consistently high quality—rather than trusting to ad hoc charter as much as is the case in Europe and North America.

Ojets also doesn't draw the line at being an aircraft management and charter specialist, but says it would consider any business propositions—including FBOs and maintenance. “We always look at every opportunity,” said Mulacek. “We’ll look at anything interrelated to leverage our business…anything in Asia-Pacific, and we won’t exclude FBOs,” although Crevier added that the focus at the moment is firmly on establishing Ojets as a fast-growing charter company. Generally, Mulacek noted, “all the major players in the industry have already been in touch with us, and there are things we’re working on that we can’t yet disclose.”

Mulacek continued, pointing out that the current economic and market conditions present “a good opportunity to buy aircraft, and with interest rates rising, some [operators] will fail. Inefficient operators have been able to hang in there, but people's cost of capital could spiral—and operators that can’t pay for upgrades [such as ADS-B] could struggle.”

The next step for Ojets will be to acquire “a second tranche of aircraft” but what shape this will take, the company is “not ready to announce,” said Mulacek. However, he hinted that they would be “mid-range feeder aircraft” to “help our expansion, and take care of the one- to eight-hour flights.”

At ABACE this month, Ojets plans to have on display one of its Globals on the static display and hopes to be able to announce its N-registered AOC then, if not before, said Mulacek. This will help in the U.S. as well as countries such as Japan and Canada, he noted. “We’re a hawk, remember!” It also hopes to unveil “some very unique programs that differentiate us from anyone else—programs for loyalty. We’re on the cusp of rolling that out too,” he said.

Ojets is intent on garnering attention: “How many people have picked up seven aircraft in a year”—and with plans for continued growth at this rate, and a parent company that is solidly behind Ojets’s trajectory, Mulacek believes Ojets will be turning heads at Shanghai’s Hongqiao Airport come the opening of the ABACE show on April 16. He is confident in the company's strategy and believes it can succeed in Asia as, “there is nobody established here that can undermine you…but you have to be very delicate and understand how to work and do business in Asia—they appreciate quality and a more polished touch.”

OJets develops global reach beyond Asia

by Ian Sheppard

As OJets approaches its first birthday this month, the Singapore Seleratar-based charter company says its ambition is to take the Asian market by storm and offer its Asian-based customers high-quality lift around the globe.

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LCI adds to Australasia leased heli fleet

Libra Group subsidiary Lease Corp. International has expanded its relationship with Malaysia-based rotorcraft operator Weststar Aviation Services through the delivery of two new helicopters—a Leonardo AW139 and an AW189. They will join a previously delivered LCI AW189, which is already in service. The new medium-twin helicopters will be used to support Weststar’s offshore operations in Kerteh and Miri.

The leasing company also noted that customer Babcock International Group has repositioned two AW139s from its operation in Aberdeen, UK, to Karratha, in western Australia, where they will be operated by Babcock’s Australasia concern in the offshore oil-and-gas role. The two helicopters will join LCI’s 12 AW139s already based in Australia, 10 of which are engaged in EMS operations, including six operated by Babcock for Air Ambulance Victoria.

“Australia is a dynamic market, with huge long-term potential across a range of operating sectors, and has been a major commercial priority for LCI since we entered the helicopter leasing market in 2012,” noted Crispin Maunder, the company’s executive chairman.

### Market Coverage

LCI specializes in medium twin-engine helicopters, and the additions in Australia expand its presence in the Asia-Pacific region, which now accounts for more than 40 percent of the company’s fleet. It currently has 48 rotorcraft in its portfolio, all but one purchased new, and an additional 21 helicopters under management. Combined with helicopters on order, that represents nearly $1 billion in equipment.

In addition to Australia, the company’s helicopters are currently operating in the U.S., Europe, Africa, Southeast Asia, and, as of this past year, China, which Maunder describes as an exciting, yet challenging market. EMS provider Shanghai Kingwing, through its operator Weststar, took on the leases of three AW139s. “We see steady growth in EMS,” Maunder told AIN. “Lots of new contracts coming up in Europe, certain parts of Asia and certainly North America as well.”

EMS operations currently occupy nearly half of the LCI fleet, while 25 percent are used for offshore oil-and-gas. The remainder is deployed in offshore wind-turbine servicing, search and rescue, and training.

Maunder has also seen what he describes as limited growth in the oil-and-gas usage, which he believes could be attributed to the replacement of older equipment or the downsizing of equipment. “I think the oil industry has probably pushed the operators too far, and hence you’re seeing uncertainty and poor financial results coming from the larger helicopter operators,” he opined.
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HondaJet Elite delivers new performance
by Matt Thurber

The HondaJet Elite, Honda Aircraft’s upgraded light twinjet, entered service in December 2019, three years after the original HondaJet received FAA certification. Work to refine the airplane and add improvements has always been ongoing, and some of the upgrades are part of the Elite model, while others are incremental small changes to the classic model that nonetheless make the HondaJet a better airplane.

There are subtle examples of the latter, such as the exterior LED lights, which have been modified to provide more light to help the pilot during taxi. The checklist roller switch on the yoke is improved and is less prone to accidental checklist item selection or unwanted movement.

But many more significant improvements set the $5.25 million Elite apart from the original HondaJet, including aerodynamic improvements, upgraded avionics, interior features, and airframe changes. During a demo flight at Honda Aircraft’s headquarters in Greensboro, N.C., AIN editor-in-chief Matt Thurber sampled the Elite improvements.

During the walkaround, demo pilot Nate Muscavage highlighted the improvements, starting outside then into the cabin and flight deck. This Elite is HondaJet serial number 131.

A subtle change is a new mechanism for the nose baggage door handle, now with a new mechanical lock that is easier to close. The nose baggage weight allowance has been increased to 200 pounds, up from 100.

The Elite’s weight-and-balance envelope is expanded, which provides more flexibility in loading. In some cases, it could be difficult to fly with a full load of fuel in the classic HondaJet and remain within the envelope. Muscavage explained. The extra weight allowed in the nose and the expanded envelope eliminates that problem.

The Elite’s maximum takeoff weight grew by 100 pounds to 10,780 pounds, but the total benefit is more than 200 pounds because Honda Aircraft engineers cut 107 pounds off the empty weight. Another 16 gallons of fuel fits into a redesigned fuselage tank, taking advantage of some unused space in the aft fuselage, boosting NBAA IFR range to 1,437 nm from the classic’s 1,223 nm. The range increase and weight savings were also enabled by removal of vortex generators on the empennage and winglet leading edges and a slightly wider elevator and tighter elevator hinge gaps. Takeoff and landing distances are lower because the larger elevator reduces takeoff and approach speeds by an average of about five knots.

The biggest improvement on the exterior airframe is the new lighted push switch next to the redesigned fuel filler neck. The fueler simply pushes the switch before starting the flow of fuel and when the fuel starts to fill the aft tank, the switch lights up to warn the fueler to reduce the flow of fuel. If left at full blast, the fuel backs up the filler and spills, but it’s hard to know when to slow down the flow without the switch lighting up to warn the fueler.

Although the over-the-wing-mounted engines contribute to low noise levels, the GE Honda Aero HF120 engines are even quieter in the Elite, thanks to a patent-pending perforated aluminum-honeycomb sandwich engine inlet engineered to cut fan blade passage noise. The engine inlet close to the fan features thousands of holes positioned to mitigate the high-frequency vibrations from fan passage.

**FLIGHT DECK IMPROVEMENTS**

While the lower noise and increased performance are welcome, Elite pilots will probably notice the avionics improvements the most. This includes NXi-like features in the HondaJet’s Garmin G2000 avionics as well as full performance and graphical weight-and-balance calculations. The autopilot adds more stability and protection features with roll and angle-of-attack functions and coupled go-arounds with underspeed protection. The latter, for example, lowers the nose automatically in case of too-slow speed, including when the stick shaker activates.

The G2000 displays have faster processors and higher resolution, and it’s now easier to read the fine print on approach charts without having to zoom in. The HSI map overlay allows display of information that normally resides on the multifunction display (MFD) such as terrain, weather (including SiriusXM, ADS-B In PIS-B, and radar), Garmin SafeTaxi airport diagrams, and traffic. New functionality is available for performance calculations such as runway required, V-speeds, climb/approach gradient, and more. The avionics also are equipped with the Flight Stream 510 wireless gateway, which allows database uploads via the Garmin Pilot app and sharing flight plans and flight information with Garmin Pilot, FltPlan Go, and ForeFlight.

Muscavage likes another new feature, the ability to calculate an accurate fuel-over-destination number while still on the ground instead of waiting until reaching the destination.
cruise altitude. Another new Elite feature is a takeoff configuration CAS message if flaps and trim aren’t correctly set.

In the cabin, the Elite offers a new galley option with a coffee maker, ice bins, and lots of storage. The galley replaces one seat, but the lavatory now has a belted seat option, so seats for seven occupants (one pilot, six passengers) are still available.

The upholstery and carpeting are improved, and three new carpet designs are available, along with new interior and exterior colors. The optional Bongiovi Aviation speakerless in-cabin sound system delivers much better audio performance than regular speakers. Electric pleated window shades are standard, with electronic dimming windows optional. Honda Aircraft offers the Gogo Business Aviation air-to-ground airborne connectivity system as an option.

Many of the Elite features are available for owners of the original HondaJet, including the aerodynamic and performance improvements such as the 100-pound mtow and useful load increase, lower takeoff field length, and G3000 software upgrades. The modification, called the Advanced Performance Modification Group package, costs $250,000.

DEMO FLIGHT

For this flight, our takeoff weight was 9,792 pounds, a bit less than 1,000 pounds below mtow. Takeoff was on Greensboro’s Runway 23L. Muscavage has logged about 500 hours in the HondaJet, and he said that a key difference he has noticed in the Elite is that—in addition to lighter

HondaJet pilots go to the FlightSafety International Honda Learning Center in Greensboro, North Carolina for type rating and recurrent training in a Level D simulator equipped with FlightSafety’s Vital 1100 visual system and a classroom with fully functional desktop trainers.

We climbed under max continuous power to FL310. At FL310, climb rate was nearly 3,000 fpm. At FL310, we had to pull the power back a little to keep from overspeeding. Muscavage set the cruise speed control, which adjusts N1 to maintain a set speed, a convenient feature for a jet without autotrottles. At ISA -6 deg C, true airspeed settled at 481 knots and fuel flow 540 pph per engine. At the maximum altitude FL430, fuel flow would be 300 pph, he said.

The cruise speed control is helpful in the terminal area, for example, on the ILS 5R approach to Greensboro. Muscavage slowed to 170 knots then set the speed control to hold that. Moving the thrust levers turns the speed control off.

We tested the misconfigure system by leaving the flaps set to takeoff/approach with the landing gear down on the ILS approach and saw the CAS message. Properly configured and at minimums, Muscavage demonstrated the new coupled go-around by pushing the TO/GA button and cleaning up the airplane as the autopilot smoothly started flying the missed-approach procedure. We entered a right downwind and returned for landing on Runway 5R.

HONDAJET PROSPECTS

Honda Aircraft president and CEO Michimasa Fujino is not just trying to build business jets but believes that helping potential customers—especially in countries where light jets are rarely used—learn about business aviation and how it can facilitate their travels is an important aspect of the company’s future. He calls this Honda Aircraft’s “global business strategy.”

Last year saw the 100th HondaJet delivered, with 37 delivered in 2018, the most very light jets for the year (excluding Cirrus’s single-engine Vision Jet). Fractional share operators may be one reason for the first HondaJet in December, offering a unique program where buyers can either have their jet professionally flown or if they qualify and receive the necessary training, fly it themselves. In Japan, the HondaJet received certification from the Japan Civil Aviation Bureau, and the first HondaJet in Japan was delivered before the end of the year. Honda Aircraft has orders for 10 HondaJets in Japan.

There are only about 30 non-government business jets in Japan and, Fujino said, “Few people know about business jets. I think introducing the light jet in Japan will help.” The country’s 80 airports are underutilized. “We’re trying to change the culture and perception of general aviation in Japan. Once they know how a business jet can be used to be more productive, maybe we can increase the size of the [business aviation] pie.”

Fujino sees plenty of potential for light jets in China and other countries where business jet usage is relatively rare. People are very familiar with the Honda brand on the automotive side, and this will encourage them to learn more about the potential of business jets like the HondaJet, he believes. One way to introduce potential users to the HondaJet is through airline flights on ANA, which formed a strategic partnership with Honda Aircraft to help expand business aircraft use around the world. ANA Holdings does this by offering passengers the opportunity to complete a trip on a HondaJet after reaching their initial destination via the airline, and it is partnering with local charter operators to accomplish this.

“This is not only good for Honda,” Fujino said, “but good for the aviation industry. We want not just to take market share but to expand the market.”
Boeing buys EFB app maker ForeFlight

In a surprise announcement, Boeing revealed last month that it has “completed the acquisition of ForeFlight,” the developer of the popular ForeFlight electronic flight bag app.

“Two years ago, Boeing and ForeFlight announced that they would partner to make Boeing unit Jeppesen’s aeronautical data and charts available in ForeFlight. The two companies will now work together “to bring innovative, expanded digital solutions to all segments of the aviation industry.”

The ForeFlight app has gained significant traction in business aviation, offering more functionality and advanced features compared to Jeppesen’s own Mobile FliteDeck and FliteDeck Pro tablet applications. But Jeppesen has enjoyed strong penetration of the air transport and business aviation segments. According to a survey conducted by AIN early last year, Jeppesen’s apps were the most popular for business aviation pilots who responded to the survey. ForeFlight came in a strong second.

FliteDeck is also unique because it is available, for large fleet users, on Microsoft Windows devices such as the Surface series tablets. ForeFlight is designed to run on Apple iOS devices.

Boeing’s purchase of ForeFlight, which employs 180 people, “aligns with Boeing’s growth strategy of complementing organic investments with targeted, strategic investments that position the company for long-term growth,” the company said.

In online forums, some pilots have expressed pessimism regarding the long-term effects of the Boeing involvement. They are skeptical that Boeing’s influence might spoil what ForeFlight has built in terms of its pilot-centric culture. ForeFlight anticipated those concerns and has already responded to them, making reference to other aviation areas of innovation where Boeing has branched out and the company’s experience working with Boeing to date.

“We’ve worked with Boeing for the past two years, and what our teams have accomplished together is truly incredible,” said Tyson Weilh, ForeFlight co-founder and CEO. “We’re inspired by what Boeing is doing—they are innovating in so many areas—and there is so much we can accomplish together. Since we started ForeFlight, we’ve changed the way pilots fly and made a measurable impact on safety. That will continue at Boeing, where we have access to a broad array of resources that we will use to create even greater things for ForeFlight customers.”

Boeing did not disclose terms of the acquisition.

Garmin D2 watch adds pulse oximeter

by Matt Thurber

Garmin’s D2 series of aviator watches give pilots a powerful alternative to smartwatches from Apple, Samsung, and other manufacturers. The newest version, the D2 Delta PX, adds a useful new feature that pilots will love, a built-in pulse oximeter (hence “PX”) for measuring blood oxygen saturation levels. The D2 PX is the largest of the series, with a case size of 51 mm, and also the most expensive at $1,249. D2 Deltas are also available in 42- and 47-mm case sizes, but don’t include the PX sensor.

The D2 Delta is a standalone replacement for digital smartwatches because it can handle those devices’ chief function—notifications—with adding a bunch of aviation-specific features that aren’t available on other watches. Surprisingly, development of aviation features hasn’t taken off with smartwatches, leaving Garmin’s D2 aviator watches as among the few choices for pilots who like aviation information on their wrists.

The display measures 1.2 inches and has 240 x 240 pixel resolution. The D2’s water rating is 10 atmospheres, which means the watch is safe to a depth of 100 meters.

In a relatively small package, Garmin has stuffed a lot of sensor technology. The D2’s positioning sensors include GPS, Glonass, and Galileo. The watch measures heart rate in addition to oxygen saturation.

The Garmin D2 watches cram a ton of technology and features into a wearable package that provides a lot of information and suitable backup for emergencies. The PX’s pulse oximeter, while helping to keep the watch’s price fairly significantly, makes it all the more worthwhile. If there is a drawback to the D2 watches, it is that they are complex, and it’s essential to spend time learning how to use them before trying to figure it out while at the controls of an aircraft.
Dassault expands FalconEye certifications

The FAA and EASA have granted certification for operational credit for low visibility approaches to 100 feet in Dassault Falcon 900CLX, 2000CLX, and 2000S jets equipped with the FalconEye combined vision system (CVS). The 100-foot credit was certified last year on the Falcon 8X.

The FalconEye CVS, the first such system to be certified, allows both infrared and low-light camera-based enhanced vision system (EVS) and database-driven synthetic vision system (SVS) imagery to be displayed at the same time on the head-up display (HUD), but the images are not overlaid. FalconEye allows the pilot to adjust a horizontal split line between EVS and SVS, moving the line up or down within the HUD combining depending on the particular outside environment. An EVS conformal runway clear zone around the airport always remains visible to the pilot, even if the airport is within the SVS split region.

The FalconEye system consists of an Elbit HUD with a large field of view of 40 degrees horizontal and 30 degrees vertical and 1,280 pixels horizontal and 1,024 pixels vertical resolution. The EVS side of FalconEye consists of an uncooled, six-sensor Elbit camera mounted on top of the airplane’s nose. The camera’s visible-light sensors also can “see” LED lights, which are increasingly found at airports around the world.

Dassault expects to receive certification of a dual-HUD FalconEye configuration next year, and this will enable EVS-to-land capability. This new capability allows pilots to fly an approach and land solely by viewing the runway environment through the HUD, without using natural vision to see the runway.

The FalconEye HUD is optional on the Falcon 2000CLX, 2000S, 900CLX, and 8X and will also be offered on the 6X when it enters service in 2022.

AirSky partnership offers air-to-ground network

Avionics manufacturer Avidyne and Airspan, a cellular telephone network LTE small cell and 4G base station manufacturer, have formed a partnership called AirSky to develop regional air-to-ground telecommunications networks. Under the partnership, Avidyne would manufacture airborne equipment while Airspan would build the base stations.

There are currently three major air-to-ground (ATG) airborne connectivity networks operating or in development. The Gogo ATG network is the longest-serving, since the early 2000s, and covers the continental U.S., central Canada and other areas in Canada, and portions of Alaska. SmartSky anticipates switching on its ATG network serving much of the continental U.S. this year. And in Europe, Intersat and Deutsche Telekom have partnered to develop the European Aviation Network, a high-speed combined ATG and satcom airborne connectivity system.

This leaves other regions in the world without any ATG network opportunities and reliant only on satcom, and that’s the void that AirSky wants to fill.

The idea is to offer regions interested in ATG a standardized system that is relatively easy to build out. The way this is done now is to build a customized system each time, starting from scratch, according to Avidyne CEO Dan Schwinn.

“There is no standard, and not very many companies have done it.” The proposed AirSky A2G network would run on Airspan’s AirSky ground infrastructure and services and use Avidyne’s SkyLNX airborne hardware.

AirSky has thus far built a demonstration network with two ground stations in Florida and done some in-flight testing. Network speeds were demonstrated at up to 50 Mbps downlink, but the big advantage of ATG over satcom is lower latency (signal delay) because the airborne equipment is much closer to the ground-based stations compared to satcom systems.

The advantage for the systems that AirSky is offering is that most countries have existing cellular telephone networks, and adding antennas to airborne ATG is relatively simple. For areas where airborne telecom traffic is higher, he added, “You can densify [the network] where you need to.”

AirSky has had discussions with telecoms across the world about building ATG networks. “They have infrastructure they can leverage,” Schwinn said. “There is definitely interest, but it’s too early to say anything will come from it. We’re hoping that wireless operators, but maybe other businesses, will say, ‘I’d like to build one of these in my country or region.’ We’ll see what happens. This is our launch to see if anybody wants to engage with us.”

AeroEx webinars outline EFB regs

A July 9, 2019 deadline has been set by the European Aviation Safety Agency (EASA) for compliance with new electronic flight bag (EFB) regulations by European operators. Aviation regulatory compliance consultant AeroEx planned three free webinars to help explain the effect of the new EFB regulations, with the last set for April 11.

The new EFB regulations will affect commercial and non-commercial operators and, according to the International Civil Aviation Organization (ICAO), they “are expected to maintain the current level of safety while ensuring compliance with the ICAO Standards and Recommended Practices (SARPs) and limiting the regulatory burden linked with the introduction of the operational approval for the use of some EFB applications by commercial air transport (CAT) operators.”

Some of the issues addressed by the new regulations include ensuring compliance with ICAO SARPs and adding specific EFB-use requirements for commercial air transport operators.

AeroEx has developed two versions of a toolkit to help operators comply with the new EFB regulations. The EFB Toolkits “include manual and risk assessment templates, checklists, and regulatory guidance material that flight departments and compliance managers can tailor to their own operations without the hassle of collecting necessary rules and information,” according to AeroEx.

FlightAware Tracking ADS-B Out Compliance

Flight-tracking and planning service FlightAware has begun distributing a monthly report on ADS-B Out compliance levels by turbine business aircraft registered in the U.S. The report details compliance by aircraft model, with data beginning in October 2016 and as of the latest report, current through February 2019.

The data comes from FlightAware’s own terrestrial ADS-B receiver network. The U.S. ADS-B Out deadline is after December 31, 2019 and applies to any aircraft that will fly in ADS-B airspace, basically where transponders currently are required.

According to FlightAware, in October 2016, just 24 percent, or 3,707 of the 15,557 aircraft in the turbine fleet, were ADS-B Out-compliant. As of February 2019, that number reached 68 percent, or 11,455, with a larger fleet total of 17,031.

Among the lowest compliance rates, as expected, are older business turbines, but even some relatively modern aircraft are seeing slow rates of ADS-B Out upgrades. For example, only 37 percent or 120 Eclipse 500s are equipped. The Falcon 20 rate is 47 percent or 29 aircraft.

The lowest number in the FlightAware data is the Gulfstream III at 31 percent (14 airplanes). There were 38 and also coincidentally 38 percent of Learjet 31s compliant. Quest Kodiak single-engine turboprops were at 49 percent or 43 aircraft, perhaps reflecting that many of these are based outside the U.S. where ADS-B Out mandates are not as prevalent.

Hawker 800s and 4000s are seeing low ADS-B Out take-up rates (57 percent/304 and 41 percent/20, respectively).

The compliance rates for later-model aircraft are all trending high, and this leads to questions about what is going to happen to older business turbines after January 1, 2020. The cost to upgrade some older aircraft is considered prohibitive when compared to the aircraft’s value, and there is plenty of speculation that the mandate could result in some aircraft being relegated to the scrapyard.

Eagle Cap Unveils Free Charting App

Eagle Cap Software introduced its AeroChart app, which provides pilots a moving map with vector-based aeronautical charts. The new product, which is only available for use on iPads, allows users to create their own customized routes and also integrates with AOPA’s internet-based Flight Planner.

The app is initially supported by advertising. For a limited time, new users will be able to pay $9.99 to have the advertisements deactivated.

Now the company is planning to upgrade AeroChart to include FAA high and low en route and area charts along with VFR sectional charts.
Sikorsky unveils new S-92 variants

by Jerry Siebenmark

Sikorsky launched two new variants of its S-92 heavy twin on March 5 at Heli-Expo 2019—the S-92A+, an upgrade package for in-service S-92s, and the new-production S-92B. Both promise better operating costs and greater reliability and mission flexibility, the Lockheed Martin subsidiary said.

“Our S-92 has set the standard for modern helicopters, and we’re excited with these changes that will ensure it remains so,” said Audrey Brady, Sikorsky v-p of commercial systems and services. “Reliability means safety. Reliability means economics. With these updates and an unmatched cabin size and capacity, our customers will see an economic benefit demonstrating that the S-92 is the best choice in helicopter missions near or far.”

These updates will include new flight computing technology and main gearbox, as well as an interior common to search and rescue (SAR) and offshore operations and optional engine that improves in hot-and-high performance. The only differences between the variants will be found on the S-92B, which will have larger cabin windows, a common cabin door for offshore and SAR missions, and titanium side frames for a stronger airframe.

Both types will share Sikorsky’s phase one Matrix advanced flight computing hardware and software. The Matrix platform enables other new Sikorsky technology such as Rig Approach 2.0 and SuperSearch. For offshore missions, Rig Approach permits the helicopter to fly a mission profile to within a quarter mile of the heli-deck on an oil rig. David Martin, v-p oil and gas, told AIN that Rig Approach is on a development path “that ultimately could result in technology that allows automated landing on the heli-deck, regardless of weather situations offshore.”

SuperSearch, on the other hand, uses advanced algorithms designed by Sikorsky Innovations Group to fly an automated search pattern. “In simulations, it has been finding and locating objects 50 percent faster than traditional search patterns,” Martin said. Both variants also will have SAR automated flight control systems and a newly designed interior that will be common to SAR, offshore, and utility operations.

**Gearbox Enhancements**

Also included with the new variants is a Phase IV gearbox constructed of aluminum, which Martin said is stronger and more resistant to corrosion than the magnesium gearboxes found on the original S-92. It will also include manufacturing improvements to the internal mechanics that are expected to reduce unscheduled removals by up to 70 percent. “So those are big drivers in the operating costs of the S-92 that we’re going to be able to reduce or eliminate,” Martin said.

The new gearbox also has a redesigned lubrication system. In FAA-witnessed testing of the new gearbox for loss of primary lubrication, the gearbox was operated at 500 nm at 80 knots and had no noted anomalies after tear down. Finally, the new gearbox’s overhaul cycle and case retirement life now match, “allowing, again, another cost reduction in the operating cost of the aircraft,” Martin said.

Meanwhile, the optional GE Aviation CT7-8A6 for the A+ and B variants will produce more power at high altitudes and hotter temperatures than the standard CT7-8A. This engine model was developed for the VH-92A, the S-92 variant that will be flown by the U.S. Marine Corps for presidential transport starting later next year. The VH-92A has been flying with the CT7-8A6 since July 2017.

Sikorsky isn’t disclosing a price for the A+ upgrades or the new-production B model, though it said the latter is expected to be below historical S-92 prices. The company currently plans initial availability of the variants for 2022. “Sikorsky has significantly invested to bring these capabilities into production, but will let market interest determine the pace of remaining internal research and development spending,” it added. Concurrent with the rollout of the variants, Sikorsky will introduce an updated Total Assurance Program (TAP) that it said will reflect “a targeted economic improvement.”

Martin said it was time for an update of the S-92, of which Sikorsky has delivered more than 300 since the model’s first delivery in 2004 to PHI.

Of that total, about two-thirds are dedicated to offshore operations, while another 40 are primarily SAR with some use as offshore transportation, he said. The helicopter also has a “pretty robust segment” as head-of-state aircraft. “One of the things you’re going to see from us at HAI [Heli-Expo] is a focus going forward on the utility market as well,” Martin said.

“We think the aircraft has a unique capability with a rear ramp and standup cabin for a utility segment.” He defined the utility segment as the transport of cargo, people, and assets into remote environments.

Martin said despite the oil and gas industry downturn that began in 2014, idling hundreds of helicopters, utilization of the S-92 offshore fleet has remained “relatively stable and flat.” Last year the S-92 saw 7 percent growth in fleet flight hours in the offshore segment, he added. “Sikorsky’s kind of kept their powder dry and trusted in the S-92. But we think now is the right time to bring these to market.”

**Airbus Intros Crash-resistant Fuel Tanks**

Airbus Helicopters will make a retrofit crash-resistant fuel system (CRFS) available for its A5350B3 and EC130B4 single-engine models, will lower the price of the CRFS, and will provide customers who have already purchased the CRFS at a higher price for other models of Airbus H125 a credit for the price difference, the company announced last month. Kits for the B3 and B4 will be available for customers in early 2020. Any Airbus H125 or H130 family model can be retrofitted with a CRFS either through Airbus or a third-party provider and Airbus said it expects to have CRFS as factory standard equipment on all new-build H125 worldwide by 2020.
Leonardo Helicopters’ sees sales and profits surging
by Mark Huber

Leonardo Helicopters managing director Gian Piero Cutillo is confident the airframer will achieve its goal of double-digit profitability by 2020 based on last year’s results. Cutillo told AIN in an interview last month that its 2018 helicopter deliveries numbered 177, substantially higher than the 149 handed over in 2017, while order intake was also much higher.

Additionally, he noted that Leonardo had 40 percent market share (by value) in 2018 versus nearly 33 percent in 2017, continuing a growth trajectory that began in 2012. Cutillo said Leonardo has captured 40 percent of the VIP multi-engine market and that its North American fleet had more than doubled in the last decade, from just more than 200 to 450 helicopters. Notably, he said, Leonardo has ranked first in the U.S. for civil helicopter billings for the second year in a row. “I think we are on the right path. Both civil and military sales have grown,” he added.

“When I took over 18 months ago, it was a difficult time and I really have to thank my team for what we have achieved. We have made so many changes and we have achieved all of our targets in terms of orders, deliveries, revenues, and profitability,” Cutillo said. He attributed the improved results in large part to “making progress on meeting customer requirements.”

He said this is particularly true in the downtrodden offshore energy market. “When the market is shrinking, our products are more resilient than other products.”

Cutillo pointed to major sales successes over the last year as evidence of the market’s appetite for the company’s products and proof “we are considered reliable in the industry.” These include a $3.4 billion order for 28 NH90s from Qatar; $2.4 billion order for 84 MH-139s from the U.S. Air Force; $315 million order for 22 AW169Ms from Italy’s Guardia di Finanza; and orders from energy exploration support customers in Russia, Kuwait, and Saudi Arabia for AW189s, AW169s, and AW139s.

“We have focused on agility, flexibility in manufacturing, response time, and level of quality in response to customers,” Cutillo said. Regarding the latter, he noted, “It is something we are focusing on in the near future. It is important for our presence in the United States and we want to improve on it. Our North American fleet has more than doubled so we must do more on customer support. It is really mandatory for us.”

In February, Leonardo opened a new parts distribution center, warehouse, and blade repair center in Broussard, Louisiana, and early next year it will open a new $85 million maintenance and flight training center in Philadelphia that will include simulators for the AW119, AW169, and AW609. “Training is extremely important and we want to do more,” Cutillo said.

Concurrent with improving customer support and training, Leonardo is working at developing a global real-time health and usage monitoring system (HUMS) for all of its helicopters. “Managed data is the future,” said Cutillo. “We are pushing hard on digitalization. There are material benefits for the customer.”

Meanwhile, Cutillo said Leonardo should finish the Aneto 1k engine upgrade program for the AW189 this year and is working hard to complete certification of the AW609 civil tiltrotor program. He said the AW609 could potentially have future military applications including for the U.S. FARA (Future Attack Reconnaissance Aircraft) program and potentially as a trainer for the V-22 tiltrotor.

Though Leonardo is working on electric vertical takeoff and landing aircraft designs, Cutillo said it is too early to formally discuss it. “We are working on it, we continue to invest in it, but it is too early for us to make an announcement.”

GPMS offers Foresight MX
HUMS for light turbine helos
by R. Randall Padfield

Health and usage monitoring systems (HUMS), which monitor critical aircraft parts and systems using onboard sensors, are typically found on large helicopters, such as those serving the oil-and-gas industry and military operations. Now, Cornwall, Vermont-based GPMS is offering Foresight MX, a just-STC’d, next-generation “prognostic and health monitoring system” for the Bell 407GX and -GXP, the first such system designed for light turbine helicopters. Subsequent STCs are planned for the 407GXI, AStar 350 and MD900.

Eric Bechhoefer, GPMS co-founder, CEO, and chief engineer, told AIN, “Our Foresight HUMS meets the necessary requirements for weight, cost, and simplicity for the Bell 407GX and 407GXP, making the 407 the model a first great platform for the STC.” GPMS has been developing Foresight MX for more than five years.

Bell, explained Jed Kalkstein, GPMS president and CFO, had been trying to get a HUMS for the 407 for many years and had an RFP in process for more than a year when GPMS visited the helicopter manufacturer. “After the folks at Bell saw Foresight, the OEM abandoned the RFP process and started over. This triggered a two-year testing and selection process for GPMS and culminated in us getting the certification last spring and signing a distribution agreement with Bell.”

Duke Energy, headquartered in Charlotte, North Carolina, selected Foresight MX, and one of its four Bell 407GX helicopters became the platform for the STC. “Duke Energy was so happy with it,” Kalkstein explained, “that they decided to outfit the rest of their fleet.” Installation of Foresight MX on the third aircraft started in mid-January.

Flight Testing on a Bell 206B

Before obtaining the Bell 407 STC, GPMS partnered with Eagle Aviation Academy of Midland City, Alabama, to do the initial flight-testing of Foresight MX on a Bell 206B. However, GPMS has not yet STC’d the product on the 206. “We did an FAA Form 337 installation on the 206B, which requires much of the same paperwork and engineering,” Kalkstein explained. “As soon as we have a customer who wants Foresight MX for a 206, we’ll submit the paperwork to get it certified.”

Why has it taken the industry so long to come up with a good next-generation HUMS for light helicopters? AIN asked. “In short,” Kalkstein replied, “HUMS has a bad rap. Although being a great concept, legacy HUMS are too hard to understand, too heavy, and too expensive. So, they are acceptable for large aircraft and large fleets, but not smaller aircraft and smaller fleet operators. Our system was designed around the maintainer—ease of use and actionable information. Our HUMS kit for the 407 [a Part 27 helicopter] weighs less than nine pounds. Foresight MX for Part 29 helicopters weighs 20 pounds, while traditional HUMS weigh more than 100 pounds.”

“Foresight is the first real, prognostic/predictive, maintenance solution, which gives operators time to plan maintenance,” Kalkstein continued. “And the automated, optimized rotor track and balance feature makes a black art more like painting by numbers.”

Monitoring Multiple Parameters

Unlike some basic, so-called HUMS, which monitor only vibration, Foresight MX monitors vibration, rotor track and balance, flight regime recognition, flight data, and engine performance. “The diagnostic portions of [legacy] HUMS have some limitations on how they can be used,” Kalkstein said. “We’ve heard of special operations teams needing to call Sikorsky to ask if they can fly their next mission because they don’t have the kind of useful life estimates that can make these systems more valuable.”

Bechhoefer and Jack Taylor (GPMS’s other co-founder and also its senior software architect) were on the team that helped develop the integrated vehicle health management (IVHM) system for Goodrich UTC. “Eric [Bechhoefer] realized there were a lot of things we would have liked to have done there,” Kalkstein said. “He and Jack went into wind turbines first, for which they designed a bussed architecture. This reduced the amount of wire and cost, in terms of the hardware components. They then demonstrated the concept on more than 100 wind turbines, which accumulated more than 18 million hours over five years.”

The co-founders returned to the helicopter HUMS market and started building what became the Foresight system. Their goal was to design the perfect HUMS solution “by putting all the complicated things that happen in the background and simplifying them in the user interface so that maintainers can easily make decisions about what they need to do.”

Leonardo Helicopters managing director Gian Piero Cutillo.

GPMS’s diagnostic Health and Usage Monitoring System (HUMS) tracks multiple parameters.
Airbus Helicopters introduced its revised H145 medium twin last month at Heli-Expo and provided a number of details about the program. The model will be designated H145D3 with EASA certification anticipated in first-quarter 2020, with FAA validation to follow approximately 90 days thereafter. Initial deliveries will be in EMS configuration, followed by those for law enforcement and those are estimated for the third quarter of 2020.

The company plans to transition from the current H145 model, the D2, to the D3 throughout 2020 and end D2 production by the end of that year, according to Alex Humpert, program head for the H145. He said the upgrade was being made in response to customer input.

Humpert provided additional details of the upgraded H145 model, which features a new, lightweight, foldable, five-bladed main rotor system, as well as full-authority digital engine control (Fadec), lower empty weight, and increased useful load. He said the upgrades will be available as a factory-supplied upgrade for existing H145 owners and that they would be credited for the trade-in of their replaced H145D2 components based on condition. The upgrade, which would take approximately 220 manhours to complete, will not be available for BK117 or EC145 variants, however.

Humpert also said that the new foldable main blade system on the D3 takes only 10 minutes to stow/deploy, making it ideal for hangar or shipboard storage scenarios. All blades fold backward within the wingspan of the horizontal stabilizer by simply removing one bolt from each blade. The avionics will provide a guide as to where to position the cyclic and collective before blade folding begins, Humpert said.

He gave more color on the program, saying it started in 2016 as part of EU-funded Clean Sky program and was spawned from the Bluecopter technology demonstrator designed to show noise reduction and performance efficiency. A test aircraft started flying in 2017 and has accumulated 150 flight hours. A second test aircraft will join the program soon, and a flight-test program of more than 400 hours is planned. Kawasaki officially will be delivered in mid-2020. The Norwegian Air Ambulance Foundation is the launch customer for the retrofit upgrade. The Norwegian Air Ambulance is the launch customer for the new H145. The H145 order is part of a larger deal that includes 24 H135s and 21 H225s.

New Zealand VIP and charter operator Advanced Flight will be the launch customer of the ACH145 version of the upgrade. The new aircraft is scheduled to be delivered in mid-2020. The Norwegian Air Ambulance Foundation is the launch customer for the new H145. The H145 order is part of a larger deal that includes 24 H135s and 21 H225s.

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Airbus reveals details on coming H145s
by Mark Huber

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Helicopter services company Bristow Group has promoted L. Don Miller to president and CEO and appointed him as a member of the Board of Directors effective at the close of business February 28. Miller previously served as the company’s senior v-p and CFO. Miller replaces Thomas Amonett, executive vice chairman of Bristow Group’s Board of Directors, who served as interim president following the announced retirement of previous president and CEO Jonathan Baliff late last year. Baliff officially left the company yesterday but will remain a paid consultant for the next four months.

Miller joined Bristow Group in 2010 and has held several leadership positions within the company’s finance and strategy functions, including vice president of mergers, acquisitions, and integration.

“As we continue to navigate through challenging times, Don’s steady hand will provide important and needed continuity,” said Tom Knudson, director and chairman of Bristow Group’s Board of Directors. Miller is being replaced as CFO and senior v-p by Brian Allman, who was previously vice president and chief accounting officer for Bristow, and will continue as Bristow’s chief accounting officer. Allman joined Bristow in 2006 as director of financial reporting. “While leading our global accounting and tax team, Brian played an important role in our recent financings and is fully integrated with our investor relations, internal audit and financial forecasting and modeling functions,” said Miller.

The H145 already has attracted several new aircraft and aircraft retrofit orders announced at Heli-Expo. The Ukrainian Ministry of Interior has decided to change eight of its 10 H145s on order to the five-bladed upgrade. These helicopters will be used for law enforcement missions. This Ukrainian H145 order is part of a larger deal that includes 24 H135s and 21 H225s.

New Zealand VIP and charter operator Advanced Flight will be the launch customer of the ACH145 version of the upgrade. The new aircraft is scheduled to be delivered in mid-2020. The Norwegian Air Ambulance Foundation is the launch customer for the new H145. The foundation is the parent of the Norwegian Air Ambulance Services (NOLAS), which currently operates seven Airbus H135s and eight H145s from 12 bases throughout Norway, as well as four H135s in Denmark.

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Boeing touts safety amid 737 Max probes

Boeing on March 19 published an open letter from CEO Dennis Muilenburg to “airlines, passengers, and the aviation community” to reiterate the company’s “core” priority of safety amid reports of government investigations into the Federal Aviation Administration’s oversight and certification of the company’s 737 Max program. In the letter, Muilenburg alluded to the company’s work on a software upgrade designed to mitigate the possibility of an uncommanded dive originating from false readings from one of the airplane’s angle-of-attack sensors. Officials continue to investigate the possibility that a false reading from an AOA sensor prompted the model’s maneuvering characteristics augmentation system (MCAS) to force the nose of the Max down into a steep descent from which the pilots commanding the airplanes involved in two fatal crashes in five months failed to recover.

“Soon we’ll release a software update and related pilot training for the 737 Max that will address concerns discovered in the aftermath of the Lion Air Flight 610 accident,” wrote Muilenburg. “We’ve been working in full cooperation with the U.S. Federal Aviation Administration, the Department of Transportation and the National Transportation Safety Board on all issues relating to both the Lion Air and the Ethiopian Airlines accidents since the Lion Air accident occurred in October last year.”

Boeing and the FAA might also need to answer to the Department of Transportation’s Inspector General’s office and the U.S. Justice Department, both of whom have begun investigating the nature of the relationship between the manufacturer and the agency during the certification of the 737 Max, according to reports in the Wall Street Journal. Neither department would confirm or deny the existence of any such probe to AIN, however.

An investigation by the Justice Department would be highly unusual for the U.S., where the DOT Inspector General typically treats such cases as a civil matter. In fact, U.S. aerospace and airline groups have often criticized other governments for “criminalizing” safety matters.

Reports of the unusual government scrutiny into the workings of the Max program’s certification process came as Ethiopian authorities noted “clear similarities” between information gleaned from the flight data and cockpit voice recorders recovered from the Ethiopian Airlines Boeing 737 Max 8 that crashed just south-east of Addis Ababa on March 10 and the October 29, 2018, crash of a Lion Air Max 8 off the coast of Indonesia.

For its part, Boeing stressed its “deep sense of commitment every day” to its safety responsibilities. “We’re united with our airline customers, international regulators, and government authorities in our efforts to support the most recent investigation, understand the facts of what happened and help prevent future tragedies,” wrote Muilenburg. “Based on facts from the Lion Air Flight 610 accident and emerging data as it becomes available from the Ethiopian Airlines Flight 302 accident, we’re taking actions to fully ensure the safety of the 737 Max.”

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Azul makes offer for Avianca Brasil AOC

Brazilian airline Azul has reached a $105 million non-binding agreement to take over selected slots, about 30 Airbus A320 leases, and the operating certificate of embattled carrier Avianca Brasil, the airlines announced on March 11. The offer still depends on due diligence and regulatory and antitrust approvals, as well as approval by creditors, and might take up to three months to complete. Azul Brasil operates as a separate entity from Colombian carrier Avianca, and ownership shielded the exploration of a merger of the two in February.

Azul wants slots at Guarulhos and Congonhas airports in São Paulo and Rio’s downtown Santos Dumont airport, according to newspaper Folha de S. Paulo. The acquisition at Congonhas would nearly triple Azul’s slots there, though still leaving it with less than 30 percent of the access enjoyed by each of larger rivals Latam and Gol. Preference given to established carriers in the distribution of slots has proved an obstacle to new entrants at major airports.

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Indonesia cracks down on flying schools

The Indonesian Ministry of Transport (MOT) has decided to embark on a crackdown on flying schools across the country over the next six months to identify those conducting poor-quality courses. According to MOT official Eddy Wijaya, the action will address the lack of skills and knowledge of pilots produced by some of the schools.

“MOT feels the current situation has a lot to do with the quality of the courses being offered,” Wijaya said.

In a recruitment exercise of one local carrier recently, only two of 150 recruits passed written and simulator tests while three out of 140 succeeded with another airline. An analysis by the MOT of those who failed revealed that they lacked skills and basic aviation knowledge in areas such as aviation law and navigation. Wijaya acknowledged that the knowledge and skills of newly graduated pilots must improve for aviation in Indonesia to move forward.

In an audit carried out in early 2018 on Indonesia’s 18 flying schools, authorities revoked the licenses of two while six others received a notice to improve.
Citing timetable pressures, Rolls-Royce in a statement.

Rolls-Royce, for one, has concluded that a viable new twin-aisle airliner capable of competing with Boeing’s proposed UltraFan. Boeing has withdrawn from the competition to vie for the contract and timing calculation for the so-called middle-of-the-market jet. Although Boeing originally said it needed to launch the program by the end of this year to meet its 2025 target for entry into service, late last year it adjusted its sights somewhat, indicating that industrial launch likely wouldn’t happen until 2020. Boeing has long said that the timing of engine technology represented one of the biggest challenges associated with developing a viable new twin-aisle airliner capable of seating between 220 and 270 passengers and flying to a range of up to 5,000 nm.

Rolls-Royce, for one, has concluded that it could not meet those challenges in time with its proposed UltraFan.

“The reality is it has to make economic sense,” said Joyce. “I would say we’re still wrestling with what the size of the market is, and that’s a big question, because people feel great when you launch, but your shareholders don’t feel great until it’s successful…That program’s got to turn into a program like the GEnx or Leap for us so these big investments come home.”

Boeing projects a potential market for 4,000 to 5,000 airplanes in the 220- to 270-seat capacity range that the NMA would occupy, largely through opening new markets that now would prove unprofitable with a larger airplane or operationally infeasible with a smaller one. Boeing Commercial Airplanes CEO Kevin McAllister has pointed to some 200 new markets that airplanes opened with the 787 series as an example of the phenomenon.

“I think you see a couple of dynamics around the world,” said McAllister. “One is, you’ve got markets that are frequency-saturated where you want a bigger-gauge airplane to be able to connect those two city pairs. And so, because the NMA sits on a higher seat count, it can go into some of these markets with more seats than currently exist. So that’s the high-density market that we were talking about.”

### Shareholders approve Embraer-Boeing JV

Embraer received shareholder approval to proceed with its proposed strategic partnership with Boeing during a February general shareholders meeting held at the Brazilian company’s headquarters in São José dos Campos. The proposal passed with 96.8 percent votes cast in favor of the transaction, while participation in the vote equated to 67 percent of all outstanding shares. The transaction values Embraer’s commercial aircraft operations at $5.26 billion and Boeing’s 80 percent share at $4.2 billion. A joint statement announcing the deal indicated that Boeing would take full operational and management control of the new company, but that a Brazil-based management team, including a president and CEO, will lead the joint venture and report to Boeing CEO Dennis Muilenburg.

Embraer shareholders also agreed to a joint venture to promote and develop new markets for the multi-mission medium KC-390 airlifter. Under the terms of that proposed partnership, Embraer will own a 51 percent stake in the joint venture and Boeing the balance. Embraer’s defense and executive jet business and services operations associated with those products would remain a standalone, publicly traded company.

Boeing and Embraer announced in December 2018 that they had approved the terms of the joint ventures and the Brazilian government issued its approval last month. Shortly thereafter, Embraer’s board of directors ratified its support for the deal and signed definitive transaction documents. The timing of the transaction now stands subject to regulatory approvals and agreement of certain “customary” closing conditions, all of which the companies said they hope to meet by the end of the year.

The final approval of the deal has survived several legal challenges initiated by employee unions, the most recent of which resulted in a judge issuing an injunction earlier in the month that, if not overturned, would have at least temporarily blocked the vote. As in previous attempts to block the deal, Embraer’s appeal succeeded, thereby allowing the vote to take place.

G.P.
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A Guardian Flight air ambulance en route to pick up a patient crashed into the waters of Frederick Sound after veering off course during an instrument approach to the coastal village of Kake, Alaska. The pilot, paramedic, and flight nurse are all presumed to have been killed. The Anchorage-based airplane’s radio communications with air traffic control were normal through the time the flight was cleared to change to the airport’s local advisory frequency, after which no further transmissions were received.

In its preliminary report, the NTSB described radar track data that show the aircraft beginning a gradual descent after crossing the initial approach fix at 5,000 feet. Before reaching the next waypoint 10.5 miles to the northeast, it turned right to a southerly heading and began to descend rapidly, losing 2,575 feet in 14 seconds (a rate of more than 11,000 feet per minute). The following day search-and-rescue teams located floating wreckage near Point Gardiner in the Chatham Strait, about 22 miles west of the airport.

At press time neither the aircraft nor the remains of its crew had been recovered.

Nepalese Helicopter Crash Kills Seven
EUROCOPTER AS350B3, FEB. 27, 2019, TAPLEJUNG DISTRICT, NEPAL

Nepal’s Minister of Tourism and Civil Aviation, two deputy directors of the country’s Civil Aviation Authority, and personal aide to the prime minister were among the seven killed when an Air Dynasty helicopter went down in the northeastern Taplejung district. The other three casualties included the pilot, an army officer, and Air Dynasty’s chairman, a well-known tourism entrepreneur.

The helicopter had just taken off from the famed Pathibara Devi temple, located at an elevation of 12,448 feet; the crash site was downslope at about 10,000 feet.

Poor weather was reported across Nepal the afternoon of the accident, and initial accounts suggested that the helicopter went out of control and hit a cliff face after entering a cloud. About 45 minutes before the accident, the pilot had advised controllers at the Taplejung Airport that he was unable to depart due to heavy snowfall. Interviews with local residents suggest that the pilot might have been influenced by reports of better conditions at lower elevations.

Photographs from the scene show that the aircraft was almost entirely consumed by fire, with only a small portion of the tailboom remaining recognizable. Following their temple visit, the occupants had intended to inspect the airport construction site at Chuhan Danda.

The pilot and sole passenger were killed when their single-engine airplane went down in the Red River while attempting to return to Shreveport Downtown Airport just after takeoff. The aircraft’s control tower received a distress call shortly before contact with the aircraft was lost. Using sonar, searchers from the Bossier and Caddo Parish Sheriff’s departments located the wreckage just off the departure end of Runway 33 in about 17 feet of water, but they were unable to send in divers due to the swift current and poor visibility. Commercial divers using heavy equipment recovered the aircraft and its occupants’ remains three days later.

The 1999-model airplane’s original 350-horsepower piston engine had been replaced with a 560-horsepower Pratt & Whitney Canada turbine in 2016 under a supplemental type certificate issued to Jet-Pro LLC. The airplane departed on an IFR flight plan for Vernon, Texas. According to an NTSB investigation on the scene, it made two left 360-degree turns before turning right and descending into the river.

The loss of power that brought down a Grand Canyon air tour helicopter has been traced to miscommunication between the helicopter’s operator and manufacturer during routine preventive maintenance. The pilot responded to indications of an engine failure by attempting an autorotation to a nearby helipad but was forced to make an up-slope landing on mountainous terrain after the retreating main rotor blade clipped a power line. Two of six passengers on the sightseeing flight suffered minor injuries; the pilot and the remaining passengers were unhurt.

The NTSB attributed the seizure of the gas generator and power turbine to oil starvation precipitated by obstruction of the number two oil jet of the axial compressor rear bearing. This obstruction was in turn traced to the fact that the helicopter had been operated without an oil filter, which had been removed by the manufacturer as part of its normal arrival inspection procedure after the accessory gearbox was serviced from the engine during scheduled maintenance. Logbook review determined that the gearbox was not due for overhaul, and after some confusion, it was returned to the operator and approved for reinstallation. The NTSB concluded that the manufacturer neither replaced the oil filter nor advised the aircraft’s operator that it had been removed. The helicopter flew for 109.6 hours without a filter before the engine seized.

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The pilot in command had 5,000 hours of total time in 2,000 hours of single-engine turbine time and 1,700 hours in 350-horsepower piston engines. He had taken the aircraft on a 30-minute flight at the time of the accident.

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Bizliner Completions Under Way
Completions activity on next-generation single-aisle ACJs and BBJs—the neos and Maxes—has moved from monitors to cabins as AMAC Aerospace and Comlux have each taken delivery of the first ACJ319 neo and BBJ Max 8, respectively. With design work signed off before induction, interior installations are under way.

Comlux has been working on a BBJ Max 8 completion since February.

The BBJ Max 8 arrived at Comlux Completion, the Swiss company’s purpose-built completion facility in Indianapolis, Indiana, in February. The interior is by New York’s Peter Marino Architect, designer of luxury residential, cultural, hospitality, and retail projects. Handover to the U.S.-based customer is expected in the fourth quarter. Two more Max 8s are slated for induction at Comlux Completion in 2020.

AMAC, also Switzerland-based, received the inaugural ACJ319neo in January. Ordered by the UK’s Acropolis Aviation, installation of the Alberto Pinto Studio-designed interior is in progress under the guidance of designer Yves Pickardt. The design represents “an evolution of our highly popular cabin, retaining the traditional and comfortable style,” said Acropolis CEO Jonathan Bousfield. The interior features an enlarged forward lounge and dining area and enlarged shower in the master bedroom suite, among other refinements. Redelivery is expected by year-end.

In May Netherlands-based Fokker Techniek will welcome the first ACJ319neo for its cabin installation, performed for owner/operator K5-Aviation of Germany. To maximize range and payload, the project focuses on minimizing interior weight, driving “how we build the monuments and how we construct a lot of the filling compounds, and special techniques [we use],” said Johan van Dorst, Fokker’s sales director.

Greenpoint Technologies is highlighting its Boeing-commissioned Lotus interior design concept for the BBJ 777X, the newest BBJ, introduced at MEBAA in Dubai in December.

The Lotus interior for the BBJ 777X includes a luxuriously appointed master suite.

The Lotus interior, inspired by the flower holding great spiritual power in the East and incorporating celestial and organic elements from Asia-Pacific cultures, is designed to resonate with regional customers. Using these elements, the Boeing widebody completion specialist has created a contemporary functional design featuring the luxuries of a world-class hotel. These include a grand, circular entry way, elevated lounge, sunken media area, backlit bar, a library with an OLED screen fireplace, and a layered ceiling with adjustable LED starry night scene. The master suite features a king-size bed, walk-in dressing room and en suite bath with oversized rain shower, heated black marble flooring, towel warmers, and black marble vanity with embedded monitor. Fine materials, including American walnut, Calcutta Gold marble, chrome, white embossed leather, and silk and Italian woven wool carpeting are incorporated throughout the cabin.

Flying Colours Expands at Seletar
Canada’s Flying Colours, the Bombardier completion, refurbishment, and MRO specialist, has expanded the refurbishment capabilities at its Singapore facility at Seletar Airport. The move comes amid a growing call for cabin overhauls that “exemplifies the change in demand from the maturing Asia and Middle East markets, as savvy owners and operators recognize the benefits of acquiring preowned aircraft,” said Paul Dunford, general manager of Flying Colours Corp., the company’s Singapore operation.

Some 300 Bombardiers are based in Asia, a number of them nearing time for C-checks and major inspections, according to Flying Colours—the perfect opportunity to perform an upgrade. The Singapore facility has completed four full and three partial refurbishments on Challengers and Globals.

The recent refurbishment of a 14-passenger Global XRS was performed in conjunction with extensive maintenance, following its purchase by a China-based customer. The project included refinished cabinetry, new satin-rose gold plating added to the metal work, new carpeting, and recovered divan and seats, with the interior done in a neutral cream palette. Galley and aft lavatory countertops were replaced to complement the newly fitted vanity wardrobe and cabinetry.
**Within 6 Months**

**April 16, 2019 NEW**

**U.S.: Drone Operation**

The FAA has issued two notices of proposed rulemaking to allow drones to fly routinely at night and over people without obtaining a waiver and to further integrate them safely into the nation’s airspace. The comment period for these proposals ends on April 15.

**April 23, 2019 NEW**

**FAA: Foreign TC Approvals**

An FAA notice of proposed rulemaking (NPRM) would revise a regulation that currently imposes a duplicative paperwork requirement on foreign applicants for type certificates of import products. Under the NPRM, the agency would require a “compliance listing” to document the means of compliance with applicable standards or a “statement of compliance” from the applicant certifying that all the requirements in the certification basis have been complied with. Comments are due April 23.

**May 18, 2019 and Feb. 18, 2020 NEW**

**EASA: Halon Banned**

Under new EASA Part 26.170 and 26.400, operators of large airplanes and large helicopters for which the first individual certificate of airworthiness is issued on or after May 18, 2019, shall ensure that portable fire extinguishers do not use Halon as the extinguishing agent. This ban applies to built-in lavatory extinguishers on aircraft newly certified on or after Feb. 18, 2020.

**May 27, 2019 NEW**

**EASA: Aircraft Cybersecurity**

The European Aviation Safety Agency has issued a Notice of Proposed Amendment (NPA) that aims to mitigate the potential effects of cybersecurity threats to aircraft electronics. The requirements would replace the use of special conditions to meet these threats with dedicated requirements under specific airframe TC and STC specifications and expand the mandate to all aircraft sizes. Comments are due May 27.

**June 1, 2019**

**Canada: Drone Registration**

Transport Canada has issued rules that require drone pilots to register their aircraft and obtain a pilot certificate by June 1, 2019. The requirements apply to drones weighing between 250 grams and 25 kilograms (8.8 ounces and 55 pounds) that are operated within the pilot’s visual-line-of-sight, regardless of whether the drone is flown for fun, work, or research.

**July 1, 2019**

**Australia: Drone Registration**

A staged implementation process is planned whereby registration and accreditation are progressively introduced for remotely piloted aircraft operators in Australia. Initial registration-only requirements are scheduled to start on July 1. The mandate will apply to commercial operators of drones of any size and to recreational users of drones weighing more than 250 grams.

**Within 12 Months**

**Jan. 1, 2020 9 Months to Deadline**

**U.S./Taiwan: ADS-B Out Mandate**

ADS-B Out equipment must be operational starting Jan. 1, 2020, in aircraft that fly in the U.S. under IFR and where transponders are currently required, and in Taiwan IFR airspace above FL290.

**Jan. 1, 2021**

**U.S.: Stage 5 Noise Rules**

Effective Jan. 1, 2021 more stringent noise certification rules apply for new type certificates for airplanes less than 121,254 pounds. The new rule, known as Stage 5, is intended only for newly designed airplanes and is not aimed at phasing out existing noise standards that apply to the production or operation of current models.

**Jan. 1, 2023 and Jan. 1, 2028**

**Aircraft CO₂ Emissions**

Standards for CO₂ emissions apply to deliveries of current in-production large aircraft starting Jan. 1, 2023. All covered in-production airplanes must meet the standard by Jan. 1, 2028. Jet airplanes with an mtow under 12,500 pounds, piston-engine airplanes and turboprops below 19,000 pounds mtow, are exempt.

**Beyond 12 Months**

**June 7, 2020 15 Months to Deadline**

**Europe: ADS-B Out Mandate**

The ADS-B Out retrofit requirement in Europe takes effect June 7, 2020. The European ADS-B mandate applies only to aircraft with an mtow exceeding 5,700 kg (12,566 pounds) or having a maximum cruising true airspeed capability greater than 250 knots.

**July 1, 2021**

**Australia: Drone Registration**

A staged implementation process is planned whereby registration and accreditation are progressively introduced for remotely piloted aircraft operators in Australia. Initial registration-only requirements are scheduled to start on July 1. The mandate will apply to commercial operators of drones of any size and to recreational users of drones weighing more than 250 grams.
Airbus Helicopters appointed Alain Flourens as head of industry, succeeding Christian Cor-nilhe, who departed the company. Flourens is currently head of engineering and formerly was head of the A380 program for Airbus Commercial Aircraft. Stefan Thomé succeeds Flourens as head of engineering, moving over from his role as head of new business models and services at Airbus Defence and Space.

Gregory Bowles, v-p of global innovation and policy at the General Aviation Manufacturers Association (GAMA), was appointed to a three-year term on the ASTM International board of directors, where he will work with legislators and regulators to enable emerging aviation technologies and shape and harmonize regulations and policy. Bowles joined GAMA in 2005 and has previously served as director of European affairs and engineering in Brussels, Belgium, for the association.

The National Air Transportation Association (NATA) elected three new members to its board of directors: Marc Drobny, president of business aviation for StandardAero; Geoffrey Heck, senior v-p operations-East, Canada, and Caribbean for Signature Flight Support; and Mike Magni, president of Monaco Air Duluth. Drobny joined StandardAero in March 2018 and before that was president of Executive Jet Management. Heck has 33 years of aviation experience including 23 with Signature. Magni has led Monaco Air Duluth as president for 13 years.

VT Group named Thomas Lydon president of aviation solutions, responsible for the integration of the company’s worldwide aviation services with the engineering and logistics capabilities of the recently acquired National Technologies Associates. Lydon formerly was senior v-p at Sabre Systems and also has held leadership positions with Vistronix, SAIC, General Dynamics, Veridian, and Grumman Aerospace. Panasonnic Avionics named Kimberly Chainey general counsel. Chainey has more than 15 years’ experience advising senior executives of Fortune 500 companies, venture businesses, and government entities, previously as associate general counsel, global M&A, strategy, and innovation for Avis Budget Group.

Duncan Aviation named Andy Richards executive v-p and COO in its Battle Creek, Michigan facility. A 22-year company veteran, Richards spent the last seven years as v-p of modifications and completions. He steps into the role formerly held by Tom Burt, who retired after 40 years with the company. Burt will remain involved with Duncan, teaching leadership and business classes.

Gulfstream Aerospace promoted v-p of flight operations Colin Miller to senior v-p of innovation, engineering, and flight, and v-p of initial and final phase manufacturing Greg Collett to senior v-p of manufacturing and completions. Miller will take the baton from Dan Nale, who retired April 1 after nearly 35 years at Gulfstream, the past six of which have seen him at the helm of innovation, engineering, and flight. Miller joined Gulfstream in 2013 as an experimental test pilot and has since been a part of the development, testing, and certification programs for the G500 and G600, as well as the development of advanced aircraft technologies. Since joining Gulfstream in 1998, Collett has held various leadership roles in operations, including oversight of initial and final phase manufacturing, new product development, and manufacturing operations.

BB&A Aviation’s Global Engine Services (GES) appointed Deborah Wells v-p of strategy and business Improvement, responsible for the integration of GES’s core operations, consisting of engineering, quality, and continuous improvement. Wells previously was senior director of global at Pratt & Whitney Canada.

Jet Aviation appointed Norbert Ehrich v-p of flight services for EMEA and Asia, succeeding Jürg Reuthinger, who retired after more than 35 years of service. Ehrich was most recently v-p of sales for Jet Aviation Flight Services.

The National Air Transportation Association (NATA) named Jonathan Freye v-p of government and public affairs. Freye most recently was senior policy advisor for House aviation subcommittee member Rep. Dan Lipinski (D-Illinois) and also has served as the federal government affairs representative for the Metropolitan Washington Airports Authority as well as a legislative fellow in the office of then Senate aviation subcommittee chair Sen. Maria Cantwell (D-Washington).

Castle & Cooke Aviation named Dean Williams general manager at its Everett, Washington (KPAE) location. Williams, who is responsible for directing all of the FBO activities, joins Castle & Cooke with more than 20 years of airline and airport management and operations experience, formerly serving as director of fuel administration and corporate manager of fuel operations and infrastructure with a major airline.

Kent Wong, Metrojet head of safety and quality, was elected to the Standards Board for the International Standard for Business Aircraft Operations (IS-BAO). Nominated by the Asian Business Aviation Association (AsBAA), Wong oversees Metrojet’s safety management system.

Ahead of the planned summer opening of its new FBO at Dallas Love Field, Tac Air named company veteran Kip Simanek general manager at DAL.

Richard Ramsden joined Ramjet Aviation as senior v-p. Ramsden, who joined the board of the firm led by his son Jeff Ramsden, recently retired from Wells Fargo Equipment Finance as v-p and territory management in the Corporate Aircraft Division and has also served with The CIT Group and Bombardier Capital.

Raphaël Fabian joined the General Aircraft Manufacturers Association as its director of European affairs.

VREF Aircraft Reference Value & Appraisal Services added Richard “Dick” Hart as chief helicopter appraiser and Jeremy Cox as senior aircraft appraiser.

Cutter Aviation promoted David Clifton to director of technical and flight support services, responsible for its Part 145 repair stations, Part 135 charter operations, and the client relationship team. Clifton joined Cutter in 2005 as director of maintenance.

West Star Aviation appointed Tommi Krell director of corporate communications.

Duncan Aviation named Ted Roethlisberger assistant manager of customer service at its Battle Creek, Michigan facility. Roethlisberger joined Duncan Aviation in 2008 as the manager of business process and continuous improvement and last year took the position of project manager.

Kromsen, the Ethiopia-based aviation services company, named Getahun Seifeselasie flight operations supervisor. Seifeselasie has served as an air traffic controller at Addis Ababa Bole International Airport for 14 years and also in a variety of roles with the Ethiopian Civil Aviation Authority.

GlobalJet Services added Amy Jock as sales account manager. Jock brings a background in finance, sales, and marketing to her new role and currently serves on the board of directors for the Avon, Connecticut Chamber of Commerce board of directors.

SolJets hired Nathan “Nate” Metzler as executive sales director for the brokerage firm. Metzler has a 15-year aviation sales background in the Parts 91 and 135 sectors, including managing training programs for Bombardier; Cessna, Dassault, and Gulfstream business jet operators.

Jill Case has joined Wing Aviation as the national director of sales. Case previously was v-p of business development for Gama Aviation in Connecticut.

Allianz Global Corporate & Specialty (AGCS) named Hugo Reyes senior underwriter, General Aviation, for North America. Reyes joins Allianz with nearly two decades of experience, including serving as assistant v-p with U.S. Aviation Insurance Group (USAIG) and v-p with Swiss Re.

FlightSafety International promoted Michelle Dodson to assistant manager of the Wichita East learning center. Dodson has served with FlightSafety since 2001, originally as a Dassault Falcon 20 instructor at the DFW North Learning Center and later as a program manager, assistant director of standards, and director of standards.
Safe and efficient single-pilot operations

FREE WEBINAR | April 24, 2019 | 1:30PM EDT

Technology and a shortage of pilots to fill the flight decks of tomorrow’s business jets and airliners is creating pressure to facilitate more single-pilot operations. Every avionics manufacturer is developing technology for safe single-pilot operations, but pilots have been flying alone safely in light aircraft through Part 23 jets for many years.

In this webinar, we’ll hear the perspective of an avionics manufacturer and from a highly experienced light jet pilot on what it takes for a single-pilot operation to be safe and efficient.

Join AIN Editor-in-Chief, Matt Thurber as he moderates the discussion with Tal Golan, Manager, Rotorcraft Business Development for Universal Avionics, and Charlie Precourt, former NASA astronaut, safety expert, and Citation owner.

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WHAT YOU WILL LEARN

• Factors that are causing the flying landscape to shift towards more single-pilot operations.

• What kind of automation & technology are avionics manufacturers developing for single-pilot operations?

• What can we learn from experienced pilots flying in single-pilot operations?

• The critical importance of standard operating procedures to enhance single-pilot safety.

• How pilot training needs to improve to enhance single-pilot safety.
Sabrewing signs deal to provide Alaska cargo UAS
by Mark Huber

Unmanned aircraft builder Sabrewing has signed a 10-aircraft, $43 million deal with Alaska’s Aleut Community of St. Paul Island (ACSPI) to deliver a mix of its Rhaegal and Wyvern cargo aircraft. As part of the agreement, the ACSPI is creating the largest aircraft test range on the Bering Sea centered about the island. Sabrewing will provide equipment and training to allow the ACSPI to operate the test range complex, known as the St. Paul eXperimental Test Range (SPxTR) Complex (“Spectre Complex”). Sabrewing will use SPxTR to conduct research, development, and FAA certification qualification on its aircraft designs. Sabrewing will also provide the test equipment, telemetry, and remote operations and telemetry stations to allow the ACSPI to operate the test complex for other customers besides Sabrewing. Sabrewing and ACSPI are creating a joint-venture corporation to provide UAV pilot training, maintenance and dispatcher training, and aircraft replacement and spare parts. The joint venture provides a vehicle for military and government contracting and to bid on Defense Department contracts directly. Sabrewing will build and sell (or lease) its cargo aircraft to commercial customers, and the joint venture will train the aircraft’s remote operators, mechanics, and dispatchers.

Changes ahead for Part 135 training
Underwood, meanwhile, outlined the many benefits of the optional standardized training, including that it may be carried from employer to employer as long as they accept the standardized approach. It will streamline the approval process and apply across instructors approved for the specific programs. Further, said Underwood, a standardized approach ensures that pilots are trained to the same skillset, based on best practices and industry knowledge. The programs can be updated as necessary.

Upgraded Standards for Part 135
Improved training is one area highlighted by John DeLisi, director of the National Transportation Safety Board’s Office of Aviation Safety, who also spoke at last month’s ACSF event. DeLisi noted the Safety Board had added Part 135 safety on its latest “Most Wanted” list of transportation safety improvements and pointed to lessons that could be learned from successes in Part 121 safety. These include controlled flight into terrain avoidance training, along with flight-data monitoring and safety management systems. DeLisi detailed accidents where these were lacking, including the Learjet 35A crash at Teterboro. The Safety Board was reviewing its findings of that accident, involving an unstabilized approach into Teterboro Airport, that same day as the ACSF symposium. (See article on page 12.)

Update on ASAP
One key safety program that ACSF is administering for Part 135 and 91 participants is the Aviation Safety Action Program (ASAP), which provides a mechanism for voluntarily reporting and mitigating safety issues in a “non-threatening” environment. Randy McDonald, the ASAP program manager for the FAA’s Air Carrier Training System and Voluntary Safety Programs branch, provided an update on the ASAP to symposium attendees, noting his agency is making it more flexible to encourage even greater participation. These changes are designed to make the partnership agreements less restrictive for participants, McDonald said. Companies have had to sign a memorandum of understanding (MoU) with the FAA to participate, but this will change to a less restrictive partnership agreement. He characterized the current MoU as a nine-to-10-page document “filled with dos and don’ts.” This will now be streamlined to a smaller document that focuses on about a handful of aspects of the partnership: roles and responsibilities, how it will function, how decisions will be made, guidance on managing data, and how the partnership could be terminated. In addition, the FAA is committing to remove administration actions—meaning no letters of warning or correction—as long as a report is accepted into the program. He stressed that employees must be “incentivized” to come forward, but disciplinary actions only serve to chill such activity. Other changes ahead include the timeliness of the ASAP reports and activities, he said, noting that should be left up to the company on what works best rather than a predetermined timeline. The changes come as the ACSF-administered programs now collectively generated 4,000 reports, 90 percent of them from a sole source. Bryan Burns, president of the ACSF, credited the ASAP program to the dramatic growth of the association in recent years, with membership now approaching 200. The two-day ACSF event, themed “Promoting the Highest Levels of Aviation Safety,” also addressed safety culture, the new charter broker rules, data and analytics, stick-and-rudder skills, a deeper dive into recent accident case studies, and a town hall with NTSB vice chairman Bruce Landsberg.

Above & Beyond

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