Airbus Halves A380 Production

Airbus is making a large cut to its A380 output, as the manufacturer continues to struggle with securing additional sales for its largest aircraft.

The company said on Tuesday that in 2018 it will reduce production of the aircraft from the current 2.5 per month to one.

"With this prudent, proactive step we are establishing a new target for our industrial planning, meeting current commercial demand, but keeping all our options open to benefit from future A380 markets," CEO Fabrice Bregier said. "We are maintaining, innovating and investing in the A380," he added. In an effort to defer concerns that Airbus may abandon the A380, Bregier said, "The A380 is here to stay."

Airbus currently has orders for 319 A380s. It has delivered a total of 193, 27 of which were delivered in 2015. This year it has handed over 14 aircraft, as of mid-July.

The decision to reduce production further will result in a huge challenge to keep the program profitable on a recurring cost basis.

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FarnboROAR!

What’s the loudest airplane in this year’s Farnborough flying display? The F-35 of course. That’s no surprise. But it only just won that dubious honor from the Eurofighter Typhoon.

The F-35 tripped our decibel meter at 112 dB as measured from the balcony of the Aviation Week Network newsroom. In fairness, it was hovering, making the din seem even louder. The Typhoon, applying afterburners for a climbing turn, hit 111 dB.

On a quieter note, the Boeing 787 touched just 84 dB on takeoff (76 dB on fly-bys), and the Boeing 737 MAX hit 90 dB on takeoff and an almost inaudible 65 as it flew around.

The old-generation Boeing 727 trijet, which is banned from many of the world’s noise-conscious airports, hit a whopping 99 dB on take-off and wasn’t much quieter on landing. Surprisingly, that put it on par with the F-35. Thank goodness the 727s have largely gone!
Fueled by the agility of Navtech and the pioneering spirit of Airbus, NAVBLUE is taking off.


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**Pratt Scoops Wizz Air A320neo Win**

European low-cost carrier Wizz Air has placed orders and options for up to 432 Pratt & Whitney PW1100G geared turbofans worth US$2.5 billion for its future fleet of Airbus A321neos, representing a significant confidence booster for the U.S. engine maker.

Coming on top of an earlier announcement at the show by Germania, which chose the GTF for its fleet of up to 40 A320neos, the Wizz Air deal bolsters Pratt’s competitive stance against the competing CFM LEAP-1A, offsetting fears of the fallout from much-publicized entry-into-service issues on the A320neo earlier this year. Wizz Air, which selected the engines to power 110 firm A321neos plus a further 90 held as purchase rights, will receive the first aircraft in 2019. Additional aircraft will be delivered through 2024, though this will be extended up to 2035 if the airline exercises further purchase rights.

The extended timeline influenced the selection of the GTF, says Wizz Air CEO Jozsef Varadi. “If you take that horizon [to 2035] from a technology perspective, then we believe the GTF technology is new and disruptive to the market. Secondly we liked the value proposition, not just the pricing of the engine but the lower fuel consumption,” he adds.

CFM meanwhile continues to amass further Leap orders with several large contracts announced for both the LEAP-1A and -1B variants as part of A320neo and 737 MAX orders. Highlights included 200 additional LEAP-1As for AirAsia, which expands its Leap engine fleet to nearly 730 engines. TAP Portugal also selected 83 LEAP-1As to power its A320neo/A321neo fleet. Air Europe also ordered LEAP-1Bs to power 20 Boeing 737 MAXs, while TUI Group also finalized an order for LEAP-1Bs to power 10 737 MAX 8s. CFM’s overall backlog of engines now stands at more than 14,000, of which 11,000 are LEAP variants.

—Guy Norris

**Qatar Airways Looks at More Boeing 777-300ERs**

Qatar Airways CEO Akbar Al Baker told Aviation Week.

Qatar Airways currently operates a fleet of 34 777-300ERs and it does not have further outstanding orders for the type. The airline was among the group of launch customers for the 777X of which it has bought 60. The carrier ordered a total of 80 Airbus A350s, among them 37 –1000s. It has so far taken delivery of eight –900s, but deliveries have been held up earlier this year by disagreements over “build quality,” Al Baker said.

A350 deliveries to Qatar Airways have resumed now – one aircraft arrived in June and one each is scheduled to be handed over this month and in the following months. Al Baker said he has had several meetings with Airbus CEO Guillaume Faury.

TO MAKE UP for a capacity shortfall caused by delays in the Airbus A350 delivery stream, Qatar Airways is considering an additional order for Boeing 777-300ERs, CEO Akbar Al Baker told Aviation Week.

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Suppliers Announced for TRJet 328 Production

New Turkish manufacturer TRJet has announced major suppliers for its new regional aircraft program that will see production of updated versions of both the former Dornier 328 turboprop and 328JET and form the basis of a new Turkish airliner production industry.

TRJet has selected a new version of the Pratt & Whitney Canada PW127 to power the turboprop version of the aircraft. This has a common turbine assembly with the PW119 that powered the original Dornier model, but with a different gearbox that produces more shaft horsepower. It will increase the maximum takeoff weight of the turboprop to that of the jet version, from 13,990 kg to 15,660 kg, giving an extra 1.5 tonnes of payload. The jet version will use the P&WC PW306B.

Other major suppliers are Liebherr Aerospace, which will provide the air management and flight control systems, Rockwell Collins, which will supply Pro Line Fusion avionics, and Heggemann Aerospace, which will develop a common landing gear for both versions of the aircraft.

Also announced at the show yesterday was an order for five special-mission variants of the turboprop, for Singapore-based Sentinel Aerospace Group.

Brimstone/Apache Trials Hit Targets

MBDA AND BOEING have completed a series of launch trials of MBDA’s Brimstone missile from an AH-64E Apache attack helicopter.

Data on the number of launches, targeting and guidance used in the UK Ministry of Defense-funded trials, which took place in the Yuma Proving Grounds, Arizona, last month, remain confidential, but company officials have confirmed that the weapons were guided using both the semi-active laser and millimetric wave seekers in unison and in combination, with the weapon fired from the standard M299 launcher on the helicopter’s stub wing.

The Brimstones were fired from hovering, moving and maneuvering/banking attitudes against main battle tanks and pickup truck targets. All of the missiles fired were fitted with telemetry payloads rather than warheads, so that data could be collected for integration.

“These trials validate a prior UK MOD study contract with MBDA and Boeing that confirmed integration was expected to be low risk,” the company said.

The tests - contracts for which were awarded in September 2015 - follow a basic integration program, which will, MBDA hopes, pave the way for Brimstone to become the standard direct-fire weapon for Britain’s Eurofighter Typhoons, Apache attack helicopters and the Protector unmanned surveillance and strike platform that will be based on General Atomics’ Certified Predator B.

With the same weapon arming the three platforms, the UK could benefit from “interoperability between the Royal Air Force and the Army…and long-term cost reductions,” says Andy Allen, who works on business development on Brimstone.

The weapon would be taken through an additional spiral of development that would allow it to be fired on selectable trajectories. Crews would also have a number of selectable warhead modes including impact and proximity fusing. The additional capabilities would require only minor hardware and software changes.

The UK Ministry of Defense has also confirmed that the latest version of the weapon, Brimstone 2, had entered front-line service on the RAF’s Panavia Tornado GR4s.

—Tony Osborne
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Embraer is at Farnborough promoting its Sisfron border surveillance system, which includes electronic warfare, UAVs, radars and communications to work in conjunction with the A-29 Super Tucano turboprop for close air support. Components of Sisfron, such as the M20 mobile radar for ground surveillance, and the Saber M60 for anti-aircraft defense, are being exhibited here. Although Sisfron is still in a protracted pilot phase in Brazil, the company claims to have signed some export contracts.

“The pilot phase shows we have to learn a lot,” Marcus Tollendal, president of Embraer subsidiary Savis, says. A challenge has been to look for different doctrines, depending on the threat. It depends on the environment – climate, vegetation – of the border, Tollendal says. The pilot phase covers approximately 600 km in the southwest of the country.

In partnership with Sparks, Nevada-based Sierra Nevada Corp., Embraer has delivered 20 Super Tucanos that the U.S. ordered, and which are to be transferred to Afghanistan forces. Six Super Tucanos slated for Lebanon are in production, with the first handover being scheduled for early 2017.

Norsk Titanium Inks Mecachrome, Boeing, Thales Contracts

NORSK TITANIUM AS has signed a long-term agreement to deliver finished aerospace structural titanium components produced by its patented Rapid Plasma Deposition process to current Mecachrome aerospace OEMs and their Tier-1 suppliers. The deal is the latest in a series of integrated supply chain moves designed to insert Norsk Titanium’s disruptive RPD capacity into existing aerospace supply chains servicing the world’s aerospace manufacturers.

Under the terms of the agreement Norsk Titanium can procure finish machining, inspection and treatment services from Mecachrome for additive manufactured components that replace parts currently supplied to the aerospace industry by Mecachrome.

Norsk Titanium has also received an order for titanium engineering test articles from Boeing. The order requires Norsk Titanium to produce titanium Ti-6Al-4V additive manufactured preforms, and deliver them to Boeing for further testing and evaluation.

A further contract signed here is with Thales Alenia Space to develop, produce and test components for use in spaceflight. Norsk will collaborate with Thales to develop and produce an initial qualification lot of titanium components this year in support of a joint test and acceptance program for spaceflight. Each component has a final mass of more than 3 kg and changing over to Rapid Plasma Deposition cuts the current part buy-to-fly ratio in half and reduces lead-time by six months over current forging processes. Following the successful qualification process, Norsk Titanium expects to begin full-rate production in 2017.

“We are thrilled to partner with Thales Alenia Space and to extend the benefits of RPD from earth-based commercial airliners all the way into outer space,” said Norsk Titanium CEO Warren M. Boley Jr. “The space frontier is a great market for our titanium RPD parts, since they are extremely fast to build, incredibly light, and can be used in applications of significant structural importance.” Norsk Titanium is at Hall 4, Booth A114.
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RAF ISTAR Chief Attacks ‘Unimaginable’ Sentinel Cuts

The RAF’s senior intelligence and surveillance officer launched a passionate defense of the Sentinel program yesterday, as the perennially overworked yet permanently under-threat system faces yet another period of uncertainty about its future.

Air Commodore Dean Andrew, commander of the RAF’s ISTAR (intelligence, surveillance, target acquisition and reconnaissance) force, intends to fight the decision – announced in last year’s Strategic Defense and Security Review (SDSR) – to remove one of the five Sentinel aircraft from service in September. His efforts are being supported by Raytheon, the prime contractor on the program, which fields a SAR/GMTI (synthetic aperture radar/ground moving target indicator) sensor onto a modified Bombardier Global Express jet that has seen heavy use since its entry into service in 2007.

“I can’t overturn [the SDSR decision],” he said, “but I know some people who can, and I’m going to lobby them. We need five airplanes in the fleet to provide the capability. If we don’t have five in the fleet, then the ability to provide that capability as regularly as we do will reduce. It makes no sense to me to do that.”

Andrew compared the SDSR decision – which also committed to remove the Sentinel from service in the 2020s – to another taken recently in Britain.

“Imagine we’d just voted to leave the European Union, yet there were people out there going, ‘That was a really silly idea – we’d like to reconsider,’” he said. “It’s in the same space. Maybe [the SDSR decision] was a good idea at the time. But I’m the operator, and it’s bad enough when I’ve got five. The people who want this capability aren’t going to [care] that I’ve only got four – they’ll still want them there. The easiest way this enterprise can continue to provide this capability to save people’s lives is to have five.”

Focus has also been turned away from the Sentinel by news of the UK’s confirmed order for nine Boeing P-8s. The new anti-submarine aircraft will begin to be available around the time the Sentinel is presently scheduled to leave service, but according to Andrew, whose responsibility includes the P-8, any thoughts that the new fleet can absorb the Sentinel’s mission seem overly optimistic.

“Nine is not enough,” he said. “If you look at the modus operandi of how we’ve done this before, nine is only enough to do over the sea.”

The frustrating irony is that the Sentinel’s value has not been in doubt since shortly after the Conservative-Liberal Democrat government announced its cancellation in the 2010 SDSR. During Operation Ellamy, the UK’s contribution to the NATO campaign over Libya, the Sentinel was unique across the coalition in its ability to map the ever-moving front line through GMTI coverage of milling ground vehicles. Deployments to Mali, Nigeria and even mapping flooding in southern England followed. The then prime minister, David Cameron, announced a reprieve to the cancellation at Farnborough in 2014; he is known personally to have requested Sentinel product during briefings.

“This is still the Prime Minister’s go-to airplane,” Andrew says. “It’s a matter of time before people go, ‘I am not going to accept a gap in capability.’ It’s about a stove-piped understanding here, a stovepiped understanding there. As the warfighter, we understand the whole enterprise. What I can’t afford to have happen is to take an airplane out of service, close the base, then six years later put it in the base down the road. Because if I do that I’ll lose all that experience. I think it’s unimaginable we would do that (with the Sentinel).”

—Angus Batey

There are not enough Sentinels to go around.
CAN WE CARRY MORE?
CAN WE FIND MORE SUBS?
CAN WE FIGHT MORE FIRES?
CAN WE DETECT MORE OIL SLICKS?
CAN WE CARRY LONGER LOADS?
CAN WE GIVE EARLIER WARNING?
CAN WE PROVIDE MORE DISASTER RELIEF?
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GE Turns Big Data Into Personal Healthcare for Engines

General Electric has set out to become the world’s Digital Industrial Company, transforming itself by using Big Data to shape everything from the way it makes things to supporting customers in the field.

“Big Data is transforming our business,” says Kevin McAllister, president and CEO of GE Aviation Services. “To my knowledge GE is the only company to invest in data analytics to match its industrial scale.”

Investment in GE Digital, the company-wide center for Big Data, will total US$1.4 billion this year, giving business units access to 1,100 data scientists whose job it is to help derive new data-based products.

Working under the umbrella Predix, they make sense out of huge amounts of data and bring new insights into products and services. “Scale doesn’t work if you have only five people [in a back room]” or farm out data analysis to outsiders, says McAllister. “Now we can combine our depth of aviation product knowledge with our rapidly growing digital capabilities. This marriage of physics and analytics is delivering better customer outcomes faster than ever before.”

Earlier this year GE Aviation Services rolled out TrueChoice, a broad suite of engine maintenance offerings for the commercial aviation industry with the ability to customize data analytics and service options for the needs of individual customers.

- TrueChoice Flight Hour brings customized offerings that help them toward those goals, explains McAllister.
- 50,000 aircraft will change hands over the next decade. That’s 4,300 a year.
- “We can be a key partner in transactions and help fleet planning objectives for used aircraft around the world.”

TrueChoice has operational implications, too. For example, in comparing shop visit data of a particular airline’s engines to the fleet, GE Aviation was able to determine that the airline typically used higher thrust settings than most when taking off in hot-and-high conditions. This operating practice was causing unnecessary stress to turbine blades, leading to their premature replacement. Now the airline has changed its procedures and the parts are lasting longer.

McAllister explained that data analysis showed this was an airline-specific issue, and there was no need to inspect or replace similar parts throughout the fleet.

“Now we can combine our depth of aviation product knowledge with our rapidly growing digital capabilities. This marriage of physics and analytics is delivering better customer outcomes faster than ever before.”

— Kevin McAllister, president and CEO, GE Aviation Services

New Products

A new software application called Flight Phase Analyzer is enabling customers who provide continuous engine operating data to access the power of GE’s Predix analytics platform to gain new insight into optimizing their flight operations.

The Water Wash Optimizer application details the significant time-on-wing gains that can be achieved through effective water wash and offers tools to optimize the procedure for maximum fuel savings.

It delivers fleet-wide and engine-level views of engine operating parameters before and after engine water wash, making it easy to see the amount of exhaust gas temperature recovery achieved from the procedure. It also provides a fuel savings scenario planner to customize wash procedures for maximum fuel savings.
Composite commercial aircraft are enjoying record orders and backlog. The mission of Norsk Titanium is to bolster the profitability of these inspiring works of composite and titanium engineering while minimizing machining waste, cost and lead-time.

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Origami in Space

An origami-inspired deployable composite structure is poised to go into space aboard an Indian launch vehicle. Developed by UK-based Oxford Space Systems (OSS), here in Hall 3/A10, the extendable payload deployment system is the first of a series of innovative products designed for the new space age. Founded in September 2013, the award-winning start-up says an origami-like folding technique is used to enable this new generation of deployable structures.

Using a combination of both traditional and qualified proprietary materials, OSS says its products have received serious interest as they are lighter, less complex and cheaper than those currently available in the global space industry. “Ultimately, the endgame is to get onto geostationary platforms with very large boom systems, but of course we have to take those stepping stones,” says OSS CEO Mike Lawton.

One product, the AstroTube, is an ultra-lightweight payload-deployment boom capable of extending and retracting antennas, solar panels or anything desired. Scheduled to be sent into space next month aboard a cubesat on India’s Polar Satellite Launch Vehicle (PSLV), the launch will set two world records for Lawton and his team. The AstroTube will be the world’s longest composite payload retractable system. Secondly, Lawton notes, the implementation of the AstroTube will mean OSS “has gone from concept to flight in less than 30 months,” a remarkable achievement considering it takes NASA an average time of 10 years to do the same, according to Lawton.

In addition to the AstroTube, OSS is developing deployable panels and larger deployable antennas, and has development collaboration contracts with some of Europe’s largest satellite builders, including Airbus.

—Greg Norris

Southampton Shepherds Sailors With Sintered Aircraft

ONE OF THE world’s first totally 3-D-printed aircraft makes its Farnborough debut this week, secreted away at Hall 3/IC21 in the Innovation Zone. SULSA, the Southampton University Laser Sintered Aircraft, is a UAV that can be fully assembled from its component parts to flight-ready in just 10 min., without use of tools.

Earlier this year a SULSA was launched from the Royal Navy’s ice patrol ship HMS Protector to assist navigation through Antarctic ice floes, complementing a quadcopter that was used for short-range scouting missions. SULSA is controlled from a laptop and cruises at nearly 60 mph. Cost is no more than GBP7,000 (US$9,300) – cheaper than an hour’s flying time by a naval helicopter.

—Paul Jackson

The Vital Element in Aerospace Design

Passengers might not wish to think too deeply about the ditching component of their preflight brief, but somebody has to. And that is likely to be Element (Hall 4/D141) – an independent company with long experience in materials and products testing.

The fascinating details of constructing and ditching a scale model in a water tank will be presented in an open seminar at the Hub in Hall 3 at 11 a.m. on Thursday. The speaker is Stuart Brown, general manager of Element’s Materials Technology division at Warwick.

Around 60% of Element’s assessment work is connected with aerospace and usually takes place during the phases of late R&D, prototype and production. And 70% of this is undertaken in the U.S., on everything from a foreplane to a passenger seat.

Element’s boast is that it “adds certainty” on behalf of its clients, assuring them that their products are safe, compliant, fit for purpose and up to quality.

And before you ask: Yes, they do also fire dead chickens at dummy windscreens.

—Paul Jackson
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Lockheed Martin is marketing its LM-100J civil Hercules variant in tandem with the newly unveiled LMH-1 cargo carrying hybrid airship as part of the company’s broader strategic initiative to grow its commercial aerospace business.

The company sees the LMH-1 as a well-suited running mate with the LM-100J commercial freighter, firm orders and letters of intent for which have grown to 25 with the sale of 10 to Bravo Industries, a Brazil-based logistics and defense group. Bravo’s Logística division, which consists of Bravo Cargas and Bravo MRO (maintenance, repair and overhaul), will operate the LM-100J for air cargo operations in Brazil.

Bravo is acquiring the LM-100J for operations in remote and austere locations around Brazil. “When we examined the market and regional demands for our logistics operations, there was only one aircraft that could do all the jobs we needed it to do to serve our customers: the LM-100J,” says JR Pereira, president and CEO of Bravo Industries. The first aircraft will be delivered to the Brazilian operator in the fourth quarter of 2018, with final deliveries in 2020.

Lockheed’s LMH-1, a 280-ft.-long hybrid airship, which is capable of carrying 47,000 lb. of payload and up to 19 passengers over ranges up to 1,400 nm at a cruise speed of 60 kt., is targeted at much the same market. The vehicle is designed to provide lower cargo transport costs to remote areas that road and current air alternatives cannot match.

“We’ve talked to oil and gas and mining companies. I think there’s definitely a market there [for the LMH-1],” says Pereira, who adds that the airship offers “an environmentally friendly” solution to the problem of cargo transport in the Brazilian rainforest.

The LMH-1 is expected to enter service in 2018, the same year as the LM-100J, and is a big move for Lockheed Martin in more ways than one. If successful, the vehicle represents the first generation of a planned series of progressively larger hybrid airships that will culminate in the mid-2020s with 500-ton transports capable of competing with ocean-going vessels. Along with the LM-100J, the venture also represents Lockheed’s first significant foray into civil aviation since the 1980s when it refocused on the defense and space markets following disappointing sales of the L-1011 TriStar airliner.

The first LM-100J is currently under assembly at Lockheed Martin’s Marietta, Georgia, facility and is expected to make its first flight in the first half of 2017. Although structurally identical to the military C-130J variant, some systems and primarily the avionics are changed to reflect the LM-100J’s commercial role, says Orlando Carvalho, EVP of Lockheed Martin’s Aeronautics business. Although originally designed under FAA certification standards, the flight test program will clear “all the upgrades made to the aircraft over the past 20 years,” he adds.

As for integrating sales of the LMH-1 into campaigns for the LM-100J, Carvalho says “we’d be extremely open to those discussions.” Working through Hybrid Enterprises, its Atlanta, Georgia-based wholly owned reseller and aftermarket provider, Lockheed Martin is securing orders and letters of intent for around 12 cargo airships from the mining and oil and gas exploration industry. It also has potential sales of a further 15 LM-100Js in addition to the current order group but sees orders “for at least 100 more.”

—Guy Norris
RUAG Pitches Reinvigorated Dornier to the U.S.

RUAG’s 228 is taking aim at the U.S. market.

Don’t call it a 228NG anymore, says the manufacturer. The future has now become the present.

“There comes a time,” says Martin Büsser, senior VP of sales and marketing at RUAG Aviation (Chalet A21), “when the new generation becomes the present generation.” Thus, the Dornier 228 NG is dead; long live the Dornier 228.

RUAG has already completed and sold the start-up batch of eight “ex-228NGs” from its relaunched production of the modernized Dornier turboprop-twins and is expecting to fly the first of the follow-ons before the end of this year. Passenger (with 19 seats) and cargo markets are, naturally, in RUAG’s sights, but a concerted effort is also being made to expand the 228’s employment in special missions.

The U.S. is seen as a key market now that RUAG has obtained (in March) FAA certification of the current 228-212 and named AMC Aviation as its regional sales and authorized service center. AMC has headquarters in Raleigh, North Carolina; a depot in the same state at Sanford; and other centers at Addison, Texas, and Carson City, Nevada.

Noting that many previous special-mission aircraft have been equipped with specific customer equipment – at unnecessary expense – Büsser says RUAG is looking at options for standard equipment suites for both different purposes and in three standards of complexity. These packages will be installed in the U.S. and can be swapped at speed through the aircraft’s wide freight door.

—Paul Jackson

Progresstech to Distribute Altair Software

Russian engineering company Progresstech has partnered with U.S. software specialist Altair to promote and distribute Altair’s software technology and methods in Russia and the Commonwealth of Independent States (CIS). Under the memorandum of understanding signed on July 11, the Russian company will become an official reseller of Altair’s HyperWorks Suite, a computer-aided engineering platform that is used in aircraft design. The partnership also includes solidThinking software products and Altair’s methods for lead time reduction and weight optimization.

“We are very happy to include Altair’s solutions in our portfolio and to work with their methods,” said Ekaterina Vasilieva, VP of international cooperation for Progresstech Group. She explained that the company would include the Altair software as the primary tool enhancing its engineering processes but mentioned the partners were not ready to disclose what projects the new software will be used for.

Dr. Pietro Cervellera, managing director of Altair Engineering, added that Progresstech’s expertise and regional presence will help the U.S. company, which has no direct local office in Russia, to establish the use of its products in the Russian and related region’s commercial and educational markets.

Progresstech is known as a provider of engineering services to the world’s largest aircraft manufacturers. The Russian company worked with Boeing on a number of programs, including the 787 Dreamliner. In cooperation with Spirit AeroSystems it was involved in such programs as the Airbus A350, Gulfstream G280 and G650, Bombardier C Series and Learjet 85, and Mitsubishi Regional Jet. In the domestic market, it participated in the Sukhoi Superjet 100, Kamov Ka-226 and Ka-62 programs.

—Maxim Pyadushkin

A Double Diamond Works Wonders

Two versions of the popular Diamond DA-42 light twin have been launched at the show this week. The first, known as Pandion (Osprey), is at Diamond’s flight-line exhibit (OE18), fitted with camera, radar and satcom antenna for patrol of coastal fisheries. It is priced at 2.2 million euros (US$2.45 million), including ground station.

Still awaiting a definitive name, the second new DA-42 is fitted with radio-frequency and gamma-ray sensors able to “see” beneath the ground. Applications include monitoring nuclear power stations, prospecting for raw materials and detecting buried ordnance.

—Paul Jackson
DHL Signs With EFW for A330P2F Conversion

Elbe Flugzeugwerke (EFW), the joint venture between ST Aerospace and Airbus Group, has signed an Airbus A330-300P2F passenger-to-freighter conversion launch contract with express and logistics company DHL Express.

Under the agreement, EFW will convert four Airbus A330-300 passenger aircraft to 26-pallet cargo configuration, capable of carrying payloads up to 61 metric tonnes. The first aircraft will arrive at EFW’s Dresden facility this month, and is scheduled for redelivery to DHL by the end of 2017.

“The A330-300P2F conversion will address an important requirement within our global aviation fleet for mid-range, high-volume cargo aircraft,” said Geoff Kehr, SVP, Global Air Fleet Management of DHL Express. “It will bring added flexibility and capacity to our operations, and will further support our aims of improving fuel efficiency for every kilo of cargo carried within our air network.”

The A330P2F conversion program, launched in 2012, is a collaboration between Airbus, EFW and ST Aerospace. ST is the program and technical lead for the engineering development phase, and is responsible for applying for EASA and FAA Supplemental Type Certificates for the freighter conversions. Aircraft OEM Airbus contributes to the program with data and certification support, while EFW leads the industrialization phase and marketing.

The A330P2F conversion is available in two versions: A330-200P2F and A330-300P2F. Of the two variants, the larger A330-300P2F is suited for integrators and express carriers due to its high volumetric payload capability with lower-density cargo. Complementing this will be the A330-200P2F, which is optimized for higher-density freight and longer range.

DHL Express is EFW’s first customer for the A330-300P2F conversion, while a launch contract with Egyptair Cargo was secured in December 2014 for the A330-200P2F conversion.

Strata Awarded Airbus Contracts

STRATA MANUFACTURING PJSC, the Abu Dhabi, UAE-based advanced composite aerostructures manufacturer that is owned by Mubadala Development Company, has been awarded two contracts to supply composite components and complete major assemblies to Airbus. The combined deals, valued at more than US$1 billion, will see Strata become a source for the Airbus A320’s tailplane and A350-900’s inboard flaps.

Strata CEO Badr Al Olama said, “We are proud of our longstanding partnership with Airbus and are privileged to be manufacturing components on the A330, A350 and A380. Looking ahead, and building on our latest contracts with Airbus signed today [Wednesday], we are confident in our ability to continue strengthening our competitiveness, growing our national workforce and playing a key role in Abu Dhabi and Al Ain’s positioning as a global aerospace hub.”

The A350-900’s airframe is made up of 53% light composite materials. Strata will manufacture composite components, perform assembly of them and manage the supply chain from its facility in the Nibras Al Ain Aerospace Park, where it is expanding its capabilities to meet the growing demands of world-leading aircraft manufacturers.
Arms Across the Baltic: Norway’s Air Force Deploys NASAMS to Poland

Last weekend’s NATO summit produced a few headlines, but one story from the event has gone largely unreported. For the Warsaw meeting security was provided, in part, by ground-based air-defense equipment and personnel from the Norwegian Air Force, who deployed NASAMS (Norwegian Advanced Surface to Air Missile System) teams to Poland after a cross-government agreement.

The number of personnel and the laydown of the NASAMS equipment – which includes command-and-control entities, launchers and radars – have not been made public. But members of the NASAMS team with co-developer Kongsberg have revealed some details to ShowNews.

“The final decision [to deploy the systems] was taken just a couple of weeks before the event,” says Hans Christian Hagen, VP of business development for Kongsberg’s integrated defense systems division. “That actually shows the flexibility and the ability of both the Norwegian forces, and also the system.”

The equipment was transported via road from Norway, through Sweden. The NASAMS command-and-control nodes were linked back to higher command echelons in Norway, though Kongsberg declines to say by what data-link system. The different sites were connected via line-of-sight UHF radio links.

The equipment is in the Norwegian Air Force’s inventory partially because the effector is an AMRAAM missile. NASAMS launchers can use a range of different missiles without modification. Of the seven current NASAMS customers, three are air forces and three land forces (the seventh is the U.S. Army National Guard).

Deliveries have been completed to six of the seven customers: The seventh order, to Oman, is currently being filled.

Dowty to Supply Props for Antonov AN-132D

Dowty Propellers has started component deliveries of its R408 propeller systems to equip the demonstrator for Antonov’s AN-132D twin-engine transport. Dowty Propellers’ support for the AN-132D program includes commissioning the propeller systems on the demonstrator aircraft, rigging of strain gauges for its ground and flight testing, and assistance during demonstration flights. The company has also signed an LoI to develop and supply the propeller electronic controller for Xi’An Aircraft Company’s twin-engine MA700 regional aircraft. This agreement follows earlier selection of Dowty six-blade propellers for its P&W PW150C powerplants.

TAI, SNC to Explore International Trainers

Turkish Aerospace Industries (TAI) and Sierra Nevada Corp. (SNC) signed an MoU here yesterday to explore opportunities in the global training market, including ground-based training and logistical support. The partnership addresses a broad spectrum of military flight training needs, with combined skill sets creating tailored, total-training solutions to strict customer requirements. The agreement leverages TAI’s more than 30 years of experience as an aerospace manufacturer, and SNC’s five decades as an integrator and innovator in design, manufacturing, modification, certification, integration, and support of some 400 different aircraft for both military and commercial customers worldwide.

Air Europe LEAPs for New B737 MAXs

Air Europe has ordered CFM International LEAP-1B engines to power 20 Boeing 737 MAX aircraft. The engine order, announced Wednesday, is valued at more than US$800 million at list prices, including a maintenance agreement. Under the terms of the 12-year rate per flight hour (RPFH) service agreement CFM will guarantee engine maintenance costs on a dollar-per-engine flight hour basis. Air Europa, headquartered in Palma de Mallorca, Spain, is a long-time CFM customer and currently operates a fleet of 20 CFM56-7B-powered Boeing 737 NGs.

Gardner Aerospace Wins Airbus Contracts

Gardner Aerospace has been appointed by Airbus to collaborate on development of the A330neo’s engine pylon. The first phase of the program will see Gardner working on eight development aircraft, with the first sections on track for delivery in Q3 2016. The company has also won more than GBP110 million in new contracts and existing work package extensions from Airbus UK for wing components and subassemblies for the A320, A330 and A380 for the next five years, as well as extending an A400M contract to life of program. Hall 1, Booth 850.

Qatar Signs With Boeing for 24 Apaches

Boeing (Chalet B6 and OE G4) continues racking up international orders for the AH-64 Apache, signing a US$667.5 million Foreign Military Sales contract with Qatar for 24 AH-64E Guardians. Qatar was approved by the U.S. State Department in 2012 to buy 24 Apaches, just as the Boeing production facility in Mesa, Arizona, was transitioning from the AH-64D to the Apache Longbow Block III, now known as the AH-64E Guardian. Qatar joins Egypt, Greece, Israel, Japan, Kuwait, Saudi Arabia, Singapore, South Korea, the Netherlands, United Arab Emirates and the UK as international customers for the AH-64.
Historic Auster Makes Farnborough Debut

A 64-year-old historic Auster originally restored by the editor of Aviation Week ShowNews is appearing over the public weekend in the static display at Farnborough Airshow.

Travel to Two Continents
A veteran of the Korean War where it spotted Communist positions for the British Army, the Auster has more tales to tell than many a warbird. And in its later civilian life it was well known as G-APRO, the personal mount of the former Commandant of the Royal Aircraft Establishment at Farnborough, Air Commodore Allen Wheeler. He used it to commute to film sets as technical advisor to such classics as the 1965 comedy “Those Magnificent Men in Their Flying Machines” and the 1966 World War I drama “The Blue Max.”

After Wheeler’s death in 1984, the Auster was imported into the U.S. by John Morris, editor-in-chief of Aviation Week ShowNews. He completely restored the aircraft and won the award for Outstanding Limited Production Classic Aircraft at the 1986 EAA Oshkosh convention.

For many years G-APRO (carrying FAA registration NX370WJ in the Experimental Exhibition category) was the only DH Gipsy Major-powered Auster flying in America. It made many noteworthy trips, including non-radio flights along the Hudson corridor through Manhattan, over the Statue of Liberty, past the twin towers of the World Trade Center, and to the historic airfield at Old Rhinebeck, famous for Cole Palen’s World War I flying circus.

Back to the UK – Again
In late 2009, the Auster was acquired by current owners Adam and Heather Wankowski of Stowmarket, Suffolk, and thanks to them it has become the only Oshkosh prize-winner to appear at Farnborough. For the last few years it has been a regular visitor to fly-ins across the UK.

The Wankowskis restored the Auster to pristine condition after its 23 years of wear and tear in the U.S. They also installed dual controls so that both Adam and Heather could fly it.

“After it being so much of my life, I was sorry to see the Auster go,” says Morris. “But it couldn’t have gone to a more enthusiastic, capable home.”

Then a remarkable thing happened. Out of the blue, Adam received a phone call asking if ‘NX370WJ’ might have anything to do with a military Auster seriald ‘WJ370.’ Adam replied it was the very same aircraft. The email came from John Bridges, a former British Army pilot, now 88 years old and living on the Isle of Colonsay, off the west coast of Scotland, who went on to explain that he flew it for more than 1,000 hr. in Korea and on its return to the UK. He added “Korean sorties were at 10,000 ft., flying along the demarcation line using high power binoculars to view the North. It was very cold!”

The military logbooks for the Auster alas are lost, but Bridges has discovered his pilot records and completed that history. Curiously, despite its long history, Bridges, Wheeler, Morris and Wankowski are the only pilots to have logged significant time in the Auster since it rolled out of the factory in Leicester, in the British Midlands, in 1952.

The Wankowskis have since taken the airplane to visit Bridges several times, and, of course, he flew it again. Despite a gap of 57 years, he commented on a slight change in handling: Yes, Adam told him, larger tail surfaces were installed in 1964 at the edict of the British Civil Aviation Authority.

A Nose for History
Bridges had long treasured a polished copper spinner made for the Auster by his maintenance crew in Korea. “It’s on my desk. But it should be on the aeroplane,” he told the Wankowskis. Now it is, and that’s the way the aeroplane is appearing here at the show.

—John Morris
Helicopter Operators Must Embrace Drones

This year’s Farnborough Airshow lists 93 exhibitors that are involved in some way with unmanned aerial systems or drones, while just four light rotorcraft, including an autogyro, are on display. You don’t have to be Einstein to see that the importance of UAS is going up, while that of lighter, single-engine helicopters is going down.

The two trends are not necessarily linked to each other. For example, the crisis in the offshore market simply has its genesis in the low oil and gas prices. And if you look at the special offshore “support of windparks” sector, this business is even growing.

But of course many markets are feeling the pressure of unmanned services, or have already been attacked by them. Filming and photography by helicopters is only “a fraction” of what it had been. Farming seems set to go the same way, followed next by “inspection” of gas and electricity lines, especially if the authorities ease up on their restriction that all UAS operations be conducted in line-of-sight.

The sheer dynamic of these developments is amazing. Many of the producing companies are still somehow “mom-and-pop” shops but with strong investors behind them. Sometimes the mood in this growing industry for lightweight drones seems akin to a second gold rush: Regulators are fueling the flames of change by shaping a philosophy within the EU “to exploit the big potential of drones and their contribution to growth and employment.” The only things holding them back are legal and technological uncertainties.

No one knows where the rapid technological change will lead. Some multicopter companies are claiming the “end of manned aviation.” Amazon wants a dedicated airspace from 200-400 ft. exclusively for automatic UASs, with a further 100 ft. above it as a declared a no-fly zone to avoid contact with normal air traffic, not even taking into consideration that there might be manned aircraft that have to use the same airspace and should have “right of way.” Logistics companies also are pushing the FAA to allow unmanned operations of their freighters.

Until now, there aren’t international regulations for them as drones – especially the small ones – aren’t even “aircraft” in the view of the authorities. In Europe this will change with the new basic regulation: All types of UAS operations will be strongly embedded into the laws of aviation.

Accordingly, there is a “non-paper” of EASA currently circulating with reasonable ideas hooked on a “concept of operation” developed by JARUS. It aims to divide the operations and necessary qualifications/certifications by risk categories from open to specific and certified. EASA also has taken into consideration that most of the private users are not comparable to model airplane pilots. So, the idea is to make the drone itself “secure” through production standards that at the minimum include identification and limitation.

The final goal is to create a “bubble,” where these toys are operated without any conflict with manned aviation. Smart ideas, but of course it all will come down to the question of how to control not only the European market but also the (ab)users. Meanwhile, we can only hope that the almost daily reports of drones flying close to helicopters and aircraft will diminish, but I doubt so.

Back to the commercial side. What is the solution for helicopter operators? “If you can’t beat them, join them.” The helicopter operators know the uncontrolled airspace, the regulations and (plenty) of the customers. So don’t leave this potential market open to new players, but start to add some drones to your helicopter fleet. Because as Dr. Siegfried Sobotta, former head of Eurocopter Germany, once said to me: “In the end we are not aircraft, but whatever the customer wants us to be, and only by luck and by technology are we using the airspace for this service.”

So, in the years ahead, we might have only service providers left and the customers pick the tool they like: helicopters or UAVs.
Where Innovation Soars

When you land in the U.K. this year for the Farnborough International Airshow, we are likely right there with you. That’s because Ontario, Canada provides landing gear for 75% of Boeing and Airbus commercial aircraft programs. And as you reach for your phone and check your GPS to find your hotel, there’s a good chance we’re there too; made-in-Ontario parts are on-board 80% of all commercial communications satellites.

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