

Police Aviation News

300th EDITION

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April 2021



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Police Aviation News

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U.K. CENTRAL GOVERNMENT ALLOCATIONS 2001

After an unexplained absence of an announcement last year the annual central government funding figures for police air support were announced in late March. As usual the funding amounts to £4M.

- Western Counties Air Support Unit (Avon and Somerset & Gloucestershire Police) will receive £1.3M towards the cost of a new EC135T to replace their existing AS355F helicopter.
- The Chiltern Air Support Unit (Thames Valley, Bedfordshire and Hertfordshire Police) are to receive an identical amount to replace their Luton-based AS355F1 helicopter.
- One of the major surprises in the list is the allocation of £1.1M to the Greater Manchester Police to purchase an aeroplane to complement their existing helicopter and upgrade air support accommodation. Greater Manchester have yet to take delivery of their new MD900 Explorer and financial assistance to acquire an undisclosed fixed wing type is therefore a surprise only because of the timing. PAN has carried previous stories - rumours with a strong basis in truth - about their wish to add a fixed wing to their resources. It is understood that clarification of the exact nature of the aircraft type will be some weeks away. The most likely types are the BN2 Islander 4000 and the Reims Caravan 2. The £167,000 upgrade in the accommodation will be enlarging the existing hangar to accommodate a fixed wing. It is currently large enough for 2/3 helicopters.



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BUNCEFIELD

- a suitable case for inter-agency co-operation

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EDITORIAL

This is the 300th monthly edition of *Police Aviation News*.

It represents a far greater number than I envisaged when the first edition was sent out by mail, fax and the then new and mysterious e-mail some 25 years ago.

In the pages of those regular monthly editions – plus the 50 or so Special Editions of course – lie the day-to-day aspirations of an industry that has seen many dreams come true and triumphs enjoyed along with hopes and aspirations hopelessly dashed. There is no reason to believe that a similar pattern will not continue. That alone keeps the subject fresh on a day to day basis.

It has been a great, interesting and often challenging journey cataloguing all aspects of the industry and it continues, 25 years is just a waypoint in a journey that has included a highly successful *PAvCon Police Aviation Conference* and other projects. *PAN* is not loved by all, and why should it be, that is for other publications. You can please some of the people some of the time but never all of the people.

Bryn Elliott

LAW ENFORCEMENT

CANADA

CALGARY: In the past twelve months, Eagle Copters Ltd. have delivered two fully customised Airbus Helicopters H125 for the Calgary Police Services Air Support Unit (CPS). Working in conjunction with CPS and Airbus Helicopters, the highly configured “HAWCS” have been servicing Calgary’s public safety needs since September 2020.

There is a significant impact that HAWCS (Helicopter Air Watch for Community Safety) have made in Calgary’s community thanks to these aircraft. In 2020, operational flying hours, at around 10 hours each day, were 2,783, calls for service 4,617, leading to 2,736 charges, 2,000 of them criminal charges.

GERMANY

BUNDESPOLIZEI: After a competitive tender procedure Elbit Systems Deutschland was selected by the Procurement Office of the German Federal Ministry of the Interior, to supply XACT nv33 Night Vision Goggles (NVGs) for the German Federal Police.



© Elbit Systems

The Special Forces and Special Operation Units of the Federal Police are facing new threats and complex scenarios from organised crime and international terrorism. The XACT nv33 NVG will support the officers’ in the fight against crime across Germany.

This decision by the German Federal Police follows another satisfied German customer - the German Armed Forces - that are already using the XACT nv33 NVG in various missions. The XACT product family have already been selected by a number of undisclosed NATO countries among them Germany and the Netherlands, as well as the Israeli and the Australian Armed Forces.

The XACT nv33 is a lightweight binocular image intensifier that can be mounted on a wide variety of helmets and can be used head-mounted or hand-held. Its compact dimensions and its lightweight and the capability to use the system to drive a vehicle in absolute darkness will further increase the operational capabilities for federal officers and better align their readiness for future security requirements. [Elbit]

COVER: Some of the front covers produced over the past 25 years. For the first few years ‘electronic’ meant no-more than a bland text e-mail and then in 2000 the first PDF edition appeared for download on the Airborne Law Enforcement Association web site. A few years later the magazine struck out on its own website.



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SPAIN

BASQUE: On March 1 a €15.8M [\$18.7M] helicopter tender 102532-2021 was issued by Gobierno Vasco (Eusko Juarlaritza, the Basque Government, for the supply of helicopter services to the Unidad de Helicopteros de la Ertzaintza (police helicopter unit).

The tender is for the rental of twin turbine helicopter for rescue, primarily in the mountains, although it must be capable of carrying out any of the missions typical of a police force. The Tenders are to be considered on April 27. [TED 2021/S 030-072209/PAR]

Ed: Since the late 1980s the unit has owned and operated a range of Eurocopter (Airbus) helicopters in support of police and SAR work. Past types have been examples of the SA365C3 and AS350B1 but since 1997 the primary operational helicopters have been EC135T1 EC-GMZ and GNA based at Barrio de Iurreta, 13, 48215 Iurreta Vizcaya, Basque Region.

Delivered 24 years ago the main upgrade work undertaken has been the addition of an autopilot undertaken at Oxford in 2001-2002. Although delivered with a range of role equipment including an EO/IR camera much of it has not been carried or used in recent years.

The current tender seeks to upgrade the service by bringing in a contractor. The type is not specified but in the recent past mention has been made of the Airbus Helicopters H145 and Leonardo AW169. This has been a long process. In November 2008 the plan was to acquire an AS365N3 to replace a 21 years old AS365C. That left the unit without replacement. By 2019 the plans had altered and expected the purchase of an H145, possibly under a lease agreement.



The early model EC135T1 were fitted with an autopilot at Oxford © Marcus Taylor McAlpine Helicopters

UNITED KINGDOM

The reader should take the words that follow as editorial – it is so difficult to separate fact from fantasy – please make your own assessment.

NPAS: Later in this edition there is a letter from former RAF, police and air ambulance pilot Tony Cowan. It is not the first time he has written to PAN defending the efficiency of fixed wing police air support and yet denigrating decisions made by NPAS in setting up its fixed wing element. It is fair to say that he is passionate on both counts and has first-hand knowledge of police flying and the NPAS purchase process. Based on NPAS figures recently supplied under an FOI request he has set out the performance issues surrounding the current aircraft of choice.

In 2013 he was present when NPAS called a meeting of industry sales teams to brief them on the protocols for a new tender for an NPAS fixed wing. The brief effectively stated that each of the companies had to submit a proposal based on a very tight specification clearly written around the Vulcanair P68R – although the type was not specified by name it was clear to all present that no other type met the description. Part of the need was that the type required a crew of three 90 kg persons. All the aircraft types vying for the contract could easily meet that part of the requirement but could not meet the clear stipulation that it have a piston engine, high wing and retractable undercarriage. The P68R was unfairly unique in that specification and it is doubtful that the form of the requirement was even ethical.

No complete list of those submitting tenders has emerged but a few are known. Types offered and rejected included the low wing Diamond DA-42, rejected because it had a low wing, and the Britten-Norman BN-2A, rejected because the type had a fixed wing undercarriage.



Veritair Aviation Ltd proposed a Diamond DA-42 Guardian to take part in a flying trial but that was supposed rejected because the aircraft to be used for the trial had a French registration – which could have been changed. A similar proposal by Diamond Executive Aviation, also with a DA-42 Guardian was also rejected even though that aircraft was locally registered. The registration issue was unimportant – both the successful P68R trials aircraft and the production aircraft regularly flew in Austrian marks.

It was not a good start and, unlike the rejected types, the selected aircraft was still in need of being upgraded to enable it to fly in icing conditions – 'FIKI'. Both the Diamond and the BN were tried and tested and already had a FIKI capability and spare lifting capacity to enable them to carry the role equipment and more than the required crew. Over the past few decades the basic P68 with fixed undercarriage had been flight tested by British police on several occasions and rejected for reasons we do not know, the reports have not survived. In contrast, the type has served with several foreign police aviation operations so there were points of reference available to the people creating the tender.

NPAS had created a 'one horse' race and all that followed, the delayed delivery and performance issues, were of their own doing. It is difficult to see what they were trying to achieve with trying to squeeze the known operational needs (as demonstrated by the several existing UK fixed wing operations) into the smaller airframe.

I am certain that if NPAS had fully researched their aircraft of choice – perhaps by visiting existing police operators of the type in Europe and the USA – and had tasked Airborne Technologies with equipping a BN-2 or DA42 for the NPAS role we would not be having this endless discussion.



Similar problems are not unknown. Some eighteen years ago the police in the Netherlands, intent on replacing a specialised role equipment fixed wing task with helicopters, were embroiled in a lengthy negotiation with MD Helicopters when that company claimed to be able to upgrade the MD900 sufficiently to undertake a task previously undertaken with a BN-2. In the end that task had to be done with a much larger airframe - the AW139 – and MD lost the whole contract.

In mid-March, some days after the Cowan letter arrived with PAN, *The Times* in London carried a story that revealed that the police had wasted millions of pounds replacing helicopters with aircraft that cannot operate in dense urban areas.

The four fixed-wing aircraft, which they declared had cost £2.5M each, were intended to fly across England and Wales but, *The Times* asserted, cannot land at most airfields because they need lengthy runways.

It is more complex than that. Finding fuel for the piston engines out of hours effectively restricts night-time operations to pick up fuel to Doncaster. That, it appears, is not a surprise to anyone except NPAS. Any piston engine type operating 24 hours would face the same issue, it is that basic. There may be ways around the problem, like ensuring 24/7 fuel elsewhere, but that provision is part of the original requirement not an afterthought. A Diamond aircraft is unlikely to face this issue as it has engines that use readily available jet fuel and they could let down into a major airport like Heathrow or Gatwick – although mixing with the big airliners might be scary in normal times.

The 1990s 24/7 Teesside operation with a BN-2 faced the same problem but the larger aircraft carried more fuel, usually enough for the typical night, they were operating locally and had the run of the airport out of hours, access to a bowser—and they planned it that way.

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NPAS is of course the organisation that on launch in October 2012 announced it planned to operate from Southend and East Midlands Airports until the puzzled owners of each place told them it was news to them and they were not welcome.... the other gaff was the plan to go into RAF Colerne a place well known for being regularly swathed in fog. And that was just the master plan the whole organisation was set up on.

In *The Times* article – subsequently repeated in other newspapers – they stated that only two of the aircraft were operating at their purpose-built £2.85M hangar in Doncaster, because pilots do not want to work there. *The Times* also suggested that the aircraft may now be given to the Maritime and Coastguard Agency because they are not suitable for policing. I do not know where either of those items of information came from, they seem oddly specific and very like the unpublished Cowan letter proposes.

The financial numbers quoted in the newspaper story are probably too modest. Other sources suggest that the project cost at least £20M. At that level it may be surmised that they received four fixed wing for the price of three new helicopters. Certainly not the target they wished to achieve.

A further blow to the fleet management prestige of NPAS – if there is any left – was news that there seem to be a major problems with the availability of the London based EC145 fleet G-MPSA, MPSB and MPSC. The Exeter, Devon, based EC145 G-DCPB (apparently nicknamed the “Pasty Bus”) was ferried to North Weald on March 5 and was noted active on the 18th and G-MPSA was also active on the 18th. It appears that G-MPSC has been unavailable since last year, the last time it was noted in the air was November 15. It seems that the Exeter aircraft was moved to North Weald to replace MPSC. The latest is that one of the EC145s suffered damage during a training sortie at North Weald and is expected to be offline for some months, that appears to be MPSB, not flown since March 12. The unit appears to be operating using the Exeter aircraft and MPSA, which of them landed short of fuel overnight at Lippitts Hill on the March 18-19 remains a mystery.



EC145 G-DCPB at North Weald
© PAR

The overnight landing was at an inopportune time. Lippitts Hill is being refurbished with both the hangar doors and fuel tanks being inspected. The latter were dry on March 19 so, I understand, a bowser had to be taken to refuel the stranded EC145.



Dateline 25 March 2021. It seems that PAN has influence in very high places. The rumours of new doors being installed and the fuel tanks being refurbished apparently have some truth for the once abandoned helipad at Lippitts Hill is now busy again after just 18 months. When I arrived by chance it was time to see the doors being cycled and clearly operational. [PAR]

There is an expectation that NPAS will be reconfigured in the coming days, the central control will remain but operations will be dispersed and controlled regionally. The aircraft have been shuffled around so that each sub-type [i.e. EC135P2, EC135T2, EC145] is operated regionally. Unfortunately that has not ensured that every base even has an aircraft to operate. Availability is apparently dire and there is an urgent need for newer airframes.

Newer airframes do not come cheap and it seems likely that leasing will be the only way out. A year ago there was an exercise where industry was approached by the NPCC team to see if there was interest in leasing aircraft to the police in a similar manner to that undertaken by Babcock with Police Scotland in effect a disruptive option.

It is an expensive option and way beyond the finances of the whole of NPAS to change all the fleet. London though is a special case with major National Security implications so rumours that they are to go for a wholly leased fleet are undoubtedly sound.

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UNITED STATES

OKLAHOMA: The new air support facility for the Oklahoma City air unit was officially opened on February 27. The location for the new Air Support Unit facility, adjoins the Southwest Briefing Station (5500 block of S. Portland Ave). The Southwest Briefing Station, formerly known as Will Rogers, is the newest division in the Oklahoma City Police Department. It is located near Will Rogers World Airport and covers the southwest portion of Oklahoma City.

Building on earlier use of light fixed wing aircraft Oklahoma City Police Department's helicopter programme began back in 1973, with a six-month grant from the Oklahoma Crime Commission to lease a Hughes 300C helicopter. The leasing company provided pilots and the police provided observers to be trained as pilots. The first three observers were Manuel Beck, John Bohan and Don Ayers.



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The City purchased their own helicopter in January of 1974 and the Helicopter Unit was formed. The unit was originally located at Northeast Airpark, then later moved to Wiley Post Airport. In 1989, the unit relocated to the Downtown Airpark at 1401 South Western Avenue, Oklahoma City, a City Centre location and a few miles north of the airport. The air unit was one of the last occupants of the former Airpark, an area destined to be redeveloped with housing and commercial units.

They were operating MD500 helicopters when they acquired their first Forward Looking Infrared (FLIR) system, which allowed the observer to track objects and subjects by heat in 1990.

In 2014, the unit's helicopters were upgraded to the Airbus AS350 B3e, which allowed for expanded mission capabilities. In 2019, the unit purchased a new FLIR, moving map system and night vision goggles. These upgrades increased pilot safety and enhanced the unit's ability to provide support to patrol.

The Police Department, is a uniformed force of 1029 officers and 237 civilian employee. The air unit consists of eight pilots and two civilian mechanics, supervised by a lieutenant. Since it's inception, the Air Support Unit has accumulated over 70,000 hours of flying time, equivalent to over 4.9 million miles. They have responded to over 239,000 calls, assisted in more than 28,000 arrests and located over 5,600 stolen vehicles. [MSgt. Shawn Byrne/PAR]

AIR AMBULANCE AUSTRALIA

SYDNEY: From mid-February patients in Greater Sydney area have enjoyed an improved access to lifesaving treatment with the addition of one of the world's most advanced aeromedical aircraft to CareFlight's fleet.

The arrival of the first Airbus Helicopters H145 in the region has greatly enhanced the capability of air ambulances in Australia and gives patients the best chance of survival.



CANADA

ALBERTA: With the reduction in face-to-face fundraising caused by COVID in the past year all we seem to hear is that air ambulances are running out of money – when what they mean is that they managed to raise a bit less this year. Contrast that with the success of HALO in the past year.

A year ago and things were looking bad – and that was before the Pandemic struck – but the group got its fundraising act together in time and they now report that in the past year they have gone some way towards turning their fortunes around. In fact HALO Air Ambulance smashed their previous fundraising record.

Last May, the Southern Alberta-based non-profit announced, due to them not being able to hold in-person fundraising events due to COVID-19 restrictions, they were in jeopardy of losing money and having to scale back operations.

CEO Paul Carolan says the community came together in an amazing way, organizing significant fundraising events and making donations on their own. For the "Free Fry Day" event, for example, over \$350,000 in donations were made in a single day. The innovative fundraising has led to the organization receiving approximately \$3.2M in 2020, around double what HALO raised in 2019 and enough to see them through until late summer.

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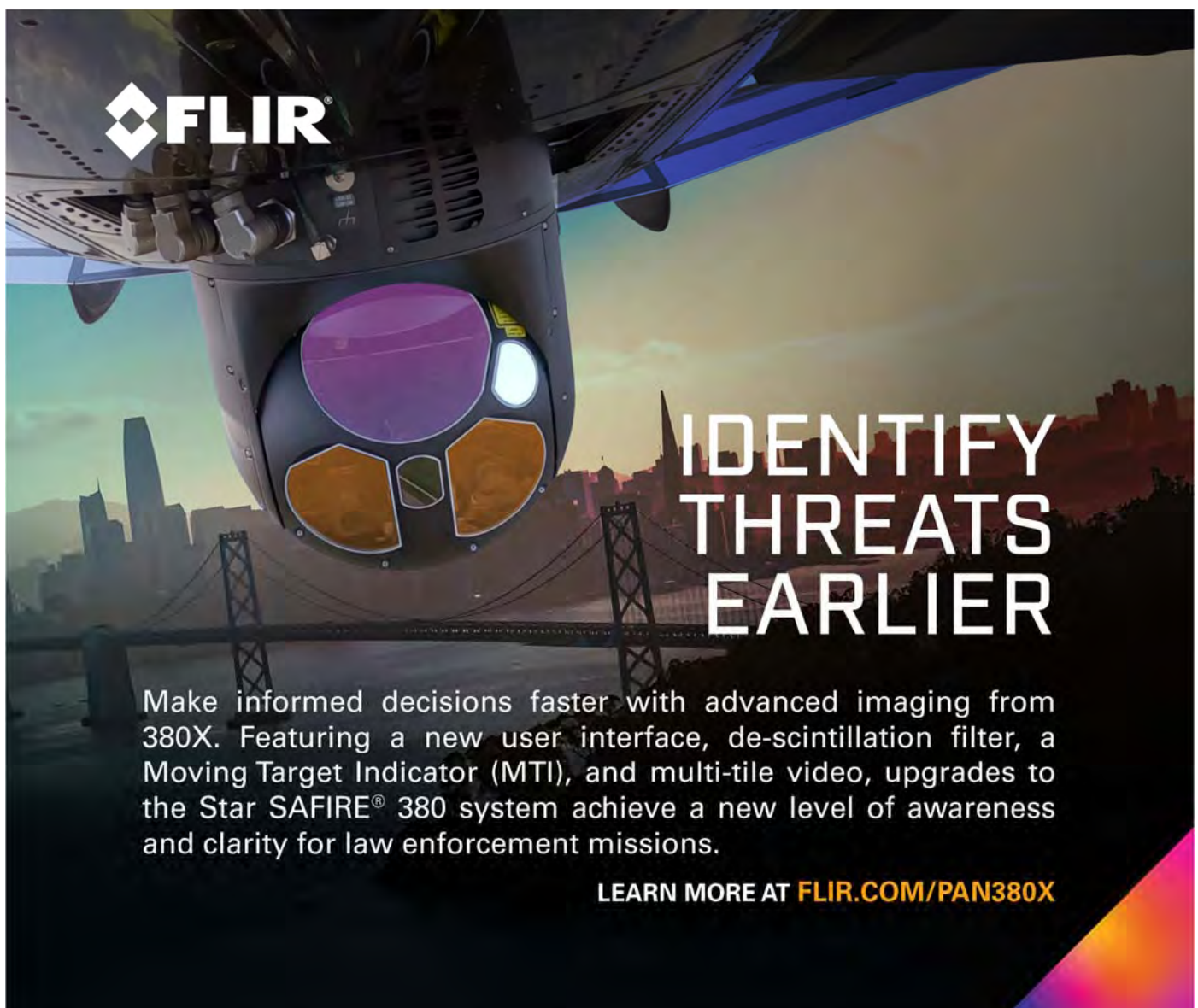
ATHENS: Early in March it was announced that two Leonardo AW109 Trekker helicopters had landed in Greece to strengthen the capabilities and efficiency of the National Centre for Emergency Care's (EKAV) air ambulance services. The arrival is thanks to a grant from the Stavros Niarchos Foundation (SNF).

The grant, part of the \$500 million-plus SNF Health Initiative dating back to September 2017. SNF collaborated with the Ministry of Health, and announced its intention to fully support a series of infrastructure and education projects to enhance the Health sector in Greece. The deal was signed off in March 2018.

The Trekker helicopters represent the evolution of the A109 E Power helicopters previously used by EKAV. The new helicopters are 1.5 metres longer than the old model, feature state-of-the-art air navigation equipment, an incubator for newborns and a negative pressure chamber, and allow for optimal entry and exit of injured and ill patients. The helicopters will go into service within the next three months, as soon as the individual configurations in equipment and the necessary training programs for Air Force flight and technical personnel are completed, among other preparatory steps.

The implementation of the grant was made possible through a collaboration between SNF; the Ministry of Health, which will have ownership of the helicopters; EKAV, which will use them; and the Hellenic Air Force, which will assist in their flight operation.

In addition to the two helicopters, the SNF grant includes two new Beechcraft King Air 350C airplanes equipped with state-of-the-art air navigation instruments. The new planes were expected to be delivered by mid-March. In addition to the new aircraft, SNF Health Initiative includes the construction of three new hospitals located in Komotini, Sparta and Thessalonika for completion in 2025.



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ROMANIA

HEMS: The first three Airbus H135 Helionix helicopters have been delivered to Bucharest to the General Aviation Inspectorate, for use with emergency medical operations.

The helicopters will be used mainly for medical evacuation, search and rescue missions in difficult conditions, especially in the mountains, and aerial interventions for critical medical cases.

The delivery takes place in the context of the 4-year framework agreement, awarded to Airbus in 2019, so that the French company can deliver its latest generation aircraft to Romanian medical services, in the face of the restrictions caused by the ongoing coronavirus pandemic. A further three are due for delivery.

[Helihub/French Embassy]

UNITED KINGDOM

NATIONAL: Air Ambulances UK has announced the appointment of Simmy Akhtar as the Chief Executive Officer to lead the organisation supporting the UK's air ambulance charities and wider air ambulance sector.

The appointment, effective from March, follows the successful merger of the former membership-based Association of Air Ambulances and the national charity Air Ambulances UK which took place in January last year.



Simmy will be at the heart of the Charity's plans for increasing its fundraising income, ensuring the successful delivery of Membership Services and government lobbying. She brings a wealth of experience to the CEO role. She was Chief Officer of Healthwatch Stoke-on-Trent and Healthwatch Staffordshire, worked with two independent Board of Trustees, held roles in the NHS and Local Authority environments, and practiced as a solicitor in the private legal sector.

Ed: Air Ambulances UK is nominally the collective representative of all the charity air ambulances, the related ambulance authorities and the service providers in the United Kingdom. That is the message they project, but it is not true. Several bodies have never taken up membership and are unlikely to.

AIR AMBULANCE SERVICE: Two new Leonardo A109 air ambulances are to serve the Warwickshire & Northamptonshire Air Ambulance (WNAA) and the Derbyshire, Leicestershire & Rutland Air Ambulance (DLRAA) as the latest upgrade airframes for The Air Ambulance Service (TAAS).

The new arrivals represents a substantial investment of more than £30M by the charity over the next seven years and is the culmination of an 18-month project to modernise and replace the current A109 helicopters.

The new helicopters are Leonardo A109 Grand New G-DLRA and G-WNAS and were launched at Sywell Aerodrome, Northampton, the home of aircraft provider and project partner Sloane Helicopters Limited, the new machines will be based at their respective homes at East Midlands Airport for DLRAA and Coventry Airport for WNAA and maintained by Sloane Helicopters.

Although the airframes are nominally the same as the aircraft they replace, they reflect advances in technology since the seven and eight years old predecessors were brought into service. As was the case with the earlier aircraft, the new GrandNew will be leased over the next seven years from Sloane Helicopters.



TAAS is a charity that also operates the Children's Air Ambulance, a service that utilises the considerably larger Leonardo AW169 helicopter, but after the tender process it was decided that it would opt for the like-for-like replacement in the latest GrandNew to replace the fleet. It does offer enhanced technology and an increase in weight carrying capability over the earlier helicopters and can carry four crew and a patient, allowing training sorties to be included. The normal crew remains three, a pilot, doctor and critical care paramedic.

The charity works closely with the East Midlands Ambulance Service and West Midlands Ambulance Service, to provide critical care to patients wherever it is needed the most.

The aircraft will be leased over the next seven years from Sloane Helicopters and are the latest to come online through this successful partnership.

Both aircraft were built in Italy by Leonardo and after arriving in the UK Sloane fitted the aircraft with clinical interiors. The introduction of these helicopters extends a long-standing lease based relationship with the charity since its HEMS operations commenced in 2003. Since then the service has flown 42,000 missions with an average cost per mission of £1,700.

Ed: Similar to the other air ambulances TAAS has faced shortfalls in door-to-door and street corner charitable income, in TAAS case this shortage has been put at £2.5M. Fortunately – as with most of the air ambulances - the core income from legacies has remained strong. Operating leased aircraft spreads the financial load and levels out the peaks and troughs. When you are building new infrastructure and buying new aircraft in the middle of a wholly unexpected pandemic certainly increases the perceived drop in income, as reported by other charities.

The WNAA was the first air operation launched at Coventry as the part-time Princess Diana National Air Ambulance for Warwickshire and Northamptonshire in 2002. The following year the service started flying with a helicopter leased from Sloane Helicopters. They used volunteer doctors. The service simplified its name to Warwickshire & Northamptonshire Air Ambulance and leased two paramedic crewed Rapid Response Vehicles (RRV) that supported the aircraft if it was unable to fly.

By its third birthday, WNAA began to provide daylight lifesaving services 365 days a year.

In 2011 the charity embraced the Derbyshire, Leicestershire & Rutland Air Ambulance (DLRAA) and operated under The Air Ambulance (TAAS) umbrella. TAAS took over the near defunct Children's Air Ambulance and got services flying by the end of 2012.

By the end of last year a total of 41,982 air and ground missions were realised and in addition the Children's Air Ambulance completed 583 Missions.

In 2018 The Sunday Times accused The Air Ambulance Service CEO Andy Williamson of using charity resources for his own benefit and of conflicts of interest including payment to a company of which he and his wife were directors. Deputy CEO & Director of People Alexandra Pope is responsible for HR decisions. There were allegations of bullying.

A campaign, led by the Times, appeared on Change.com but never really got going. The Charity Commission were already involved on these and other matters connected with the Children's Air Ambulance – PAN investigated the TAAS take-over of that failing charity at the time - so they re-opened the papers and looked into what they called serious governance failings. The Air Ambulance Service has been a long running area of concern however, the regulator appears to have quietly dropped its investigation of two years ago and the same people remain in charge.

CORNWALL: In a surprise move Paula Martin left the position of Chief Executive Officer at the end of February 2021. She had been in post for 12 years and it was the expectation of many that she intended to stay in post for a great deal longer. Steve Murdoch, Chief Operating Officer, has taken over the helm as interim Chief Executive Officer for the charity.

Mark Carne, Chairman of the Board of Trustees at Cornwall Air Ambulance made the announcement. Under Paula's tenure as CEO, the Trust has developed substantially.

As well as growing the operating headquarters at Newquay Airport, there has been significant development of service levels and patient care –increasing to more than 1,050 missions in the last 12 months and raising more than £2.7M to help purchase the current helicopter.

Paula, who also acted briefly for the Association of Air Ambulances for a period after their CEO departed quickly states she is committed to remaining an enthusiastic advocate for Cornwall Air Ambulance in the future.

Ed: Interestingly in researching this story I found that the Linked-In pages for Paula Martin have suddenly been erased. Part of the content lingers on in the Internet and a new profile has appeared under the name of Paula Bridget Wilkins.

There have been several sudden, unexplained, departures from air ambulance charities in recent weeks. Perhaps the effect of the pandemic on the bottom line for some charities is leading to some disquiet among Trustees. Sometimes unexpected financial pressure results in a need to place blame and heads rolling.



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DORSET & SOMERSET: Blizzard Protection Systems Limited and Dorset and Somerset Air Ambulance (DSAA) have launched the 'Air Ambulance Edition' Blizzard blanket; a new version developed for use in the air ambulance environment, which will help to save patients' lives.

In pre-hospital care, heat loss occurs through several mechanisms and evidence suggests that critically ill and injured patients presenting with hypothermia are at high risk of death. Once the patient is hypothermic, it is difficult to reverse this in the pre-hospital environment.

Recognising the advanced benefits that Blizzard's blankets provide to patients in the pre-hospital environment and as part of their ongoing efforts to improve patient care, members of DSAA's clinical team embarked on personal project in their own time, to design a bespoke blanket in collaboration with engineers at Blizzard. This culminated in the development of a new Blizzard blanket named 'The Air Ambulance Edition', which will be used to improve the thermal management and treatment provided to critically ill and injured patients.

DSAA will be the first air ambulance client to use the blanket however, it will also be available for distribution to clients around the world which include other air ambulances, military, ambulance, hazardous area response teams, police, fire and rescue services as well as mountain rescue. <https://www.blizzard-survival.com/shop/>

ISLE OF MAN: The fixed wing air ambulance service serving the Irish Sea island has signed up its third contractor in a decade.

In April 2017 the Isle of Man's air ambulance service transferred the multi-million pound contract from Capital Air Charter to Belfast based Woodgate Aviation for three years. The operation was tasked with responding to emergencies, and takes about 350 patients each year from the Isle of Man to the UK for specialist treatment. The Woodgate contract was scheduled to run until April 2020 but was subsequently extended for a few months. Woodgate also operated the Northern Ireland air ambulance service.

On December 7, 2020 the Isle of Man air ambulance service announced a new three-year partnering with IAS Medical operating from offices in St John St, Farringdon, London. The contract for the provision of a 24/7, year-round air ambulance link between the Island and the United Kingdom. The firm commenced its service on October 1, 2020 deploying a Beechcraft King Air 200 aircraft operating from Ronaldsway Airport and Noble's Hospital in the Braddan part of the island's capital Douglas.

The King Air aircraft is modified and includes a Lifeport system which incorporates an aerosled stretcher and patient loading system. This both enables a seamless transfer process and provides patient comfort. The aircraft can accommodate 2 patients (1x stretcher and 1x sitting) and 2 health care staff.

Although the contract is a local government arrangement it still attracts charitable fundraising efforts. A local woman will walk the Island's coastline to raise money in memory of her late brother. Emma Blackburn and her friend Maddie will walk 160km to raise money for the air ambulance operation. Her brother William was once a pilot for the ambulance and fulfilled his dream of flying whilst helping people. She has raised more than £5,000 ahead of the fundraiser next month, via Go Fund Me. That figure has already been exceeded. May 2021 marks two years since William passed away.

The island does have another air ambulance. During the renowned motor cycle TT racing a helicopter 'air ambulance' is a short-term lease service used purely to transport Island residents and race goers from point to point on-Island and is not used to transfer patients to the UK.

LONDON: London's Air Ambulance Charity & Specialist Aviation Services have announced they have signed a further 3-year maintenance contract, supporting London's two MD902 Explorer helicopters in the provision of air ambulance services to central London.

London delivers rapid response and cutting-edge care to save lives in the city of London via helicopter or rapid response car, the Charity is the only helicopter emergency service caring for the 10 million people that live, work & travel in London every day.

MIDLAND: The first spade has entered the ground to mark the start of construction of a new airbase and charity headquarters for Midlands Air Ambulance on the Shropshire/Staffordshire border. Enabling

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works have now been started by main contractor Morris Property and the project is expected to complete in late 2022.

The new facility, which has been in planning for more than four years, will boost the charity's pre-hospital helicopter-led emergency medical service, providing a purpose-built environment for clinical staff, advanced clinical simulation training room, and space for two aircraft.

NORTHERN IRELAND: NI's Health Minister has announced funding of £1M for Air Ambulance Northern Ireland. As with most UK air ambulance charities they have seen a fall in fundraising income due to the pandemic and have also been faced with a near 20% rise in tasking.

After a troubled start, the service launched in July 2017 and is a partnership between the charity Air Ambulance Northern Ireland and the Northern Ireland Ambulance Service.

YORKSHIRE: As part of its Special Mission business unit's entry into the UK charity Air Ambulance market, Gama Aviation announced the supply of a relief aircraft, G-GMAH to support Yorkshire Air Ambulance's operations whilst one of its aircraft undergoes its annual service. The contract was signed on March 3.

It was exactly a year earlier, as the UK entered into the restrictions surrounding COVID that Gama Aviation declared their intention to its penetration of the UK emergency services market. At that time they were showing their spare H145 aircraft G-GMAH, a machine that was primarily assigned to support the Scottish Air Ambulance operation. Gama took full control of them last year.

The Yorkshire Air Ambulance deal marks Gama Aviation's first foray south of the border into the Charity Air Ambulance sector since HEMS operations in Scotland went live on 1st June 2020. Using its near three decades of experience in air ambulance operations and recent successful transition of three major air ambulance contracts with no loss of operational availability, Gama Aviation is seeking to disrupt the largely static choice of operators that currently serve the market.

Photos: Captain Andrew Lister and Steve Waudby,
Director of Aviation at YAA.
© Gama Aviation



UNITED STATES

FLORIDA: Air ambulance company Jet ICU is looking to land a new lease with Tampa International Airport for its headquarters. If approved, Jet ICU will invest roughly \$3M to construct the new hangar that's at least 30,000 square feet; it will house offices, maintenance and operations. The agreement would allow for two, five-year renewal options if approved by the authority. At the end of the initial term, the new hangar reverts to the authority. It is expected that the construction will complete within 12 months.

In December 2020, the Hillsborough County Aviation Authority entered into a letter of agreement with Jet ICU to occupy a hangar located at 4408 W. Tampa Bay Blvd. while it moves its HQ operation to the airport.



BRITISH COLUMBIA: In partnership with Talon Helicopters, DART Aerospace recently received Transport Canada approval for Talon to perform night hover refill operations with its DART AS365 Fire Attack System (FAS). The approval is the first step in pursuing a full FAA STC update to allow night vision goggles (NVG) aided and unaided night hover refill operations on all DART AS365 Fire Attack Systems.

This move comes as demand for night firefighting increases around the globe to help battle the world's growing number of devastating wildfires. Certified tanks like DART's fire attack system are the only fire-fighting tool for night VFR flights.

The original AS365 FAS STC only allows ground fill operations at night. After purchasing the FAS-equipped aircraft, Richmond, B.C.-based Talon Helicopters requested DART's support in removing night hover refill restrictions.

Dart installed NVG capabilities on the aircraft in preparation for increased firefighting support. The restriction on hover refills were an obstacle to rapid response. DART worked with Transport Canada and Talon, arranging NVG-aided and unaided flight tests to demonstrate the safety of night hover refill operations. DART submitted the flight test report and other certification documentation to Transport Canada.

JAPAN

EHIME AND YAMAGUCHI: Last month the prefectures of Ehime and Yamaguchi signed a Mutual Support Agreement regarding their helicopter operations. Under the agreement, each prefecture will be able to request support from the other for their firefighting and disaster prevention requirements.

Ehime Prefecture operates a Kawasaki built EC145, while Yamaguchi Prefecture has a Leonardo AW169.

Under the agreement, support can be requested when a helicopter is unavailable due to maintenance, or there is an additional requirement which cannot be fulfilled. The option for jointly-run disaster prevention drills has also been set up. Prior to this, Ehime had signed a mutual support agreement with Hiroshima and the four prefectures of Shikoku region, and this is also the sixth prefecture with which Yamaguchi has a similar contract.

UNITED STATES

COLORADO: When wildfires affected Colorado and the western US last year it fell to water- and retardant-dropping airplanes and helicopters to make the difference between a small blaze and a killer giant fire. Those resources were difficult to obtain at short notice and individual states found themselves pitted against each other to buy in aircraft at a reasonable cost.

The problem is expected to get worse rather than better as climate change leads to longer fire seasons filled with more and larger blazes. Compared to the late 1970s and early 1980s, Colorado's core fire season is now 78 to 84 days longer. With that in mind Colorado lawmakers have signed off on spending tens of millions of dollars this year to improve the state's access to wildfire-fighting planes and helicopters by extending lease agreements. Only too well aware that they have insufficient fire fighting resources of their own, they also have agreed to purchase a state-of-the-art firefighting helicopter to give themselves a degree of operational control.

Colorado currently owns two single-engine Pilatus PC-12 aircraft dedicated to firefighting, but both are assigned to command and control and have no water drop capability. One proposal already approved but awaiting a signature is extending current contracts for two single-engine air tankers by 90 days at a cost of \$620,000. Two helicopters it has on contract for the fire season would likewise have their term extended by 110 days at a cost of \$1.36M. A large air tanker would also have its availability extended from 75 days to 110 days at a cost of \$5.36M.

These extended leases would assure the state of around 6 months of fire cover if it is required. The legislature have also approved the allocation of \$30.8M to fund the purchase and operation of a Sikorsky Firehawk helicopter.

FLORIDA: Collier County Emergency Medical Services in Naples, Florida are now operating their new Airbus Helicopter H135 N911CB in replacement for the 20 years old EC135T1 N911CK. Although promoted as a brand-new helicopter it is a 2019 build that has been delayed entering service by the pandemic. It was delivered late last year and has now completed its role fit at Metro Aviation in Louisiana.

Collier County has issues with the distance between trauma centres. The operation undertakes around 285 missions annually. There are no major hospitals within the county, the closest trauma centres are Lee Memorial Hospital or Kendall Regional or the hospitals over in Broward and Dade County. That means when it comes to someone critically injured, time is of the essence. The new model 135 looks identical to the old one but they operate differently. The new one got some important safety upgrades.

It provides much more safety for the crew, it has autopilot features that the old aircraft does not have. It also can carry more weight and it actually goes a little bit faster. Metro outfitted the helicopter with a standard medical interior featuring a customized Mermaid Manufacturing Medi-Kool cabinet, Dual Pilot/Single Pilot IFR systems, Outerlink's aviation software and a three-colour polyurethane paint job

Metro Aviation has delivered to Tampa General Hospital Aeromed a significant upgrade to its fleet of critical care helicopters with the addition of a new Airbus EC145e N630AH. The new helicopter provides more cabin space and faster air speeds than their current primary aircraft.

The new EC145e is equipped with Metro's standard medical interior and Genesys Aerosystems' instrumental flight rules (IFR) HeliSAS Autopilot and Stability Augmentation System, providing workload reduction for both single and dual pilot operations. The aircraft also has the Outerlink Global Solutions IRIS combined voice,



video and flight data recorder system onboard. The video function and data monitoring can be used for pilot training, while the flight following, push-to-talk radio, and live alerts and warnings allow Metro's Operational Control Center to monitor the location and condition of the aircraft and verify alerts and conditions in real time.

Aeromed has been part of the Metro Aviation family of operations customers since 2013.

SEARCH & RESCUE

GERMANY

BUNDESWEHR: Airbus Helicopters has handed over the seventh and last H145 for the search and rescue (SAR) service of the Bundeswehr to the Federal Office of Bundeswehr Equipment, Information Technology and In-Service Support (BAAINBw) on time. The previously delivered helicopters are used for training and field testing and are available 24/7 at the Niederstetten and Nörvenich air bases for rescue operations. Operations with the new H145 LUH SAR will begin shortly, as planned, at the third SAR station in Holzdorf.

Among other features, the helicopters are equipped with high-performance cameras, Trakka searchlights, emergency beacon locator systems, a full suite of medical equipment, rescue winches, and load hooks that can be used for fire-extinguishing tanks, for example. They are easy to identify thanks to the characteristic bright orange paintwork on their doors, featuring 'SAR' in blue lettering.

NORWAY

Despite the challenges posed by the ongoing Covid-19 pandemic, Leonardo has successfully delivered the tenth AW101 All-Weather Search and Rescue (AWSAR) helicopter to the Norwegian Ministry of Jus-





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tice and Public Security.

The remaining six aircraft out of 16 are currently being assembled, integrated and tested at Leonardo's site in Yeovil, UK. The 330 squadron of the Royal Norwegian Air Force, which operates the platform, has completed more than 200 flight hours, largely on SAR operations, which have included several life-saving missions in the inhospitable Norwegian environment, such as a night mountain rescue, an offshore rescue, as well as a challenging emergency transportation. Further to the go-live of Sola in September 2020, further bases in Ørland and Banak are expected to become operational this year.

UNITED KINGDOM

COASTGUARD: Last month the Maritime & Coastguard Agency published the Contract Notice for the UK Second-Generation Search and Rescue (UKSAR2G) contract on gov.uk.

UKSAR2G seeks to procure a successor service to both the UK Search and Rescue - Helicopters (UKSARH) and Aerial Surveillance and Verification (ASV) contracts when they expire between 2024 and 2026.

These contracts provide Her Majesty's Coastguard with helicopter assets and operations to comply with international Search and Rescue (SAR) obligations, rescuing people in distress around the UK coast, and fixed-wing assets and operations to monitor polluting, illegal or anti-competitive activity.

Already Airbus has announced that it is teaming with Draken [formely FRA Aviation/Cobham] is putting forward a bid. Speculation on the Airbus bid suggests that the aircraft types that the consortium will propose are the H145 with the H175 to undertake the long distance sorties.

Official details of the aircraft to be proposed for the requirement are scant, with the partners simply saying that they will "deploy advanced helicopter, fixed-wing and unmanned aircraft". A final decision on the platforms to be offered will be based on requirements contained in a request for proposals due later this year.

Draken Europe will operate the helicopters, fixed-wing aircraft and unmanned systems. Rotorcraft will be exclusively sourced from Airbus Helicopters and this has led to speculation that the current Bristow fleet of the Sikorsky S-92 and AW189 will be replaced by the H175 and H145. These two types will offer significant savings in first cost and operating costs over the current fleet.

Draken Europe, formerly Cobham Aviation Services, already operates search and rescue and mission-critical helicopter services, and performs fixed-wing surveillance activities.

OIL AND GAS: Babcock's Aberdeen-based North Sea Search and Rescue (SAR) team recently completed their 500th emergency response tasking. The crew responded to a call from a North Sea platform, safely transporting the patient back to the mainland for hospital treatment.

Babcock SAR team engaged in a training exercise in the North Sea. If using please credit Sean Harrower/Babcock

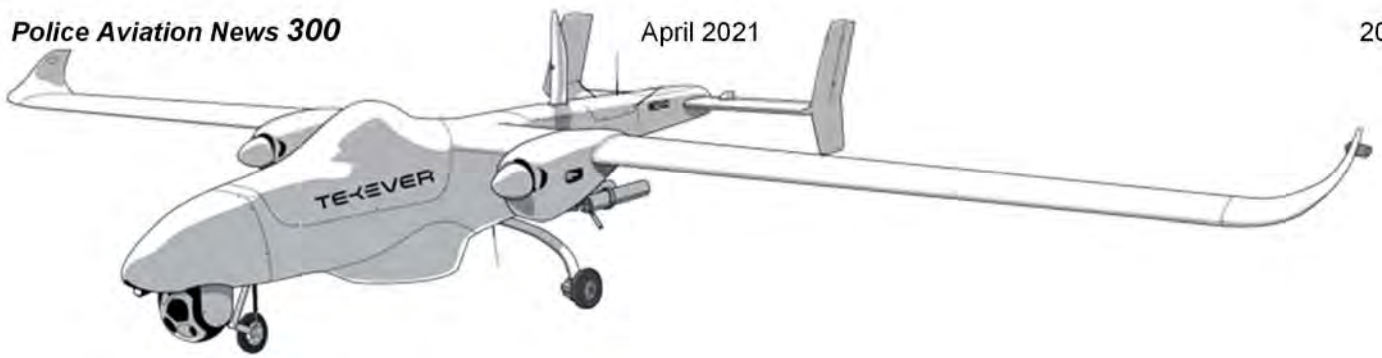
The Babcock SAR team's 500th tasking milestone comes just after a new contract extension was announced that will see them continue delivering their lifesaving service through to spring 2025. [see last month]

Meanwhile there have been developments that will alter how the service will be delivered.

Babcock, the aerospace and defence company, has entered into a conditional agreement for the sale of its Oil and Gas aviation business to CHC Group, LLC (CHC). The Oil and Gas business, which is part of the Group's Aviation sector, provides offshore oil and gas crew transportation services in the UK, Denmark and Australia. It is headquartered in Aberdeen, UK, and employs over 500 people and operates around 30 aircraft across its three locations.

This is part of the business formerly owned by Bond, indeed there were rumours that Bond were again bidding to take over the business. The other part of that business remains at Staverton. Although the transaction has some way to go it has already been suggested that it will greatly improve the product that CHC is able to offer the UKSAR2G bidding process.





After several weeks missing from the air, the Tekever AR5 unmanned aircraft G-TEKV based at Lydd and operating for Border Force across the English Channel returned to the skies last month. The reason for the absence is not known but is likely to be an annual maintenance or systems upgrade. Under the terms of their contract Tekever cannot make any customer specific comments.

The AR5 Evolution Mark 2 is a 7.3m x 4.0m fixed wing craft built by Tekever in Portugal. It was designed as a tactical UAS for medium and long-range maritime surveillance missions. The fixed wing landplane is capable of carrying up to 50 kg, with a reduced load it can undertake up to 20 hour missions, the AR5 features a wide range of sensor options and a multitude of features.

As with the load and endurance fuel consumption depends on the configuration, but a typical configuration results in the consumption of 3.5 to 4.5 L/h. The drone was designed and tested to fly with just one engine.

At the moment the type cannot be flown in known icing conditions, the capability is planned for the future but so far there has been no customer requirement expressed.

That stated role load of 50kg might include the carriage of the Wescam MX-15 [45kg] or similar sensors but there may not be enough clearance to carry such large sensors and they are probably much too expensive to risk in a low cost drone over water. To date customer needs have been met by far smaller rudimentary sensor packages. In recently observed flights over the English Channel the craft flies relatively low so a larger sensor is unlikely to be needed. Doing daylight video and thermal image is a standard configuration, providing HD live video quality feed to the ground over RLOS and BRLOS.

The missions flown from Lydd have been over water in the congested narrows of the English Channel looking for would-be-migrants making their way towards England from France. To date flights have been under 10 hours. G-TEKV was registered in October 2019 to Tekever's office in the University of Southampton's Science Park. As a tried and tested system this may be useful for consideration at the next PAvCon Europe as a 'disruptive technology' It will also be interesting whether someone from the ongoing SAR contest notices it

Meanwhile, back in the English Channel, the flow of would be migrants continues. The government talks of sending them back and it may well do but significant numbers still arrive. As March came to a close it appears that three times the number were arriving compared to 2020. If the migrants are aware that there is a three times better chance of success today than there was last year they are going to just keep coming. March 2021 - 603. March 2020 - 187

The total for the first quarter of 2021 [January to March] is therefore 1,134 again nearly three times the rate for 2020 when it was just 473.

The total for March 2021 was greater than the total for the first quarter in 2020 and more than three times the total for March 2020. Yes, just where is the money being spent

INDUSTRY

The large **AVIC AG600** amphibian continues in development for a range of tasks including fire fighting and SAR. The state media in China has been saying that it expects the type to conduct water-dropping test flights over fire sites before the end of the year.



The AG600 has moved to a new stage in its testing campaign, operating flights over the sea. The aircraft is scheduled to conduct its first take-off from the ocean surface, according to a China Daily report quoting the aircraft's manufacturer based at the China Aviation Industry General Aircraft (CAIGA) factory at Zhuhai airport.

The AG600 has typically conducted tests in calm reservoir waters, the four-engined aircraft, B-002A, has been seen conducting sorties that involve a water take-off and landing.

In February the former **Euroavionics GmbH** formally changed its identity to **Hensoldt Avionics GmbH**. There have been no major changes to company information, addresses and telephone numbers.

Avalex's video recording units have maintained reliability and ruggedness, consistently meeting DO-160D and MIL-STD-810F standards. These ground-to-air-ready units have been a proven choice of numerous ISR operators worldwide and have played key roles on major platform upgrades like the S-70M Black Hawk. With the addition of the AVR8404, an already-expanding line of reliable AVR products has now taken on new value, in both cost and capability. The AVR8404 unit is especially valuable as a low-price-point option that enables both autonomous and remote control, and it is multi-channel, allowing simultaneous recording from both SD and HD sources. Options for event marking, KLV data, image snapshots, jog playback, playback-while-recording, as well as data specifications for Ethernet, CANbus, RS-232 or RS-422, discrete, USB, SD, SSD removable memory, and 54 GB of internal memory round out features that are exceptionally suited for integrators.

Avalex is not just offering this new video recorder unit, however. In addition to the DVR functioning, customers can now perform critical review of captured mission data with ease, using the included Avalex-designed media playback software called Avalex Mission Replay Software or AMRS. Playback, analysis, mission debriefing, as well as the processing of recorded information for post-mission use, is available with all the playback options needed to maximize analysis, such as video snapshot, thumbnail previewing, event, mute and unmute markers, time synchronization, and much more.

More negative news on the UK's new **Emergency Services Network (ESN)**, the latest estimate is that it might now face a further 2-year delay. Even that prediction is somewhat flexible as dates mentioned are early 2024 or late 2025. How does that work?

The imprecise prediction has come from John Black the latest in a long line of new programme chief's. According to him there is no fixed date for switching off Airwave and a warning that prototype devices that have yet to be issued will have reached their 'end of life' before the system goes live. Meanwhile operator after operator is being forced to renew their 'aged' Airwave devices as they also reach their end of service life.

It was the tenth time the Home Office had been in front of the **Public Accounts Committee** and on this occasion the Permanent Secretary for the UK Home Office, Matthew Rycroft, was the person to reveal that the new 4G based ESN is now unlikely to completely take over from the existing platform until early 2024 or late 2025. Previously it was due



by December 2022.

At present the emergency services (police, fire etc.) interface via the Motorola-owned **Airwave** network, which is believed to cost the UK around £3billion and harnesses **TETRA** (Terrestrial Trunked Radio) network technology. TETRA is slow and expensive, although it does deliver excellent voice coverage and a 97% geographic reach.

The high cost of Airwave is often highlighted as one of the main reasons why the government, in 2015, decided to replace it with 4G. The Home Office originally expected that emergency services could start using this ESN in September 2017, allowing Airwave to be fully replaced by December 2019.

Mobile operator EE (part of BT) holds the main 4G based (mobile broadband) network contract, but the ESN covers a variety of different areas with other suppliers that have also been delayed (e.g. handsets, software etc.). EE's contract does not include all aspects of ESN coverage - the Home Office is responsible for commissioning 292 masts to be built in areas not covered by the market and those are delayed too. Those 292 masts are primarily in areas of special interest – areas of natural beauty and remoteness where a commercial company would certainly face an uphill struggle in getting planning permission. It may ultimately be the same team digging the holes and erecting the aerial towers but the permissions need to come with an official stamp of approval.

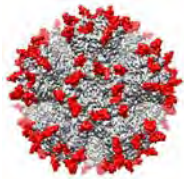
On the positive side there are new generation handsets in service, about 1,000 were issued for use by immigration enforcement in September last year, since then another 5,000 were expected to be rolled out for use.

The **Public Accounts Committee** highlighted the continued lack of a business case for the programme. They were promised one in 2019 (but that was two years after the system was supposed to have been rolled out), then they were promised one in late summer 2020 but COVID further delayed that and the latest guess last September was that it would be written by March 2021.

There was a draft business case last September, and that business case has been shared with the programme board and with senior users. It needed to go through a review process with the Cabinet Office. Delays were mainly that no-one appears to have got their head around the technical stuff, let alone how it may fit into all scenarios and logistics around the deployment planning.

The crucial factor is the turn off date for the Airwave system. Until that moment arrives the users are paying for two systems at once, and that massively increases costs. They have a target date of early 2024 which is still three years away and that does not really address the potential problems that may be presented by fitting ESN into aircraft. That little problem remains on the back burner.

Air-to-ground is now under contract, and the first test run of the first air-to-ground mast has been run and found to work well. Cobham is on board to deliver the air-to-ground devices.



Frequentis is working directly with the Home Office on the development of a gateway, which will connect Frequentis multimedia communications platform 3020 LifeX to the new ESN. The gateway will provide an Airwave-comparable feature set, and, once ready, will be installed and tested within the Ambulance Radio Program (ARP), a reference customer of Frequentis' and which is working closely with the Home Office. The two recent successful test demonstrations against ESN have allowed Frequentis to show the Home Office the intermediate progress of the project. Participation took place remotely, allowing the momentum of the project to continue despite the challenges of COVID-19.

The Frequentis 3020 LifeX is already being implemented for a number of police and emergency services organisations across Great Britain on Airwave, and worldwide, and will be compatible with ESN in due course. The gateway development, supported by subcontractor, Nemergent, will ensure that control room operators using the Frequentis LifeX platform have access to a fully approved and easy to use interface into ESN for all mission-critical communications. LifeX has been designed to allow emergency services operators to maximise the benefits of multimedia communications, and when next generation 999 (NG999) becomes a standard it will also allow members of the public to share images and videos of incidents that can be analysed in real-time.

MD Helicopters remain in business but it is becoming increasingly clear that the products they are offering potential customers are very limited.

In recent years they have displayed and offered new upgraded variants of the MD600 and 902 on the floor

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of the annual HAI Heli-Expo but none of them have advanced beyond titillating the viewing show attendee. The manufacturer remains trapped by its only lucrative product line, variations on the 1960s era OH-6A Loach/Cayuse. Under various guises the OH-6 sells to foreign powers as an attack helicopter. It is the same shape as the Vietnam War era type, although there have been significant manufacturing alterations to the structure and the provision of an ultra-modern glass cockpit. From being a well respected and numerous law enforcement airframe its popularity has plummeted over the past 25 years. There have been some successes, but they have been few, several operators have had their existing airframes economically rebuilt to a modern standard.

The type that has seen the main uptick in popularity has been the AS350/H125, and that is also a fairly ancient design. The difference appears to be that the original AS350 design was significantly larger and offered a configuration that was predisposed towards continuous development.

In an effort to turn around the situation MD have been inviting Las Vegas area operators and agencies to view and schedule a demo flight in the MD530. The helicopter was in the area in mid-March and visiting North Las Vegas airport (VGT), McCarran International Airport (LAS), and Henderson Executive Airport (HND).

Last August the MD 530F design enjoyed an approval for increased max takeoff gross weight from 3,100 lb to 3,350 lb, boosting performance and useful load while maintaining a safety margin to support mission options. The updated helicopter also incorporates an optional advanced NVISB interior designed to enhance safety during night operations.

The advanced glass cockpit features the Garmin G500 TXi, Electronic Flight Instruments (EFIS), Howell Instruments Electronic Engine Instruments and Crew Alert Systems (EICAS), and Garmin GTN 650 Touchscreen NAV/COM/GPS.

It would seem that such as Las Vegas PD, a long standing customer, will be looking to buy new and they have already shown an interest in the Airbus Helicopters product by buying the H145 and the H125 is only a step further.

Airbus Helicopters is now offering its H125/H130 Crash Resistant Fuel System (CRFS) retrofit solution at a promotional price and new additional incentive for any order placed in 2021.

This CRFS solution is now available on H125 AS350 B3/B3e with FAA/EASA FAR/CS 27.952 compliance, and on EC130 B4 with FAA/EASA FAR/CS 27.952 compliance except for operations with underbelly installation.

The Airbus solution does not work with the cargo hook but other manufacturers offer alternatives that do. As this promotion is primarily a flight safety issue, customers who retrofit their H125/AS350/EC130 aircraft with a third-party CRFS kit, will see Airbus Helicopters will offer an incentive in training credits.

Airbus Helicopters and major civilian airworthiness authorities (EASA/FAA) strongly recommend that operators retrofit their helicopters with CRFS and any other equipment offered to enhance operational safety.

East Anglian Air Ambulance [EAAA] will use an innovative ultrasound device to check patients and diagnose them quicker, improving their chances of survival in the most perilous situations.

The smartphone-connected point of care ultrasound (POCUS) by US-based Butterfly Network can scan the whole body using one probe at the scene of an incident.

By using the device, which looks deep within internal organs for damage and scans the entire body, the air ambulance can immediately share the information with emergency medics on standby, speeding up treatment.

EAAA have been trialling the Butterfly iQTM portable ultrasound for a number of months. The information it gives can, in some cases, be the difference between life and death. The ability to share scans remotely to teams of ultrasound experts and clinicians is greatly improving the care offered to patients by aiding continuous improvement in this area.



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Rolls-Royce and Italian airframer Tecnam are joining forces with Widerøe, the largest regional airline in Scandinavia, to deliver an all-electric passenger aircraft for the commuter market, ready for revenue service in 2026. The project expands on the research programme between Rolls-Royce and Widerøe on sustainable aviation and the existing partnership between Rolls-Royce and Tecnam on powering the all-electric P-Volt aircraft.

The programme will look to cover all elements of developing and delivering an all-electric passenger aircraft that could be used in the Norwegian market from 2026. Due to its topography, Norway makes extensive use of aviation for regional connectivity and has an ambition for all domestic flights to be zero emissions by 2040. Rolls-Royce will bring its expertise in propulsion and power systems, Tecnam will provide aircraft design, manufacturing and certification capabilities. Widerøe's mission will be to ensure that all competence and requirements of an airline operator are in place for entry into service in 2026.

In the frame of maintenance programme improvements for its light single-engine helicopter range, **Airbus Helicopters** has continued to improve the maturity of the hydraulic main rotor actuator (MRA) from its supplier, Novintec, while improving its reliability and reducing maintenance costs.

This improvement, available for AS350B3/B3e with double hydraulic and EC130 B4/T2 aircraft, consists of an improvement to the welds on the temperature probe harness. This fix does away with an intermittently flashing hydraulic light on the warning panel.

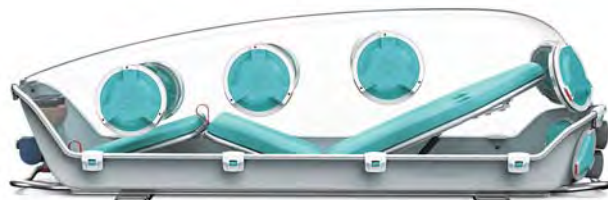
The new solution is now systematically implemented free of charge by the repair centre during any repair or overhaul, through the replacement of the temperature probe harness, bringing the part to the latest G amendment status.

Airbus Helicopters is also working with Novintec for the qualification of a second repair centre in North America in order to increase repair capacity and to provide a greater degree of service around the world.

Nearly a year after the Norwegian equipment came to public notice, deliveries of the Epi Shuttle continues to make the news. The Royal Canadian Air Force (RCAF) has acquired 15 EpiShuttle pods to transport infectious patients by air. Five EpiShuttle's goes to RCAF's primary search and rescue squadrons. The remaining ten devices are stationed at 8 Wing Trenton, ready to launch an evacuation of infectious patients.

Elsewhere EpiShuttle's are acting as aid gifts. The U.S Embassy in Latvia has donated two EpiShuttle to State Emergency Medical Services (Neatliekamās medicīniskās palīdzības dienests). These are the first examples of the EpiShuttle to be stationed in Latvia but they will be used primarily in ground transport to transport critically ill Covid-19 patients between hospitals.

In addition to Covid-19 medevacs, the EpiShuttle is also used for transport of patients with other contagious diseases as the SARS, MERS, Ebola and MRSA. Scanmed SIA is the Latvian distributor of the EpiShuttle. The EpiShuttle is NATO's stock listed and CE-marked as a class one medical device.



Generally the customer gets what they order. If they have not done their research and due diligence with an eye on the detail they will not get what they think they want. The result is they will be undoubtedly be disappointed and criticised.

Airborne Technologies can put their Mission System Airborne LINX in pretty much any aircraft you care to name and it will perform well. It is well thought of and installed on the customers aircraft of choice across the world. It is to be found in the Viking Twin Otters for Vietnam and due to be fitted in the Bell 429s of the Thai Police. The aircraft of the customers choice.

They recently promoted Airborne LINX as an option for the popular Diamond DA40 light single. Airborne Technologies are demonstrating the flexibility of their mission system. It can be adapted to truly any customer requirement regardless of the size of the aircraft.

The lightweight and compact ISR package for the DA40 includes a 20kg class EO/IR camera, an operator station including Augmented Reality System integrated in the backrest of the co-pilot seat and a downlink system. The aircraft interior is compact and probably not an environment you would want to be in for too many hours but it is very much an "ISR Starter-Kit" for tight budgets. Most potential emergency services operators in European countries will not allow it to be used, simply because of the single engine, but it clearly illustrates that it is the customer that selects the correct aircraft for their mission, the contractor then integrates the basic or complex ISR solution to get the best out of the aircraft.



The Corona pandemic requires fast and sensible solutions. For a customer operating in the search and rescue role, **SPAES** is offering the UV CAD circulation air disinfection system and has put in place the associated modifications for the Airbus H145 helicopter. To find the optimal installation position, an air circulation test was performed in the helicopter. After completion and analysis of the tests, a mounting position behind the center console was determined. This position allows effective disinfection against a range of potential hazards including Sars, COVID-19, Hepatitis A and influenza.

The required Minor Changes for installation in the H145 were performed in SPAES' EASA Part 21J Design Organisation.

www.spaes.de



ACCIDENTS AND INCIDENTS

22 February 2021 Beechcraft C90A N447DB Air ambulance operating for Guardian Flight of Utah struck a deer during the rollout sequence following landing at Blanding Airport in Utah, USA. The aircraft sustained damage to the right engine propeller and right engine cowling. The deer impacted the right engine propeller, engine cowling and right main landing gear causing damage to both engine propeller and cowling. The aircraft was removed from service for inspection and repairs. [Concern]

24 February 2021 Air Tractor AT-802A EC-MNF. Fire fighting aircraft of Forestal Mininco S.p.A. located in Santiago, Chile [part of the Wood Product Manufacturing Industry]. The aircraft departed from Angol [Aeródromo Los Confines] and crashed under unknown circumstances in forested land near Camp Lindo, Nueva Imperial, Chile, 130km south, killing the pilot.

25 February 2021 Eurocopter EC130B4 N259AM. Air Ambulance of Air Methods operating at Richard Lloyds Jones Airport, Tulsa, Oklahoma USA suffered substantial damage in a hard landing where the skids were spread. No injuries reported. [ASN]

12 March 2021 Eurocopter EC145 G-MPSB- National Police Air Service. While undertaking a training flight at North Weald Airfield, Epping, Essex reported to have landed heavily with significant damage to the landing skids but no injuries. [Details not confirmed]

13 March 2021 Antonov An-26 '02' Kazakhstan Border Guard. Aircraft written off after crashed at Almaty Airport, Kazakhstan, killing four of the six occupants. The aircraft crashed about 600 m short of the threshold of runway 23R and burst into flames. Weather at the time of the accident was poor with overcast clouds at 300 feet (91 metres), a visibility of 5 km with light freezing drizzle and mist.

18 March 2021 Beriev Be-200Chs RF-31140. Amphibian of the Russian Ministry of Emergency Situations. While undertaking training circuits at Krasnoyarsk-Yemelyanovo International Airport it suffered a landing gear collapse. No injuries reported.

25 March 2021 Kamov Ka-32A11VS RF-32805 Russian Ministry of Emergency Situations. Crashed into the waters of Curonian Bay near Kaliningrad during a training flight. Two people were rescued, another one is missing. [ASN]

27 March 2021 Leonardo AW169 GDF 504/MM81970 Guardia di Finanza A Leonardo AW169, operated by the Guardia di Finanza on ground at Bolzano Airport started to taxi, paused, veered to the left, lost directional control and fell on one side, injuring the 2 occupants. [ASN]



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SAFETY

It is relatively rare for equipment failures to be highlighted in accidents these days but the NTSB has cited them in relation to the fatal crash of an Airbus Helicopters H145/BK117 N146DU at Hertford, North Carolina, on September 8, 2017.

Investigators say that the pilot shut off wrong engine ahead of the Duke Life Flight helicopter crash. They also highlight that equipment failures were the likely cause for the pilot to shut down the wrong engine.

The crash happened in Perquimans County near Belvidere while the helicopter was transporting two staff nurses and a patient to Duke Medical Center from Sentara Albemarle Medical Center.

All of the occupants, the nurses, patient and helicopter pilot died in the crash.

The prime cause of the accident was the failure in the rear bearing of the helicopter's number 2 engine.

That rear bearing failure caused "unexpected and confusing cockpit indications," according to the report.

The pilot then shutdown the number 1 engine, which caused engine number 2 to degrade quickly and ultimately lose power entirely.

The NTSB said that the complete loss of engine power happened at a time and place that made it impossible for the pilot to safely make an emergency landing. [NTSB]

UNMANNED

Helicopter Association International (HAI) has announced that the University of Maryland UAS Test Site Team, led by director Matt Scassero, and University of Maryland Medical Center's Dr. Joseph Scalea are the 2021 recipients of the association's Golden Hour Award. The award recognizes the efforts of an individual, group, or organization that, through a particular activity or contributions over time, has advanced the use of helicopters or UAS aircraft in the vital mission of air medical transport.

On the night of April 19, 2019, 44-year-old nursing assistant Trina Glispy waited at the University of Maryland Medical Center (UMMC), prepped for kidney transplant surgery. In her eighth year of dialysis for kidney failure, she had begun to lose hope. Destiny had another plan.

When Glispy learned she had a match, she was offered a very special opportunity—the kidney could be delivered to the hospital by drone, a medical first that would pave the way for faster organ delivery. Excited by the chance to make a difference, Glispy agreed to the delivery option.

As Glispy was prepped, an unmanned aircraft system (UAS) team, led by University of Maryland UAS Test Site Director Matt Scassero and UMMC Dr. Joseph Scalea, awaited the arrival of the kidney from the Living Legacy Foundation, Maryland's organ procurement organization. Once secured, the kidney was launched in a custom UAS, complete with real-time monitoring equipment.

The drone flew 2.8 miles in 9.52 minutes at 300 ft. to the rooftop helipad at UMMC, faster than a car could have made the trip in Baltimore traffic. It landed smoothly with all organ-monitor readings in the green. The kidney was soon on its way to the operating room where Glispy waited.

The idea of organ transport by UAS was born two and a half years earlier. Scalea approached Scassero after hearing about a fixed-wing drone test his team had conducted carrying medical equipment across the Chesapeake Bay and asked if the same could be done for an organ.

The drone was built from scratch with multiple redundancies all the way down to a parachute system that could be deployed either automatically or manually to protect the organ. The team also designed the first-ever organ-monitoring system.

Utilising the monitoring system, the team were able to see that the organ remained well within the parameters.

Glispy is doing very well and has returned to many of her former activities. The technology that made her recovery possible has also flourished. Members of the original team partnered with an investor to found MissionGO, a company that is developing and expanding this technology and increasing organ donation efficiency through a new software product.

In May 2020 London based drone company Skysports and Thales announced the launch of a medical



www.policeaviationnews.com



drone supply service for the Scottish west coast. Some ten months later, last month, they were able to demonstrate the service to the media.

Drones are delivering urgently needed medical supplies such as COVID-19 test kits and Personal Protective Equipment (PPE), to a Scottish island.

As part of a two-week trial, the supplies were flown between Lorn and Islands District General Hospital in Oban on Scotland's west coast to the Mull and Iona Community Hospital in Craignure on the Isle of Mull - about 12 miles (19km) over sea.

Health authorities in Argyll and Bute said the scheme will enable patients to be diagnosed more quickly.

The flight takes around 12 minutes and proposes to replace a service that delivers supplies via road but has to await the sailing of a daily 45-minute ferry crossing to Oban.

Skysports said it marks a milestone for UK drone flights as the medical deliveries will be going out of sight of the machine's operator, which is currently not allowed, but the company has worked with the Civil Aviation Authority to make the trial happen.

Ed: Until the law changes this and other similar trials reported in PAN are simply that. The Skysports craft is vertical lift into a horizontal flight and vertical landing. The craft used in the Oban trial carries significantly less disposable load than the Windracer trialled last April between the Isle of Wight and the mainland.

Meanwhile the only viable and reliable air transportation of samples and PPE continue to be the manned aircraft provided by volunteers [the CAP] or air ambulances [arguably wholly uneconomic].

All this NHS delivery service hype remains at the level of a pipe dream until an autonomous drone system can be certified to allow an automatic launch transit and recovery of the craft involved. Employing even one person [other than a volunteer] at some £30K a year on providing the service envisaged remains totally uneconomic, at the moment these trials employ several people.

Meanwhile, thankfully, the coronavirus threat in the UK recedes and makes the development of such services far less urgent.

As Skysport and Thales stated last year the ultimate aim of this trial is to prove the long-term, sustainable viability of such services; bringing together regulation, government and industry to unlock the transformational potential of drones for society when used in a safe, secure and controlled way.



Trakka Systems has announced a successful demonstration of the TIPS-C (Trakka Interceptor Package Solution) at Eglin Air Force Base in Florida. The TIPS-C is designed to better serve the ISR, inspection, UAS and C-UAS marketplaces.

On February 24, 2021, an executive team from Trakka Systems and DroneShield met with multiple key decision makers and members from Hanscom and Eglin AFB at the Northwest Florida Fairgrounds to demonstrate the capabilities of the system.

The TIPS-C, mounted on a mobile platform, provides a flexible, early detection, identification, and neutralising counter UAS solution for the rapidly evolving UAS threat. Trakka's partnered vendor DroneShield provided DroneSentry-C2TM software, which is designed to produce a common operating picture for drone detection and tracking within the local airspace. DroneSentry-C2TM ingested the data from several sensors, including the radar, radio frequency (RF), and our TrakkaCam TC-300 to provide an intuitive visualization of the airspace and potential drone threats.



LETTER TO THE EDITOR

Dear Editor,

THE WRONG AIRCRAFT

With four Vulcanair P68R aeroplanes now in service with the National Police Air Service (NPAS) it's become increasingly obvious that a very expensive mistake has been made. The fact is that this aircraft, designed for private use and multi-engine pilot training, is far too small for routine police air support operations. First, the average basic weight, inclusive of police role equipment, is 3,525 lbs. With full fuel tanks, 142 USG, the weight without the crew, is 4,377 lbs which, with a maximum take-off weight of 4,548 lbs, leaves just 171 lbs remaining for one crew member, the pilot! To carry one tactical flight officer (TFO) the fuel load must be reduced by some 200 lbs with a consequent reduction in flight time of around 90 minutes to leave just over 4 hours with a 45 minute reserve. To carry two TFO's a further reduction in fuel will reduce the flight time to around 3 hours.

A further serious limitation with the P68R, one that you can't escape, is the fact that there's difference of 227 lbs between the maximum take-off weight (MTOW) of 4,548 lbs and the maximum landing weight of 4,321 lbs. This difference of 227 lbs equates to 38 USG of Avgas weighing 6 lbs per gallon. So, with a nominal fuel burn of 20 USG per flight hour you're looking at 2 hours flying from after take-off to before a landing is permitted; if the departure is at the MTOW. With crew of three, the pilot and two TFO's the aircraft could take-off, anticipating a 3 hour flight, and then, if the mission were to be cancelled shortly after take-off, the aircraft would have to remain airborne, for 2 hours, to burn off fuel before being able to land!

Following a trial of the P68R that was performed by NPAS in 2013-14, together with expert advice that was given at the time, there can be no excuse for not knowing that that this aircraft came with significant operational limitations. Before the contract was signed to purchase 4 aircraft, with an option to add an additional 2. Also, it must be stressed that these limitations are not shared by other aircraft in the same category. For example, the ubiquitous BN Islander, the DA42 Guardian and the DA62 MPP. Also, although other, much larger commercial transport aircraft may have a landing mass which is lower than the MTOW they can, unlike the P68R, quickly dump fuel, to reduce the aircraft weight, to land in an emergency. This very expensive mistake, a drain on the public purse, should now be independently investigated by the Public Accounts Committee.

Nevertheless, although the Vulcanair P68R is unsuited for the police air support role this fact should not be used to tarnish the reputation of other fixed-wing aircraft. For 10 years the former North East Air Support Unit successfully operated a BN2B-20 Islander aeroplane and an AS355 Twin Squirrel, followed by an EC-135 helicopter, alongside each other. As a consequence it amassed a considerable amount of experience with both types. Experience which shows that, with the right aircraft, the aeroplane and the helicopter can be equals in core police activity with, on some occasions, the aeroplane, with its lower capital and lower operating costs, outperforming the helicopter! Police air support operations are generally reactive, where the key to success is to arrive on task quickly, where distance equals time, complete the mission and then return to base to refuel and be ready for the next mission. Patrol flying is generally restricted to surveillance missions, or to a catch-up with a list of requests for aerial photography.

In an earlier, very detailed study of police air support, by SD Scicon in 1990, it was recommended that the whole of England and Wales, inclusive of both urban and rural areas, would require 72 bases not more than 28 miles to provide complete air support within 20 minutes. However, a targeted 80% coverage could be provided with 33 bases not more than 40 miles apart. In 1990 the recommended fleet size, to cover England and Wales, was 42 aircraft; 29 helicopters and 13 fixed-wing at 33 bases in 7 clusters. It was further concluded that a clustered (regional) approach was the only sensible option. Today, with a national police air service there are just 14 air support bases and far too few aircraft to provide the recommended 80% coverage. Before NPAS was formed in October 2012 there were 30 bases with over 30 aircraft. Not as many as recommended in 1990, but, nevertheless, very close.

With regard to patrol flying, in 1990 it was judged that, *"In general the cost of air patrols has caused them to be rejected except in the case of special campaigns."* Moreover, the Vulcanair. P68R is, very obvious-

#



ly, 'a square peg in a round hole', trying to cover far too much ground from one base, at Doncaster, and unable return to base for some 2 hours if departing at the maximum take-off weight. There can be no excuses, the limitation, the difference between MTOW and landing weight is part of the technical specification and it must have become very obvious during the 6 month aircraft trial, by NPAS, in 2013-14.

So, if the P68R is unsuited to the police role, which it very obviously is, what else could it be used for? The capital cost of a new Vulcanair P68R will be significantly higher than a pre-owned Piper Navajo built in 1979; for example, Piper Navajo registration G-SCTR, owned by 2ExCel and flown on behalf of HM Coastguard. Nevertheless, the four P68Rs in police service presumably belong to the Government, to NPAS and, or the Home Office with operating costs that are much lower than the larger Navajo. Could these aircraft be transferred between government departments, to the Maritime and Coastguard Agency, and then operated on behalf of HM Coastguard for coastal and offshore patrols? Or, alternatively, could NPAS be tasked to provide air patrols on behalf of the Border Force? Right now there is, as we know, a serious problem in the English Channel, a problem which, based on the current numbers of illegal migrants crossing the Channel from France (numbers that are significantly higher than in previous years), is far from being resolved.

If it is agreed that the Vulcanair P68R has insufficient utility as a police aircraft, then changing the NPAS badge on the fin of the aircraft to that of HM Coastguard would cost pennies. Moreover, two of these aircraft based at Lydd in Kent, to patrol the coast, hopefully on both sides of the English Channel, could make a significant difference in this ongoing operation, an operation where lives are at risk, we may also agree. Unfortunately, the lack of a second observer, to maintain a visual lookout, could prove to be yet another limitation in what is, essentially a search and rescue mission. A mission where it's a case of the more eyes, the more observers, the better! Although 3 hours on task in a discrete area with the operating base close by could just be sufficient.

Yours sincerely,

James A Cowan MBE
Squadron Leader
Royal Air Force (Ret'd)

PEOPLE

Although the event is cancelled Helicopter Association International (HAI) has announced its Salute to Excellence Awards award winners, HAI recognised previous recipients of the awards through events at HAI HELI-EXPO®, the association's annual trade show. Because of the pandemic, HAI is acknowledging the achievements of this year's recipients through a variety of virtual events, including a series of webinars relevant to the subject of each award. Each individual recipient or team will also receive a trophy and publicity surrounding their work.

John Cooper, pictured right, the safety and training officer for the Columbus Division of Police in Columbus, Ohio, is the 2021 recipient of the association's Law Enforcement Award. The award, sponsored by MD Helicopters, recognises an individual that has contributed to the promotion and advancement of helicopters in support of law enforcement activities.



The recipient of the association's Safety Award, sponsored by BLR Aerospace, recognises Neo Aik Sia for outstanding contributions to the promotion of helicopter safety and safety awareness.

Neo Aik Sia [left] joined the Junior Flying Club in 1972 in his native Singapore before he could even drive a car. He later earned his private pilot airplane rating six months after graduating from high school.

Neo was conscripted into the Singapore National Service shortly after school. Seeing an opportunity to stay in aviation, he opted to leave the service three months later to enlist full-time with the Republic of Singapore Air Force (RSAF) as a pilot officer. Once in the RSAF, he found his calling in safety.



US Coast Guard MH-60 pilot **Lt, Commander Robert McCabe** is the 2021 recipient of the association's Pilot of the Year Award. The award recognizes an outstanding single feat performed by a helicopter pilot during the year or extraordinary professionalism over a period of time.

On the evening of November 24, 2019 he was called out to the fishing vessel Leonardo, it had suddenly and unexpectedly capsized 24 miles southwest of Martha's Vineyard, throwing all four crew members into the cold water.

A hypothermic survivor was rescued from 10-foot [3 metre] seas and 30-knot winds. The weather worsened to sleet and 15-foot waves.

At low altitude the flying crew became disoriented, McCabe recognized it and coached the flying pilot through a successful instrument transition to stable flight. McCabe's action avoided a near-catastrophic situation.

BOOK REVIEW

Autobiographical books covering law enforcement air support remain few in number so it is a pleasure to report on the arrival of a new one from a fledgeling British author, Brian Allinson.

"A Long and Winding Beat" Is primarily the story of a British police officer who went on to administer the setting up of police air operations in the west of England.

The book charts the unusual life of the author from at a young age experiencing life "below stairs" in a large country House, through his early education by the Nanny of the household, and later into a secondary technical education.

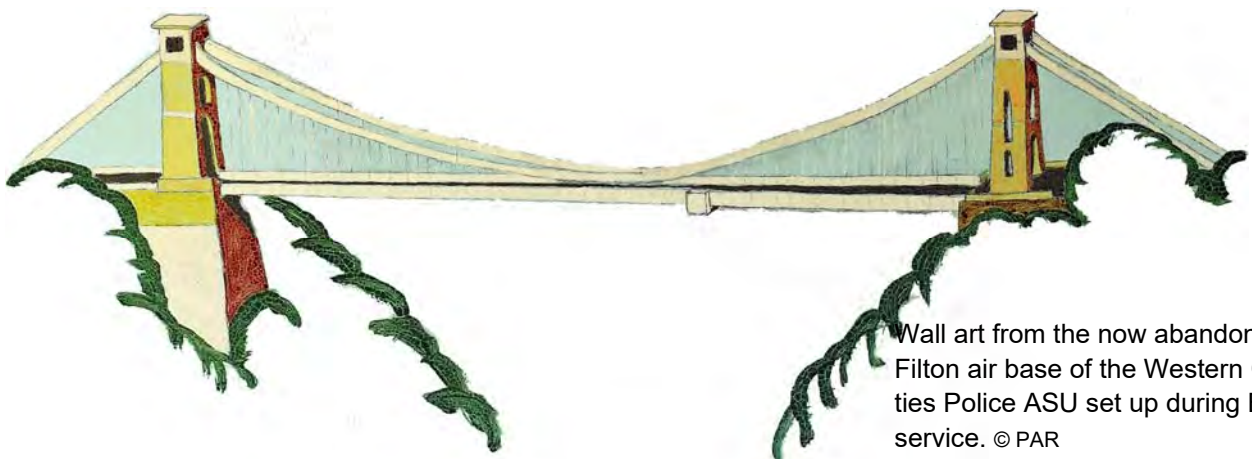
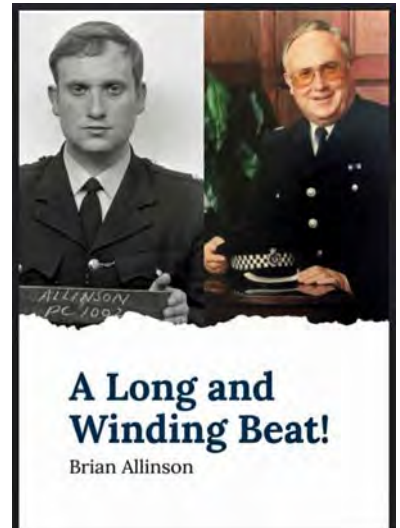
His first job in the early 1960's was with a Jaguar Car dealership which led to a love of performance cars. A career change in the late 60's saw him joining the Police Force in Somerset, and experiencing the strict regime that existed in rural forces in those days. He required the permission of his Chief Constable to get permission to get married, where to live and the prospective partner had to be vetted too.

Early and regular promotion saw him rising through the ranks until he later retired as a Superintendent in 1998.

The book includes a number of unusual postings and experiences and in particular his first ever flight in a aircraft in 1976. That led to another turn in his career and interest in the development of Police Air Support in his police force, Avon & Somerset. It became a passion, eventually leading to a post retirement second career as an International Police Air support advisor. He describes rare insights into police aviation and life in China.

His second career came to an untimely end after he expressed an opinion that NPAS was likely to be a disaster. A very senior police officer with NPAS complained to his employers – a company with a great deal invested in their helicopters and he was 'let go'.... One of too many casualties in recent UK police aviation.

The police service had dictated his early life within the service and through circumstances even dictated the final fate of his post retirement career. He was effectively *cancelled*. It seems NPAS has a great deal to answer for. *A Long and Winding Beat!* ISBN 978-1-5272-8608-5 is available from the author/publisher brian1002allinson@icloud.com £11.99



Wall art from the now abandoned Filton air base of the Western Counties Police ASU set up during Brian's service. © PAR



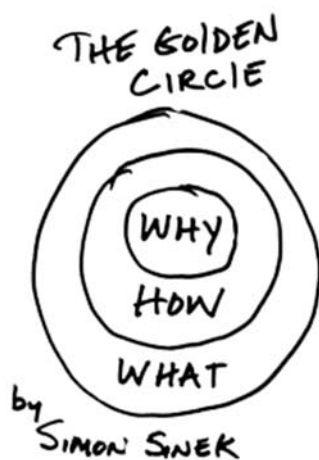
How it all began

David Howell

As this is the 300th edition of the Police Aviation News I thought that it was only appropriate to write an article that looked at the very reason why we all enjoy reading the publication and are all so passionate about the benefits of flight, specifically how it benefits so many people in their hour of need. From an emergency service perspective there is nothing better than to save a fellow humans life, to assist in the capture a dangerous criminal or to find a vulnerable missing person who otherwise would not have been located. To make a real and positive difference gives you an amazing buzz, fulfillment and a sense of worth and achievement. But how did it all begin back in 1903?

In July 2018 I was fortunate enough to deliver a presentation to the Continuous Improvement Meeting (previously known as the Police Eurocopter User Group) in Oxford. My presentation brief was to provide the assembled delegates from both Eurocopter and the National Police Air Service a base managers perspective of running a police air base, in this case Lippitts Hill and previously Halfpenny Green. I was a bit cheeky and decided push the envelope 'slightly' by asking a question of the attendees and that was,

'How does a public organisation form a synergy with a private commercial company? In essence how does a non-profit community focused organisation (NPAS) work with a private, profit focused company (Airbus)?'



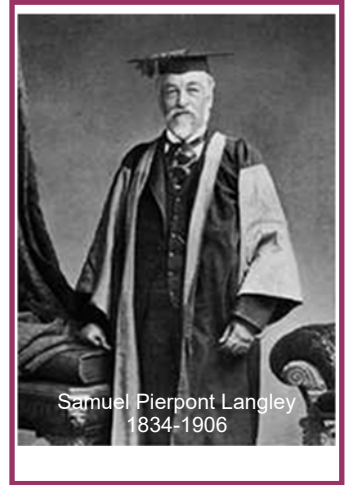
Attempting to answer this particular conundrum I resorted to Simon Sinek (author of 'Start with Why') and used an example from his book to illustrate my thinking. What was the 'why' of each organisation and how could they work alongside each other by understanding each other's respective positions?

To illustrate the problem and to expand the thinking within and outside the meeting room, potentially seeking some form of agreeable consensus I used a passage from Simon Sinek's book as it seemed appropriate and fitted perfectly into the presentation. It was in fact the story behind how the first heavier-than-air, machine-powered, controlled human flight was achieved. Once again, I started with a question to the audience and it was this, 'Who is this person?',

Thankfully, no one knew who it was and it certainly wasn't my father! If they had known the gentleman's name it would also have spoilt the rest of the presentation. The gentleman in the picture was in fact the person who should really have, well on paper, achieved that first historic flight. His name was **Samuel Pierpont Langley**.

Langley was an acclaimed American academic being an astronomer and professor of mathematics who could boast of prestigious personal connections such as Andrew Carnegie and Alexander Graham Bell. He was also funded to the sum of \$50,000 (\$3m dollars in today's money!) by the United States War Department and even employed a test pilot by the name of Charles Manly, as well as mechanical engineers. As well as the best minds they also had access to the best materials and the media of the were following Langley and his team around everywhere waiting for the moment when flight was achieved. They had, on paper, all of the ingredients for success and seemingly could not fail to claim the glory, fame and the money as a result of their inevitable success. The printing presses were all primed and set to run with the news of the first flight once Langley had achieved it.

So, why does no one really know or has never heard of Samuel Pierpont Langley and why was he beaten to the prize by a group of non-academic bicycle makers, the Wright brothers.



Samuel Pierpont Langley
1834-1906



The Wright Brothers

Orville and Wilbur Wright had no funding, no high-level connections and none of the team possessed a college education between them. How on earth could they then achieve the ultimate goal of flight when they had none of the ingredients for success but all the ingredients for failure? What they did have was the ability to understand the root cause of the problem that they were ultimately facing, which for them was the issue of balance and flight whereas Langley was focusing on power.

It is written that every time the Wright brothers and their team went flying, they took with them five sets of parts with them as they knew it would require that amount of mechanical support and experience of failure before they convened for the day.



However, on December 17th 1903 in a field in Kitty Hawk, North Carolina they achieved their goal. Orville flew the fragile aircraft for a grand total of 59 seconds and 852 ft in distance at a dizzy altitude of 120 ft at the speed of 'a jog' they created history. A moment of history from which we all benefit and to some extent, we now all take for granted.

In Simon Sinek's book it speaks of the Wright brothers having the right "why". The "why" is described as being their passion and inspiration which took the team with them on this quest as they saw the huge benefits that the ability to fly would bring to world, bringing with its astonishing change. They were not in this race for the fame, recognition or financial reward. They realised what the impact of flight would have on the world, and it certainly did. If they had not achieved this amazing feat then I would not have enjoyed some 18 years flying and the *Police Aviation News* would not exist! Langley, on the other hand, was attempting to achieve greatness for his own personal gain and for that reason did not have that all important "why". He was therefore perceived as doing it for the wrong reasons.

I would like to take Simon Sinek's argument a step further and attempt to explain this remarkable achievement not through the "why" factor but through linear and non-linear thinking.

Let us first define the difference between linear and non-linear thinking;

Linear Thinking is a process of thought following known cycles or step-by-step progression, where a response to a step must be elicited before another step is taken.

Non-Linear Thinking is human thought characterised by expansion in multiple directions, rather than in one direction, and based on the concept that there are multiple starting points from which one can apply logic to a problem.

You may even see these two different types of thinkers in your teams or organisation...

If we first analyse Mr. Langley, who incidentally quit aviation soon after hearing the news of the Wright

brother's success. It was said that he found the defeat personally humiliating, especially as his effort crash landed in the Potomac River. The once besotted newspapers made fun of his failed efforts and his ego was destroyed as a result. Interestingly, could have easily have learnt from the Wright brothers and conducted further development and improved their idea further but chose not to.

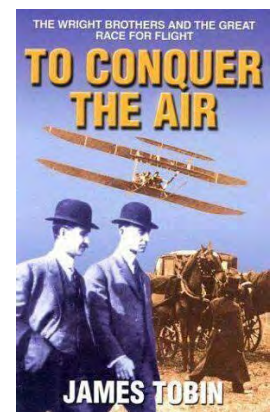
After assessing what evidence there is available of Mr. Langley a linear thinking process prevailed. The money, the academic support, the materials and the connections were all in place but the one missing thing was not the "why" but the ability to think, or to have someone within the team to think in a non-linear manner. They would solve the issue step by step by step. It would have potentially required only one non-linear thinker to have considered all of the scientific evidence gathered and to have possibly suggested that they were not looking at the right problem. That 'different thinking' around the problem was the missing link, the missing piece of the jigsaw, that equated to either success and failure. Fame or ignominy.

How many times have you heard a dissenting voice, possibly in a meeting, suggest that there was another possible option, another solution, another route to success only for them to be told, metaphorically, to 'get back in your box'? They may not have had the experience, the rank, the stature or position or they were deemed by the hierarchy to be of little relevance. The tried and trusted 'set in stone' linear dominant thinking and processes that form the all too familiar 'we've always done it this way' mentality, prevail. That dissenting voice may actually be your non-linear thinker who possesses that rare ability to see around corners and to provide innovative and creative solutions that others simply did not see. They make the complex appear simple and see complex issues as being simple. Unfortunately, when the solution is pointed out to the linear leader, the leader becomes naturally defensive as they feel that it should have been them who should have spotted the solution. Is this not how a certain M. Langley behaved? Embarrassed they generally tend to belittle the solution and revert to the 'we have always done it this way' stance. The non-linear thinker, who proposes the solution, then becomes frustrated and subdued and either leaves the organisation or resigns themselves to remaining in the shadows, happy to just play their part in the inevitable failure, disappointment and inevitable 'finger pointing' as to who caused the failure.

If we now look at the Wright brothers let's see why they were the ones to have achieved powered flight. Were they in fact the Elon Musk of their day? If you equate achieving flight in 1903 to landing humans on Mars in 2021 there is a definite correlation.

There is a great quote from James Tobin's book on the Wright brothers and its states, ***'Wilbur and Orville were true scientists, deeply and genuinely concerned about the physical problem they were trying to solve – the problem of balance and flight'***.

We can easily transfer this observation to Elon Musk and his SpaceX project. Assuming that Elon Musk is a Polymath, a person who has specialist interests in many specialisations with an overlapping insight, we can see this in the Wright brothers. That ability to have an overlapping insight was that missing ingredient in Samuel Pierpont Langley team. Langley fits in with being either a linear Specialist, or complex Generalist as they are individuals who can function across many disciplines but not necessary being a specialist in all.



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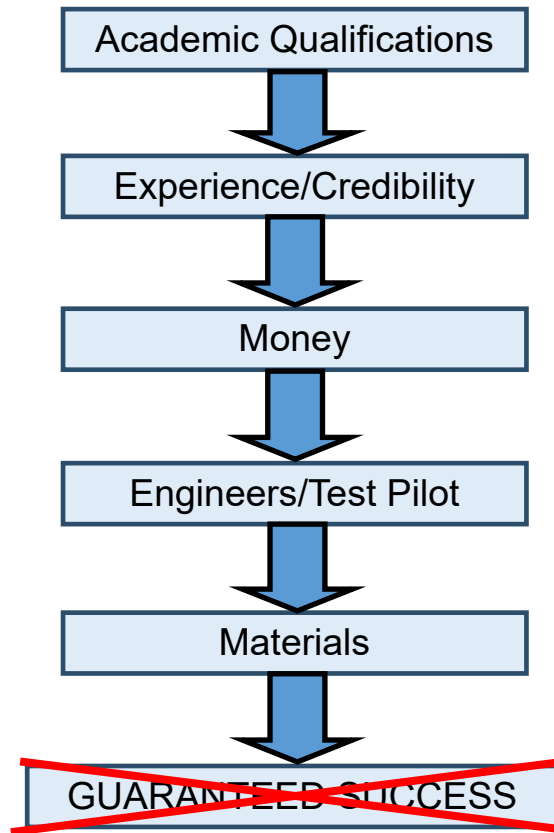
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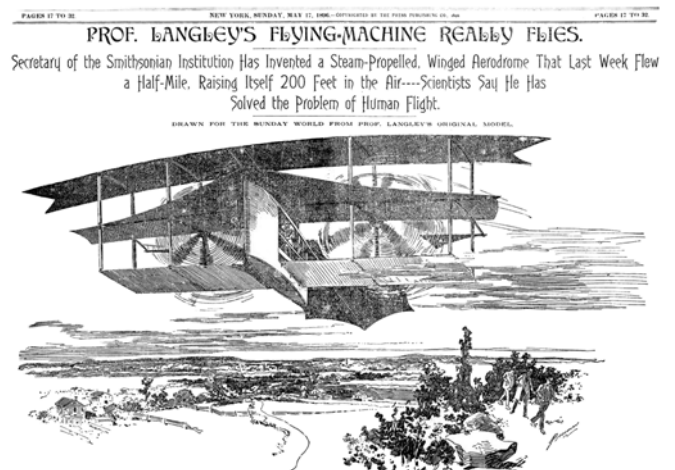
There is a notable transitional zone that occurs between the Specialist and the Generalist. Individuals within this zone (Specialist/ Generalist) are often identified as complex capable due to their extensive ability to reference past experiences as Specialists despite not being sufficiently complex capable.

Langley also had one larger issue. His Achilles heel if you like. If we assume that Langley was in fact a linear thinker, we know that linear thinkers find it difficult to identify errors in systems as those systems become more complex. Linear thinkers also overcomplicate systems during the design process through linear sequencing. This was evident in the linear sequencing Langley introduced to his project in terms of:



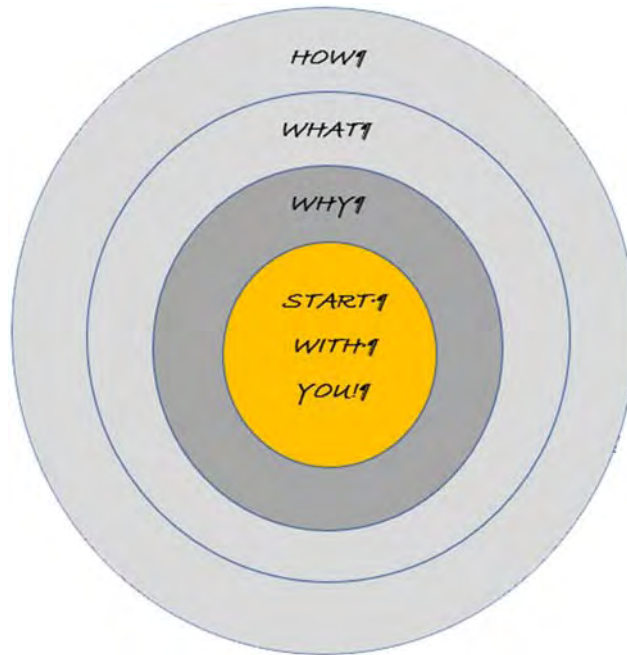
this is where the Wright brothers had the huge advantage over Langley and ultimately brought them the prize of flight and it wasn't, as Simon Sinek argues, their "why". As non-linear thinkers they could deal with systems and were able to introduce change and innovation in systems or if necessary, design new systems. They certainly did not have any of the monetary or other perceived advantages and benefits that Langley had access to.

This example then begs another more relevant and 'here and now' question which is how do we consistently build high performing teams that can solve complex problems? How do we to replicate the Wright brother's team formula time and time again? Google recently spent millions of pounds seeking this missing ingredient during their Project Aristotle and still do not have a coherent answer to the conundrum. David Marquet's bestselling leadership book, 'Turn the Ship Around' explains what happened on board his nuclear submarine, Santa Fe, but has this particular crew ethos and intent based leadership style ever been replicated again?



Police aviation, air ambulance, coastguard all seek to bring teams together and develop them under the banner of crew resource management but it actually goes back well before even CRM kicks in. Organisations need to recruit people with the ability to think in both a linear and non-linear manner but they then need to align that innate talent to the correct role throughout all strands of the business, from the cleaner to the CEO. We will then reap the benefits of having people not falling into burn out, fulfilled and happy in their role. We also organically develop that all important psychological safety in order to solve those problems that face us on a daily basis. Another huge benefit will be that people's home and social life will

thrive as the stresses of work do not then permeate into it. If you are happy at work you will be happy at home and vice versa as home and work are intrinsically linked. We also need to highlight who the Poly-maths are amongst those teams and organisations and when you find them, build that psychological safety around them so that they and the organisation can flourish.



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Only once you truly know yourself and your people will you then witness your organisation fly, as a result of your people, not at the expense of them.

And finally, congratulations to Bryn Elliott and Police Aviation News for achieving 300 editions of truly insightful emergency service aviation..
David Howell

MOVE ALONG THERE

There is no evidence that the second world war Hawker Hurricane fighter was ever used by the police in India but recently one has turned up in a police training college in Uttar Pradesh.

As disclosed by an article in an Indian magazine Jagran, a much modified Hurricane was being taken down from the pole it has been displayed on for some years at the *Police Academy of Uttar Pradesh* and replaced by a more modern MiG-21UM in January. The Hurricane is now with the Indian Air Force and destined for a *museum in Delhi*.

The theory is that after the war the Hurricane force landed in the grounds of the academy and was never reclaimed. Left lying around it was deemed that it would provide a suitable gate guardian for the one of the entrances to the officers mess.



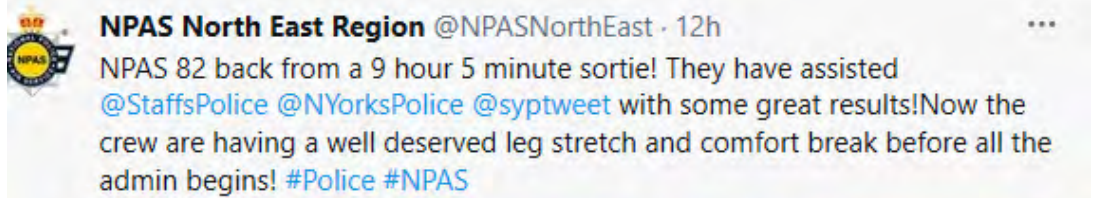
It was somewhat abused during its police service. The original canvas covering and cockpit covering were not resilient to the worst of the weather in India and it therefor received a wholly inappropriate sheet metal covering that protected it but distorted its real shape. It may have looked alright but it was not fit for purpose.

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All the controversy over the capability of the P68 seemed to be misplaced when in mid-March, one of the operators from NPAS North East Tweeted that one of the Vulcanair P68R aircraft, NPAS82/UKP153 had flown a 9 hour 5 minute sortie.

That suggested that the P68 had not landed for refuelling – thus allowing flight beyond the 6-hour maximum.

There may have been a detail missing in the post as there have been no sightings of an NPAS in-flight refuelling aircraft joining the fleet.



Not all it seems to be? There is an assumption that two sorties actually took place.

In March the National Police in the Philippines announced that they will admonish couples when they are in a public display of affection (PDA).

This was announced last month by the Philippine National Police spokesperson Brigadier General Ildibrandi Usana in the face of the increasing number of coronavirus disease 2019 (Covid-19) cases in the country.

Usana said that PDA prohibitions include kissing, holding hands, and embracing in public.. The police will admonish not only the couple, but also their families and friends. Usana said the police will only admonish, not arrest those publicly displaying their affection. He also said that this prohibition is aligned with the health protocols mandated by the government, which include social distancing.

EVENTS ON THE MOVE

Due to the uncertainty regarding the Covid-19 pandemic, Africa's largest General Aviation show AERO South Africa will be postponed to July 2022 and will take place at the Wonderboom International Airport, Tshwane.

The launch event in 2019 was extremely well received by the General Aviation Sector and exhibitors are excited about the date change in the hope that the new date will allow sufficient time for the impacts of the pandemic to settle.

Leading manufacturers and suppliers have already committed for AERO South Africa planned in July 2022. The show will cover the full spectrum of General Aviation products, technology and services.

THE SHOW MUST GO ON

It comes after a coronavirus-plagued 2020 in which big shows such as Farnborough and Airshow China in Zhuhai were cancelled. This year's Paris air show has also been called off.

The last major international show to take place was the Singapore Airshow, which ran from 11-16 February 2020, but which suffered sharply reduced attendance.

Although international teams were expected to be all but non-existent at Aero India, companies manned stands largely with India-based staff.

In addition to the challenges involved with travelling amid the pandemic, international visitors may also be put off by India's case numbers. The Johns Hopkins Coronavirus Resource Centre shows that India has recorded 10.8 million cases of Covid-19, the second highest in the world after the USA.

Everyone attending the show needed to take a Covid-19 test 72h before arriving at the show. This needed to be uploaded to a special portal for validation by a medical team. The show issued 19 pages of guidelines covering topics such as physical distancing, crowd control, hygiene, and other health and safety measures.

Masks are required at all times, and attendees must maintain a 2m distance from each other. There will be innumerable plastic barriers and hand sanitiser stations.

Despite the challenges, the US government sent a high level delegation to the show aboard a military aircraft. There is money to be earned in the Indian market.

AND ON

In association with the Airborne Public Safety Association Inc., PAVCon Europe is to hold a virtual event aimed at education on Monday June 7, 2021. It will start at 10am Central European Time.

The 6 hour programme includes contributions from The Netherlands, Belgium, Spain, United Kingdom and USA.

Details, including confirmed titles of the presentation and the speakers will be made available nearer the time.

STOP PRESS

As this edition closed news came in from Airbus Helicopters that they are bidding to supply the next generation Search and Rescue helicopters for New York City. The type they hope to replace is the Bell 412.

Airbus Helicopters, Inc. has submitted a bid to the New York Police Department (NYPD)'s request for proposal for two new helicopters to partially replace their aging fleet of rotorcraft. Airbus is prepared to equip the New York Police Department with high-tech, high-performance search and rescue H175 helicopters.

Called on to support, protect, and serve the more than 8.5 million citizens in all five New York City boroughs and the immediate surrounding areas, NYPD is responsible for missions that include surveillance, search and rescue, counter terrorism, SWAT, medical evacuation, high rise rescue, and firefighting. The current request for proposal for two new helicopters was released earlier this month, with an award announcement expected later this year.




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As this Special Edition draws close to the final page it might be a good time to reflect on the past year, the many deaths, failing businesses, trials and tribulations with a positive note.

For too long we have had to seek diverse means to protect emergency workers and their customers from the threat—real or supposed with special equipment and workwear. There is promise of a return to normality.

Unfortunately the madness has not gone away. Even as the United Kingdom congratulates itself on getting everyone to submit to the life-saving vaccine injection Europe seems to have lost its mind in finding reasons not to trust the remedy! This may go on forever!

Left: Wales Air Ambulance crewmember demonstrates constrictive protective suit and facemask.

Overleaf: EC145 on the pad at Lippitts Hill in 2009.



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