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# ROTOR

BY

AIRBUS HELICOPTERS

THE LIFE OF THE RANGE  
**Today's discussions:  
tomorrow's revolutions**

THE LIFE OF THE RANGE  
**Teamwork makes  
the dreamwork for  
European interoperability**

IN THEIR WORDS  
**Hurricane Helene  
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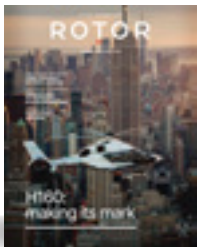


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Bruno Even, CEO of Airbus Helicopters

“Innovation and safety have always been embedded throughout our range and that must continue.”

This is an industry where no matter what our role at the company is, we at Airbus are all inspired by making helicopters fly. Making sure that our helicopters are ready for our operators' missions is something that drives everyone at the company — whether we design, build, maintain, or fly these aircraft. Having begun its operations in 2022, our H160 is flying more and more in new missions for new operators, touching almost every corner of the globe.

What is driving this increased activity? With 68 patents, the H160 embodies a huge amount of innovation, and we are thrilled that it is meeting operators' high standards and multi-mission needs. Lessors GDHF base their business model on efficiency and modernity, aiming to offer customers the best helicopter for any operation. Their first choice? The H160, which is making its debut in the Brazilian offshore energy segment. While for the military variant, prototypes are being assembled and equipment is being tested as we ensure that everything is on track for the H160M.

Innovation and safety have always been embedded throughout our range and that must continue. Flying critical missions, our operators must have the right solutions to be impactful.

For us, this means that scoping new technology must begin years, sometimes decades, in advance; in October, our first-ever M Days event, which brought together 80 of our military operators, sowed these very seeds. During discussions with operators, talk often turns to crewed and uncrewed teaming. The MUSER project was an important step in enhancing this capability and we are proud to have seen our FlightLab and VSR700 team up, both with each other and with other European platforms, across vast distances.

Another thing that people find inspirational about helicopters is the fact they perform so many rescues. The recent storms in the French Pyrenees meant people needed to be airlifted to safety. The storm also threatened a main source of income for one local beekeeping community as they couldn't access their hives and therefore couldn't sell their honey. Fortunately, local operator SAF's H125 came to the rescue and flew the bees to safety. Even after decades of service and millions of flight hours, operators are still finding new missions for a global leader like the H125 — which definitely gives everyone a good buzz.

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# H160: making its mark

The H160 was designed to make a difference whenever and wherever it flies. At once innovative and efficient, versatile and comfortable, its perfect blend of competitiveness and performance is proving irresistible to customers.

As operators increasingly identify the H160 as the perfect match for their mission requirements, its order book is burgeoning and an industrial ramp up is already underway. Clocking ever more flight hours with every passing day, the H160 is making its mark on the world.

Articles: Heather Couthaud, Emmanuel Huberdeau and Ben Peggie



# Brilliant visibility ahead: the H160 programme's soaring debut

Benoit Klein will step into the role of H160 Programme Director in January 2025. We took the opportunity to ask him how the H160 is doing in the hands of customers.



## BENOIT, WHAT ARE YOU LOOKING FORWARD TO WHEN YOU START YOUR NEW POST NEXT MONTH?

**Benoit Klein:** Taking on the role of programme director for the H160 is a dream come true. The H160 is an extraordinary aircraft with incredible market potential and is setting new standards for safety, innovation and excellence. I am energised by the opportunity to develop and execute this programme for both civil and military markets, across diverse missions, industries and locations. What excites me most is working with our customers, understanding their needs and ensuring the H160 meets and exceeds their expectations. This is a unique chance to deliver a helicopter that will make our clients dream, while bringing real-world solutions to life. I firmly believe in the power of respect and teamwork to unite, inspire and challenge teams around the globe to achieve greatness together.

## WHERE DOES THE PROGRAMME STAND AT THE MOMENT?

**B.K.:** The aircraft now has customers in all the market segments for which it was designed. There will be law enforcement and public services customers flying soon in Europe and

North America. The H160 has joined private and business aviation fleets on all continents barring Antarctica. OMNI in Brazil and PHI in the Gulf of Mexico will start offshore operations soon. And the outlook for the H160M with the Joint Light Helicopter (HIL) programme is gearing up for its first flight in 2025. Thanks to its outstanding commercial success, the H160's priority is to deliver its current order book, and its ramp up is doing just this despite a challenging supply chain. Our target is to stabilise production at a rate of 40 aircraft a year until the H160M military version starts production, after which the rate will be closer to 60 units a year. Beyond that, we can say that its time to market is now at a competitive rate.

## TO WHAT DO YOU ATTRIBUTE ITS SUCCESSFUL ENTRY INTO SERVICE?

**B.K.:** First, we invested in its maturity, starting with an early emphasis on design. Our dynamic helicopter zero prototype is nearing 1,300 flight hours and has paved the way through testing

and implementation. We also invested in the industrial set up, support and services, and stock so they'd be ready as operators began to take delivery. Now, with the H160 flying, we've put webinars in place and started operator communities to encourage feedback so our teams can make adjustments to the aircraft, its maintenance and support. We also remain humble in the face of this return on experience as the fleet's flight hours continue to grow, conscious that every irritant is a valuable learning experience that will help further the aircraft's maturity.

## GREAT EXPECTATIONS WERE PLACED ON THE H160. HAS IT LIVED UP TO ITS PROMISE?

**B.K.:** The best indicator is the positive feedback from customers. The resounding opinion is that it's a well-conceived helicopter whose maintenance is simple for a machine of its size. The French Navy's overall experience has been positive: the machine's maintenance plan and downtime for programmed inspections is minimal and consistent with our goals. ...

**1:** Benoit Klein, incoming H160 Programme Director from January 2025

**2:** Airbus' H160 now has customers for every market segment it was designed for.

**3:** An H160 flies alongside Marseille's ports.







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**4:** PHI's H160 flying in the US. The helicopter will principally operate in the Gulf of Mexico.

**5:** Since receiving FAA certification, the H160 has been clocking up many flight hours in the US.

**6:** The H160 was designed to hold up well against corrosion, making it an asset for offshore operations.

... The aircraft was designed to hold up particularly well against corrosion, which is especially useful for operators working in offshore conditions, and we are pleased with the feedback we've received so far from the French Navy, which has been very encouraging. The start of offshore operations with PHI and OMNI should further confirm the aircraft's maturity, performance and availability rate (which currently stands at more than 90%). We've had feedback on its solid performance in numerous mission segments, such as for public services where the French customs service, operating in the West Indies-Guyana, and the French Navy both testify to its good visibility during missions, speed in getting to the scene, comfort, manoeuvrability and reduction in crew workload. Its safety innovations have also raised the bar, like the vortex pre-alerting system and the assisted automatic takeoff, both easing pilot workload while increasing safety — especially while operating in confined areas.

#### WHAT IS NEXT FOR THE H160?

**B.K.:** We are confident in the H160's market prospects since the aircraft suits each segment it's designed for, with an established customer



5



6

**7 & 8:** The state-of-the-art H160 final assembly line is ergonomically designed to make life comfortable for the colleagues who work there, as production ramp up continues.

**9:** The programme's first priority is to deliver its ordered backlog to customers.



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base that needs a reliable platform with the latest technology and safety enhancements. Demand in the medium segment looks set to increase by the end of this decade with several looming fleet replacements in play, and the H160 as a state-of-the-art machine is a strong contender. These next years will also see our continued strong support for operators in all market sectors to ensure they're satisfied with the aircraft. Our short- and medium-term goals are to deliver our backlog to clients, focus on the H160M's important milestone — the first flight of the prototype — and look toward future markets, such as Australia where this year we received certification.



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# The H160: a multi-mission dream for pilots and passengers

GDHF is a start-up helicopter leasing company that began business in April 2024 and aims to offer the most innovative and efficient vertical lift solutions to its clients. Signalling their intent by immediately signing for 50 H160 helicopters, CEO Michael York explains why they're a perfect fit for his company's ambitions.



## WHAT IS THE MAIN AIM OF GD HELICOPTER FINANCE?

**Michael York:** Our goal is to grow a large portfolio of the most technologically new, modern, efficient, cost-effective multi-mission helicopters and lease them out to customers globally. We're going to place the helicopters where they're critical for their end-user customers, such as offshore energy, emergency medical services, search and rescue, government and corporate missions.

## WHAT PERSUADED YOU TO BUY 50 H160 HELICOPTERS?

**M.Y.:** This helicopter is perfect for our business philosophy of bringing the newest-technology, most cost-effective multi-mission helicopters to a global market, for multiple market segments. We see the H160 as the future of the medium helicopter space. It's much more cost efficient to operate, it's a step-change in safety and efficiency and it's more economical to purchase and operate than previous technologies and we think the passenger is going to love it because of the comfort, the smoothness and

the accessibility of the aircraft. As a pilot, it's amazing to fly; it's smooth and it has a range of technologies which make it very safe. It's really a dream, as a pilot and as a passenger.

## WHAT IS THE ADDED VALUE OF THE AIRBUS H160 COMPARED WITH OTHER HELICOPTERS IN THE SAME CATEGORY?

**M.Y.:** I think the H160 is really a step-change in terms of technology. Older helicopters are exiting the market as they don't really meet the modern safety requirements or are simply more expensive to operate. We see the H160 as consuming less fuel than previous generation products, being less expensive to operate in terms of capital costs and in terms of running costs and as being really rapidly configurable to different missions. When we want to transition an aircraft from one function to another to suit our client base, it's quick and efficient to do so. It really is

a multi-mission platform and that's core to our leasing business model.

## WHAT CAN THE H160 BRING TO THE OFFSHORE ENERGY MARKET?

**M.Y.:** When I think of the Airbus H160 for the offshore energy market, as a lessor, GDHF wants to provide a product that the operators and the end users who contract the services are going to love. They want to get their people safely offshore and back in a way that is very sustainable at a lower cost, whilst being safe, comfortable and reassuring for passengers. We think the H160 really fulfils all of those criteria. The end users are already very interested in this helicopter and they see it as the perfect platform for the offshore energy space. We see the H160 entering new markets and we're really excited about being part of driving that.

**1:** GDHF CEO Michael York

**2:** Lessor GDHF believes the helicopter is the future of the medium helicopter space.

**3:** It is extremely quick to transition the H160 from one use to another — making it an attractive platform for lessors with many clients.





# Cabin class game changer

Modernity combined with safety, low operating costs, top-of-the-line comfort and style — the ACH160's siren call just keeps getting stronger.



**1:** Frederic Lemos, Head of Airbus Corporate Helicopters

**2:** The ACH160 hovering over the Hudson river, with the bright lights of New York city in the background

**3:** Flying through the high rises of Manhattan

**4:** Passenger experience is paramount for the ACH160's users.

**5:** 19 ACH160s are in service with 12 customers.



"The helicopter goes beyond our expectations; it is easy to maintain, easy to change parts, [and] efficient for our pilots thanks to some of the aircraft's automation." Such appreciative feedback from Daniel Braz, Maintenance Manager at Ocean Explorer, is echoed by others who have piloted, been passengers of, maintained or just seen the H160 helicopter — particularly as a private and business aviation (PBA) asset in the Airbus Corporate Helicopters (ACH) lineup. In the PBA segment, where it is known as ACH160, the definition of 'a job well-done' is transport on-demand. By this standard, the aircraft does the job superbly. A 255 km/h cruise speed, 4h30 min of endurance, and 6-tonne maximum takeoff weight contribute to passengers' first priority: a reliable, fast flight. Yet none of that explains the accolades it receives: "Exceeded expectations"; "delivers beyond expectations"; "impressed with the comfort". Utility may be its prime mover, but with its sleek appearance and spacious cabin, the ACH160 is changing the high-end helicopter offering in important ways.

## FROM MANHATTAN TO THE RED SEA

Currently, 19 ACH160s are in service with 12 customers. The fleet has flown more than 2,600 hours, with the lead taken by Ocean Explorer

in Brazil at some 560 hours. ACH160s are in service in every corner of the world, from Europe to Asia and the Middle East; operating from yachts or in the cold of Canada; in megacities like New York, São Paulo and Kuala Lumpur. And they've been ordered in all configurations on offer — a testament to the product's success with PBA clients. As far as cabin design goes, the ACH160 comes in a choice of interiors: ACH Line is a sportscar-inspired design emphasising simple elegance to give owners the greatest mission capability and retention of aircraft value. Within this, the Lounge package offers more comfortable seating arrangements. Finally, ACH Exclusive brings even more ease with dedicated soundproofing, sophisticated finishing, a cabin-management system and seclusion from the cockpit.

## ALL THE AMENITIES

Among owners whose aircraft are in service, feedback centres on the ACH160's comfort and design. "In cabin-class aircraft, passenger experience is paramount because they are the ultimate buyers," says Frederic Lemos, Head of Airbus Corporate Helicopters. "But we also hear from pilots how easy the ACH160 is to fly, how its cockpit visibility is an advantage. From both sides, the feedback is positive." That Airbus developed an aircraft which envelops its passengers in exceptional comfort is also thanks to its innovations. The ACH160 has a low sound signature, reduced vibration levels and better fuel consumption. It has an MTOW of one tonne less than equivalent-sized cabins on offer, meaning it also has a lower operational cost and is designed to be more mission efficient. This makes financial sense to the helicopter's client profile, 80% of whom are business entrepreneurs, 20% corporate customers, and governmental entities. However, beyond its utility, comfort and cost of operation, people simply love how it looks. As Frederic Lemos says, "The aircraft leaves everyone who sees it feeling some type of emotion." For many, even a standard passenger-transport configured H160 provides enough comfort. As proof, Ocean Explorer opted for a regular 12-passenger configuration for their two ACH160s, evidence of the helicopter's built-in elegance. In the words of Daniel Braz: "There may never be a perfect helicopter in existence, but the H160 is currently the best aircraft in the world for the VIP market."





# The H160M takes shape

In July, final assembly of the first H160M prototype began at Airbus Helicopters' site in Marignane. In the meantime, system integration is moving forward with bench testing and in-flight aerodynamic testing.



**1:** For the H160M, digital simulations cannot replace real-life testing.

**2:** Airbus Helicopters will build three H160M prototypes.

**3:** The French Ministry of Armed Forces has ordered 169 H160M helicopters.

**4:** Aerodynamic testing is underway for the H160M.

July 4 was an emotional moment for the Airbus Helicopters personnel in Donauwörth as they bid farewell to the first major component assembly (MCA), the main fuselage, of the first militarised H160. After being assembled and tested in Germany, this fuselage was sent to Marignane, France, where it is used in the assembly of the first prototype of the H160M. Airbus Helicopters will build three H160M prototypes that will be used to develop the military version of the latest helicopter in the Airbus range. Assembly is taking place in the following months, with the first flight of this prototype scheduled for 2025. The second fuselage has also now been shipped from Donauwörth to Marignane, meaning assembly of the second prototype can now begin.

### THE POWER OF FOUR

Each H160 and H160M is made up of four MCAs, which are built and assembled at Airbus Helicopters' sites before final assembly of the rotorcraft in Marignane. The main fuselage comes from Donauwörth, the blades from Paris le Bourget (France), the tail boom from Albacete (Spain) and the main gearbox from Marignane. In December 2021, the French Armament General Directorate (DGA) signed a contract with Airbus Helicopters for the development and procurement of the H160M in the frame of the Joint Light Helicopter programme (HIL). The contract includes the development of several prototypes and the delivery of a first batch of 30 aircraft (21 for the army, 8 for the navy and 1 for the air force). The French Ministry for the Armed Forces plans to order a total of 169 H160M helicopters, or 'Guépard' as coined by the French Armed Forces.

### GETTING WITH THE PROGRAMME FOR PARTNERS

Since then, Airbus Helicopters has been working closely with the DGA, the armed forces and its industrial partners on the development of the programme. A 'system helicopter zero' test bench has been built, reproducing the cockpit of the aircraft, and connecting it to the real systems that will be used onboard the H160M. With this test bench, the systems can actually be physically integrated and tested. For instance, the test bench now integrates the HForce equipment, and Safran has already supplied the Euroflir 410 electro-optical system. Thales has also supplied the FlytX flight deck



feature. This new-generation avionics and mission suite for helicopters had previously been tested in flight by Thales. The list of systems that have already been delivered and integrated also includes Thales' TopOwl helicopter pilot head-up display helmet, an inertial navigation system, communication systems and the global navigation satellite system (GNSS).

### NOTHING BEATS THE REAL THING

Meanwhile, flight tests have also been conducted, thanks to mockups of the sensors, communication antennas, electronic warfare systems and the landing gear oof the H160M all being mounted on an Airbus H160 prototype for aerodynamic testing. Digital simulations can't replace real-life testing when it comes to measuring the aerodynamic impact of such equipment on the helicopter's in-flight performance. These tests are also used to assess that every system has been placed in the right position. In June 2024, the French Navy announced that an integrated in-flight test team had been set up with personnel from the armed forces and Airbus Helicopters. This team is already preparing the next phases of the development and test programme of the H160M. They have been working on a pre-serial H160 to test some of the autopilot mdes that will also be available on the H160M.





# French Navy: pioneering the H160 for search and rescue operations

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**AIRBUS H130 TO REACH NEW HEIGHTS WITH ADVANCED AUTOPILOT SYSTEM**

The H130 helicopter's new autopilot offers a multitude of benefits for both pilots and operators. This system provides significant assistance in all phases of flight, from cruise to delicate manoeuvres such as takeoff, landing and hovering, thanks to its 3-axis stabilisation capabilities. To protect the flight envelope, the system integrates advanced safety features by applying progressive resistance to the cyclic stick as the helicopter approaches pre-defined limits, thus preventing dangerous manoeuvres. In addition, it also provides both visual and audible alerts if the aircraft exceeds predefined speed or altitude limits. A 'Level' button is also integrated, allowing the helicopter to return to a straight and level stable flight position in the event of pilot disorientation. Designed to accommodate a wide range of operations and engineered to enhance flight precision and efficiency, the H130 3-axis autopilot is now available to order as an option. While test flights are already well under way, certification is planned for the first half of 2025, with the initial deliveries to take place before the end of next year.



Civil



**ØSTNES HELICOPTERS ORDERS 10 AIRBUS H125s**  
Airbus and Østnes Helicopters, the official distributor for Airbus Helicopters in the Nordic countries, announced a contract for ten Airbus H125s at this year's European Rotors airshow. They will join a fleet of more than 150 H125s in the region, which mainly perform utility and aerial work missions.



**GLOBAL MEDICAL RESPONSE ORDERS 28 AIRBUS HELICOPTERS IN FLEET EXPANSION**  
Global Medical Response (GMR) has placed an order for 28 Airbus helicopters, including 6 H125s, 5 H130s, 14 H135s and 3 H145s, as it continues expanding its air medical fleet. Following GMR's order of 5 Airbus helicopters earlier in 2024, the company will operate a fleet of nearly 200 Airbus helicopters, reinforcing its position as one of the largest operators of Airbus helicopters in North America.



**AIRTELIS SIGNS FRAMEWORK CONTRACT WITH AIRBUS FOR H145 HELICOPTERS TO EXPAND OFFSHORE WIND OPERATIONS**

Airtelis and Airbus Helicopters took the opportunity of European Rotors to announce the signature of a framework agreement for the purchase of up to five H145 helicopters, including the firm order of one. The helicopters are foreseen to be operated and used by Airtelis' subsidiary Oya Vendée Hélicoptères, which provides support for the offshore wind industry.





ONE HUNDRED H135s FOR SPAIN AS FIVE MORE ARRIVE

Spain now has 100 H135 helicopters fulfilling essential missions across the country, following the delivery of five more new aircraft to the DGAM (Dirección General de Armamento y Material). The deliveries to the Guardia Civil, national police, the navy and the air and space force are part of the contract for 36 helicopters that was signed in 2021. These new H135s complete the deliveries to Spain's Ministry of the Interior. The national police and Guardia Civil now each have nine new H135s. The Spanish Air Force and Navy now have seven and five new H135s, respectively.

THE NETHERLANDS ORDERS 12 AIRBUS H225M HELICOPTERS

The Dutch Ministry of Defence has awarded a contract to Airbus Helicopters for 12 H225Ms. The contract also includes an initial batch of support and services. The Royal Netherlands Air Force (RNLAf) currently operates Cougars from the H215M family. The H225Ms will be operated by the RNLAf 300 Special Operations Squadron. Airbus Helicopters and the RNLAf will work closely together on the development of the H225M adapted to the requirements of the users, enhancing capabilities and efficiency for the success of special operation missions, through tactical communication and a unique design of interaction of the aircraft and its systems.



Military



AIRBUS SIGNS HISTORIC CONTRACT TO PROVIDE 19 H135 MILITARY TRAINING HELICOPTERS TO THE ROYAL CANADIAN AIR FORCE

Airbus Helicopters has signed a landmark contract with SkyAlyne, a joint venture between Canadian defence leaders CAE and KF Aerospace, to provide the Royal Canadian Air Force (RCAF) with 19 Airbus H135 helicopters to train the next generation of RCAF Pilots. The contract is part of Canada's Future Aircrew Training (FACt) Program and marks the first time that Airbus helicopters will fly as part of the Canadian Armed Forces.



AIRBUS DELIVERS FIRST OF UP TO 82 H145M HELICOPTERS TO THE GERMAN ARMED FORCES

Less than a year after the contract was signed, Airbus Helicopters has delivered at its Donauwörth site the first of up to 82 H145Ms ordered by Germany. The Bundeswehr (German Armed Forces) have named their new H145Ms "Leichter Kampfhubschrauber" (light combat helicopter), or LKH for short. The helicopter's missions include training, reconnaissance, special forces operations and light attack.





H125M:  
an Ecureuil that  
packs a punch



# HURRICANE HELENE RELIEF EFFORTS SHOW UH-72B LAKOTA IS A FORCE FOR GOOD

Although Helene weakened from a Category IV hurricane after making landfall on 26 September, the storm stalled over the Blue Ridge Mountains in the eastern US for three days and unleashed its fury on several small mountain communities. Punishing winds, rain and tornadoes, combined with unique aspects of mountain topography, led to torrential flooding and devastating landslides wiping entire towns off the map.

Article: Nathan Christensen

Helene caused more than 2,000 landslides in western North Carolina alone and was dubbed a once-in-1,000-year rainfall event by the National Weather Service. People watched as rivers burst their banks and washed their homes downstream leaving them stranded, in need of food, water, shelter and relief supplies.

## COMPLETELY INACCESSIBLE

"Things were really bad," said Chief Warrant Officer 2, Kevin Deharo, a UH-72 Lakota pilot with the North Carolina National Guard. "Everywhere was cut off and completely

inaccessible; there were downed bridges, collapsed houses, and a lot of stranded elderly people and pets who needed our help." Deharo is part of Detachment 1, Bravo Company 2-151st Aviation Regiment and performs missions with the North Carolina Helicopter Aquatic Rescue Team (NCHART) when called upon. NCHART is a partnership between the National Guard, highway patrol, emergency management and local first responders, and after Helene hit, Deharo flew nearly 40 hours over a five-day span in the UH-72 Lakota performing critical search and rescue missions.

## PRICELESS ASSETS

Justin Graney, an official with the North Carolina Department of Public Safety, said that NCHART aviation teams have been performing rescues across the state for 20 years, but this recent effort following Helene in western North Carolina was the most robust aviation response in the state's history. "After a disaster, aviation assets are priceless and allow us to get critical commodities in areas devastated by a storm," he said. "They either rescue folks from an aircraft using a static line [or] lower into the area and make a rescue." In all, the NCHART team made 540 air rescues during Helene and 196 were conducted by hoist operations, he said.

## PERFECT OPERATIONS WHEN PUSHED TO THE LIMIT

Chief Warrant Officer 3, John Seeger, a member of the South Carolina National Guard who serves as part of Alpha Company 2-15 1st Aviation Regiment, also flew missions in support of Hurricane Helene. Seeger said that his unit was tasked to do grid-search operations up and down valleys, and then hover or land at specific landing zones (LZ) to deliver supplies or rescue people in need of assistance. "The LZs for this mission were really tight — 45 ft x 45 ft," he said. "We not only had to think about how to land, but also how to get out. There were a lot of wind and obstacles in our way, including downed trees and power lines and we had to be precise in our execution." Seeger, who has flown the Lakota since 2020, said he and his crew performed 57 total rescues, including 12 pets, and delivered more than 1,000 kg of supplies. "This mission was perfectly suited for the Lakota. We pushed it to its limit, and it handled things perfectly," he said.



## A HIGHER POWER MARGIN

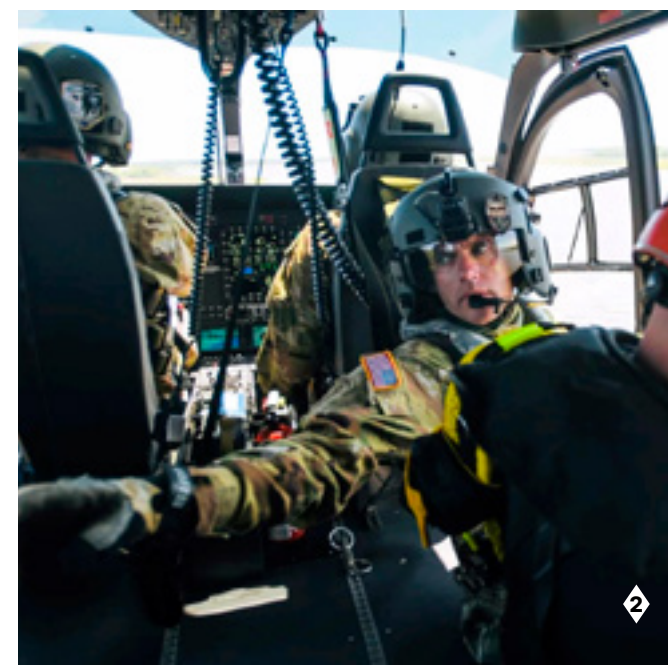
Staff Sgt. James Bailey, who flew with Deharo and served as the crew chief and hoist operator on the Lakota during hurricane relief efforts, said they frequently train for this mission. "We practice rescues in that area [of North Carolina] all the time," he said. "How much we train enabled us to be absolutely prepared for whatever came our way." Deharo added that the helicopter performed exceptionally well in difficult circumstances and enabled the pilots to focus on the mission, rather than the aircraft. "I cannot say enough good things about how the platform performed during the mission," Deharo added. "We operated in really tight areas and the platform gave us a good power margin to do what we needed to do. No doubt, [Lakota] helped us be a force for good in this terrible situation."

**2:** Inside the Lakota cabin as crew get ready to provide vital support to those affected by Hurricane Helene.

**3:** NCHART's missions in the aftermath of Hurricane Helene were the most robust in 20 years of operations.

**4:** In all, the NCHART team made 540 air rescues during Helene, with 196 conducted by hoist operations.

**1:** A US Army Lakota, ready for action





# 1 HOMEGROWN HELP FOR AFRICAN OPERATORS

As Airbus Southern Africa celebrates its 30<sup>th</sup> anniversary, Nam-Binh Hoang explains that the focus remains on offering more to customers and operators in the future.

Article: Ben Peggie

"Our office in South Africa is made up of about 80 people," explains Nam-Binh Hoang, Managing Director of Airbus in South Africa. "Nearly everyone is local, so it's local people supporting local operators. Today there are around 500 helicopters flying in South Africa and most of them were made by Airbus. Over the past 30 years, our team has continuously worked on enhancing the support of the fleet of operators throughout the sub-Saharan African region." High-performance skill sets are definitely required to deliver in a region where the Airbus fleet performs a variety of operations from law enforcement, defence, mining, sightseeing tours, wildlife conservation and private business. The scope of operations is naturally reflected in the team's activities, as Hoang explains:

"We do helicopter sales, helicopter completion and maintenance, sales of spare parts, pilot training, technical support, CAMO services."

## CHALLENGING ALTITUDES

The African continent can be a demanding environment for both helicopters and crew alike. The heat is one thing but operators also have to deal with challenging altitudes in many African countries. For instance, Johannesburg (South Africa) has an altitude of 1,700 metres. Kenya also has some very high working environments. Fortunately, when conditions can't get much hotter or higher, Airbus helicopters still deliver, with one model in particular beloved by local customers, proving itself time and time again — the H125. "I remember my first experience with



an African customer was in Kenya," notes Hoang. "They came straight up to me and told me 'Your H125 works perfectly. It's powerful and we can use it regardless of the conditions, wherever we need to operate. It keeps its performance in high and hot conditions. It's an amazing helicopter.'" While the H125 may be the region's workhorse, Hoang predicts that it won't be long before the five-bladed H145 makes an impact. "Landing on the Aconcagua in Latin America proved that this is also a helicopter which is well suited for high and hot environments," explains Hoang. "The BK117 is popular in several countries and the five-bladed H145 is a natural evolution of this platform for operators replacing fleets or new players entering the market."

## EVERYONE NEEDS GOOD NEIGHBOURS

Hoang believes that as an office dedicated to local customers, a key measure of the customer centre's success is the positive impact operators receive from its activities. "We want to show that we can offer local support, from South Africa. Our approach is based on investing in what our customers need," states Hoang. "For example, we are investing to have blade repair capability here in South Africa instead of having customers send their blades to France, Singapore or the US." With global supply chain challenges ongoing, Airbus Helicopters in Africa invested in a stock collection, so that its proximity would reduce lead times for local operators receiving parts. Another initiative was to make maintenance kits available so that should



operators decide to perform a 600/750-flight-hour inspection on their H125, they could order one line and get the whole maintenance kit, with the right quantity of parts. For pilot training, a new virtual reality simulator — the first of its kind in Africa — will help pilots perfect their normal, emergency and special flight procedures whilst remaining safe on the ground. Hoang wants customers to expect increasing levels of quality service from his team and believes that proximity is vital to delivering on this promise: "We are not 10,000 km from their operations, we are their next-door neighbour, and they can find every service they need from here."

**2:** Nam-Binh Hoang, Managing Director of Airbus in South Africa

**3:** Emergency medical services missions are one of many that Airbus helicopters perform both in South Africa and across the entirety of the continent.

**4:** An H125 surveys some elephants in their natural habitat.



**1:** An Ecureuil on safari. The H125 is beloved by local South African operators.



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# TEAMWORK MAKES THE DREAM WORK FOR EUROPEAN INTEROPERABILITY

As the autonomy of uncrewed aerial systems (UAS) increases, teaming these technologies with crewed aircraft will be vital. A European Union-funded project, code-named MUSHER (manned-unmanned teaming system for helicopters), aims to develop building blocks for crewed-uncrewed teaming (CUC-T) capabilities for a future European framework of interoperability of assets.

Article: Ben Peggie

MUSHER's scope is enormous with, quite literally, a lot of moving parts. Parts that are moving simultaneously (and independently) in two different countries. Uniting aerospace and defence leaders across the continent, the project aimed to team helicopters and UAS from different companies, operate them together in different countries and develop a European framework, including a common exchange protocol. In the final tests, Airbus' H130 FlightLab teamed with its VSR700 UAS to perform an operation in France, while concurrently in Italy a Leonardo helicopter

and optionally piloted vehicle (OPV) flew together. Flight trials included joint operations of the Airbus H130 with the OPV in Italy with real-time payload data transfer through satellite connection, as well as the interaction between the VSR700 and the Italian helicopter — proving that crewed helicopters and UAS from different companies and different countries, operating across large distances, could be integrated within a single CUC-T system. Thales provided a supervision station and mission debriefing station, while the operational concepts of the tests were then



defined by the French, Italian and Spanish Ministries of Defence.

## TEAM BUILDING AND BUILDING TEAMING

Vanessa Blaise, a Research and Technology Programme Manager at Airbus Helicopters, led the company's contributions to the project. With such an extensive list of stakeholders it is not surprising that Blaise stresses the importance of teamwork between the human participants — before even mentioning the complexity required to deliver a complex demonstration: "There was a great spirit of cooperation." Effective collaboration was essential because with so many participants working on a project with such fine margins and fixed windows of opportunity, there was real pressure to deliver. "You have to be on time," states Blaise. "Knowing that in early October, every helicopter, drone and piece of software had to be ready to demonstrate to personnel from the participating Ministries of Defence. Thankfully, it went well."

In order to achieve this interoperability demonstration, around 80 colleagues from Airbus Helicopters contributed to MUSHER. "We used the FlightLab and VSR700, as one of the principles of the project was to use existing technology where possible," explains Blaise. "Nevertheless, we had to define the system architecture and perform some development in particular for the VSR700 ground station controlling the data payload and to install a tablet on the H130 [a remote mission station]."

**1:** Airbus' H130 FlightLab and VSR700 were teamed together during the MUSHER project.

**2:** Vanessa Blaise, Research and Technology Programme Manager at Airbus Helicopters

**3 & 4:** The crewed H130 FlightLab was able to assume full control of the uncrewed VSR700 during the simulated mission.

## TESTING SOLUTIONS FOR TESTING TIMES

The in-flight testing aimed at demonstrating levels of interoperability (LOI) 2 to 4, from direct receipt of UAS data by the crewed helicopters and the ground station (LOI 2), to the control and monitoring of the UAS from the helicopters (LOI 4). One scenario showcased UAS and crewed helicopters on an anti-piracy mission. The UAS initially conducted a surveillance mission. Once it spotted suspicious activity on a boat, the crewed helicopter joined the scene and took full control of the UAS in preparation for an intervention. Teaming helicopters and UAS is becoming increasingly important as they can perform a range of missions, to protect people and critical infrastructure. "The interoperability demonstration performed even better than expected," emphasises Blaise. "With the help of drones, you can protect and increase survivability, limiting the loss of helicopters. This demonstration shows we can deliver what customers and operators expect in the short term while helping guide our future development and research."





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# TODAY'S DISCUSSIONS: TOMORROW'S REVOLUTIONS

In October, Airbus Helicopters hosted its first M Days event. The two-day symposium of conferences, demonstrations and displays allowed around 80 military operators from 20 countries to gather and discuss the rotorcraft of today, tomorrow and beyond. Head of Marketing at Airbus Helicopters, William Sampson, explains why Airbus Helicopters is perfectly placed to lead such an initiative.

Article: Ben Peggie

## WHY WAS THIS THE RIGHT TIME FOR AIRBUS TO HOST M DAYS?

**William Sampson:** We have a responsibility, as a world-leading rotary and uncrewed aerial systems (UAS) manufacturer. We must be preparing for security challenges, not just for today and tomorrow but for events in the 2040s and beyond. Many questions are currently being asked about the future of the industry and Airbus is one of the few entities that can assemble a 'brain trust' of people who are asking these kinds of questions to assess: are we all asking the same questions? Are we asking the right

questions? What are the different views? We wanted to assemble the right expertise to simply consider if the conventional helicopter, as we know and love it today, is going to be what we need tomorrow? If it's not, what will we need? It's not just listening to the end customers and how they feel about our products, but trying to actually shape the future of the rotary and UAS, defence and security world. Even considering competitors, they don't have the same range of products nor customers globally, which enables this diversity of thinking, and consideration of responses to the threats being



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faced. It's important to face these challenges collectively. What was most appreciated by participants was that this was an opportunity to exchange.

## ARE OPERATORS FACING SIMILAR CHALLENGES?

**W.S.:** There were some common themes which came up about customer operations, availability, survivability, looking ahead to dispersed operations. So, there was a certain amount of commonality, in that these are problems which everyone in the entire industry faces. The military is hard pressed, government security and operators are hard pressed to do a lot of critical life-saving missions within a constrained budgetary and supply chain environment. There's a certain amount of shared consideration when looking ahead to our future conflicts about using UAS and uncrewed teaming. We know it will be part of the answer, but we're all trying to work out the best answer and the best way to integrate that into the concept of operations and thereby develop the future products. So that's a very accelerated cycle and certainly a generational change within the helicopter industry.

## WHAT WERE THE MAIN TAKEAWAYS?

**W.S.:** The notion of multi-mission capability and modularity of approach, particularly in the context of hybrid warfare, is something which really stood out from the M Days. The discussions showed that there are certain similar challenges which we're facing, both contemporary and future, but it would be a mistake to conclude from that, that there's a one-size-fits-all answer. When considering the design of the next generation of military rotorcraft, there are a number of contending designs that are under consideration, including high-speed tilt rotor options. If we're going to be facing conflict



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in theatres where a kind of hybrid warfare in an increasingly uncertain world could be playing out — we're talking about protracted events, which go on over years, where the warfare is on an operator's home soil — while speed is essentially important, it's not the priority because what you need is to have resilience of your industry in order to be able to carry out multiple missions, multiple tasks in peacetime and in wartime. From fixing the power supplies which the enemy has destroyed, to rescuing people where some insurgents have blown the dam, and doing disaster relief operations, versatility is what is most important.

**2:** William Sampson, Head of Marketing at Airbus Helicopters

**3:** A Hungarian H225M in flight. Representatives from 20 armed forces from around the world were in attendance.

**4:** The H145M prototype flies as a part of a demonstration for some of the 80 attendees.

**1:** M Days featured the entirety of Airbus Helicopters' military range. Here an H225M, H175M and H160M sit on static display.



# TO BEE OR NOT TO BEE — THE H125 TO THE RESCUE

In the midst of a natural disaster, a swarm of bees took an extraordinary first flight, beneath an SAF Ecureuil. An event worthy of a Shakespearean play, except with no sting in the tale.

Article: Alexandre Marchand

In the early days of September 2024, severe weather hit the French Pyrenees. The Aspe valley was lashed by torrential rain, leading to landslides and flooding. National Route 134, which links France to Spain via the Somport tunnel, was cut off, and the water and electricity networks also suffered extensive damage.

## READY FOR ACTION

"The first effects of the Gave d'Aspe flooding were felt on the night between 6 and 7 September," explains Jérôme Delhome, pilot and head of the Pyrenees base at SAF Hélicoptères in Ger. The company keeps an H125 stationed there throughout the year for aerial work in the region. "The flooding got worse during the night, the authorities issued warnings in good time,

residents evacuated and there were no casualties," continued Jérôme Delhome. "My assistants and I were ready to take action on the morning of 7 September, but the wind was too strong. We had to wait until the end of the day to launch the first logistical relief missions."

## NON-STOP OPERATIONS

Everything was transported by sling, with lengths varying from 25 to 70 metres depending on the terrain. The helicopter was also used to transport personal belongings from devastated homes. The light helicopter once again proved its worth, flying up to six hours a day non-stop. Around two weeks after these dramatic events, the SAF base received a call from the Pyrenees National Park: the situation for beekeepers who

could no longer access their hives on the Layers plateau was becoming critical. The forest paths had been destroyed by mudslides, vehicles could no longer get through and the plateau was only accessible on foot. In addition to harvesting several hundred kilos of honey, they also had to bring the hives down to the valley for the winter. The Ecureuil would go on to single-handedly rescue an entire local economy.

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## A TONNE OF HONEY

"The first stage of the job was to bring in the honey," explains the pilot. "In two round trips, I took almost one tonne down to the village of Borce, 300 metres further down the valley." Meanwhile, the beekeepers dismantled their hives and prepared them for transport on pallets. "We put a dozen on each pallet, for a total weight of around 700 kg. We didn't have a problem with the load, but we were afraid that the hives would get damaged during transport and that the bees would escape."

## 'BEESILY' TAKING FLIGHT

Normally, hives are transported on trailers at night, when the bees are asleep. The noise, rotor blast and possible damage to the hives make caution a necessity, so the bees were smoked inside their hives the night before to give them a few extra hours of peace and quiet during transport. The next morning, the assistants in charge of attaching the loads to the sling worked wearing beekeeping protective gear. The pilot, 35 metres higher up, wasn't at risk and wore no special protection equipment. After the two round trips to collect the honey, five more were needed to bring the hives to the floor of the valley. Each flight lasted just over eight minutes and the entire operation was completed in less than an hour. "I've been a professional helicopter pilot since 1997 and I've clocked up over 16,000 flying hours, including 12,000 on the Ecureuil family," explains Jérôme Delhome. "In the course of my career, I've transported everything from cows and horses to sheep and tourists... but never bees! One thing I learned from this mission is that these insects seemed to enjoy this new kind of flight. They showed no aggression, and nobody got stung."


1: A SAF H125 in operation

2: The honey was transported to Borce 300 metres further down the valley.

3: About 700 kg of honey was transported during the operation.





An aerial photograph of a yellow and black Airbus H160 helicopter in flight. The helicopter is banking to the right, leaving a white smoke trail behind it. Below the helicopter, a winding asphalt road runs parallel to a coastline. The road has a white car on it. To the left of the road is a dense green forest, and to the far left is the ocean with visible waves. The overall scene is captured from a high angle, looking down at the helicopter and the landscape below.

airbus.com



# MULTI-MISSIONS DEMAND A MULTI-TALENT

Whatever mission it's called for, the H160 is raising the standard to create a new benchmark in the medium twin segment. That's because this technologically advanced helicopter delivers exceptional performance coupled with next-level efficiency. Along with high levels of automation and unparalleled cockpit visibility, its safety compliance and optimised maintenance costs provide added value to every customer. With lower fuel consumption, reduced sound levels, and larger passenger volume, the H160 offers many features that help keep the world a safer place.

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