

MAGAZINE

ROTOR

THE WORLD OF HELICOPTERS BY AIRBUS HELICOPTERS - N°98 - JUNE 2014

SUPPORT & SERVICES

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THE TRANSFORMATION IS UNDERWAY

I'm pleased to begin this editorial with some good news that concerns you directly. First of all, the EC175 and EC145 T2 have both been certified and will enter service this year. Helionix®, our new avionics system, has been installed on both helicopters; over time it will be introduced on other models in our civil range. This optimized human-machine interface will mean better flexibility and safety for your helicopters. In addition, the new shaft developed by our engineers to equip the EC225/EC725 fleet also has been certified. It will now be installed on all new helicopters of this type and will progressively replace the shafts on the helicopter fleet in service.

I know your expectations of us are high. That is why our top priority at Airbus Helicopters is the transformation plan that we are introducing at every department to better satisfy your needs, to ensure that quality and safety remain core values at the company, and to provide you with an even more competitive range of helicopters. The plan already is starting to produce results. We have introduced specific actions throughout the industrial chain, from design and development through to support and services. You'll learn more about some of these actions and the results we've obtained in the current issue.

I've also added new talent to my management team. Each one comes from a different background and brings a fresh vision to the strategic direction of Airbus Helicopters. Helmuth Gold is now executive vice president of Quality; Christian Cornille is executive vice president of Industry; and Martin Schübel becomes executive vice president of Purchasing.

Indeed, 2014 is an important year for our company. A year of change, and a year of challenges – which we are determined to meet to serve you better.

Thank you once again for holding us to the highest standards. Fulfilling your requirements drives us to become even better at what we do.

Guillaume Faury



PEDRO SILVA SUÁREZ

LMA Maritime Rescue at Inaer Helicópteros (A Coruña, Spain)

“The Spanish Maritime Safety Agency (SASEMAR) overseen by the Ministry of Development will soon be replacing the Sikorsky S-61N it operates for sea search and rescue missions with an EC225.

I would also like to see an article in your magazine about the outstanding work performed by the men and women at the La Costa de la Muerte maritime rescue center in Galicia, Spain. In this region, which was struck by ecological disasters such as the Aegean Sea oil spill in 1992 and the Prestige oil spill in 2002, local fishermen (who play a decisive role when helicopters are selected by the SASEMAR and the regional government) must go to sea in harsh conditions every day. It is our mission to look after them, and also to perform on-land air ambulance missions with our two EC135s.”

> We are always on the lookout for stories about our operators and their missions that spotlight the men and women who utilize our helicopters. The story you suggested is very interesting, and we would be thrilled to share your experiences with our readers. Let us know as soon as your EC225 enters service!

WOLFGANG BURGER

Technical director at OAMTC

“I’m a regular reader of *Rotor* magazine. I’d like to see more articles about all the departments at Airbus Helicopters and the people who work in them so I can get a better idea of how the company works.”

> We’d also like our customers and the people who work at Airbus Helicopters to learn more about each other, which is why we’re showcasing our Support and Services department in our latest issue. The editorial staff here at *Rotor* is working to present more of our departments in upcoming issues.

JONATHAN ESCANDE

Maintenance manager at main base of HELI SECURITE

“I would like to see more articles in your magazine about new products: the EC175, EC145 T2, X4, etc.”

> Regarding the EC175 and the EC145 T2, we think this latest issue will be of particular interest to you. As for the X4, the program is moving ahead on schedule. *Rotor* certainly will showcase them when the time is right!

THE FLOOR IS YOURS!

Dear readers,

The editors of *Rotor* want to hear from you. That’s why we’ve dedicated a special space for you in the pages of each issue. So feel free to drop us a line. We’d love to share your stories, hear about your flying experiences, and publish the best pictures of your missions. Send your letters to rotor-magazine@airbus.com. We’re counting on you!

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© Alain Ernould



© Anthony Pecchi



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EC225 CERTIFICATION OF VERTICAL SHAFT



© Alain Ernould

The European Aviation Safety Agency (EASA) certified the new design of the EC225's vertical shaft in April. Other airworthiness authorities around the world will soon be following suit.

The new design increases corrosion resistance, reduces residual stress, and eliminates critical stress points.

Production work on the new shaft is already underway, with installation scheduled to begin on the EC225 in the second half of 2014.



© Jérôme Deulin

AIRBUS HELICOPTERS AND AVICOPTER PRODUCTION AGREEMENT FOR 1,000 EC175S

Airbus Helicopters and China's Avicopter signed a joint agreement on March 26 for the production of 1,000 EC175/AC352 rotorcraft. The ceremonial signature was made in the presence of Chinese President Xi Jinping and French President François Hollande at the Elysée Palace in Paris.

As development work has been equally shared between Airbus Helicopters and Avicopter for the EC175/AC352 project, production is likewise shared – combining the capabilities of both companies.

Two different rotorcraft are being built from a common platform: the AC352, assembled and supported from China by Avicopter, primarily for the Chinese market; and the EC175, assembled and supported by Airbus Helicopters from Marignane, France, for the remainder of the worldwide market. France and China launched their cooperation on the EC175/AC352 in 2005, benefitting from 40 years of close ties between these partners on previous rotorcraft projects.

PARTNER PORTAL A NEW WEBSITE TO FACILITATE COOPERATION

Airbus Helicopters' new partner portal was launched in March to improve communications with the company's suppliers. It facilitates document and data exchange, and provides suppliers with a single tool for receiving information about business strategy and industrial needs. Each supplier now has its own dedicated space on the interactive site, which includes a wide range of services. A platform has been set up where suppliers can see responses to their bids and to monitor contracts, forecasts and orders. They can also see production plans and the status of invoices, and have access to forums for sharing information.

New services will soon be available, such as functions for distributing contractual documents and managing quality notes and equipment change sheets (FEEs).

URUGUAYAN AIR FORCE A DAUPHIN AS365 DELIVERED IN PRESENCE OF URUGUAYAN PRESIDENT



© Fuerza Aérea de Uruguay

Airbus Helicopters' local entity in Chile delivered an AS365 Dauphin to the Uruguayan Air Force (FAU) during a ceremony in May that was attended by the country's president, José Mujica. The FAU fleet, which performs medical airlift and emergency rescue missions, includes two Dauphins

equipped with defibrillators, oxygen bottles and incubators. One of the Dauphins was put to good use last April, when it flew to the rescue of a woman with her new-born baby following heavy flooding in the Tacuarembó department. The grateful mother named her daughter "Delfina."

SUPER PUMA AS332 C1e SIX HELICOPTERS FOR THE BOLIVIAN AIR FORCE



© EC Chile

The Bolivian Air Force (FAB) has selected the Super Puma's latest high-power AS332 C1e version to fight drug trafficking and perform public-security and disaster-relief missions throughout the country. This contract includes a logistics package that will support fleet sustainability in the coming years. The first two helicopters will be delivered this year and the remaining four before 2016.

The contract also includes a logistical support package that aims to provide the FAB with the resources and know-how it needs to ensure high fleet availability. The FAB also will benefit from a technology transfer program that includes the training of more than 80 technicians and pilots in France and Bolivia.

2014: A YEAR OF CERTIFICATIONS

Article
RÉGIS NOYÉ

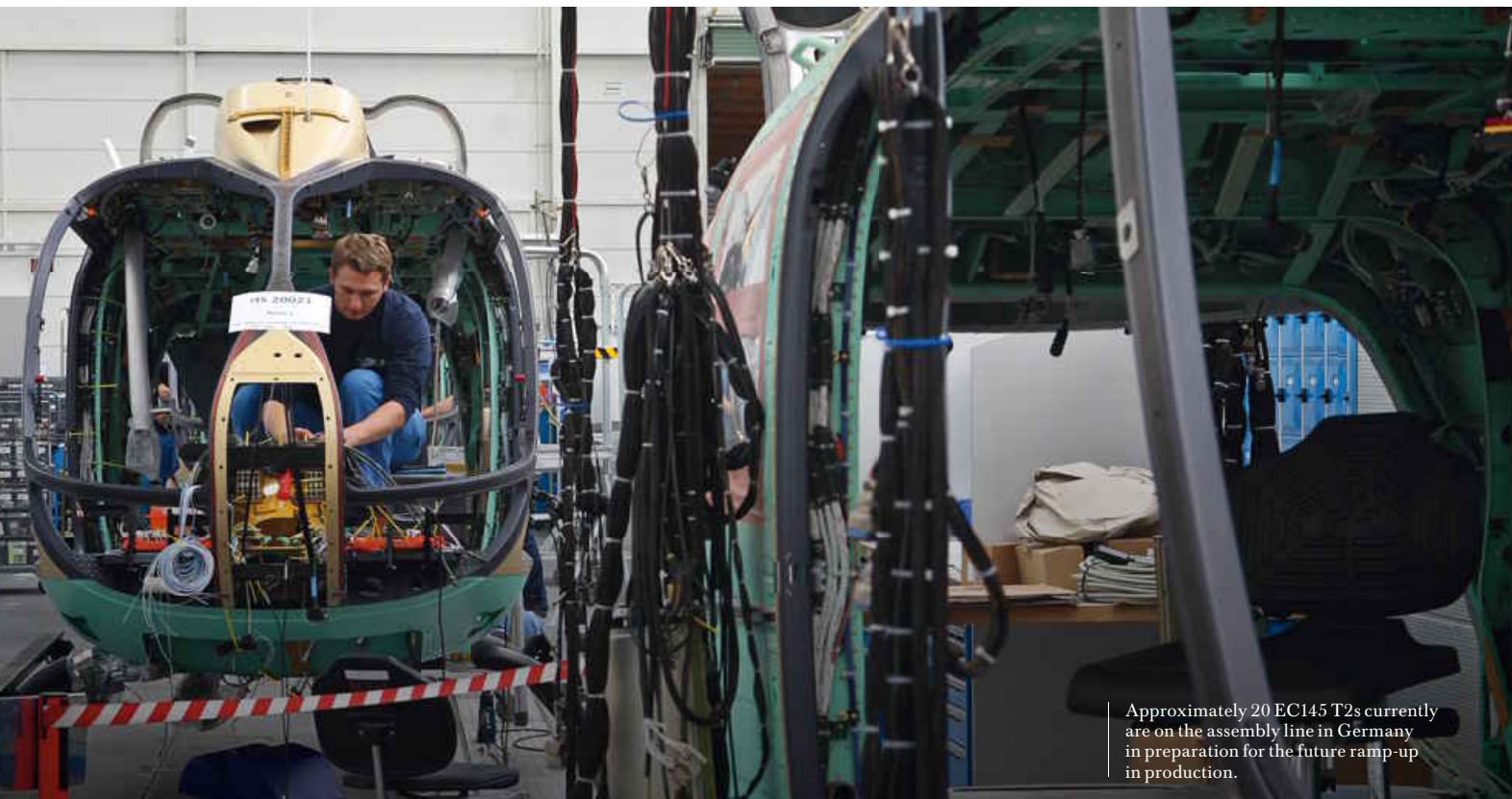
Developed in cooperation with Chinese enterprise and boasting revolutionary avionics, the EC175 has broken new ground by becoming the first entirely new helicopter to receive certification from the European Aviation Safety Agency (EASA).

The issuance of the EC175's type certificate on January 30 was achieved thanks to the work of nearly 1,000 Airbus Helicopters personnel. Several departments were involved in the process. At the forefront among them were the design office, ground and flight testing, and support. Describing the work carried out on the program as "exceptional," its chief

engineer Philippe Legendre hailed "the commitment of the workforce."

As shown by customer demonstration flights, all stated objectives have been reached in terms of comfort, safety, performance, and pilot workload, which has been lightened thanks to the ergonomics of the new Helionix® avionics suite. Certification was granted to the EC175

in its oil & gas version, fitted with all the appropriate equipment for this mission profile. The initial aircraft of this type will be delivered before year-end. A further two versions will soon come into being, one for VIP business transport and the other for SAR (search and rescue) missions. Certification from the U.S. Federal Aviation Authority (FAA) and Russia's



Approximately 20 EC145 T2s currently are on the assembly line in Germany in preparation for the future ramp-up in production.

© Charles Abarry/Airbus Helicopters



© Anthony Pecchi/Airbus Helicopters

Aviation Register of the Interstate Aviation Committee (IAC-AR) should be obtained in 2014.

DELIVERIES OF THE NEW EC145 T2 TO BEGIN IN THE THIRD QUARTER

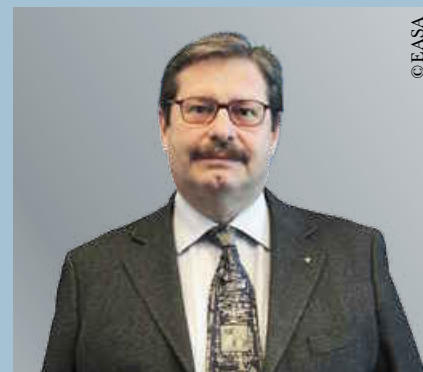
The newest member of Airbus Helicopters' proven EC145 rotorcraft family – the EC145 T2 – was certified on April 16. This certification covers the full range of capabilities, including single-pilot and instrument flight rules (IFR) and single engine operations (Category A/VTOL), along with night vision goggle capability. Approximately 20 EC145 T2s currently are in series production, providing a solid basis for the ramp-up in production. To date, Airbus Helicopters has received orders and options for more than 100 EC145 T2s, along with 15 of the military EC645 T2 variant for the German Army.

IMPROVED PERFORMANCE

The EC175's maximum take-off weight (MTOW) has been increased to 7,800 kg, giving operators the choice between a payload of 300 kg or an additional 40 nautical miles of operating range. The upgraded MTOW is scheduled for certification by the end of 2016.

3 QUESTIONS TO...

PIER-GIORGIO COLOMBO
EASA PROJECT CERTIFICATION
MANAGER



© EASA

“A REMARKABLE EXPERIENCE”

Pier-Giorgio Colombo was the EASA Project Certification Manager responsible for overseeing certification of the EC175. Having acquired 30 years of experience in the industry prior to joining EASA, he is the perfect voice to discuss the program.

Can you give us your view of the EC175 certification process?

Pier-Giorgio Colombo: I'm extremely proud and satisfied to have had the opportunity to work on this program. It was a remarkable and very rewarding experience both for my team and for me. We learned a lot about how to manage a project of this scale. When the process began in 2007, EASA was still very much in its infancy and this initial experience has allowed us to put our organization on a more solid footing.

Were there any specific problems you encountered during the certification process?

P.-G. C.: The process lasted longer than expected, basically due to two main reasons: the project development that required some tuning of the aircraft design, and the project management. Problems encountered during the development of a new project are quite normal and in this case Airbus Helicopters encountered such challenges, resulting from a new avionics package and with the involvement of various partners; the company managed them with commitment and competence. Regarding project management, the number of actors involved required significant coordination efforts, primarily on the manufacturer side but also by EASA.

To what extent did you work with Chinese manufacturers on the program?

P.-G. C.: In reality, not very much. With a view to setting out the working methods, EASA signed a cooperation agreement with the Chinese certification authorities, but we had little contact with them at the end. Only in few cases did we request the CAAC to witness tests on our behalf in their country. In some cases, we went to China but most of the time we relied on the Airbus Helicopters' Design Organization Approval.



READ THE FULL INTERVIEW
OF PIER-GIORGIO COLOMBO
ON ROTOR ONLINE
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TECHNICAL SUPPORT

has many responsibilities: answering customers' questions and finding technical solutions for specific issues (either directly or via a TechRep); providing numerous information services; completing development work on helicopter modifications and upgrades; and creating technical documentation.

SUPPORT & SERVICES: 100% CONNECTED

Article: RÉGIS NOYÉ

DATA MANAGEMENT AND SOFTWARE SUPPORT DEPARTMENTS

are responsible for compiling, processing and analyzing data pertaining to the entire in-service fleet while also providing support for onboard software developed by Airbus Helicopters on aircraft such as the NH90, EC175 and EC145 T2.

While the strengths of Airbus Helicopters' support and services are well known – a diverse range of services adapted to customer needs, a strong worldwide presence, and around-the-clock responsiveness – feedback from recent customer surveys shows that operators expect

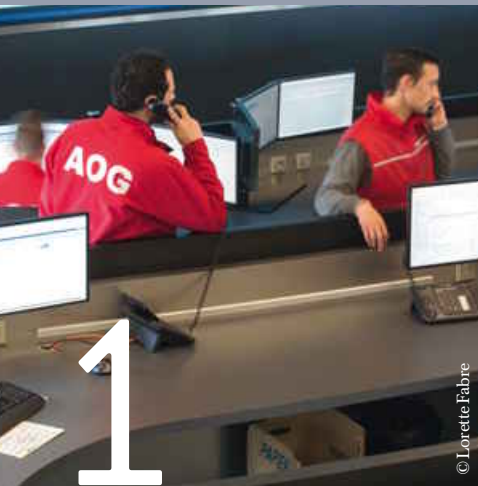
much more. In parallel, customer demands are increasing, particularly when it comes to spare parts, AOG services and technical support. In response, Airbus Helicopters is focusing its transformation of support and service activities on customer satisfaction.



5

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10 FEATURED ARTICLES



LOGISTICS

is responsible for receiving and dispatching spare parts (both new and repaired) to make sure that the delivery times specified in customized 24-hour and 48-hour contracts are respected. The department also manages warranties and AOG services via emergency call centers that are open 24 hours a day, seven days a week.

THE MRO DEPARTMENT

performs maintenance visits and carries out overhauls and repairs on all types of helicopters (from Airbus Helicopters and other manufacturers), both in its workshops and at customer bases. The department is also responsible for helicopter transmission systems (such as main gearboxes, rotor heads and blades) and equipment packages.

2



TRAINING

oversees type qualifications and recurrent training for pilots and ground-based technicians. Airbus Helicopters' training services has many tools at its disposal, including 21 full-flight simulators (FFS) at the company's 25 training centers around the globe. Four more FFSs will enter service in 2014 and 2015.

“BUILDING OUR PLAN WITH YOU”

The moment an Airbus Helicopters rotorcraft is delivered, one of the company’s primary missions ends just as another gets underway: to provide the customer – regardless of its profile, activities or location – with the technical support and services it needs to carry out its operations with maximum efficiency, maximum safety, and minimum costs. As customer needs change, we must be capable of continuously adapting to their operational requirements.

The following articles offer a look at the Airbus Helicopters-wide transformation plan we launched this year to provide customers like you with better service. In the following pages, you will learn about some of the specific measures we have already implemented in our customer support & service sectors.

We’re focusing our efforts on four main areas: improving each link in the customer support chain; understanding your missions better; introducing truly performance-based contracts; and ensuring our services are of the same high quality everywhere in the world. We’re building this plan together with you, so we’re counting on your feedback to help us develop effective initiatives in tune with your needs. In return, the top-notch performance levels, availability, and competitiveness of your helicopters will be our ample reward.



© Christophe Guibbaud

Dominique Maudet,
Executive Vice President
Global Business and Services



© Eric Raz

IMPROVE OVERALL PERFORMANCE

Matthieu Louvot, Senior Vice President – Support & Services, shares elements of the transformation plan.

What are the main areas for improvement?

Matthieu Louvot: “There are four main areas. First, we need to improve the intrinsic performance of each individual element in the overall support puzzle. This means reducing MRO work cycles, respecting lead times for spare part deliveries to customers, and increasing the overall quality of our services. To do so, we’re making sweeping changes to our management methods and processes—both internally and with our suppliers—by employing Lean concepts and systematically monitoring quality levels and lead times.

Secondly, we intend to gather more detailed data about our customers’ operations and maintenance activities (number of flight hours, number of parts changed, etc.) in

“We progress on our customer satisfaction goals by increasing spare part inventories, by investing in IT tools to facilitate better administration and exchange, and by developing online services.”

order to better analyze their needs and pinpoint the areas where we need to focus our efforts to improve services and innovation.

We also need to use these improvements as building-blocks to offer more performance-based support contracts that guarantee our customers top-notch service.

And lastly, Airbus Helicopters has to work more closely with its worldwide support network – in particular its approximately 30 local entities—to make sure all the services we offer conform to the same high standard.”

What are your objectives?

M. L.: “We have three quantifiable targets of the utmost importance. First, we want to reduce the number of late deliveries – i.e., the number of parts delivered to customers behind schedule – by two-thirds by the end of 2015. If we’re successful, our service rate for on-time deliveries will increase to 95 percent. Our second goal, to be accomplished within this same timeframe, is to reduce MRO cycles by an average of one-third.

At the same time, everything regarding support and services must be in place when our two new helicopters, the EC175 and EC145 T2, enter service – along with the new Helionix® avionics system installed on both helicopters. And of course, we’ll continue to keep a close eye on technical support and availability for the EC225 fleet.”

What means are at your disposal to achieve these goals?

M. L.: “We are focusing on several areas: increasing spare part inventories, which entails a significant financial investment; investing in IT tools to facilitate better administration and exchange with customers, together with developing more online services; and finally, optimizing the geographical distribution of our technical representatives (TechReps) and strengthening our technical support hubs in the Americas, Europe and Asia to ensure high-quality support around the clock. We’re also coordinating the work of our support engineers, who handle technical issues, with our logistics teams, who are responsible for inventory management. They’ll now be working hand-in-hand to provide more effective service. It should also be noted that starting this year, inventory management will be coordinated by Airbus Helicopters using new forecasting tools and methods in order to optimize spare part locations based on fleet needs. And of course, we’re still open to any new ideas that will help us improve our services.”

A CATALOGUE FOR STANDARDIZED OPTIONS

Airbus Helicopters and its network of subsidiaries now offer customers an extensive range of more than 150 standardized optional upgrades certified by Service Bulletins (SB) and Supplemental Type Certificates (STCs). Customers can now see the entire offer in an online catalogue accessible via the Keycopter portal, and can purchase the upgrades from anywhere in the world via the portal’s e-ordering service. The product is delivered in a kit that includes the necessary installation documentation and the product certificate. The catalogue’s STCs are EASA and FAA certified, and may be subject to additional certifications from aviation authorities in certain countries.



One of the goals is to reduce MRO work cycles by one-third on average.

CUSTOMIZED CONTRACTS

Airbus Helicopters offers a full range of customized contracts with performance-based services (PBS) that can be adapted to the specific profile and operational constraints of its customers.

Below, two very different customers with very different needs share their experiences with these unique contracts.



© École de l'armée de l'air allemande



© Hélicoptère

GERMAN ARMY AIR CORPS SCHOOL

The German Army Air Corps School operates a fleet of 14 EC135s that log a minimum of 7,000 flight hours each year in the training of approximately 80 pilot trainees. The school has had a tailor-made “Full Support” contract since 2001, which includes a service package guaranteeing the availability of 11 helicopters every working day of the year (including a certain number of night flights). The contract covers all operational sites in Germany and abroad. To honor the contract, approximately 15 Airbus Helicopters technicians remain on-site to perform all flight line maintenance operations. The price of the contract is based on number of flight hours.

“The only thing we have to do is the pre-flight check before each mission,” said Lieutenant Colonel Michael Grub, who is in charge of flight training. “We are extremely satisfied with the contract, which has been fully honored and perfectly meets our needs. We renew it every five years without changing a thing – mainly because of the excellent services provided by the Airbus Helicopters personnel on site. The working relationship has been excellent.”

HÉLI CHALLENGE

Héli Challenge is a French operator specialized in transport missions and airlift work in mountainous regions. The company operates five AS350 B3/B4s, and has a “Parts by the Hour” contract, with fees based on the number of flight hours completed. As part of the contract, Airbus Helicopters guarantees rapid delivery of a certain number of parts (dynamic components or equipment) from a predefined list. The contract also covers unscheduled part removals and TBO (Time Between Overhauls) components that have reached the end of their service life.

“When a failure occurs on a costly part, our contract guarantees that it will quickly be replaced and that we will receive the part with the most recent upgrades – without us having to worry about the cost, as would be the case with a standard replacement contract. We avoid having helicopters on the ground, and don’t have to manage part inventories. In the end, the contract enables us to smooth out our expenses and budgets, and to better manage investments and depreciations within our fleet,” explained Jean-Christophe Martinet, technical director.



VIEW THE GLOBAL NETWORK MAP ON ROTOR ONLINE
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PROXIMITY TOP PRIORITY

With 90 MRO⁽¹⁾ service centers worldwide, Airbus Helicopters has the largest support network in the helicopter industry. New centers are being added around the globe to ensure the same high-quality services for all customers, wherever they may be.

THE AIRBUS HELICOPTERS NETWORK: KEY FIGURES

- 149** countries
- 30** local entities
- More than 60** certified partners
- 7** logistics platforms for spare part distribution
- 25** training centers

Airbus Helicopters maintains a presence in 149 countries to ensure true neighborhood services for its customers. The acquisition of Canadian company Vector Aerospace in 2011 consolidated Airbus Helicopters' presence in several regions around the globe, while the synergy and complementarity of the two companies' range of services has been of great benefit to a large number of operators. The network continues to grow. At the end of 2013 Helibras, Airbus Helicopters' local entity in Brazil, inaugurated a new service center in Atibaia near São Paulo. Bralog will be the single interface for all the country's customers. The

new center also is a logistics platform for the Airbus Helicopters range within the country. Its team is available seven days a week to handle all types of customer support requests. They manage contracts, dispatch spare parts, answer technical questions, honor warranty claims, and of course provide AOG services that include emergency repair solutions and spare part shipments.

(1) Maintenance, Repair and Overhaul

A GROWING NETWORK OF LOCAL SERVICES

For Airbus Helicopters, the training of pilots and ground technicians is essential to flight safety. The company's instructor pilots and mechanics provide training at 25 centers around the globe. These centers are certified by the parent company to make sure the services provided at each site are of the same high quality. Airbus Helicopters has introduced new tools such as the Flight Navigation Procedures Trainer (FNPT – see photo opposite), now available for the EC175, simplified computer-based tools, and operational analyses at customer sites.

Airbus Helicopters continues to expand its training network, as the increasing number of Full Flight Simulators (FFS) clearly attests: in 2008, just four FFSs were in service; by 2013 the number had grown to 20. In 2014, a new EC135 FFS already has been inaugurated in Japan, and the first EC175 FFS is scheduled to enter service before the end of the year in France. An additional three simulators are on the way in 2015: the first FFS for the EC145 T2, along with EC225 FFSs in Brazil and Norway. In 2016, a second EC175 simulator will be entering service in the United States.



© Jérôme Deullin/Airbus Helicopters

OPERATIONAL CENTERS BY YOUR SIDE 24/7

The AOG department is customers' around-the-clock point of entry for "Aircraft on Ground" situations. The department also offers technical support to provide optimized repair solutions.

The centralized operating center in Marignane looks much like an airport control tower, equipped with a unique, cutting-edge visual management tool. An enormous wall of digital displays gathers all the information needed to properly handle a request, updated in real time: the requested part, the requesting party's location, the request's status, the available stock, the number of requests in progress, etc.

In the control room across from the display, a team of approximately 50 people – all specialists in their respective fields (technical, logistics, quality, shipping, etc.) – take turns manning the workstations 24 hours a day.

This center in Marignane also supports similar logistics platforms in Hong Kong, Dallas and Atibaia (Brazil) when they are unable to resolve problems locally.

Soon, a new unit of technical specialists will join the AOG department to help meet increasing customer demand and to provide additional support when the EC175 and EC145 T2 enter service. The new unit will perform in-depth analyses of technical problems to improve Airbus Helicopters' response times in AOG situations, and will carry out real-time analyses before orders are placed to ensure that the best possible repair solution is offered to the customer.

This new service will be essential to improving fleet availability and supporting the new aircraft entering service.

© Lorette Fabre



REGA

PRIORITIZING COMMUNICATION AND AVAILABILITY

"Based at Zurich Airport, Rega comes to the aid of people in distress, providing swift and professional medical assistance by air 24 hours a day. In order to do this, we employ state-of-the-art operating resources. The company operates a total of 17 helicopters, including six EC145s, performing more than 10,000 missions a year, day and night, often in difficult conditions such as ice and snow.

We use aircraft-on-the-ground (AOG) services approximately once a month, whenever an AOG situation occurs for any reason, or to avoid extending a maintenance action. We expect parts availability and a professional AOG help desk (24/7), as well as adequate communication and status updates. Airbus Helicopters is performing as we expect in most cases, so generally speaking we are satisfied with the AOG support we receive.

We are likewise satisfied with the level of technical support received, particularly regarding the availability of the Product Manager and his team. The information provided is high quality and pertinent, even if the timeframe for receiving repair approvals could be shorter."

Alessandro Pedrini, Head of Procurement and Logistics at Rega

Learn more at www.rega.ch

KEYCOPTER

A WIDE RANGE OF E-SERVICES

Airbus Helicopters continues to expand its broad range of interactive and personalized Internet services and mobile applications, available 24/7 via the Keycopter portal. The company aims to make the services accessible to 80 percent of customers worldwide by the end of the year (100 percent for e-techpub customers). The main services are introduced below. Others are already online or will soon be available.

e-customer request is a means for customers to freely express themselves. Any type of request can be sent in real-time to the relevant technical department and then followed online. During summer 2014, a new interface will be made available so that customers can quickly enter technical requests and incidents and effectively monitor their progress.



e-ordering makes it possible to submit all spare part orders online, to view all previous orders, and to consult the Illustrated Parts Catalogue (IPC). The order is automatically transferred to the closest logistics platform in the Airbus Helicopters network that has the part in stock, which will then handle the order directly.



e-warranty can be used to send warranty claims in real time to the department concerned and to monitor their status throughout the claim procedure, thereby reducing processing times.

e-techpub is the new database containing the entire body of technical documentation, now accessible directly online. Thanks to e-techpub, customers know they always have the latest document version. The second-generation O.R.I.O.N.¹ interactive browser is efficient and user-friendly, enabling operators to quickly find the reference for their helicopter model and to move between documents via interactive hyperlinks. The database has many useful functionalities, such as allowing operators to order spares directly from the technical manual.



WebHUMS makes it possible to monitor and track health and usage for helicopters with an onboard Health and Usage Monitoring System (HUMS)².



WebMIS is an online system for managing operations, logistics, maintenance (including inventories), and more. With no initial investment required, WebMIS can save time and money while increasing aircraft availability.



Data analytics helps operators pinpoint ways to improve operations and maintenance activities by displaying and monitoring key operational data compared against those of other helicopters around the world.

(1) Optimized Reader for Internet and Other Networks
(2) Health and Usage Monitoring System



© Jérôme Deulin / Airbus Helicopters

EC175

Article: RÉGIS NOYÉ

THE GREAT WHITE NORTH



The EC175 PT3 prototype spent the month of February in North-eastern Canada undergoing cold weather trials led by a team of 12 persons. The purpose of the campaign was to demonstrate the helicopter's ability to successfully operate in extreme temperatures.

The helicopter was transported to Edmonton by an Antonov cargo plane, and then flown to the small town of Yellowknife, about

400 kilometers south of the Arctic Circle. As part of the test, the teams verified that the helicopter could be started up after being exposed to the cold for periods of at least 10 hours (to ensure fluids such as oil and fuel reached the required test temperature). They also checked that no cold-related phenomena occurred during flights, and performed operational checks on the helicopter's equipment in extreme weather conditions.

“SAFETY IS ABOUT EVERYDAY CHOICES”

Interviewed by **JEFF LENOROVITZ**

Recently appointed as President and CEO of the National Safety Council, Deborah Hersman previously served as Chairman of the National Transportation Safety Board (NTSB). This visionary is an advocate of safety in all modes of transport, and responds to questions on helicopter operations from her NTSB experience for *Rotor Magazine*.

Why was helicopter safety added to the NTSB's Most Wanted List of Safety Improvements in 2014?

Deborah Hersman: This highly-unique sector is growing globally and there is tremendous demand for the wide variety of missions that helicopters can perform – both in the U.S. and around the world. The helicopter industry's inclusion in our recent “most wanted” list underscores the growth in this industry and some of the risks we feel need to be addressed.

Our goal is to spur the industry – from manufacturers to pilots – to identify what they can do to mitigate risks. Whatever your role in the helicopter sector, you can affect change to improve safety.

Over the past 10 years, the NTSB has investigated nearly 1,500 helicopter accidents. Are there general trends that have emerged from these accidents?

D. B.: We often focus on three factors: the human, the machine and the environment. For the human aspect, the industry must ensure high-quality training, good risk assessments, a strong understanding of equipment and familiarity with emergency situations, so operators are fully prepared for both day-to-day missions and worst-case situations.

When it comes to the machines, we have identified a number of areas to improve safety, including terrain awareness warn-

ing systems (TAWS), a full instrument suite in cockpits, recording devices, add-ons such as night vision goggles and the autopilot for single-pilot operations.

Lastly, the environment can be extremely complex for helicopter missions. The weather has been a difficult variable for many operators because they don't have accurate reporting. Many helicopters are also performing in high-pressure missions – such as emergency medical services – so we want to make sure quality risk assessments are occurring. The industry needs to create an environment that is supportive and safe, which protects the operation.

Is the helicopter industry proactive in reacting to the NTSB's findings and recommendations?

D. B.: In many respects the industry is working together to improve safety. Sometimes we only need to release the information stemming from our investigations, and manufacturers and operators move on it right away. This is why we have parties to our investigations – for the industry to obtain knowledge and proactively apply it. It's a testament to the industry that there are numerous safe transports that occur every day without incident because we have well-maintained equipment, well-trained pilots and operators making the right decisions.

In other important areas for improving helicopter safety, such as more realistic



The Appareo Vision 1000 system



From 2009 to 2014, Deborah Hersman chaired the U.S. National Transportation Safety Board – an independent federal agency that receives its authority from the United States Congress. She is widely respected in the field of transportation safety.

© NTSB

simulator training for emergency situations, advanced equipment and straightforward risk assessments for go-or-no-go decisions, there is still not 100-percent acceptance within the fleets. While many operators and manufacturers are moving in the right direction on their own, one of the challenges of a voluntary system is that not all organizations are going to make the right safety choices until they are required.

Airbus Helicopters recently announced it will outfit its entire product line with cockpit imaging and flight data monitoring systems. How important is this equipment for improving safety?

D. B.: For many years, we have advocated for the implementation of recording devices in aircraft. Recorders are invaluable to the NTSB for analyzing – and learning from – the final few minutes of flight before an accident, but they can likewise be instrumental for pilots and operators. We see these as tools to improve safety, not necessarily for discipline.

Airbus Helicopters is doing a great job by not waiting for a mandate. When they moved ahead with Appareo Vision 1000 equipment as standard on the AS350, it was a huge step forward in advancing safety. These important safety tools allow operators to observe day-to-day operations and access data to enhance safety. ▶



**READ THE FULL INTERVIEW
OF DEBORAH HERSMAN ON ROTOR ONLINE**
www.airbushelicopters.com

EC225e: 300 NAUTICAL MILES AND MORE

Article:
ALEXANDRE MARCHAND

More powerful than the EC225, the EC225e was presented for the first time at this year's Heli-Expo convention

"The main asset of the EC225e ("e" for "evolution") is the increase in its operating range in hot weather conditions (ISA +20°C) from 140 to 190 nautical miles when 19 passengers are being carried, and up to 300 nautical miles with 10 passengers in ISA conditions," explained Marketing Product Manager Rémi Estime. "This increase comes in response to

strong demand from off-shore operators, which we have been able to meet by re-engining the aircraft with Turbomeca's Makila 2B." With an increased gearbox rating for OEI flight, the Makila 2B allows an increase in maximum takeoff weight from 10.45 to 11 metric tons in Category A conditions (ISA+20°C). Thanks to this increase in payload, the helicopter can optionally be fitted with a 470-liter fuel tank, lending it even more endurance. The tank can easily be installed in less than two hours and automatically is registered by the fuel management system.

MODERNIZATION OF THE AVIONICS

A second feature of this EC225 evolution is the upgraded avionics, which now enable IFR approaches to be made with GPS-based lateral and vertical guidance – all backed by the Space-Based Augmentation System (SBAS). The resulting improvement in approach safety brings with it a reduction in crew workload. Furthermore, the Euronav 7 digital mapping system, AIS (Automatic Identification System), TCAS II and upgraded transponder in the ADSB Out system provide pilots with optimal awareness of the flight environment.



© Anthony Pecchi

Lease Corporation International (LCI), a subsidiary of the U.S. Libra Group, signed for 15 EC225e helicopters at the Heli-Expo helicopter industry show.

A CHOICE THAT MATCHES OUR TASTE FOR INNOVATION



© Patrick Gertner

"The EC225e was an entirely natural choice for us because we always buy the best the market has to offer. We have complete confidence in the EC225 and this new version is going to offer us increased endurance and payload,

not to mention excellent operating costs. We love to see innovation and that's essentially the reason why we are the launch customer for this aircraft."

**Crispin Maunder, Executive Chairman
Lease Corporation International**

Illustrating the EC225e's approach and landing ability in a standard offshore scenario, Estime said: "In performing flights in IFR conditions to offshore platforms, the EC225e will allow fully-automated GNSS (GPS) approaches to be made right up to the landing decision point, at 200 feet above the sea. The pilot can then land the aircraft intuitively and in complete safety, thanks to the support provided by the new and improved autopilot modes."

The Makila 2B is expected to receive certification in 2015, with the EC225e then following suit. Delivery of the first aircraft is scheduled for 2016.

At the Heli-Expo show in Los Angeles, Airbus Helicopters announced new orders for 78 helicopters, including 57 for leasing companies. These latest sales once again demonstrate the competitiveness of the company’s products in this market segment—and customers’ confidence in the newest models in the range.

CONFIRMED DYNAMIC MARKETS



The helicopter leasing market has wind in its sails, and Airbus Helicopters’ customers have often opted for the newest members of the company’s product range.

The helicopter leasing market has really taken off, and the impressive number of new orders at Heli-Expo demonstrated the growing role leasing companies are playing in the global expansion of heli-

copter fleets: Waypoint Leasing will be acquiring 25 EC145 T2s and 12 EC225s, and Lease Corporation International (LCI) opted for six EC175s and 15 EC225e rotorcraft.

The EC225 and the new EC225e (see accompanying article) once again proved that they’re a force to be reckoned with in the 11-ton class, as they racked up a total of 27 orders.

CLOSER TO CLIENTS

Fourteen new orders also were placed for the EC175: Noordzee Helicopters Vlaanderen (NHV) ordered an additional six, Lease Corporation International placed its first order for six, and CHI Aviation placed an order for two.

The latest member of the Super Puma family, the AS332 C1e, also was unveiled at the show in Anaheim, painted in the livery of Starlite Aviation – the helicopter’s launch customer. Starlite is adding two new units to the initial two it already ordered, one of which has been assigned to Kosovo for utility work and medical evacuation missions.



Waypoint Leasing acquired 37 new helicopters during Heli-Expo.

IN THE CUSTOMERS’ OWN WORDS

JOÃO ANDRADE,
CEO DE SONAIR.

“We rely on the EC225 for its exceptional operating range, capabilities and overall performance,” said João Andrade, CEO of SonAir, which operates the three new EC225s leased to Milestone Aviation Group for oil & gas operations in Angola.

ERIC VAN HAL,
CEO DE NHV.

“This new EC175 order is another major step forward in NHV’s strategy to acquire and operate a modern fleet of helicopters with cutting-edge systems in order to strengthen our mission capabilities and ensure complete safety,” said Eric Van Hal, CEO of NHV.

Helionix®

Article:
BELÉN MORANT

ONBOARD FLIGHT ASSISTANCE

Helionix® is an innovative avionics system that offers operators exceptional mission flexibility and safety. Its design is based on a family concept with standardized features, so it can be installed on nearly all new commercial helicopters. Helionix® is fully modular and can be installed with one to four screens, meaning it can just as easily be adapted to light helicopters or to the EC175.

The Automatic Flight Control System (AFCS), based on the EC225 autopilot, ensures complete control over the flight envelope and high-precision piloting.

Helionix® currently is certified for the EC175 and the EC145 T2, and is designed for use on almost all new commercial helicopters in the Airbus Helicopters product family.

The highly redundant system is automatically reconfigured if a malfunction should occur in one of the components, quickly restoring equivalent functions without requiring pilot intervention.

© Charles Abarr



Helionix® is a fully integrated system that cuts the amount of required equipment in half, meaning easier maintenance and a significant weight reduction.

The new avionics system includes a centralized maintenance function that monitors the status of all the helicopter's sub-systems. Troubleshooting can quickly be performed via a ground-based diagnostics tool, and maintenance activities are fully optimized.

With the situational awareness system in the middle of the instrument panel, the pilot can quickly see a digital display of the helicopter's terrestrial (obstacles, terrain) and aerial (presence of other aircraft) environments. To prevent dangerous situations, the HTAWS (Helicopter Terrain Awareness System) warns the crew well in advance of any land-based obstacles in the vicinity of the current flight path.

The cutting-edge Human-Machine Interface (HMI) displays all flight parameters and flight management data on a single screen. The Part Time Display is a new concept. A summarized version of the flight parameters can be displayed to help the pilot quickly analyze and assess the situation in order to remain fully concentrated on the mission.

KEY FIGURE

Helionix® is a highly innovative avionics package protected by more than

20 registered patents.



With a 90 percent availability rate, the Tigers exceeded the Spanish Army's expectations despite extreme weather conditions.

THE TIGER: EXCEEDING EXPECTATIONS

Article: **BELÉN MORANT**

From March to September of last year, three Tigers from the Spanish Army Airmobile Force (FAMET) successfully performed escort missions in Afghanistan. The commanding officer of the attack helicopter battalion, Lieutenant Colonel Alberto Javier García Romera, talked with *Rotor* about this Tiger deployment.

"Our forces are now being withdrawn from Afghanistan, and three Tigers from the FAMET were deployed in order to protect the troops and ensure that the withdrawal could be carried out safely. We had to perform many different types of missions: protection of land convoys and aerial formations, security missions, and even close-range fire support. Half of our missions were to support Spanish troops, but we escorted U.S., Italian and Lithuanian convoys as well as part of NATO's ISAF mission. Of course, we also provided support for the Afghan armed forces, which over time will be responsible for maintaining peace within the country. The majority of our escort missions were carried out during the daytime, and prepared 72 hours in advance. However, we also participated in logistical maneuvers over routes considered to be dangerous and in mountainous regions. In such cases, we were deployed as part of Quick Reaction Alert missions, and the Tigers (usually working in tandem formations)

had to be ready for takeoff in only 30 minutes. Despite the high temperatures (up to 50°C in the summer) and the dust and sand-laden atmosphere that made flying even more difficult, the Tigers' performance levels consistently surpassed our expectations. Their availability rate was 90 percent. We were also pleasantly surprised by the fuel consumption. It was less than expected, even with the added weight of the weapons systems, and left us with room for maneuver throughout the flight. The Tiger's powerful engines proved to be another key feature, enabling it to provide excellent performance at high altitudes (the base in Herat is surrounded by mountain peaks that can reach 13,000 feet). Simply put, the Tiger went well beyond the call of duty!

The deployment was a real challenge for us, but now we're preparing for a new adventure: the arrival of the Tiger's HAD version, which will give us all the tools we need to respond to any type of situation."

SPOTLIGHT

Top-quality Support Services

When the decision was made to send three Tigers to Afghanistan, Airbus Helicopters España had only three months to make the necessary modifications to the helicopters (installation of armor plating and sand filters, software upgrades, etc). Other modifications were made to four of the five Tigers between January and March in record time. Airbus Helicopters España also sent a representative to Herat for the duration of the deployment in order to facilitate troubleshooting, manage spares, explain service bulletin requirements and provide many other services. This support work undoubtedly was a decisive factor in the Tigers' exceptional availability rate.

TWO EXTREMES

The NH90 has proven its operability in conditions of opposite extremes. From Afghanistan to Finland, conditions that include high temperatures, dust, icing and snow are no challenge for this helicopter.

PERFORMANCE, DELIVERED DAILY

AFGHANISTAN: MAZAR-I-SHARIF

Mazar-i-Sharif is known for its merciless weather. Winter temperatures seesaw between minus 20 and plus 20 degrees Celsius, while strong storms occur year round, raging snow in winter and raging sand in summer. Since this northern Afghan city is located in the middle of a desert, in the hottest months temperatures

may climb to nearly 50 degrees Celsius. "Mother nature is brutal here," says Colonel Andreas Pfeifer, Commander of Transport Helicopter Regiment 10 "Lüneburger Heide." He and 4,000 other German soldiers have been living in Camp Marmal near Mazar-i-Sharif since April 2014. Pfeifer leads the Bundeswehr's operational squadron, to which four NH90

helicopters belong. The weather is as hard on people as it is on machines. "Actually, the heat isn't the biggest problem on our flight missions," says Pfeifer, "it's the sand and dust." The NH90's built-in systems help the crew cope during difficult maneuvers. In poor visibility, the 4-axis autopilot takes some pressure off pilots, while the forward looking infrared camera (FLIR) is especially advantageous for seeing through dust by day or night, explains Pfeifer. In darkness, pilots can use night vision goggles (NVG). When used in combination with the infrared camera and the 4-axis autopilot, pilots can even nail night landings in the dusty conditions.

Under NATO command, the NH90 is on call for any emergency around the clock. Missions always follow the same pattern: the alarm goes off, and 15 minutes later two NH90 helicopters take off. While one helicopter functions as flying ambulance, the other takes on the role of escort. Once they reach the theater of operations, the emergency services helicopter lands. While the medical crew brings the injured on board, provides necessary intensive care, and evacuates them to safety, the other helicopter provides backup from the air. Sixteen such rescue missions have been performed so far, five of them involving seriously injured people. In each case, the patients were brought to the military hospital within the 'golden hour'—for serious injuries, 60 minutes can mean the difference between life and death.



© Philipp Ridolfi/Bundeswehr

SPOTLIGHT

The German NH90 in Afghanistan

- The Bundeswehr is deployed in Afghanistan with four NH90s.
- Of the 16 rescue missions so far, five involved rescuing seriously injured people.
- A total of over 600 flight hours.

A Bundeswehr NH90 operating in sand and dust.



© Utti Jaeger

With its cutting-edge technology, the NH90 is irreplaceable for operations in extreme conditions.



FINLAND: UTTI

In January, Jaro Kesänen spent a few days in Bückeburg, Germany, training on the NH90 flight simulator. The local temperature was around zero. For the Finn, that's hardly real winter; in his country on the same day, the thermometer read -40 degrees Celsius. Major Jaro Kesänen is the Commanding Officer of the Utti Jaeger Regiment's Helicopter Battalion. The regiment, a special unit of the armed forces stationed in the southern Finnish city of Utti, is also deployed for search and rescue (SAR) missions. Finland is one of the coldest countries in Europe. "The cold isn't really the problem here," says Kesänen, "It's the snow." Whiteout conditions are a common problem during helicopter missions; clouds, fog, and snow can severely obstruct visibility. In such cases, the NH90's state-of-the-art 4-axis autopilot and the fly-by-wire controls are a great help. Most difficult are night missions in snowy conditions. Pilots can then use the autopilot and the night

vision goggles (NVG) for orientation. "To make it worse, the clouds are really low on some winter days," Kesänen explains. Flying through the clouds causes ice to form, which is why the NH90's deicing system is indispensable for the Finnish winter.

Since January 2010, one NH90 always stands at the ready for SAR missions, day or night. The first mission came in February: a man near the city of Kuopio drove his snowmobile to a frozen lake to go fishing and didn't come home. The clouds were especially low that day; it was snowing and the visibility was so bad that the police couldn't find him even after searching for hours. The local police requested help from the Utti Jaeger Regiment. "When we reached the scene, it took us just 30 minutes to find the guy," Kesänen explains. He was in bad shape and severely hypothermic when the soldiers carried him on board and transported him to the nearest hospital.

SPOTLIGHT

The Finnish NH90 in Utti

- The Utti Jaeger Regiment currently has 17 NH90s; a total of 20 have been ordered.
- The regiment deploys the helicopters for national defense, international crisis management and for SAR missions. On average, the Finns fly 12 SAR missions a year.
- A total of over 5,400 flight hours.

"That was the first time that an NH90 in Finland participated in saving a person's life," says Kesänen. "It was an important day, and none of us are likely to forget it."



IN THE LAND OF THE RISING SUN

Article:
ALEXANDRE MARCHAND

With their high population density, exposure to natural disasters and predilection for cutting-edge technology, the Japanese can truly appreciate the helicopter for its real worth. It's no surprise that Airbus Helicopters has such success in the country.

The headquarters of Airbus Helicopters Japan is in Tokyo's Roppongi Hills business district. From their offices on the 19th floor of Mori Tower, the Airbus sales teams have a commanding view of the capital. About 500 kilometers west of Tokyo, the subsidiary's operational base can be found on the artificial island that is home to Kobe Airport. This is where the majority of Airbus Helicopters Japan's activities are housed, including engineering offices and a major MRO (maintenance, repair and overhaul) department serving the country's operators. CEO Stéphane Ginoux has been working in Japan for more than a decade. He talked about how the company was first created and its current position in the country: "Back in 2009, our Eurocopter predecessor took control of its distribution in

Japan and at the same time acquired the acquired ANA Group's helicopter maintenance branch. We combined these activities to create the local entity Eurocopter Japan (Airbus Helicopters Japan as of January 2014), which has developed its industrial capabilities and increased its staff to 290 people. Airbus Helicopters Japan continues as the only helicopter manufacturer in the country that can offer its customers comprehensive support: whether it be spare parts, commercial services, training facilities for pilots and technicians, MRO workshops or customizations, we can do it all right here in Japan."

A UNIQUE MARKET

This impressive setup means that Airbus Helicopters Japan is perfectly poised to

meet the specific needs of the Japanese market, which is truly one of a kind. One unique feature, for example, is the predominance of twin-engine helicopters.

"There are twice as many twin-engine helicopters in Japan as single-engine rotorcraft," said Mr. Ginoux. "It's not due to any special regulations: operators simply prefer twin-engine models for their enhanced comfort and performance levels." Another special feature is how many helicopters are operated by the country's news media industry – often incorporating extremely sophisticated equipment, as Japanese TV stations and newspapers use their helicopters for much more than just filming. Many of the Dauphins and EC135s – the most popular choices for this market – are more like flying television studios, with newscasters giving reports right from the cabin! As the numbers attest, Airbus Helicopters Japan can clearly stake its claim as market leader in Japan: 335 helicopters in service, representing over 50 percent of the civil market, and approximately 20 new sales per year. The Dauphin (60 units currently in service) and the EC135 (77 in service) have

Airbus Helicopters Japan is the country's leading supplier, with 335 helicopters in service, approximately 20 new sales each year and over 50 percent of the civil market.





EC225s are operated by the Tokyo Fire Department, the Japan Coast Guard and the country's armed forces for both government missions and to serve the Emperor.

been great successes, and are called on to perform a wide range of missions (EMS, media, law enforcement, firefighting, etc.).

THE NEW FRONTIER

"We're also present on the market for heavier helicopters, with about 15 helicopters from the Super Puma family – ranging from the AS332 to the EC225 – currently in service," added Ginoux. "Meanwhile, the EC175's recent certification has raised interest among Japanese operators, and we might conclude our first sale as early as next year. A market exists in Japan for the EC175 – not only for offshore work and the Japan Coast Guard, but also for Dauphin operators looking to upgrade to a heavier model."

The EC225s are operated by the Tokyo Fire Department, the Japan Coast Guard and the country's armed forces for both government missions and to serve the Emperor. The EC135s used for pilot training by the Japanese Navy represent a "new frontier" for Airbus Helicopters Japan: the defense market. "Government policy is changing in Japan," he explained. "Defense regulations governing cooperation with foreign companies are being relaxed, creating new opportunities to strengthen ties between Europe and Japan. The helicopter already has been identified as a means of moving forward in this area, and the excellent reputation of our helicopters in the country, combined with our close ties to local industry, will really give us an edge."

"We selected the EC135 to develop our EMS activity in Japan. It's a very reliable helicopter that is perfectly adapted to this type of mission."
Hiratagakuen Helicopters, Kobe.

SPOTLIGHT

Service Makes a Difference

"Our main strength is the quality of our support and services," said Olivier Tillier, senior vice-president operations at Airbus Helicopters Japan, and director of the subsidiary's Kobe facility. "We do a great deal of customization work – in 2013 alone, we performed approximately 100 modifications." The latest example is the installation of a direct broadcast satellite system for high-definition images on Dauphins operated by the fire departments of Kyoto, Miyagi and Tokyo. Airbus Helicopters Japan has 8,000 square meters of floor space at its Kobe site, used primarily for MRO activities, engineering, technical support and training. Rooms have been set aside for training work, and the site also boasts an EC135 full flight simulator – the country's first.

USHERING IN A NEW INDUSTRIAL MODEL

Article:
ALEXANDRE MARCHAND

With the transition of Eurocopter to Airbus Helicopters, the changes involve much more than just the name. It represents one of the steps in a profound industrial makeover being ushered in via an ambitious transformation plan.

The sweeping changes being made to Airbus Helicopters' industrial model are dictated by many factors: new market realities, escalating competition, and customers' ever higher expectations. The key to this ambitious project is the new transformation plan, which is progressively being deployed at all levels of the company. Up until now, the design office, industry, and support & services—the three pillars on which Airbus Helicopters is based—were each working on their own improvement plans. Today, the focus is on unifying the company's objectives around common goals and bridging the gaps between various projects. These are key goals of the transformation plan, and remain an absolute prerequisite for Airbus Helicopters to successfully change its industrial model.

“DO IT” – AN AMBITIOUS PROJECT

One of the many different modules in the transformation plan is DO IT. Focused entirely on industrialization issues, this module's goals are two-fold. The first is its scope: DO IT covers nearly all of Airbus Helicopters' activities, from the initial customer request to support services. Second, the module will be weeding out all the causes of subpar performance at the company (late deliveries, poorly adapted part inventories, cost overruns, etc.). DO IT will deliver the technical solutions that Airbus Helicopters needs to successfully manage growth

and improve its competitiveness, while also generating the margins necessary to finance new programs.

DO IT is being deployed through an inter-departmental approach, and is focusing on five main areas in which Airbus Helicopters must make progress. Simple goals have been set for each area. The first is product maturity. There are many lessons to be learned in this area from the automotive industry, or even from Airbus, which has already undergone a revolution of its own. The second area is standardization: the former industrial model, which placed too great an emphasis on product customization, will become a thing of the past. It's with this goal in mind that Airbus Helicopters is actively developing “favorite configurations.” Next comes industrial planning, an area in which the company must be more flexible, and better integration of suppliers into the company's processes. The fifth and final area aims at improving performance in the development and production phases. Following a period of sustained growth in the past few years, during which Airbus Helicopters was mainly focused on successfully handling increased demand, the company is now looking for ways to increase its profitability—both for its own good and for the benefit of its customers. As a result of these new initiatives, helicopters will be manufactured more quickly and will be even more mature when they enter service.



© Alain Ernout

“The industrial transformation is focused on all the causes of subpar performance at the company.”



The transformation plan is being progressively deployed at every level of management, ushering in a complete metamorphosis of Airbus Helicopters' industrial model.

FRANCE/KAZAKHSTAN

Interviewed by
CAROLE LEMBEZAT

In Kazakhstan's Almaty mountains last November, Airbus Helicopters organized a training session with pilots from this Central Asian republic – performed in partnership with the French Gendarmerie. Lieutenant Colonel Emmanuel Sillon, head of the French Gendarmerie delegation, and Marat Torgayev, chief pilot of the helicopter fleet at Kazaviaspas, the aviation element of the Kazakh Ministry of Emergency Situations (MES), each talked about this unique experience.

HIGH-FLIGHT COOPERATION

Do the French Gendarmerie and Kazakh MES have the same operational needs?

Marat Torgayev: Our country is experiencing rapid growth, and this dynamic economic expansion has been accompanied by a boom in the tourism industry and alpine sports. It's our responsibility to ensure the safety of our people and to provide them with assistance when necessary. This is possible only if we have the necessary capabilities to perform rescue work in severe weather conditions and to carry out medical evacuations in hard-to-reach mountainous regions. In fact, our operational needs are not so different from those of the French Gendarmerie.



© O. Volkoff



© O. Volkoff

Emmanuel Sillon: It's true that our operating conditions are quite similar. The main difference is that Kazakhstan only recently began using the EC145, whereas we've been operating this helicopter in many different applications for a wide range of missions. Another difference is that the mountains in Kazakhstan reach heights of 7,000 meters. The EC145 can fly up to 18,000 feet, but it can't work at such altitudes. We all want to do the same thing—provide effective services in the mountains—but there are always limits that must be respected. Whether it's



© O. Volkoff

The French Gendarmerie provided theoretical training, followed by flight training, to four pilots who had been selected based on their experience and their aptitude to train other pilots.

weather conditions or helicopter performance, during missions you always have to find the right balance between safety and efficiency.

In your opinion, what are the strengths of the EC145?

M.T.: It's a very modern helicopter that offers multi-mission capabilities. The EC145 is perfectly adapted to all our emergency medical and evacuation missions. During our flights with the French Gendarmerie, we saw firsthand how the EC145 can effectively be used for rescue work at high altitudes – even when hoisting is required. The EC145 is very compact, which means that it can reach areas that are inacces-

sible for many other helicopters. It's also agile, fast and extremely powerful.

E.S.: With its cabin space and cargo capacity, the EC145 can adapt to almost any situation. There's a lot of workspace that is especially well adapted to rescue work. It also performs well at high altitudes of up to 4,800 meters in acceptable atmospheric conditions. This is the limit if we want to have enough power available to perform hoist work in hover flight.

What will you take away from this experience?

M.T.: In the past, we thought the EC145 was more of a "pleasure craft." But then we saw for ourselves what feats it could per-



© O. Volkoff

The Ministry of Emergency Situations (MES) – which is equivalent to the French Civil Security organization – operates 15 EC145s.

form with one of the “aces” of the French Gendarmerie behind the controls—and even more importantly, we realized that we also were capable of doing the same, and in the mountains no less. I can tell you we quickly changed our opinion! I would like to take this occasion to thank our French colleagues once again for their willingness to share their experience with us and their unfailing patience: “Merci beaucoup!”.

E.S.: We received a very warm welcome, and I would also like to express my heartfelt thanks to the staff at MES, to Marat Torgayev and his team, and to ECKE for making sure that everything went so smoothly. The language barrier was some-

times a problem, but we were lucky to have teams from Airbus Helicopters’ local entity on hand to help us avoid any misunderstandings when we analyzed some of the finer points, as the English translation often wasn’t sufficient. The Kazakhs were expecting a lot from these demonstrations, and they were very attentive when we shared our experience with them. They followed all our recommendations with a great deal of modesty, even though they’re recognized experts themselves! We were very candid with each other. The exchanges were excellent and based on mutual respect. For these reasons, our work together was a great success.

SPOTLIGHT

A lasting cooperation!

Following the successful training sessions, Kazakhstan’s Ministry of Emergency Situations (MES) has committed to a long-term cooperation project with the French Gendarmerie. Pilots and technical personnel from both countries will be participating in a biannual exchange program in France and Kazakhstan. The two countries will be working together to develop a modern “helicopter ecosystem” in Kazakhstan. To kick off the program, the MES officially invited a delegation from the French Gendarmerie to participate in joint flight demonstrations during the “Kazspas 2014” international emergency rescue competition.



SWEDEN

Like most operators, Sweden's Jämtlands Flyg carries out a variety of missions. Unlike most, these include tracking wolves, herding reindeer and getting up close and personal with bears...

KEEPING THE WOLVES AT BAY

Article: **TREVOR HUGGINS**



© Jérôme Deulin/Airbus Helicopters

The missions performed by Jämtlands Flyg require very skilled pilots who are capable of flying at very low altitude and often at slow speeds.

The noise of the helicopter is muffled by the wind and by the time the wolf realizes, it's too late: the door slides back, a shooter takes aim and the crack of a rifle swiftly follows. However, it's only a tranquilizer dart. And it's just part of a regular day's work for Jämtlands Flyg, a family firm in central Sweden that celebrates its 60th birthday this year. "About 40 percent of our business is marking wolves, bears and elk, and herding reindeer," says Sara Grinde, the CEO of an operator with a main base in Östersund and a fleet that includes three EC 120Bs and an AS350 B2. A typical mission involves her father Ulf Grinde flying a vet and a shooter – who are often the same person – over the region's

forested mountains. Once located and tranquilized, an animal can be measured, weighed and marked with a GPS device. "My father says that wolves are the smartest animals we have to deal with and have good memories. Once a wolf that's been marked before hears a helicopter, it immediately escapes to the thickest part of the forest so it can't be seen from above," Sara Grinde told *Rotor*. Wolves also are persistent. Sweden's most famous predator, Susi the Golden Wolf, has been tranquilized during a Jämtlands Flyg mission and driven some 600 kilometers south on no fewer than three occasions. Each time, Susi made her way back up north – where she is a menace to reindeer herds. Indeed,

for some wolves, the rifle is loaded with bullets instead of darts. A bear provides a different challenge. As it's not easy to judge its weight from the air – and therefore the amount of tranquilizer needed – vets wait several minutes after a bear goes down. "An elk just gets confused after a tranquilizer shot. But a bear gets angry and it's not afraid of a helicopter – and will attack," Sara Grinde warned. In the past, a researcher carried by a different operator was lucky to survive such an attack. For pilots, these mission demand considerable low flying skills at speed and quick turns, while the big windows and sliding door makes the EC120 an ideal hunting machine. Unless, of course, you are a wolf...

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