

EADS

*TALENT
& INNOVATION*

Discover the talent which is driving our success





Talent and innovation are two of the key drivers behind EADS' long-term success. It is only thanks to the strong commitment of our highly talented and motivated employees that EADS can develop the most technically innovative and competitive products. We invite you over the following pages to meet a few of the Group's employees working on some of our most innovative projects: the Airbus A350 XWB; Eurocopter X³; Astrium's Ariane 5 ME; and Cassidian's Unmanned Aerial Systems.

THIERRY BARIL

Chief Human Resources Officer

JEAN BOTTI

Chief Technical Officer

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Pushing the boundaries of aircraft efficiency

Talented people innovating together

“I’ve been with Airbus for 12 years, including five years involved with the A350 XWB. So I have been participating in this adventure since the very beginning of the programme.

My job today is to ensure that all the systems have been tested on the ground and are ready for the flight-testing campaign. For me, the main innovation, or at least the one that is closest to our activities on the Final Assembly Line, is the use of carbon fibre for the airframe. This is a big step forward in aircraft efficiency. From my early dreams of being a jet fighter pilot and more recently my sky-diving experiences, I have always been attracted by aviation. Working on the A350 XWB makes me feel part of Airbus’ history.”

Julien Wasier

A350 XWB Final Assembly Line Ground Testing Production Leader

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The A350 XWB is Airbus' next-generation aircraft in the 250-400 seat segment of the market. Bringing together the very latest in aerodynamics, design and advanced technologies, the airplane will offer a 25% improvement in fuel efficiency compared to its current long-range competitors. A large team of talented employees working across many sites has made exceptional progress on the programme ahead of the aircraft's first flight.



DESIGNED FOR A HIGHER PERFORMANCE

The improvement in the aircraft's efficiency stems from a number of new design features. Over 70% of the aircraft's airframe is made from advanced materials, combining 53% of composite structures with titanium and advanced aluminium alloys. The innovative Carbon Fibre Reinforced Plastic (CFRP) fuselage results in lower weight and easier maintenance. Improved aerodynamics will make the A350 XWB faster, more efficient and quieter, especially due to its advanced wing design while the Rolls-Royce Trent XWB engines offer the

lowest fuel consumption and lowest emissions. The improved design is also apparent in the programme's industrial approach, represented by the new eco-efficient A350 XWB Final Assembly Line (FAL) constructed in Toulouse, which started operating in 2012.





“With around 600 aircraft already ordered, this brand new airplane is a commercial success for Airbus. Now, we need to turn it into an industrial success.”

Julien Wasier,
A350 XWB FAL Ground Testing
Production Leader



Using composites in the fuselage and the wing also reduces the need for fatigue-related inspections that are required on traditional airliners built with aluminium. The composites and titanium also reduce the need for corrosion-related checks. All three aircraft in the A350 XWB family will share the same wing platform, which is built primarily from carbon composite materials.

In 2013, the total number of A350 XWB orders passed the 600 mark. A higher performance made possible by talented people working together and driving innovation.





Radically different thinking

Taking up the challenge

“I am part of the Eurocopter Innovation Cell and have been working on the X³ demonstrator since I joined the company in 2008. My role is to support the X³ project manager in all his daily management tasks.

The X³ demonstrator is designed to validate the high speed, long-range hybrid helicopter concept developed by Eurocopter. It combines excellent take-off, landing and auto-rotation capabilities with the speed of a turboprop airplane. The X³ is clearly a success in terms of speed, handling qualities and robustness. Being part of the X³ concept team is a unique chance for me, as it represents an important breakthrough in the history of helicopter development. Working on such an innovative and ambitious product makes me very proud and motivated each day.”

Damien Couloumies

X³ Project Coordinator

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The Eurocopter X³ high-speed hybrid helicopter demonstrator marks a new milestone in the Division's innovation strategy. It performed its maiden flight on 6 September, 2010 and rapidly reached and exceeded all its objectives. The concept has evolved since then, with an aim to push forward the limits of speed. Simplicity and efficiency are key features of the X³, as confirmed by Eurocopter pilots and customers who flew the demonstrator without any preliminary training in Europe and in the US.



NEW GENERATION OF ROTARY-WING AIRCRAFT

The objective of the Eurocopter hybrid configuration is to fly 50% faster than standard helicopters, while the costs are estimated to be only 20% higher. The X³ demonstrator utilises a Eurocopter Dauphin helicopter airframe and is equipped with two turboshaft engines that power a five-blade main rotor system, along with two propellers installed on short-span fixed wings. This enables it to reach a fast cruise speed of more than 220 knots, surpassing the average fast cruise speed of a traditional Dauphin helicopter by at least 70 knots. The X³ can climb at 5,500 feet/minute and perform manoeuvres



with left and right turns at bank angles of up to 60 degrees.

This new generation helicopter is mission-driven – for use in missions where time is critical (such as long-distance search and rescue, oil & gas transportation and inter-city shuttles). The concept could also attract military customers interested in obtaining rapid-intervention capabilities.

“No high speed helicopter has been commercialised yet, but I think that the Eurocopter X³ can be the leading product of this new helicopter market.”

Damien Couloumies,
X³ Project Coordinator



TEAM SPIRIT A KEY TO SUCCESS

“When I joined the project, the X³ was just a 3D model – It was just a dream initiated by experts. Today, the X³ is a flying reality,” says Damien Couloumies.

This demonstrates the skills, capabilities and dedication of the X³ team in defining the future of rotary-wing aircraft, he says.

“Step by step, the X³ team became like a family always focused on the project’s goals and demonstrated the innovative spirit of Eurocopter. We have shown that a motivated team can achieve objectives that initially seemed unreachable.”



Aiming for a leap forward in the Ariane story

*Our talent is meeting
the challenge*

“I have been with Astrium for 25 years now and have had the great opportunity to move from design engineering to advanced projects and finally to programme management.

Since 2008, I have been in charge of the Ariane 5 Midlife Evolution (Ariane 5 ME) launcher improvement project. The development of Ariane 5 ME entails challenging objectives in terms of performance, costs and schedule. The main objective of Ariane 5 ME is to effectively combine “two launchers in one”. I am proud to work on this project, which will offer more performance and versatility to customers, while keeping the price stable. Ariane 5 ME secures the competitiveness of Ariane 5. The preliminary definition phase of the Ariane 5 ME was completed at the end of 2011 and the project improvement programme addressed various topics linked to this phase. Now, we are tackling the detailed development.”

Marie-Françoise Bougeard

Ariane 5 ME Improvement Project Manager

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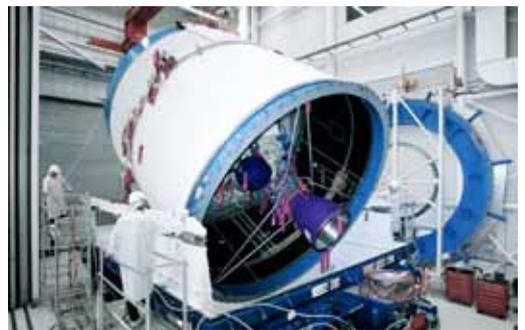
Astrium Space Transportation was selected by the European Space Agency (ESA) to be Prime Contractor for the development of the Ariane 5 Midlife Evolution launcher, leading a European industrial team from more than 12 countries. The system will be capable of placing a payload of up to 12 tonnes in geostationary orbit, with two satellites weighing over five tonnes each being launched on a single mission. Ariane 5 ME will therefore boost launch capacity by 20% compared to the current Ariane 5 launcher, and for the same price. For the first time, Ariane 5 ME will meet a new French Space law that requires the de-orbiting of the launcher's upper stage from transitory orbit.



ARIANE 5 ME: A WIDE ARRAY OF INNOVATIONS

“A lot of technical innovations have been put into the definition of the Ariane 5 ME launcher to get a more powerful and versatile launcher for the same cost as the present Ariane 5,” says Marie-Françoise Bougeard.

The Ariane 5 ME launcher is packed full of innovations, deploying advanced technologies such as the use of a new engine, Vinci, with an expander cycle and a deployable nozzle, and the architecture of the upper stage tank with a common bulkhead and new thermal insulation.



Innovation is also at the heart of management and process improvements, says Bougeard: “The Ariane 5 ME improvement programme promotes new management techniques, such as Visual Management, and in particular Virtual Visual Management between Astrium sites.”



“Promoting innovation and people empowerment are really at the heart of Astrium and EADS Group culture.”

Marie-Françoise Bougeard,
Ariane 5 ME Improvement Project Manager



DEVELOPING TALENT IN AN INTERNATIONAL ENVIRONMENT

The Ariane 5 ME team is at the core of the success of this initiative, according to Marie-Françoise Bougeard: “I am part of a large team sharing the common goal of developing this more powerful and versatile launcher within the programme’s targets.”

“The Ariane 5 ME team is composed of people from different countries, with different backgrounds, who all share a passion for space. Cultural diversity helps to foster my personal development,” adds Bougeard.





BARRACUDA

Securing the future

*Talented people with different
skills working together*

“I am working as Chief System Engineer for Cassidian’s Unmanned Aerial Systems (UAS) demonstrator, Barracuda. My responsibilities comprise all aspects of the discipline systems engineering for the whole demonstrator. Systems engineering is a mandatory aspect of every complex project as we translate customer requirements into real design solutions.

All tests we conduct are designed to analyse the performance of different innovative technologies to be installed on the wide range of Cassidian UASs. For each UAS development in the future we can rely on the results from these test campaigns. Personally speaking, working on the Barracuda is a professional dream come true. I work with a team of highly-qualified and motivated system engineers to develop state-of-the-art technologies. We have the freedom to think outside the box and to try new approaches on a daily basis. You really couldn’t ask for more!”

Maximilian Merz

Chief System Engineer, Barracuda

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Barracuda is Cassidian’s flexible technology demonstrator for Unmanned Aerial Systems. The modular design allows the easy integration of new equipment for testing purposes. The Barracuda has an operational range extending up to a radius of 200 km, a maximum speed of Mach 0.6 and the ability to fly to an altitude of 6,000 metres. The airframe is made entirely of carbon fibre. The aircraft flies automatically and can carry a maximum payload of 300 kg for testing purposes. The Barracuda transmits all information in real time to a ground station, enabling the instant analysis of the collected data. The Barracuda is controlled by the Air Vehicle Operator on the ground. A maximum of flexibility is given, in case the mission needs to be altered unexpectedly.



BARRACUDA: A UNIQUE DEMONSTRATOR FOR A FULL RANGE OF APPLICATIONS

“Over the last four years we performed 540 ground tests and 13 airborne tests on the Barracuda,” says Maximilian Merz.

The tests enable Cassidian to investigate new UAS technologies in a relevant environment, such as the Traffic Collision Avoidance System (TCAS), says Merz.

The most current investigations performed are for UASs operating in a network centric environment and for UAS integration into non-segregated, civilian airspaces.

“Imagine a UAS on a collision course with another aircraft: the innovative systems we are testing ensure that in these cases the UAS will automatically realise the danger, communicate with the other aircraft and choose a different route,” says Merz.



"I am part of an inspiring team that unites the conviction that Unmanned Aerial Systems are important for the future. Barracuda represents our share of the future success of Cassidian."

Maximilian Merz,
Chief System Engineer, Barracuda



NEW MARKET PERSPECTIVES ANTICIPATING THE FUTURE OF UASs

"Unmanned Aerial Systems are an important element of future Military Air Systems," according to Maximilian Merz. Certifying UASs for flying in civilian airspace therefore becomes very important as they will interact with the civil air traffic, he says.

Creating drones that do not disturb air traffic management represents a key challenge for Cassidian today and will provide a real competitive advantage to its products, not only in Europe but also globally. This initiative will definitely open up new market perspectives, adds Merz.



