

FIGHTER FATE SEALED AS FCAS DRAMA ENDS IN SPLIT

Eight years after Airbus and Dassault shook hands at the ILA Berlin Air Show to jointly pursue a future combat aircraft, France and Germany on the eve of this year's gathering

decided to go separate ways.

The failure of the so-called New Generation Fighter, the central pillar of the Franco-German-Spanish Future Combat Air System (FCAS), is largely due to industrial tensions, German Defense Minister

Boris Pistorius said on the eve of ILA. "An agreement was not attainable," he told reporters.

Dassault Aviation, which was the industrial lead on the fighter program, a year ago voiced its displeasure with the structure,

saying it lacked sufficient control and wanted changes. That set off months of industrial bickering. The issue came to a head with a new phase of the development program due to start in October.

Amid the tensions, other differences emerged, including over requirements. France needs an aircraft carrier-capable fighter, and one able to deliver nuclear weapons. Germany does not.

"It is good the deadlock is over," Airbus Chief Financial Officer Thomas Toepfer said in an interview. "Given the situation, this was the right and only possible solution," he added.

Partial progress

While the fighter program is dead, other elements of the FCAS program are progressing. Those include, for instance, pursuit of uncrewed aircraft programs and development of a so-called combat cloud, a network that can tie future platforms together. Those parts of FCAS will progress into the next development phase.

Pistorius said it was premature to say how Germany will proceed now to address its future fighter needs to eventually replace the Eurofighter Typhoon. The government has been talking to different actors for months, he says. "We will see what way we go," while declining to speculate on what the project may be and who might lead it. Toepfer signaled confidence a path forward will be found. ▲

Leonardo's AW249 Makes Show Debut

Leonardo's AW249 is making its flying display debut at the show as the Italian rotorcraft manufacturer eyes an opportunity to replace Germany's Airbus Tiger attack helicopters in the early 2030s.

The big Italian attack helicopter, with its distinctive slab-sided airframe, has been developed to replace the AW129 Mangusta – Italian for Mongoose – that has served the Italian Army since the 1980s.

The 8.3 metric ton AW249 weighs almost twice that of the

Mangusta and has been developed to operate within the Italian Army's new doctrine of fighting near-peer adversaries in a multi-domain, anti-access, area-denial environment. The Italian Army

demand that the new aircraft outperform the Mangusta in all areas of performance, range, payload, and speed.

▶ CONTINUED ON P3

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Diehl Sees Gap Filler Role For New IRIS-T System

Diehl Defence has revealed a mobile launcher for its ground-launched IRIS-T missile that will be capable of firing the weapons on the move.

The company's SLS Mk.4 system packages the complete air defense system, including the command-and-control, radar sensor and missile launchers onto one wheeled vehicle.

The aim is for a system that can be "more mobile, more flexible and be a gap filler," says Harald Buschek, Diehl Defense's Chief Program Officer. The vehicle would be able to protect convoys or large gatherings of troops.

Typical load out for the vehicle would be eight ready-to-launch quad-packed missiles that can be fired vertically or from a slant angle.

IRIS-T SLS has an effective range of 12 km (7.4 miles) and an altitude coverage of up to six km

(3.7 miles). Diehl has also built in a high-level of automation into the system in a bid to reduce the manpower demands.

Furthermore, the company plans for the system to be able to fire on the move, albeit not at high road speeds.

Unlike previous IRIS-T SLS launchers, the missiles are stored in launch boxes for greater protection from the elements. Earlier IRIS-T SLS launch systems simply had the missiles on launch rails in the open, such as on the Swedish Mk.1 system, which uses the Hägglunds BSV10 tracked vehicle and on the Norwegian Nomad, which uses covered launch rails.

At the show, the system is displayed fitted to a Mercedes-Benz Zetros 6x6 vehicle with a Saab Giraffe radar fitted to a raisable mast. Diehl says the integration of additional effectors, such as the company's Cicada anti-drone

effector from Diehl Defence or a weapon station, is also possible.

Development of the Mk.4 takes lessons from IRIS-T SLS

and SLM operations in Ukraine where the medium-range IRIS-T SLM has emerged highly effective against Russian cruise missiles.



Eyes on the sky: Diehl Defence's Harald Buschek, (left) with Dietmar Woidke, Minister of Brandenburg at the show, with the IRIS-T SLS.

CONTINUED FROM P1

Achieving that required the AW249 to be a larger, heavier aircraft. To keep development risks and costs down, Leonardo used a tried and tested rotorcraft industry technique of re-using the existing dynamic system, including the main gearbox and tail rotor system and five-bladed main rotor system of the proven AW149 military utility helicopter and fitting a new fuselage, avionics, and mission systems around it.

Two General Electric CT7-8E6 turboshafts mounted high on the rear fuselage provide around 2,500 shp

each and are assembled by GE's Italian subsidiary, Avio Aero.

They have been modified for improved one-engine inoperative and maximum continuous power performance. The Italian Army selected that engine in part due to commonality with other types in its inventory, including the NHIndustries NH90 transport helicopter.

Leonardo is currently flying four prototypes, and it is the fourth prototype that is performing in the daily flying display.

With Airbus' Tiger no longer in production, the AW249 now represents Europe's only dedicated

attack helicopter that is currently being manufactured with European governments calling for Europe to acquire locally-made platforms, Leonardo is hoping the helicopter will have broad appeal across the continent.

Big opportunity
Leonardo sees a particularly big opportunity here in Germany where the Army plans to retire its Tiger fleet in 2031. It is currently replacing them with the Airbus H145M light attack helicopters armed with the EuroSpike missile, but Leonardo is optimistic that Germany may still want a dedicated attack helicopter once the

Tiger has been withdrawn.

Leonardo is now in the final stages of the AW249's development and qualification with the final steps set to include environmental trials, and armament integration and testing.

"We are demonstrating to the community that the program is mature and to demonstrate its characteristics," Roberto Pretolani, Leonardo Helicopters' Head of Military Specialized Platforms. "This aircraft was designed from the beginning for the concept of operations we expect on the modern battlefield, it brings a balance between payload and agility."

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Airbus Reveals Uncrewed U145

Airbus Helicopters is unveiling an uncrewed variant of its H145 twin-engine light helicopter that it hopes will appeal to European customers.

The airframer's U145 is an entirely separate development to its MQ-72C Lakota Connector platform being developed by its U.S.-based business for the U.S. Marine Corps with ShieldAI, L3Harris, and Parry Labs.

Here in Europe, Airbus is leaning on its work on the VSR700 naval rotary-wing uncrewed air system (UAS) to create an autonomous H145 that could perform logistics mission, firefighting, aerial scout and act as a mothership for air-launched effects.

Airbus is partnering with missile manufacturer, MBDA on the latter capability. Like the Lakota Connector, the 3.8 metric ton U145 has no physical cockpit, features an empty cabin with a

cargo floor and an openable nose door for the loading of equipment, in addition to the existing rear clamshell doors.

"With the U145, we are offering our customers an autonomous, uncrewed version of our H145 helicopter – combining the proven airframe, power and useful load of the H145 with the autonomy of a UAS," says Matthieu Louvot, the CEO of Airbus Helicopters.

"To develop the U145 and its capabilities as a multi-mission UAS, we will be teaming up with leading autonomous mission partners to further expand the UAS ecosystem in Europe," he adds.

The aircraft is being displayed in mock-up form here at the show. But Airbus is planning to advance development of the aircraft quickly with a first flight with a safety pilot planned for the end of 2026 and



The U145 combines the proven airframe, power and useful load of the H145 with the autonomy of a UAS.

service entry at the beginning of the 2030s.

Airbus has been working on an uncrewed variant developed outside the U.S.

Airbus decision was driven by dramatic changes in geopolitics and Europe's push to develop sovereign capabilities and reduce reliance on Washington.

Hybrid-electric VTOL Maker Takes Step Into The Defense Market

Munich-based startup ERC Systems is looking to branch out into the defense business with the launch of the hybrid-electric Victor cargo drone.

The company, which is unveiling the Victor vertical takeoff and landing (VTOL) uncrewed aircraft at the show, says it should be ready for customer delivery in 2028. ERC promises it can carry a payload of 250 kg (551 lb.) over a range of

300 km (186 mi) at a cruise speed of 250 km/h (166 mph).

The company says it is building on the experience it has gained with its Romeo, a fully-electric demonstrator that first flew in November featuring eight boom-mounted rotors in a lift-plus-cruise configuration.

Romeo is intended to inform the design of its production configuration, Charlie, which the company

aims to certify early in the coming decade.

The pitch comes as militaries in the U.S. have started to explore logistics operations using uncrewed aircraft. But Victor is being pitched as a dual-use system for military and civil use. ERC says it sees likely non-defense applications in fields such as disaster response, offshore operations, and critical infrastructure supply and maintenance and that it is in talks with potential customers to define the product and get it service-ready.

"Over the past 18 months, we were repeatedly approached by military and civilian operators and asked to apply our experience from building 'Romeo', the EU's heaviest uncrewed eVTOL, towards a heavy-lift cargo drone", ERC Chief Commercial Officer Maximilian Oligschläger says.

Oligschläger says the company would be able to meet the aggressive timeline to deliver hardware in around two years for the vehicle that would have a wingspan of about eight meters (26 ft).

Rohde & Schwarz Shows Laser Focus

Rohde & Schwarz is getting into the increasingly-contested market for laser-based counter-drone systems. The German defense electronics specialist is unveiling its Tactical High-Energy Opponent Response & Interception System, or Thoris, at the show.

It couples sensors to spot hostile uncrewed air systems with company-developed jamming technology and, when that fails, it engages with what it calls the laser combat system (LCS). The system is due for formal launch toward the end of 2028.

The company is showing the Thoris LCS mounted on a mobile vehicle, but notes it could also be used for fixed installation for base defense. Germany's Trumpf would supply the laser that would fire high-power pulses to disable the drone's electronics or propulsion system. Rohde & Schwarz says the system includes radio frequency detection devices as well as electro-optical/infrared sensors, tying all that into a common command and control system.



To the Victor the spoils: ERC is launching its vertical takeoff and landing (VTOL) uncrewed aircraft at ILA.

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Airbus CEO: Challenging Growth Plans Require Digestion

Airbus will need to moderate production growth plans at some point to let its industrial system catch-up and deal with challenges exposed during the current rampup, CEO Guillaume Faury (pictured) said yesterday.

The airframer has repeatedly had to adjust output plans, including its ambitious target of building 75 A320 family aircraft per month. Those delays have angered operators that have been left waiting for aircraft they could use to meet passenger demand and cut their fleet's average fuel consumption.

"We are growing at a pace difficult to sustain

for a company that manufactures complex systems," Faury said at the Berlin Aviation Summit.

For Airbus, that means it will need to "digest" growth in the next decade, before going further, he said as the company has been mulling a production rate greater than 100 aircraft per month for the A320's replacement. Airbus might launch that program's development around 2030.

After the COVID-19 pandemic, a disrupted supply chain caused widespread problems in aerospace manufacturing. Although the situation has improved, pain points remain, Faury

said on the eve of the show.

Airbus has had to deal with suppliers struggling to keep pace with its higher build rates. Moreover, he added, with the A321, including the longer-range XLR version, supplanting the A320 as the majority model in production, the company has had to deal with greater complexity.

The company in recent months has taken over some former Spirit AeroSystems' factories which, Faury said, could address some of the problems Airbus has experienced in building its A220s and A350s. The Spirit site in Belfast, Northern Ireland that makes A220 family wings and the Kinston North Carolina facility which makes the A350's fuselage

section 15, are now under Airbus control.

The major pain point for Airbus, for now, remains the supply of Pratt & Whitney geared turbofan engines. They power about 40% of the A320 family aircraft. Airbus has complained Pratt & Whitney is preferencing airline maintenance needs over its production demands. Faury said the mismatch could impede Airbus's production ramp up for another 18 months.

Whether Airbus can make its revised target of building between 70-75 A320 family aircraft per month toward the end of next year is contingent on suppliers. "That will depend on how many engines we finally get from Pratt & Whitney," Faury said.



Deutsche Aircraft To Offer D328 Landing Gear Design

Deutsche Aircraft is planning to offer its own design of landing gear for both the forthcoming Dornier 328eco and legacy D328 turboprops, as a reaction to continuing equipment supply chain problems.

Existing 328 turboprops have an undercarriage produced by Safran. However, long delays in accessing replacement landing gear from the French manufacturer have spurred Deutsche Aircraft into developing its own version.

Deutsche Aircraft will hold the IP, but will devolve the manufacturing to a German supplier, CCO Anastasija Visnakova told *Show Daily* on the sidelines of the Berlin Aviation Summit yesterday.

She says that airlines have had to retire some legacy 328s with significant remaining life because of problems in sourcing replacement landing gear. The new kit will initially be made available for retrofitting to legacy 328 turboprops (the 328JET is not included).

Deutsche Aircraft currently holds 134 letters of intent (LoI) for the 328eco. Around 70% are airliner replacements for existing types and around 10-15% are for the recently-announced 328MR

(Multi Role) variant offered for government, para-government or military users. A new category is the 'fly in, fly out' (FIFO) market, where companies – typically in the mining sector – rotate work crews to and from remote sites.

The LoIs are spread widely – the

greatest number of customers come from Europe and Africa, but the largest number of aircraft will be destined for North America, if the LoIs are firmed up.

Demand is "typically for replacement aircraft," Visnakova says – sometimes for elderly

turboprops, but also for some jets that are aging, such as Embraer 135/145s.

Deutsche Aircraft is specifically looking at Part 135 operators – airlines that have a maximum of 30 seats and use FBOs rather than conventional airport terminals.



A Dornier 328-100 is being displayed outside Hall C (pictured). The aircraft has been converted into a flying testbed for climate-friendly air transport technologies as part of the UpLift project. It will be used to measure and

quantify the climate protection potential of various new technologies, such as fully-synthetic fuels or hydrogen. The aircraft will be in operation at the beginning of 2027 following a purchase by DLR from Deutsche Aircraft.

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MTU Seeks Reset In Military Engine Approach

Growing demand for high-end uncrewed aircraft is prompting MTU Aero Engines to explore at least a partial reset of its design philosophy in an effort to establish itself as a major propulsion provider for such systems.

The company's decades-long heritage of building high-end, long-lasting engines with a premium placed on safety may not suit the market for collaborative combat aircraft (CCA) and similar systems, says Ottmar Pfänder, the German aircraft engine maker's head of programs.

"What you now do in the civil market is maximum performance and maximum safety. This is a different business," he says. "We have to start with a different mindset."

MTU, to help bring about that change and to establish itself more fully as a drone propulsion provider, this year acquired AeroDesignWorks. The company brings with it a heritage of rapid design also with a cost focus well suited to the drone market, Pfänder says. "We want to be leading in Europe in terms of drone propulsion," he adds, also reflecting

Europe's growing interest in home-grown supply options.

MTU has begun talks with potential customers about engine concepts. The range of demands is still wide, in part because military customers are still unclear about what they want in these systems.

There are a myriad of options and thrust categories, Pfänder notes. "The range is large. The technical demands are very different. The art is going to be how to adapt the technological know-how to each demand level."

Keeping costs under control will



▲ MTU ready to meet defense needs.

be important, he adds. A drone engine would likely not require the high number of flight cycles of a crewed platform, in some cases just flying once for testing and then for an operational mission, changing design parameters. Supply chain approaches also are different, as are design iteration cycles. The engine also has to be able to be stored for long periods of time, but then work right away once the system is pulled out of its boxes.



Lockheed Martin Installs Engine For First German F-35

Lockheed Martin has installed the Pratt & Whitney F135 engine into the first F-35 Joint Strike Fighter destined for the German Air Force. Germany has 35 F-35As on order with the aircraft slated to take on the NATO dual-capable aircraft nuclear deterrence mission from the long-serving Panavia Tornado. The first German F-35s will be delivered later this year to Ebbing Air National Guard Base, Arkansas, for training with, while the first deliveries to Germany's Buchel airbase are in 2027.

As well as the nuclear mission, they will perform the anti-ship task with the Kongsberg Joint Strike Missile and perform deep precision strike with the Lockheed Martin's Joint Air-to-Surface Standoff Missile – Extended Range, which Germany requested in 2024.

Purchase of the F-35 follows a long tradition of Germany operating U.S.-made combat aircraft, having previously flown the McDonnell-Douglas F-4 Phantom and the Lockheed F-104 Starfighter.

▲ The first German F-35s will be delivered later this year to Ebbing Air National Guard Base, Arkansas.

Why ILA Is Focused On Counter-Drone Technology

Counter-drone operations are poised to be front-and-center at this year's ILA as Germany grapples with the effects of those systems on both military and commercial air traffic operations.

The wars in Ukraine and Iran have driven the need to react to adversary uncrewed air systems up the agenda for Western militaries. Such illicit flights around critical

national infrastructure, including airports, have become both a security and economic concern, driving an appetite for new ways to track what is happening in air space and how to mitigate threats.

German aerospace research organization DLR says German air traffic suffered at least a €60 million (\$80 million) hit from unauthorized drone activities last year alone. Both

Frankfurt in July and Munich in October, Lufthansa's two principal hubs, suffered in what the DLR says were among the most impactful disruptions from illicit drone flights. The bill is €160 million (\$184.6 million) if the ripple effects on flight operations are factored in, the organization adds.

At ILA, companies are poised to showcase surveillance systems to

track drones, as well as the kinetic and non-kinetic ways to defeat them.

A range of companies, including Rohde & Schwarz, Quantum Systems, Diehl and Onberg Autonomous Systems, the recently-created joint venture between Ondas and Heidelberger Druckmaschinen, plan to showcase new c-UAS capabilities.

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Luftwaffe Set To Make Capability Leap

The German Air Force is undergoing an intense period of modernization through to the end of the decade that will do more than just revitalize its core air dominance role, the service's chief of staff says.

Security developments of recent years have altered the thinking around air and space forces, Luftwaffe Inspector Lt. Gen. Holger Neumann says. For the Luftwaffe, which is celebrating the 70th year of its existence in the modern era, that means, for instance, adding the mission to safeguard space to its role of being able to attain and maintain air superiority, he adds.

Before the end of the decade, the Luftwaffe will start fielding Lockheed Martin F-35s, the first time it will fly a stealth aircraft, introduce upgraded Eurofighter Typhoons and new Boeing CH-47F Chinook heavy-lift helicopters. Germany is also defining its plans for the next evolution of its fighter fleet and related elements of air combat.

"The sixth generation will encompass far more than a new combat aircraft. It will integrate a broad spectrum of unmanned platforms within a common data network, with interfaces



Luftwaffe: this year marks 70th anniversary in the modern era.

BillyPix

to additional systems and other operational domains," Neumann says. Additionally, the Luftwaffe is introducing a range of new air and missile defense capabilities. "Strengthening ground-based air defenses is a top priority," Neumann says.

The first Israel Aerospace Industries Arrow 3 capabilities have now arrived in Germany, giving the country its first ability to counter

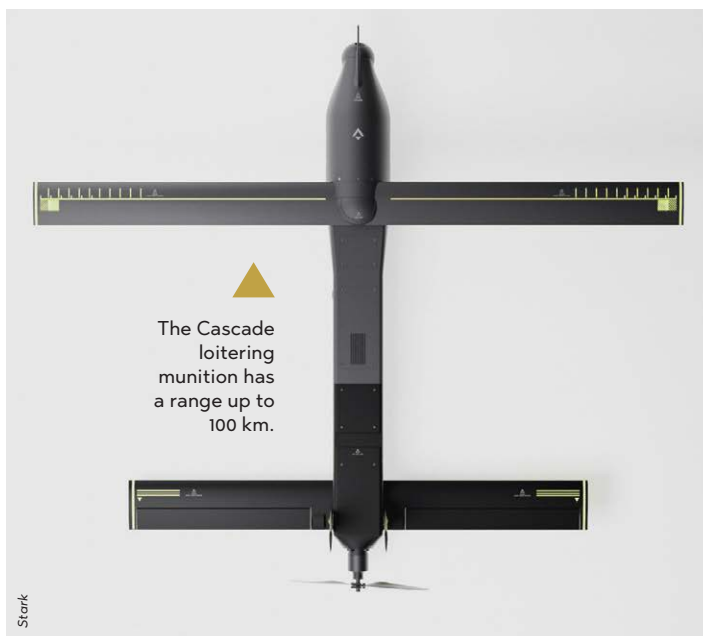
longer-range ballistic missiles. Germany plans to boost the number of Arrow interceptors it is buying in coordination with Israel and U.S. It also plans to add to its inventory of Diehl IRIS-T SLS short-range air defenses and field the longer-range SLM version.

A big step in the Luftwaffe's modernization is due in the fall, when the service expects to take delivery of its first F-35, which also

is supposed to serve as a central node for the service's coming fleet of collaborative combat aircraft.

Five years after Germany set up a space command, the capabilities to operate in the domain are being clearly expanded, Neumann says. That encompasses more staff, various satellite constellations deployed into different orbits, including inspection satellites and those to guard its assets, Neumann adds.

Stark Opportunity For Loitering Munition And Strike Quadcopter



The Cascade loitering munition has a range up to 100 km.

European defense technology startup Stark has unveiled a tube-launched loitering munition and quadcopter for potential weaponization as it builds out its weapons offering.

The Cascade loitering munition has a range up to 100 km (62 mi.), with shorter range configurations of 40 km (25 mi.) and 60 km (37 mi.) also options, says the Berlin, Germany-headquartered company. It can carry a payload of up to 4.5 kg (10 lb.) and fly for up to 60 min.

The system is not reliant on easily-jammed satellite navigation, the company says, and it uses object recognition and precision tracking.

Stark unveiled the products publicly following a visit by British Prime Minister Keir Starmer at its UK facility in Swindon. The company says it partnered with

Force Development Service, a British company, to develop a six-cell launcher for the system that can be fired from the ground or naval platforms. The company adds it has demonstrated Cascade launch from its Vanta uncrewed surface vessel.

Stark also says it has developed a 25-km-range, six-kg quadcopter that it calls Gambit. The system for use by frontline troops can carry a 2 kg payload for either the intelligence collection role or in a weaponized setup.

Stark Chief Technology Officer Johannes Schaback says the weapons reflect lessons from the war in Ukraine. "Armed forces need capabilities that can be produced quickly, adapted rapidly and fielded at scale. Cascade and Gambit were designed for exactly that challenge," he says.



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Airbus Invests In Hamburg, Augsburg Plants For A321XLR Production

Airbus has made significant investments in its industrial base in Germany to accommodate production of the A321XLR.

In Augsburg a new assembly hall has been built at the Airbus Aerostructures plant one. The almost completed new hall 130 is used to assemble the core element of the A321XLR, the rear center tank (RCT), which holds slightly more than 13,000 liters of fuel.

Meanwhile, in Hamburg, two separate new facilities (halls 246 and 259) are largely dedicated to integrating the RCT with the center fuselage section and with equipping the much-modified section afterwards.

In hall 246 in Hamburg, sections 15 and 17 (which are themselves Hamburg work packages) are put together with the RCT.

The enormous height of the facility allows Airbus to deliver sub-assemblies from above rather than from the ground, which makes a

more ergonomic and efficient use of floor space possible, among other things.

Five stations are organized to build a flow line that will, Airbus hopes, allow much higher production rates when processes are fully spooled up.

As usual, the company does not disclose how many XLRs Hamburg is able to produce, but the industrial capacity is believed to be higher than the current share of the XLR in the A321neo backlog.

Once completed, the combined sections 15/17 are moved into hall 259, a newly-built hangar dedicated to outfitting work.

The outfitting creates about 25% more work hours than a standard A321neo. Hall 259 can do work on "normal" ACF (Airbus Cabin Flex) aircraft, too, but the bulk of the work is on the XLR. Three hundred technicians in two shifts are working in this hangar alone.

The A321XLR is a key part of



Airbus

Airbus' drive to gain even more market share in the single-aisle segment. With a range of up to 4,700 nm, the variant expands the A320 family operating radius to include thin true long-haul routes.

The version, launched at the 2019 Paris Air Show, has been popular with airlines globally.

▲ Airbus investing in German facilities to meet XLR demand.

According to *Aviation Week's* Fleet Discovery database, 30 aircraft have so far been delivered. There are outstanding orders for 438 aircraft.

Safran Strengthens German Defense Investment

Safran Electronics & Defense is investing nearly €50 million (\$58 million) in Germany aimed at strengthening its industrial and technological presence in the field of defense equipment.

The company will move operations from Murr to a new center of excellence in Ludwigsburg, Baden-Württemberg, scheduled to open in early 2028. The larger facility will boost industrial capacity and support growth in Germany.

It will strengthen production and maintenance of the Murr site's core products, including fiber optic gyroscopes and PNT (Position, Navigation, Timing) equipment for civil and military platforms. The new center will also add capabilities for portable optronic equipment used by soldiers. The investment is expected to create 200 jobs for engineers, technicians, quality managers, and sales staff.



Take it as red: André Chripunow with a model of the ExoMars Rosalind Franklin Rover, which will search for signs of life on Mars.

ESA's ExoMars Rover Surfaces

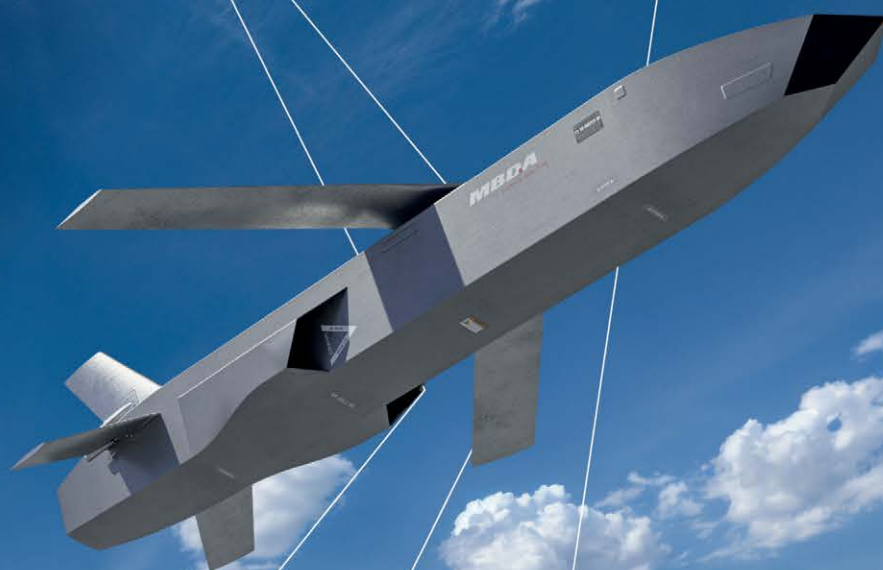
A model of the European Space Agency's (ESA) Rosalind Franklin Rover, part of the ExoMars program, is being displayed in the space hall. The rover will be the first to drill up to two meters below the Martian surface to collect samples shielded from radiation and extreme temperature fluctuations.

"The ExoMars Rosalind Franklin Rover will search for signs of life. Mars' clay deposits extend beyond previous estimates," says André Chripunow. Manager Space at BDLI (German Aerospace Industries Association). "Clay minerals require liquid water to form and hold clues of a time when the Red Planet was wetter and more hospitable to life. The findings point to the presence of large amounts of water shaping the region, and possibly the entire planet. This has important implications for Mars' past climate and habitability." The Rover is scheduled to launch in late 2028.

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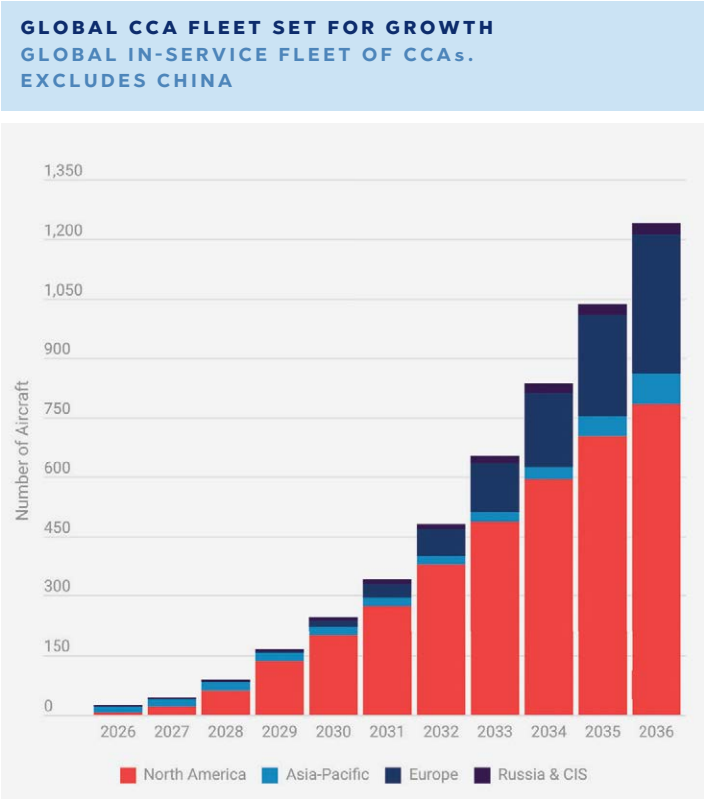




Boeing Australia recently finalized a contract for seven additional Boeing MQ-28 Ghost Bats which will result in 18 aircraft being delivered by the end of 2028.

Collaborative Combat Aircraft On The Rise

Strong global demand for CCAs is set to see over 1,000 in service with operators by 2036.



Source: Military Fleet & MRO Forecast 2026 © Informa Markets 2026

Collaborative Combat Aircraft (CCA) have the potential to represent the most consequential development in air combat since the introduction of guided weapons.

Designed to operate in conjunction with crewed fighters to enhance their lethality and survivability and crucially to add mass to depleted tactical aircraft fleets these aircraft also offer a window into a future where pilots are no longer in the cockpit.

Partially as a result of their revolutionary nature interest in CCAs continues to expand with operators now putting funding into developing their own capabilities in this area. The results of these investments are increasingly visible.

At the end of 2025 only a handful of CCAs had been produced globally with the vast majority being used as test articles and developmental aircraft to refine concepts and explore operational applications.

By 2030 this will have changed –

CCAs are expected to have entered service with a number of air forces around the world and production will be ramping significantly.

Based on *Aviation Week's* projections 160 aircraft should be in the hands of operators by 2030 with that total rising to over 1,000 by the end of 2036. 2026 represents a crucial year in determining whether these projections hold.

US first

The bulk of the aircraft due to be delivered over the next 10 years will go to the U.S. Air Force however competing priorities and technical challenges could yet see established program schedules adjusted.

A final production decision for Increment 1 of the air force's CCA program is due in FY26, while requirements for increment 2 are refined ahead of a tender for the next phase of the program.

Given the U.S. lead in this area it is perhaps no surprise the other operators around the world are

CONTINUED ON P16



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CONTINUED FROM P14

watching what happens there with a keen interest in order to see how the concepts, technologies and requirements evolve.

In parallel however CCA development and production programs are already proliferating globally and in some cases are already equally mature.

Australia is at the forefront of the concept having pursued the indigenous development of the MQ-28A Ghost Bat with Boeing Australia recently finalizing a contract for seven additional Boeing MQ-28 Ghost Bats which will result in 18 aircraft being

delivered by the end of 2028.

Similarly Turkey has made huge strides in its efforts to locally produce CCAs and already has two designs in flight test in the form of the Baykar Kizilelma and the Turkish Aerospace Anka 3.

Both platforms are notably larger, more survivable designs and are attracting considerable interest from abroad.

In May Indonesian defense holding company PT Republikorp signed an agreement with Baykar to provide 12 of its uncrewed combat aircraft for use by the Indonesian Armed Forces, with deliveries starting in 2028.

Baykar also launched a joint

venture with Leonardo focused on uncrewed systems while Turkish Aerospace signed a Memorandum of Understanding (MoU) in November 2025 establishing a strategic alliance to explore opportunities in this area.

Emerging technology

Australia and Turkey are far from the only countries making progress in this area.

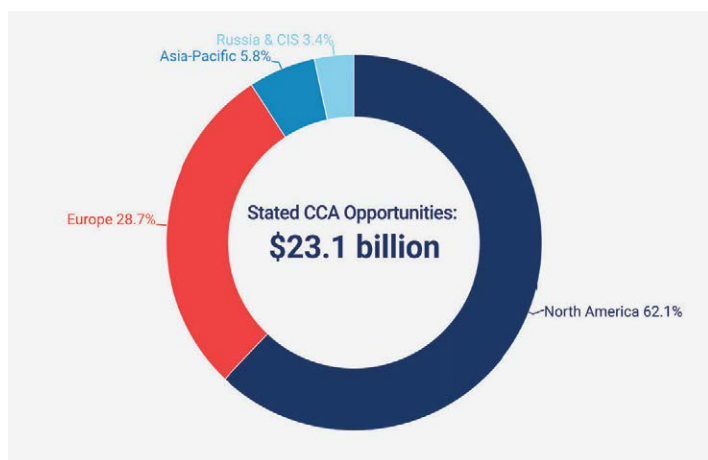
Notable programs are also underway in France, Germany and South Korea while manufacturers from more than a dozen other countries have displayed concepts of aircraft now being proposed to their own defense ministries.

Of the 1,066 CCAs currently projected to be in service as of 2036, roughly 45% are expected to be acquired by non-U.S. operators, primarily in Asia-Pacific and Europe where recent defense budget growth is enabling investment in this emerging technology.

As interest in the technology grows *Aviation Week* has identified \$23.1 billion in open opportunities to supply CCAs between 2026 and 2035 that have officially been announced by operators.

This now represents the third largest mission segment in the global military aircraft market in terms of open requirements behind only fighter aircraft and transport helicopters. Competition is set to remain fierce and unpredictable as the concept is matured over the next decade. ▲

COLLABORATIVE COMBAT AIRCRAFT OPPORTUNITIES BY REGION VALUE OF STATED OPPORTUNITIES OF CAAs FOR 2026-2035. EXCLUDES CHINA



Source: Military Fleet & MRO Forecast, Aviation Week Intelligence Network © Informa Markets 2026



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Analysis derived from *Aviation Week's* Defense Market Analyzer. To access the data behind this analysis, visit aviationweek.com/GD-ILA or visit us in Hall A, Booth 500.



Turkey has made huge strides in its efforts to locally produce CCAs and already has two designs in flight test in the form of the Baykar Kizilelma (left) and the Turkish Aerospace Anka 3 (above).

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Lufthansa Technik Looks To Bolster Defense Activities

Lufthansa Technik is preparing to ramp up its defense activities as Germany starts introducing a range of new aircraft into service and the company sets its sights on additional wins in the sector.

The company, best known for maintaining commercial airliners, embarked on expanding the work it does in the defense arena about seven years ago, in part to help Germany boost low utilization rates of its military aircraft. That initiative got a massive boost when Russia's full-scale invasion of Ukraine in 2022 spurred a German defense reawakening and a large inflow of money.

"That was the biggest tailwind you could imagine," says Michael von Puttkamer, vice president of Special Aircraft & Defense at Lufthansa Technik.

Now the company is a partner on multiple key German military modernization programs. It is working with Hensoldt and Bombardier on the Pegasus signals intelligence

aircraft using a modified Global 6000, the Boeing P-8A maritime patrol aircraft, the Lockheed Martin F-35, and the Boeing CH-47 heavy-lift helicopter.

And the company has its eyes on more, von Puttkamer indicates. Hensoldt is trying to win a contract for a German Air Force standoff jamming aircraft where Lufthansa Technik could have a role, and a potential German purchase of airborne early warning aircraft

could also generate new business.

One of the milestone developments as part of the defense push was becoming involved in the P-8A program, with the first few now delivered. Lufthansa Technik does the maintenance of the aircraft, drawing on its decades of experience servicing 737s.

But what makes the P-8A different is not just its military role, but that it can employ munitions. "It is the first time for Lufthansa

Technik to have a real weapon-carrying system in our hangars," von Puttkamer says.

When the company embarked on the project, it first consulted its workers council, where some employees bristled at the idea of doing this kind of military work, von Puttkamer says. That changed, though, with the Ukraine war, and now, he says, the defense activities have some of the highest application rates.

The company says it has a triple-digit number of people working on its defense activities. That number will go up, von Puttkamer says, as the German customer starts introducing into service the new platforms and other opportunities emerge either at home or abroad.



Lufthansa-Technik



First Poseidon checks took place at Hamburg facilities in April.

German Military Eyes Micro-Launch, Offensive Space Options

The German armed forces are starting to refine their space operational plans, including the deployment of offensive capabilities and ways to quickly replenish their expanding constellations in case of attack.

Germany has unveiled a range of planned military space investments in areas such as communications, Earth observation and ballistic missile warning.

"We will also add offensive capabilities, because only if we can actively defend ourselves will we be able to deter aggression against our own space systems," says Maj. Gen. Wolfgang Ohl, Deputy Director General for the armed forces directorate in the German defense ministry.

"There is only one red line we

defined. We will not produce debris if we go offensive," the Luftwaffe general told the SmallSat Europe expo at the end of May.

Germany has greatly stepped up its military space ambition in recent months, publishing its military space strategy last year and pledging to spend 35 billion (\$41 billion) in the area through the end of the decade as it looks to be ready to fight in the operational domain.

"The threat landscape is complex and is dynamic," Ohl says, noting the diversity of counter-space systems that are operational.

Given those concerns, the German armed forces are defining plans for the use of micro-launchers to augment heavy-lift vehicles for deploying its systems. "Micro-launches will be extremely signifi-

cant in the context of responsive space," he notes, calling the capability "crucial."

The government is exploring potential partnerships with industry, but also other countries, to address its needs. Potential international cooperation could come from Norway and Canada. Launching from Scotland is also an option, he says.

German space startup Isar Aerospace uses a launch facility in Norway (pictured right) and is in talks with Canada to operate from Nova Scotia, while Rocket Factory Augsburg plans to use Saxa Vord in Scotland as its initial launch base.

As part of its push to improve Western military space cooperation, Germany is looking to set up a European Space Component

Command that would be hosted by the country's Space Command and open to multinational participation. The command would not formally be part of NATO or European Union structures, though will likely include fellow member states.



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Seat manufacturer Recaro last year reached pre-pandemic revenue levels.

German Suppliers Ready To Ride Commercial Ramp-up

While the war in the Middle East adds further market uncertainty, Germany's aerospace suppliers are keeping a focus on supporting Airbus' plans to lift aircraft production, reports Jens Flottau.

The recent news flow must have felt scary for the German aerospace industry. Airbus' commercial aircraft ramp-up, the sector's key growth driver, is slower than hoped for, owing mainly to a myriad of supply chain constraints, including engine shortages and quality lapses.

But these problems pale against the more acute crisis that has emerged from the U.S.-Israel war against Iran: skyrocketing fuel prices, concerns about actual jet fuel shortages (even in Europe), much higher rates of inflation and a potential structural realignment of the global industry, among other geopolitical factors.

Yet as the German aerospace sector convenes at the ILA Berlin Air Show, players are still optimistic about their business prospects, even though navigating these complexities has become even more challenging. Preparing for much higher production rates

in the Airbus supply chain is a key priority that requires a lot of attention.

At the same time, the sector is beginning to get ready in earnest for the launch of Airbus' next-generation single-aisle (NGSA) aircraft, due to be formally launched around 2030. That milestone will require a lot of preliminary design work that will take years to complete.

Engine shortage

Airbus plans to raise A320neo-family output to 70-75 aircraft per month by the end of 2027. But the company delivered only 136 A320neo-family aircraft in the first four months of this year, or an average of 34 per month. That shows the severity of the engine shortage and the effect of rework needed on forward fuselage panels due to a supplier quality issue discovered in late 2025. For comparison, Airbus' monthly average of A320neo-family

deliveries was just above 50 last year.

In addition to the main narrowbody family, A220 output is slated to grow substantially to 13 per month. Airbus is looking at much higher rates for the A350 as well – initially to 12 per month in 2028 and potentially much higher later.

"We want to support the targeted rates," Liebherr-Aerospace Lindenberg Managing Director Philipp Walter says. But he warns that his company's own supply chain is still struggling and adds: "Smaller players are looking at us to help, but we can only do so much."

The Iran war has raised further questions about production rates, and Walter is concerned that some players will come to their own conclusions. "One is taking the risk," he says. "Another one is not." He says the industry might



"We want to support the targeted rates," Walter says. But he warns that his company's own supply chain is still struggling and adds: "Smaller players are looking at us to help, but we can only do so much."

PHILIPP WALTER
LIEBHERR-AEROSPACE LINDENBERG
MANAGING DIRECTOR

▶ CONTINUED ON P22

CONTINUED FROM P21

not be talking enough about how prepared it is to operate in an even more challenging environment and what needs to be done to increase resilience.

Walter's worries largely center on small suppliers that are perfecting specialized processes on which the industry depends; not all of those companies are financially stable. "In some cases, we have to fully finance them so that business continues," he notes.

"We need a realistic conversation around whether we need to adapt [rates] or not," Walter says. "If we don't adapt, then we want to deliver [to Airbus]." Liebherr-Aerospace is a major provider of landing gears, flight controls, actuators and electronic components, among other things.

The situation is similar at Diehl Aviation. "The reality is the rates will come, mostly with some small delay," CEO Jörg Schuler says. "Demand is still very high." The company, which has a large cabin interiors business, is "prepared to

meet Airbus' future demand," he says, particularly since rates are still low. Diehl's installed industrial capacity is actually still not fully utilized.

But like at Liebherr, the company's own supply chain is creating headaches. "You cannot claim that there is full resilience yet," Schuler says. "The delivery performance of our own suppliers is still not at the level we need. The smaller the supplier, the less resilient they are."

While performance has improved in some sectors, Diehl still needs to intervene heavily in some cases and recover from delays to contain the impact on Airbus.

The company made substantial adjustments to its procurement organization, merging operational and strategic departments into a single unit. Diehl hopes that the move will provide better visibility of its supply chain and possible constraints early on.

At MTU Aero Engines, the supply chain picture is variable, too. "It changes over time," MTU Chief Program Officer Ottmar

"If jet fuel remains expensive, there might be an impact next year. We will still grow substantially, and I would not call this a crisis yet."

MARK HILLER
RECARO CHIEF EXECUTIVE

Pfänder says. "There are programs that saw fluctuations last year and are fine this year — or the other way around."

Pratt & Whitney, which is a partner with MTU in the International Aero Engines consortium, is in the middle of a deep dispute with Airbus about the number of PW1100G geared turbofan (GTF) engines to deliver to the final assembly lines this year. Airbus says the number of GTFs received are significantly short of contractual obligations.

At the end of 2025, the consortium pushed for as many deliveries as possible to Airbus so the airframer could meet its own targets. Yet at the beginning of this year, MTU's focus shifted to accommodating airlines and the in-service fleet to reduce the number of parked aircraft.

"There are not enough engines to serve everybody," Pfänder remarks. "Expanding industrial capacity does not go quickly enough."

The same might be said about aircraft seats. Leading seat manufacturer Recaro, based in Schwabisch Hall, reached pre-pandemic revenues again for the first time in 2025, when it grew by 24%. Growth is not abating this year, either, CEO and shareholder Mark Hiller says.

The company has not seen any indication that line-fit or retro-fit programs are being questioned by customers in North America, Europe or Asia, although some airlines in the Middle East are considering delaying investment decisions, according to Hiller. On the other hand, Emirates and a few other carriers in the Middle East are using aircraft downtime to speed up cabin renewal programs.

Even if larger-scale decisions are made now, any effect on production would be felt in 2027 at the earliest, given the long lead

times. Should aircraft retirements finally accelerate, the seat industry would not immediately suffer, as these would only affect retrofit opportunities. Furthermore, "there is not enough capacity in the market," Hiller says.

The global aircraft seat industry was worth around \$3.1 billion in 2025 and will grow to around \$5 billion in 2030, according to Recaro's estimates. A significant chunk of that growth will be driven by the continuing trend towards premium products. Business-class seats currently represent 20% of Recaro's revenue, but Hiller estimates that share will grow to 40% in the next two years, based on existing and likely future orders.

No problem, for now

For now, none of the companies see any material immediate impact of the Strait of Hormuz closure on their own supply chain, business or customer demand, even though the elevated price of oil will flow through into higher inflation especially for oil-based products. That could become a problem for Diehl because of the materials it uses for cabin components.

Of course, that will likely change if the situation in the Middle East does not improve in the coming months and airlines do not recover as foreseen. "If jet fuel remains expensive, there might be an impact next year," Hiller says. "We will still grow substantially, and I would not call this a crisis yet."

For all the operational and political issues, demand appears to be remaining strong. MTU in particular is seeing huge demand for its manufacturing business as well as maintenance, repair and overhaul (MRO), in part due to the fixes needed to the PW1100G-installed fleet.

Even after the extra GTF work winds down, Pfänder does not see any issues filling the company's MRO capacity as the in-service fleet continues to grow. He also does not expect competitors' planned all-new MRO shops to open in time or at all, given the skilled labor and capital required.

Nor is Pfänder worried if retirements of aging aircraft finally gain momentum in the coming years. MTU could still benefit through resales of engine spare parts. ▲

MTU Aero Engines



Technician works on a Pratt & Whitney PW1100G engine at MTU's Munich headquarters.

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