

## **Singapore and Germany Step Up Collaboration to Improve Performance in Air Traffic Management**

The Civil Aviation Authority of Singapore (CAAS) and DFS Aviation Services (DAS), the commercial subsidiary of the German air navigation service provider DFS Deutsche Flugsicherung, have signed a Memorandum of Understanding (MOU) to step up collaboration to improve performance in air traffic management, as air travel between Singapore and Germany recovers to pre-pandemic levels. Both Singapore and Germany are major air hubs in Asia-Pacific and Europe. Pre-COVID, there were 42 weekly flights between Singapore and Germany. These have since recovered to 37 weekly flights, or 88% of pre-COVID levels.

2 Under the MOU, CAAS and DAS will collaborate in four areas: (i) safety; (ii) sustainability; (iii) performance benchmarking; and (iv) training.

3 On safety, CAAS and DAS will work to enhance aviation safety, through strengthening (i) safety data collection and analysis; (ii) safety culture amongst air traffic control officers and system engineers; and (iii) investigation processes into safety incidents. Both parties will also work on developing safe air traffic management (ATM) concepts, solutions and technology for the next generation of ATM systems.

4 On sustainability, CAAS and DAS will exchange ideas and share their respective sustainable ATM initiatives. These include CAAS' Sustainable Air Hub Blueprint that is being developed, and DAS's research into climate-friendly flight management such as contrail prevention. Both parties will also work towards launching joint trials and demonstrations in long-range air traffic flow management to reduce carbon emissions.

5 On performance benchmarking, CAAS and DAS will establish a set of common indicators for benchmarking Singapore and German airports and improving performance. The set of common performance indicators agreed between Singapore and Germany – which can include additional fuel burn, taxi-out additional times and additional time in terminal airspace – can provide a template which can later be extended to and adopted by airports worldwide.

6 On training, the Singapore Aviation Academy (SAA), the training arm of CAAS, and DAS will exchange training instructors and jointly develop new training pedagogy curriculums and programmes to strengthen their respective manpower capabilities to support future growth. Both parties will also jointly develop and market seminars and courses for the international market.

7 The MOU was signed between Mr Ng Tee Chiou, Deputy Director-General of CAAS, and Mr Andreas Pötzsch and Mr Pierre Hermann, Managing Directors of DAS on 21 March 2023. The MOU renews the partnership that was established between CAAS and DAS in 2018, which was disrupted due to the COVID-19 pandemic.

8 Mr Han Kok Juan, Director-General of CAAS, said, “The new MOU between CAAS and DAS is significant as it is a collaboration between two leading air hubs of the world. We will leverage each other's expertise to improve performance and serve as a pathfinder for key emerging issues affecting global aviation.”

9 Andreas Pötzsch, Managing Director, DFS Aviation Services, said, “This Memorandum of Understanding represents the recognition that we are working towards the same goal – to enhance ATM safety standards and performance across the globe. For our both organisations, this MOU symbolizes a partnership which we believe will lead to many new joint ATM initiatives that produce new synergies.”

Quelle:

CAAS Press Release 18 April 2023

### **Singapore and the United Kingdom to Step Up Collaboration in Five Areas to Prepare Aviation Sector for the Future**

The Civil Aviation Authority of Singapore (CAAS) and the United Kingdom Civil Aviation Authority (UK CAA) will step up collaboration in (i) aviation safety, (ii) sustainability, (iii) training, (iv) innovation and (v) horizon scanning to better position their respective aviation sectors for the future as they emerge from the COVID-19 pandemic. These five areas of collaboration were agreed at the second Singapore-UK Bilateral Aviation Steering Committee co-chaired by Director-General of the Civil Aviation Authority of Singapore, Mr Han Kok Juan, and Chief Executive Officer of UK Civil Aviation Authority, Mr Richard Moriarty, on 27 March 2023. The Bilateral Aviation Steering Committee was set up in December 2020 for the two authorities to work together to help their respective aviation sectors tide over the COVID-19 crisis.

2 On aviation safety, the Civil Aviation Authority of Singapore and UK Civil Aviation Authority will be conducting technical visits to validate each other’s safety systems and work towards mutual acceptance in airworthiness certification, whereby the regulatory approval issued by one authority to organisations for aircraft and product modifications will be accepted as equivalent to the approval issued by the other party. This will help the two aviation sectors streamline regulatory requirements and lower costs.

3 On training, the Civil Aviation Authority of Singapore and UK Civil Aviation Authority have signed a Supplemental Arrangement, under which the Singapore Aviation Academy (SAA), the training arm of the Civil Aviation Authority of Singapore, and CAA International Ltd (CAAi), UK Civil Aviation Authority’s technical assistance arm, will expand training cooperation through the exchange of experts for curriculum design, research, and delivery of training programmes. For a start, the Civil Aviation Authority of Singapore and UK Civil Aviation Authority will jointly develop and deliver a cybersecurity seminar for aviation professionals involved in the oversight and implementation of cybersecurity in the two countries.

4 On sustainability, Singapore and the UK have earlier signed a memorandum of understanding to advance sustainable aviation. The Civil Aviation Authority of Singapore and UK Civil Aviation Authority will discuss policies, regulatory tools and approaches to setting and raising sustainability targets in their respective countries.

5 On innovation, the Civil Aviation Authority of Singapore and UK Civil Aviation Authority will share experience and information on the use of technology, innovation, and research and development to redesign airport processes to enhance productivity and user

experience. Both parties will also exchange details of vertiport standards and pilot licensing, and collaborate on the creation of our regulatory roadmaps for Advanced Air Mobility (AAM) and Beyond Visual Line of Sight (BVLOS).

6 On horizon scanning, the Civil Aviation Authority of Singapore and UK Civil Aviation Authority will work together to identify emerging trends, threats and opportunities relating to air travel demand post-COVID. These include the emergence of new technology and changes in the operating environments, so as to better prepare their respective aviation sectors for the future, particularly in the areas of industry development and regulatory response.

7 Mr Han Kok Juan, Director-General of the Civil Aviation Authority of Singapore, said, “As global air hubs, Singapore and the UK share many similar challenges and opportunities as we emerge from the COVID-19 pandemic. The deepening partnership between the two civil aviation authorities is testament to our shared desire to pool resources and share expertise to better serve our respective aviation industries and position them for the future.”

8 Mr Richard Moriarty, Chief Executive of the UK Civil Aviation Authority said, “We’re delighted to be extending our agreement with the Civil Aviation Authority of Singapore, continuing to strengthen cooperation in areas of common interest including safety, innovation, sustainability and training. Preparing for the future, training collaboration will focus on equipping aviation professionals with the skills and capabilities to continue to support a safe and secure aviation system, including as the sector evolves to introduce new requirements, technologies and users.”

Quelle:

CAAS Press Release 04 April 2023

### **Singapore to acquire 8 more F-35B fighter jets, growing fleet to 12**

*The Singapore Armed Forces will also upgrade its training with virtual reality technology and a new digital range, as part of its 2040 vision.*

The Republic of Singapore Air Force (RSAF) will acquire another eight F-35B fighter jets, growing its incoming fleet of the fifth-generation fighters to 12.

Singapore will take delivery of the eight jets from US manufacturer Lockheed Martin "by the end of the decade", Defence Minister Ng Eng Hen said in Parliament on Friday (Feb 24).

In 2019, Singapore announced the acquisition of an initial four F-35Bs, which are on track for delivery by 2026. The purchase was worth an estimated US\$2.75 billion, according to a US government press release.

That deal included an option for eight more F-35 jets. Dr Ng on Friday said the Singapore Armed Forces (SAF) had decided to exercise the option for the F-35B variant after an extensive evaluation.

"MINDEF and the SAF have concluded that the F-35 is the best choice to meet our defence needs now and in the future," he told Parliament.

The Defence Ministry has the largest estimated expenditure among the ministries for the 2023 financial year, at S\$17.98 billion. This is a 5.6 per cent increase from FY2022. Almost all the money, or about S\$17.04 billion, will go to the SAF.

MINDEF does not give detailed cost figures for the acquisition of planes, submarines and Army platforms as these can provide an indication of capabilities.

Dr Ng attributed the increased spending to heightened inflationary pressures, catching up on projects disrupted by the pandemic, and building up the SAF's ability to counter non-traditional threats.

Describing a backdrop of intensifying global competition, he noted that Asian countries were upsizing their militaries, especially in north-east Asia, and this "can spell trouble ahead".

Yet outside of Parliament, "some political personalities" have pushed for a reduction in defence spending, he said.

"To them, I say – don't sacrifice a strong defence for Singapore at the altar of political expediency. It may win some support, but it risks losing Singapore in that self-interest.

"We must never forget that defence is a long-term business. For the SAF, major systems and platforms take 10 to 15 years to conceptualise, build and integrate into our fighting force."

As part of the SAF's transformation into a next-generation defence force by 2040, Dr Ng also announced that it would invest in training upgrades, including the use of realistic virtual reality simulators and a new digital range.

Quelle:

channelnewsasia.com 24 February 2023

## **About Singapore Airshow**

***20 - 25 FEB 2024***

Every two years, high-level government and military delegations, as well as senior corporate executives around the world attend the Singapore Airshow to forge partnerships and seal deals in this region. As Asia's largest Airshow, this is the place to be for leading aerospace companies and budding players eager to make their mark in the international aerospace and defence market!

The event offers a unique platform for industry thought leadership through its high-level conference, forums and co-located events. Leading industry players, government and military chiefs gather here bi-annually to contribute to dialogues, exchange ideas and seek solutions and strategies to advance the interests of the global aerospace and defence sector.

Quelle:

Singapore Airshow

## **Airbus Helicopters introduces first American-made military versions of the H125**

Airbus Helicopters is introducing the first U.S.-built H125 military configurations, known as AH-125 and MH-125 Ares, to the Airbus range of military helicopters. These combat-capable aircraft will feature militarized options that meet the needs of military and parapublic allies and partners around the world.

The AH-125 Ares will be configured as the armed variant of the helicopter, while the MH-125 Ares will be configured as a multi-role helicopter capable of a wide range of operations. The new offerings complement the extensive line of military helicopters already produced by Airbus, including the H125M.

“The AH-125 and MH-125 Ares helicopters will offer the capability, reliability and flexibility needed by America’s allies and partners as they perform an array of rotary wing missions, ranging from light attack to disaster response and other parapublic missions,” said Scott Tumpak, Vice President of Military Line of Business for Airbus U.S. Space and Defense. “They represent the latest evolution of Airbus’ H125 family of helicopters, and will be produced in the U.S. at Airbus Helicopters, Inc.’s facility in Columbus, Mississippi.”

Globally, the H125 family accounts for almost 80% of the single-engine market and has the highest number of certified modifications (supplemental type certificates) available. With the new addition of a flexible weapons capability, the H125 helicopter will easily be re-configured between multiple mission sets in less than 30 minutes, ranging between light attack, air assault, search and rescue, casualty evacuation, and disaster response, as well as other combat and parapublic operations.

MAG Aerospace will perform the weapons installation design, engineering, certification and manufacturing. The helicopter will accommodate a wide range of weapons such as a .50 cal (12.7 mm) gun and unguided rockets, and precision-guided weapons as a growth option. The installation allows for doors-on flight throughout the mission.

“MAG Aerospace is thrilled to team with Airbus to combine our unique platform engineering and modification capabilities with the world-class leader in the single-engine helicopter market. It’s an honor to work with Airbus and expand our ability to serve our partners in the U.S. and around the world,” said Matt Bartlett, President of MAG Aerospace.

The H125 is the world’s top-selling helicopter with a long history of use by U.S. law enforcement and government agencies. Currently, the H125 is the light enforcement helicopter used by U.S. Customs and Border Protection, with more than 100 H125 family aircraft in service, making the U.S. government the single largest customer and operator of the aircraft.

Airbus provides a range of reliable and versatile helicopters to the U.S. government and military, enabling them to perform a wide variety of missions. More than 480 UH-72A and UH-72B Lakota helicopters have been delivered to the U.S. Army and National Guard since the program began in 2006. Airbus also continues to support the U.S. Coast Guard’s fleet of nearly 100 MH-65 helicopters, which play a critical role in the USCG’s homeland security, drug interdiction and lifesaving missions.

Quelle:

Airbus Press Release 24 April 2023

## **Boeing Expands ecoDemonstrator Flight Testing with 'Explorer' Airplanes, Announces 2023 Plan**

*- Accelerating technology development for sustainability with multiple airplanes*

*- Boeing will use first Boeing ecoDemonstrator Explorer, a 787-10 Dreamliner, to partner with four countries on operational efficiency testing*

*- Flagship ecoDemonstrator will test 19 new technologies in 2023*

Boeing [NYSE: BA] is expanding its ecoDemonstrator flight-test program to further accelerate innovation for sustainability and safety. The company today announced its 2023 plan to assess 19 technologies on the Boeing 777 ecoDemonstrator, while also adding "Explorer" airplanes that will focus tests on specific technologies.

The first ecoDemonstrator Explorer, a 787-10 Dreamliner, will conduct flight tests in June from Seattle to Tokyo, Singapore and Bangkok to demonstrate how coordinating navigation across global airspace jurisdictions can improve operational efficiency, which can reduce an airplane's fuel use and emissions by up to 10%. Utilizing today's onboard capabilities, Boeing and air navigation service providers (ANSPs) in the U.S., Japan, Singapore and Thailand will collectively sequence the airplane's routes to achieve the optimal flight path across multiple regions, factoring in conditions such as weather, air traffic and airspace closures. The airplane will fly on the highest available blend of sustainable aviation fuel (SAF) at each location.

"To support our industry's goal for net zero carbon emissions by 2050, Boeing is expanding our ecoDemonstrator program with Explorer airplanes to test even more sustainability-focused technologies," said Stan Deal, president and CEO of Boeing Commercial Airplanes. "We continue to invest in innovation that reduces fuel use, emissions and noise on our products and to partner with governments and industry to make progress on sustainability during each phase of flight."

"The industry will need continued fleet renewal, efficiency gains, renewable energy carriers such as sustainable aviation fuel and advanced technology to meet the civil aviation industry's commitment to achieve net zero carbon emission by 2050," said Boeing Chief Sustainability Officer Chris Raymond. "Our initial Explorer testing in partnership with aviation stakeholders in four countries is a great example of how we can work together to optimize operational efficiency and reduce emissions."

In 2023, Boeing also will use its current flagship ecoDemonstrator airplane, a 777-200ER (Extended Range), to test 19 technologies including:

- Sustainable wall panels in the cargo hold that are made of 40% recycled carbon fiber and 60% resin made from a bio-based feedstock
- A fiber optic fuel quantity sensor compatible with 100% SAF
- An Electronic Flight Bag application featuring Smart Airport Maps, a component of Jeppesen FliteDeck Pro, which reduces operational costs and supports safe taxi operations with the depiction of contextual airport data
- For all flight tests, the airplane will fly on the highest available blend of SAF locally

Since its initial flights in 2012, the Boeing ecoDemonstrator program has accelerated innovation by taking new technologies out of the lab and testing them in an operational environment. Including the 2023 plan, the program will have tested about 250 technologies to help decarbonize aviation, improve operational efficiency and enhance safety and the passenger experience. Approximately a third of tested technologies have progressed onto Boeing's products and services.

More information about the 2023 ecoDemonstrator and previous ecoDemonstrator airplanes is available at [boeing.com/ecoDemonstrator](https://www.boeing.com/ecoDemonstrator). Boeing's sustainability commitments, partnerships and efforts are available at <https://www.boeing.com/principles/sustainability>.

Quelle:

Boeing Press Release 27 April 2023

### **Raumsonde JUICE wird per Technologie des OHB-Tochterunternehmens Antwerp Space mit der Erde kommunizieren**

#### ***Europäische Weltraumorganisation (ESA) startet JUICE-Mission zur Erforschung der drei Eismonde des Jupiters***

JUICE wird dreieinhalb Jahre lang die Atmosphäre, die Magnetosphäre, die Ringe und die großen Eismonde Ganymed, Europa und Callisto des Jupiters untersuchen. Es wird vermutet, dass sich unter ihrer gefrorenen Kruste, Ozeane aus flüssigem Wasser und vielleicht sogar bewohnbare Umgebungen befinden. Der Höhepunkt der Mission wird die Umrundung des Eismondes Ganymed sein. Das Ende der Mission ist für das Jahr 2034 geplant - dann soll der geplante Aufprall der Sonde auf der Mondoberfläche stattfinden.

Antwerp Space, eine Tochtergesellschaft des Technologie- und Raumfahrtkonzerns OHB SE, hat die Entwicklung des Kommunikationssubsystems im Auftrag des Hauptauftragnehmers Airbus Defence and Space durchgeführt. Das Kommunikationssystem wird während der achtjährigen Reise zum Jupiter und der anschließenden Wissenschaftsphase mit der Erde kommunizieren. "Das System wurde für die strengen Anforderungen und die raue Umgebung der JUICE-Mission konzipiert, optimiert, analysiert, integriert und vier Jahre lang erfolgreich vom Ingenieurteam von Antwerp Space getestet", sagt Hugues Vasseur, leitender Ingenieur des Teams von Antwerp Space.

Die Entwicklung eines Kommunikationssubsystems für eine Mission wie JUICE erfordert fundierte Kenntnisse und Erfahrungen in der Raumfahrttechnik: Das System wird für die Kommunikation zwischen Erde und Jupiter etwa 800 Millionen Kilometer überwinden und muss den extremen Umweltbedingungen um den Jupiter standhalten.

"Ich bin sehr stolz auf das JUICE-Team und möchte Airbus Defence and Space und der ESA für die enge Zusammenarbeit danken. Antwerp Space hat einmal mehr erfolgreich bewiesen, dass es in der Lage ist, bei der Entwicklung eines solch komplexen Systems die volle Endverantwortung zu übernehmen", so Koen Puimège, Geschäftsführer von Antwerp Space.

Quelle:

OHB Press Release 14 April 2023

## **Weltweite Piloten-Allianz gegen Sicherheitsbedrohung durch Fliegen mit reduzierter Besatzung**

Weltweite Pilotenverbände bilden eine Koalition gegen "Reduced Crew Operations". Aus Europa ist der Dachverband European Cockpit Association (ECA) dabei, in dem die Vereinigung Cockpit (VC) eine maßgebliche Rolle spielt. Die Koalition setzt sich gegen Pläne von Fluggesellschaften und Herstellern ein, die aus Kostengründen Piloten im Cockpit einsparen wollen. Die VC setzt sich aus Sicherheitsgründen seit Jahren für die Beibehaltung einer Mindest-Cockpitbesatzung von zwei Personen ein und schließt sich der von IFALPA, ECA und ALPA gegründeten Koalition an.

VC-Präsident Stefan Herth: "Wir Pilotinnen und Piloten kämpfen dafür, dass das Fliegen sicher bleibt! Beim ECA Presidents' Meeting am 23. und 24. März haben wir "Reduced Crew Operations" für unsere Verbände gemeinsam zu einem Top-Thema erklärt. Wir werden alles tun, um sicherzustellen, dass immer mindestens zwei gut ausgebildete und erfahrene Piloten im Cockpit ihren Dienst tun. Nur so können wir das extrem hohe Level an Flugsicherheit aufrecht erhalten. Für uns gilt immer "Safety First"! Kommerzielle Interessen müssen bei Sicherheitsfragen hintenanstehen. Deshalb schließen wir uns unseren Dachverbänden vollumfänglich an!"

Einige Flugzeughersteller und Airlines betreiben mittlerweile dennoch eine aggressiv geführte Lobbykampagne, die auf Regulierungsbehörden in der ganzen Welt abzielt. Die Europäische Luftfahrtbehörde EASA hat sich bereits offen gegenüber Vorschlägen zur Reduzierung von Cockpit-Besatzungen gezeigt.

Trotz technologischer Entwicklungen im Bereich der Automatisierung bleiben aus Sicht der weltweiten Pilotenverbände zwei Piloten im Cockpit die wichtigsten Sicherheitsmerkmale beim Fliegen. Flugzeuge, ihre einzelnen Systeme, die Vorschriften und Standards, die für den Flug gelten und die Verfahren, die die Piloten befolgen sind für ein mindestens zwei Personen umfassendes Team im Cockpit konzipiert. Abweichungen von dieser Logik führen zwangsläufig zu einem Verlust von Sicherheitspuffern. Piloten eliminieren Systemausfallszenarien und fungieren als kritischer Ersatz für ausgefallene Systeme an Bord, überbrücken technologische Lücken und passen sich in Echtzeit und in der realen Umgebung an unvorhergesehene Situationen und Notfälle an. Technologie, egal wie hoch entwickelt, ist kein Ersatz für Piloten im Cockpit.

Quelle:

VC Press Release 27 March 2023

## **Lufthansa: Neue Langstreckenziele im Winter**

- *Ab München mit dem Airbus A380 nach Bangkok und Los Angeles, mit dem Airbus A350 nach Bangalore*
- *Ab Frankfurt nach Hyderabad*

Lufthansa startet im kommenden Winter mit neuen A380 Zielen ab München. Bereits ab dem 5. Oktober fliegt die Airline wieder täglich mit dem weltweit größten Passagierflugzeug die



kalifornische Metropole Los Angeles an. Kurz vor Beginn des Winterflugplans am 28. Oktober gibt es dann eine besondere Premiere: Zum ersten Mal startet ein Lufthansa Airbus A380 täglich von München aus in die thailändische Hauptstadt Bangkok und erweitert damit das Sitzplatzangebot im Vergleich zur A350 um fast 75 Prozent. Lufthansa bietet auf dieser Verbindung ein größeres Premiumangebot an als je zuvor: Die A380 hat 8 Plätze in der First Class, 78 Plätze in der Business Class sowie 52 Plätze in der Premium Economy.

#### Neue Verbindungen nach Indien

Lufthansa erweitert sein Angebot nach Indien. Neues Ziel ab München ist Bangalore, das neben Delhi und Bombay mit einem Airbus A350 angefliegen wird. Lufthansa Gäste kommen dabei in den Genuss eines der modernsten und sparsamsten Langstreckenflugzeuge der Lufthansa Group, des Airbus A350-900. Nach längerer Pause wird Lufthansa auch Hyderabad wieder in den Flugplan ab Frankfurt aufnehmen. Damit gibt es erneut eine direkte Anbindung von Deutschland aus in die Pharma- und Hightech-Industrie Indiens. Einzelheiten dazu gibt Lufthansa Mitte Mai bekannt.

Insgesamt fliegt Lufthansa im kommenden Winter von ihren beiden Drehkreuzen Frankfurt und München fünf Ziele auf dem indischen Subkontinent an.

Quelle:

Lufthansa Press Release 27 April 2023

#### **Rheinmetall Defence and Lockheed Martin will cooperate on Rocket Artillery System**

Rheinmetall Defence and Lockheed Martin have entered into a Memorandum of Understanding (MOU) to collaborate on tailored solutions that will provide Germany with a unique rocket artillery system that maximizes existing and combat proven components, produced in Germany.

“For us, the letter of intent signed today is an agreement of strategic significance. The combination of Lockheed Martin’s proven capabilities and extensive know-how with Rheinmetall’s experience in fabrication and production opens unique opportunities for both sides”, declares Armin Papperger, chief executive of Rheinmetall AG. “For Germany and Rheinmetall, the agreement offers the chance to secure key technologies and a significant share in the value added chain for Germany.”

Under this collaboration, the companies will explore potential joint opportunities in areas such as research and development, production and other activities.

“Lockheed Martin looks forward to collaborating and optimizing our combined resources to meet an immediate need for deterrence,” said Lockheed Martin Vice President of Tactical Missiles, Paula Hartley. “This is another step in our partnership with Rheinmetall bringing 21<sup>st</sup> Century Security solutions to Germany.”

Quelle:

Lockheed Martin Press Release 20 April 2023