



**ROYAL
AERONAUTICAL
SOCIETY**
AUSTRALIAN DIVISION
SYDNEY BRANCH

OCTOBER 2020

Vol 2020-08 ABN 75 134 058 731
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NEWSLETTER



Webinar



Title: **'Boeing Airpower Teaming System'**

Speaker: **Dr. Shane Arnott**
**Program Director Boeing Airpower
Teaming System, Senior Technical Fellow
Boeing Defense, Space & Security**

Date: **Wednesday, 14th October, 2020**

Time: **18:30 hours** (sharp)

Webinar registration is required in advance by clicking on the link: <https://raesoct20.eventbrite.com.au> (Please note that Sydney Branch members will be given first access to register by Wednesday 30th September, before registration opens Australia wide.) After registering, you will receive a confirmation email containing information about joining the webinar. Additionally, 10 minutes before the commencement of the Webinar a reminder will be automatically sent to all who had registered.

Attendance will attract 1 CPD hour

Profile: As the Boeing Airpower Teaming System (ATS) program director, Dr. Shane Arnott is responsible for providing coordinated program management support for key global campaigns, including the evolution of multiple development projects, such as the Royal Australia Air Force's Loyal Wingman Advanced Development Program, to create the ATS franchise product.

Prior to this role, Dr Arnott was director of Phantom Works International, being responsible for Boeing's Phantom Works business in Australia, the United Kingdom, Korea, India, and Saudi Arabia. In this role, he established Boeing's largest autonomous systems development program outside of the United States and oversaw the largest increase in Boeing's international research and development investment. Since joining Boeing in 1997, Arnott has held several management and engineering positions, developing and leading international teams in both civil and defence aerospace domains.

As a Senior Technical Fellow with Boeing, he is recognised as being within the top 0.1 per cent of Boeing engineers, and is the international spokesperson for the fellowship. He received both the Innovator of the Year and Excellence Award at the 2019 Australian Defence Industry Awards.

Outside of Boeing, Dr Arnott is a recognised leader in aerospace, serving as an Adjunct Professor with the Queensland University of Technology, Member of the Board of Insitu Pacific, Industry Committee Advisor to the Queensland Government, Industry Mentor in the Techstars Global Accelerator Program, and a Master Lecturer for the global Go Fly Prize.

He received his Bachelor of Engineering with Honors (First Class) in 1995 from Latrobe University and his doctorate in Systems Engineering from the University of Queensland in 2014.

Synopsis: The Airpower Teaming System is Boeing's newest unmanned platform designed for global defense customers by Boeing Australia. It is the company's largest investment in a new unmanned aircraft program outside the United States and the first military aircraft to be designed,

developed and manufactured in Australia in more than 50 years. The aircraft will complement and extend airborne missions through smart teaming with existing military aircraft.

In May 2020, Boeing Australia delivered the first Loyal Wingman as part of the Advanced Development Program with the Royal Australian Air Force. Design, development and manufacturing of the prototypes is occurring across four Australian states with more than 35 Australian companies contributing. As a research and development activity Boeing Australia will complete three Loyal Wingman concept demonstrators for the Australian Government, which will provide key lessons toward the production of the [Boeing Airpower Teaming System](#).



Dr. Arnott will cover the program origins and its latest milestones.

Agenda: 18:30 Welcome by Mr David Cox FRAeS, Chair of the Sydney Branch

18:35 Presentation by Dr Shane Arnott

19:25 Q&A

19:30 Vote of Thanks

19:35 End

WORLD'S FIRST A321 FREIGHTER SPOTTED IN QANTAS LIVERY:

In August 2019, Qantas signed an expanded partnership with Australia Post*, which will see them become the launch operator for the Airbus A321P2F (Freighter). The first Airbus A321P2F was spotted with a Qantas Freight livery in Singapore. The program allows Airbus A321s, that have completed their operational service carrying passengers for airlines, to have a second life as highly efficient freighters. D-ANJA, which will eventually be registered as VH-ULD, is a 22-year-old Airbus A321 which used to be passenger-configured. The aircraft has been converted by ST Engineering and Airbus in Singapore.



The A321P2F is a perfect replacement for the older generation of narrow-body freighters. With space for 14 large containers/pallets on the main deck and 10 LD3-type containers on the lower deck, it is the most cost-efficient freighter in its category available today. It also is more environmentally friendly through a much lower fuel burn and reduced emissions. Modifying an A321 from passenger to the P2F version involves integrating a large main deck cargo door in the forward fuselage, plugging the passenger windows and deactivating most of the passenger doors. The forwardmost left passenger door is replaced by a smaller one to optimise the number of cargo positions on the main deck. The cabin is refurbished, including the installation of a rigid barrier wall, and the floor is reinforced.

From October 2020 Qantas will introduce up to three passenger to freighter (P2F) converted Airbus A321 aircraft. Compared to their existing fleet of Boeing 737-300 Freighters, the A321P2F can carry around 50% more cargo; this equates to around nine extra tonnes. Airbus figures show the A321P2F has a total payload capability of 27.9 metric tonnes over two decks. Depending on its configuration and payload, the aircraft is listed with a range of 2,300 nautical miles.

* (Qantas' partnership with Australia Post dates back to 1992 and has been renewed under various conditions since. Qantas Freights operate a 14-strong fleet, consisting of six Boeing 737 freighters, two 747-8 freighters, one 767-300ER freighter, one Saab 340 and four British Aerospace 146 freighters.)

Wings Over Illawarra 2020 CANCELLED due to COVID-19: After consultation with NSW Health, the organisers of Wings Over Illawarra 2020 have made the heart-breaking decision to cancel the 2020 event which was due to take place in November 2020. Originally set for May 2020, Wings Over Illawarra was postponed to November in the hope the current COVID-19 situation would have eased sufficiently for the event to take place. Unfortunately, this is not the case. After lengthy discussions with NSW Health, it became apparent that the organisers would be unable to safely proceed with the event in 2020. The bottom line is that the safety and health of staff, volunteers, attendees, exhibitors, stallholders and participants is paramount and, with the current advice from NSW Health, the organisers are unable to proceed with the November event and are forging ahead with Wings

Over Illawarra 2021 - 13th and 14th November 2021 with a STEM day planned for the 12th November 2021. Refer further details in the Diary Section – Page 5.

SCHIEBEL CAMCOPTER® S-100 AND NORDIC UNMANNED CARRY OUT WORLD'S FIRST FULL-SCALE OFFSHORE UAV FLIGHT FOR EQUINOR: Vienna, 28 August 2020 – Schiebel,

together with partner Nordic Unmanned, successfully demonstrated to Norwegian energy company Equinor the cargo delivery capability of its Unmanned Aerial Vehicle (UAV) CAMCOPTER® S-100 to offshore platform Troll A* off the west coast of Norway. This is a world's first in terms of full-scale offshore UAV delivery from shore to an active oil and gas installation. The exercise simulated the scenario of an urgent requirement for specific essential spare parts at the gas production platform Troll A. The CAMCOPTER® S-100 successfully carried out the long-range delivery flight from Mongstad Norway, where the spare parts were 3D-printed, to the offshore platform Troll A. The unmanned delivery distance was 100 km (55 nm). After the UAV supplied the spare parts, it carried out a close inspection around the platform before it headed back to Mongstad. The flight trials also included a successful Search and Rescue (SAR) mission, where a "man over board" dummy was quickly located by the UAV and transmitted the position data and live images.



Hans Georg Schiebel, Chairman of the Schiebel Group, said: "This was the perfect trial to show off the exceptional maritime capabilities of the S-100 for the oil and gas industry. We have extensive experience in long-range unmanned flights, especially in the maritime domain and under adverse weather conditions. The S-100 was able to show off its outstanding capabilities and we have proven once again that the S-100 UAV is the superior choice."

The **Troll A platform** is a [Condeep gravity base structure](#) offshore [natural gas platform](#) in the [Troll gas field](#) off the west coast of Norway. Built from [reinforced concrete](#), as of 2014, it was the tallest and heaviest structure that has ever been moved to another position, relative to the surface of the Earth, and is among the largest and most complex engineering projects in history. The platform was a televised sensation when it was towed into the [North Sea](#) in 1996, where it is now operated by [Equinor](#). The Troll A platform has an overall height of 472 metres (1,549 ft), weighs 683,600 tons (1.2 million tons with ballast) and has the distinction of being the tallest and heaviest structure ever moved by mankind. The platform stands on four legs extending down to the sea floor 303 metres (994 feet) below the surface of the sea, and the leg containing the import and export risers has an elevator that takes over nine minutes to travel from the platform above the waves to the sea floor.

100 years - the Spirit of Australia: "The story of Qantas is the story of modern Australia – past, present and future. It's a remarkable and unlikely tale of how a humble air mail operation in outback Queensland



became a national carrier flying over 50 million passengers a year. It's a story of service – through peace, war, natural disaster and national celebration. It's a story of innovation – from a 31-stop, 12 day flight to London, to operating the world's first non-stop flights between Australia and Europe. But most of all, it's a story shared by all Australians. Thanks for joining us in Qantas' Centenary year

as we celebrate that story and look towards creating new stories for future generations to tell." Alan Joyce, Chief Executive Officer and Managing Director, Qantas Airways Limited. Refer for further details:

qantas.com/au/en/100-years-of-the-spirit-of-australia

Society Merchandise for Sale: Sydney Branch has a selection of Society Merchandise for sale at its regular monthly meetings. Items include Society Ties, Tee Shirts, Caps, Pins, Lapel Badges, Silver Kestrel Brooches, and Mugs.



Our Sales Director, Mr David Adkins, accepts cash, cheques, and credit cards through PayPal.

Closed Member Only Group on Facebook: Sydney branch is live video streaming our monthly branch lectures. Watch lectures live or later, at the "RAeS - Sydney Branch - Members Only" group within Facebook. Please note that this service is only available to financial members of the Royal Aeronautical Society.

Past Newsletters and Webinars are now stored on our websites: Members are advised that all Sydney Branch Newsletters since February 2012 are now stored on our website. To access this information enter our web address (www.raes.org.au) into your browser, click 'Branches', then 'Sydney Branch', and scroll this page to the heading 'Sydney Branch Newsletters'. Newsletters are arranged by month within each year heading. **Past webinars are now viewable on the RAeS AD website - www.raes.org.au complete 'member login', click on 'Resources' tab, and then 'Videos' - some 21+ webinars will be available for viewing by Members. Additionally, there are further videos under the tabs 'Young RAeS' and 'Cool Aeronautics' – for these two tabs, 'Member Login' is not required.**

Aerospace Websites: www.57rescuecanada.com : Follow Capt. Karl Kjarsgaard's adventures to recover Halifax bomber LW170 which is resting beneath 5000ft of water off the Irish coast; <https://www.abc.net.au/radio/programs/conversations/beverley-bass/11060672> : Podcast - This is your captain speaking. On the morning of the attack on New York's Twin Towers, Captain Beverley Bass was flying from Paris to Fort Worth, Texas.

www.adastron.com/707/updates/updates.htm : Diary of Boeing 707-138B XBA formally Qantas EBA.

<https://www.aerosociety.com/events/catch-up-on-events/video-audio-archive/> : Many podcasts and videos of previous presentations including Vulcan to the Skies (podcast and video), and The U-2 Reconnaissance Aircraft Incident of 1 May 1960 (podcast only).

<https://airandspace.si.edu/collection-objects/assembly-bio-harness-armstrong-apollo-11>

www.airshow.com.au

www.atsb.gov.au

www.aviationmuseum.com.au - Temora Aviation Museum;

<http://boxkite2014.org/book/book.htm> - The Boxkite project.

www.ela.space - Equatorial Launch Australia - Australia's Spaceport at 12 Degrees – The Arnhem Space Centre site is in Australia's Northern Territory, outside of the East Arnhem township of Nhulunbuy, approximately 12 degrees south of the Equator on the land of the Yolngu people.

https://en.wikipedia.org/wiki/Rolls-Royce_Trent;

hars.org.au Historical Aircraft Restoration Society

<https://herox.com/SpacePoop> The Space Poop Challenge

<https://news.northropgrumman.com/news/features/apollo-13-failure-was-not-an-option> - Fifty years ago April 17, 1970, the Apollo 13 Command Module and crew safely returned home.

www.powerhousemuseum.com/whatson

<https://qfom.com.au/> Qantas Founders Museum, Longreach, Qld

https://www.youtube.com/watch?v=wZ4WmKy8zkY&feature=youtu.be&dm_i=4OGU,VYG8,2ZCDRJ,3XM4,J,1 Video - Talking with Paul Stein, Chief Technology Officer at Rolls-Royce

<http://www.singaporeairshow.com/>

<https://www.youtube.com/watch?v=JGjmRRTThdk> How TIME created their new cover image with 958 drones

http://www.rbogash.com/B-52/B-52_Disassembly.html How to move a B-52 without flying it – The Final Disassembly and Transport Update for the move scheduled 3/6/2018 - with the wings split and the fuselage in final stages of prep before hitting the freeway.

<https://www.spitfireassociation.com> THE SPITFIRE ASSOCIATION "Keeping the memory alive" Patron; Air Vice-Marshal Mark Skidmore AM (Ret'd), and President RAeS Australian Division.



**DUE TO THE COVID-19 PANDEMIC ALL OF THESE DATES MAY CHANGE
TO KEEP INFORMED OF DATE CHANGES REFER TO THE APPROPRIATE WEBSITE**

Diary: 5-8 October: AUVSI XPONENTIAL 2020 – Find Your Edge – will now take place entirely as a virtual event over the planned dates of October 5 – 8! While it was our collective hope that the fall would bring about a safe opportunity for our community to engage in-person in Dallas, the current rise in COVID-19 cases has made clear the need for a safe alternative. XPONENTIAL 2020 is the global stage for everything unmanned - from state-of-the-art propulsion technology, sensors, energy storage and UAS mitigation solutions to what's coming over the horizon in



AI, 5G, edge computing and more. As the largest, most significant event for the unmanned systems industry, you'll find your edge as you hear from industry luminaries. Further details to be provided shortly - refer: www.xponential.org/xponential2020

Wednesday, November: The 62nd Sir Charles Kingsford Smith Lecture will be presented by Mr Alan Joyce AC FRAeS, Chief Executive Officer and Managing Director, Qantas Airways Limited, via Webinar – date and details are being considered and will be advised shortly.



16 November: Qantas Airways will turn 100 and to celebrate Qantas Founders Museum has a number of activities planned for the day:

- The Museum will provide free entry to the Museum for all visitors;
- You can't celebrate a birthday without cake so visitors will get to enjoy a special morning tea with delicious birthday cake;
- The Curator will present a talk about the history of Qantas; and
- The Museum will provide two one hour guided tours of the National Heritage Listed Qantas Hangar where guests will learn about the early days of Qantas and the history of this significant building.

Those planning to visit the Museum must book online and will be refunded the Museum entry cost. To book go to: <https://qfom.com.au/plan-your-visit/>



24 November: The RAeS Australian Division will be running a Webinar featuring Boeing. Further details will be provided shortly.

28 Jan-4 Feb, 2021: 43rd Scientific Assembly of the Committee on Space Research (COSPAR) and Associated Events - COSPAR 2021 will be held in Sydney. Host Organization: Australian Academy of Science; Scientific Program Chair: Prof. Iver Cairns, University of Sydney, School of Physics. Abstract Deadline – closed. Abstract acceptances and program notification letters were sent out 31st March, 2020. The theme of the COSPAR 2021 Assembly is *Connecting Space Research for Global Impact*. More information can be found at www.cospar2020.org



March 31, 2021: Marks the Royal Australian Air Force 100 years as an independent service. For further details refer: airforce.gov.au/our-mission/air-force-2021

15-17 June, 2021: ROTORTECH 2020 has been deferred to this date. It will be held at the same venue - Royal International Convention Centre, Brisbane. Registration process is being updated and is currently not available.



Refer further details: <https://www.rotortech.com.au/visit/registration.asp>

June 24, 2021: Aviation Safety Australia 2020 has been deferred 1 year to 24th June 2021 – due to COVID-19 pandemic. A new program will be issued at the start of the new year and Invitations will be reissued in early 2021. Registrations remain open at 2020 prices, which will not be adjusted until January 2021. For further details and to register at 2020 prices refer: <https://www.raes.org.au/eventdetails/5392/aviation-safety-forum-2021>

Postponed – New dates to be confirm in 2021: Dr Behrooz Barzegar, recently retired from Airbus. He will discuss his Integration and Architectural roles in Airbus entitled 'Aerodynamic Design of Commercial Aircraft - Airbus A380 and the future' including the Beluga XL.

13-14 November, 2021: Wings over Illawarra – The Sydney Airshow - Immerse yourself in history as you wander through rare displays of vintage and classic aircraft including the fully-restored Super Constellation and record breaking Qantas 747 along with some beautifully restored WW2 fighters. In 2020 your entry ticket will once again include access to the Historical Aircraft Restoration Society aircraft that are open for inspection. To thank the supporters of the Wings Over Illawarra event this year, Wol are offering tickets for the 2020 event at half price - but be quick, they're only available for a limited time. For further information please refer: <https://www.wingsoverillawarra.com.au/>



November 23-28, 2021: The Australian International Airshow and Aerospace & Defence Exposition



(AVALON 2021) - As the centrepiece of the Royal Australian Air Force's Centenary celebrations, AVALON 2021 is Australia's own signature international aviation, aerospace and defence event and will have great national and international significance. Organised by AMDA Foundation Limited, it is a premium international platform for engagement between industry, defence, government and academia. Deferring AVALON 2021 to November will ensure the event serves its purpose as a powerful promotional and industry engagement forum on the way to business recovery and as a spectacular celebration of 100 years of the Royal Australian Air Force.

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