First Airpower Teaming System unmanned aircraft roll-out a win for Australian industry

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Boeing Defence Australia partnering with the Royal Australian Air Force and Australian defence industry have celebrated the roll-out of the first Boeing Airpower Teaming System (BATS) unmanned aircraft, the first military aircraft to be fully designed and built locally in 50 years.

The aircraft, which uses artificial intelligence to extend the capabilities of manned and unmanned platforms, is the first to be designed, engineered and manufactured in Australia in more than 50 years. It is Boeing's largest investment in an unmanned aircraft outside of the US.

As the first of three prototypes for Australia's Loyal Wingman Advanced Development Program, the aircraft also serves as the foundation for the BATS being developed for the global defence market.

Air Marshal Mel Hupfeld, Chief of the Royal Australian Air Force, said the roll-out of the first aircraft was a significant milestone in the Boeing Loyal Wingman project.

"This project is an excellent example of innovation through collaboration and what can be achieved working together with defence industry. This demonstrates the importance of the relationship Air Force has with Boeing Australia and defence industry more broadly. I look forward to exploring the capabilities this aircraft may bring to our existing fleet in the future," AIRMSHL Hupfeld explained.

Air Vice Marshall Catherine Roberts, AM, CSC, Head of Air Force Capability, said, "I applaud the efforts of Boeing working collaboratively with a breadth of Australian defence industry from prime partners like BAE Systems (https://www.defenceconnect.com.au/bae-systems) Australia, through to SMEs like RUAG Australia and Ferra Manufacturing, to deliver the concept demonstrator which shows the capability of Australian industry."

More than 35 members of Australian industry are supporting prototype work across four Australian states. With a global market demand for highly capable but extremely affordable unmanned aircraft, Boeing applied company-wide innovation to achieve those goals.

Dr Shane Arnott, program director, Boeing Airpower Teaming System, explained, "The BATS platform is shaping up to be a potent addition to the Royal Australian Air Force's airpower capabilities, working with platforms like the F-35, Super Hornet, Growler and E-7 Wedgetail, the most exciting piece is the growing interest from key allies serving as a powerful example of Australia's growing defence manufacturing base."

Kristin Robertson, vice president and general manager of autonomous systems for Boeing Defense, Space & Security, added, "We are proud to take this significant step forward with the Royal Australian Air Force and show the potential for smart unmanned teaming to serve as a force multiplier.

"We look forward to getting the aircraft into flight testing and proving out the unmanned teaming concept. We see global allies with those same mission needs, which is why this program is so important to advancing the development of the Boeing Airpower Teaming System."

Boeing industry partner, BAE Systems Australia announced it has been selected to supply the unmanned flight vehicle management solution and simulation capability for the Loyal Wingman - Advanced Development Program led by Boeing Australia for the Royal Australian Air Force (RAAF). The company is also delivering flight control computers and navigation equipment.

BAE Systems Australia Chief Executive Officer, Gabby Costigan, welcomed the announcement saying, "I am delighted to be working with Boeing Australia to bring a new defence capability to life that also offers enormous potential for the RAAF as well as future export markets."

BAE Systems Australia joins over 35 Australian companies in manufacturing the first military aircraft in Australia in more than 50 years. The aircraft rolled out today is the first of three prototypes for Australia’s Loyal Wingman program and serves as the foundation for the Boeing Airpower Teaming System product being developed for the global defence market.

"This project highlights our commitment to leading the development of new technologies and collaborating to advance autonomous capabilities. It is also an exciting opportunity to work together again, delivering a world-leading program using home-grown engineering expertise," Costigan said.

Prime Minister Scott Morrison said the new capability would help protect and support Australia’s most valuable Defence aircraft, and the pilots who fly them.

"We’re investing to enhance the agility and capability of the Australian Defence Force so we can protect our nation and our allies. It means Australia can sharpen its edge and prepare for the future. Our investment also highlights our Government’s commitment to growing and developing our local defence industry, creating jobs and boosting our global export potential," Prime Minister Morrison said.

The Loyal Wingman will have a range of more than 3,700 kilometres, enabling Defence to better understand how these types of aircraft can be used as a force-multiplier, helping to project power forward while keeping manned capabilities out of harm’s way.

Defence Minister, Linda Reynolds CSC said, "The program will examine how autonomous unmanned aircraft can support existing manned aircraft, such as our Joint Strike Fighters, Super Hornets and Growlers.

"This is Australian ingenuity at its finest, and presents Australia and our allies with opportunities for critical capabilities to fight emerging global threat systems," Minister Reynolds added.

Minister for Defence Industry, Melissa Price echoed the sentiment, stating, "This is a truly historic moment for our country. It’s the first time that Australian industry are locally designing, developing and manufacturing an aircraft of this type.

"This demonstrates the importance of the relationship that Defence has with companies like Boeing, and defence industry more broadly, and provides a fantastic example of the innovation we can achieve together," Minister Price added.

Dr Arnott added, "The Loyal Wingman is a historic development program for the Australian aerospace industry, Boeing and our entire industry team, and we’ve worked together with speed and agility to deliver this smart unmanned aircraft.

New South Wales-based Allied Data Systems is one such Australian-owned SME that has benefitted from the BATS program, with the company being selected to supply power distribution systems.

Andrew MacLaurin, Allied Data Systems’ chief executive officer said, "Our team is proud to supply power units to the Loyal Wingman unmanned aircraft. This initial contract will help support jobs for Allied Data Systems and its subcontractors in New South Wales."

Allied Data Systems has been a supplier to Boeing since the 90s. Allied Data Systems is a supplier to a range of products for other defence/commercial programs of Boeing including the E-7A Wedgetail and the Currawong Battlespace Communication System.

Allied Data Systems develops embedded computing systems for Mining, Industrial and Defence applications.

Defence markets served and supported include Naval, Air and Land domains. Allied Data Systems provides systems and support to a number of Defence Primes both here in Australia and overseas.

"We've leveraged the skills of the local supply chain to build a Loyal Wingman that will work together with other airpower teaming assets to provide an unmatched capability for Australia and for our global customers," Arnott said.

The aircraft was engineered using a digital twin to model its structures, systems, capabilities and full life cycle requirements; manufactured with Boeing's largest-ever resin-infused single composite piece; and assembled using proven advanced manufacturing processes.

The Loyal Wingman prototype now moves into ground testing, followed by taxi and first flight in late-2020.

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