How Australian-led innovation drives aerospace manufacturing

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Boeing's manufacturing capabilities extend across multiple domains from robotics and automation to 3D printing and carbon fibre composite aerostructures engineering, transforming how airplanes are made and putting Australia firmly in front of Industry 4.0 technological advancements.

During Australian Manufacturing Week (7-10 June), Boeing celebrates its 95-year evolution in aerospace manufacturing and the people behind its products, which now encompasses industry-leading commercial airplanes, complex defence systems, space communications capabilities and a range of aircraft services.

"Our 95-year history is tied to that of aviation and flight itself when our legacy companies first began manufacturing aircraft in Melbourne in 1927," said Mick Sorrenson, managing director of Boeing Aerostructures Australia. "The Fishermans Bend factory soon became the cornerstone of Australia's air force, producing general-purpose combat airplanes during the Second World War. Now, our people are using innovative manufacturing processes to develop critical parts for the 737, 747, 777 and 787 along with the Airpower Teaming System."

Boeing recently won two federal Modern Manufacturing Initiative grants to develop new technology parts for defence aircraft with its local Advanced Defence Aerospace Manufacturing Network, and space manufacturing for satellites and human space exploration systems which includes some of the country's leading small-to-medium enterprises.

"Made in Australia, by Australians underpins our approach," Sorrenson said. "Our Australian industry ecosystem unites employees, suppliers and research partners into a winning advanced manufacturing network that provides high-tech jobs, a resilient supply chain and sovereign capability for the Commonwealth."

Key to continuous transformation is Boeing Research and Technology Australia (BR&T-A), an advanced research and development division, that draws on the expertise of aerospace scientists and engineers to workshop future solutions to make manufacturing safer, faster, more costefficient and sustainable.

"Modern manufacturing needs to be anchored in continuous improvement and over 95-years we have learnt a great deal about how to refine and improve our processes," said Michael Edwards, director of BR&T – Asia Pacific. "Our focus on R&D across resin infused composites, autonomous systems, additive manufacturing, advanced robotics and model based engineering has resulted in better platforms for our customers, safer work environments for our people, and driven innovation for the industry at large."

"This combined with our strong partnerships with research organisations such as CSIRO and 16 Australian university partners are instrumental to evolving our manufacturing innovations."

Sorrenson is quick to point out that modern manufacturing isn't just technology-focused.

"Safe and quality-focused aerospace manufacturing requires a combination of tech and teamwork, and we're proud of our first-of-kind program to attract and support women into non-traditional trades."

Boeing's Melbourne advanced manufacturing site is currently seeking female applicants for a four-year <u>Female Apprenticeship Program</u> to advance women in trades, with applications closing at the end of June.

Boeing celebrates 95 years in Australia

With a presence dating back to 1927, Boeing Australia today has 4000-plus employees working across the broadest aerospace portfolio in Australia, including advanced manufacturing, defence, services, research and development, and uncrewed systems. We have a thriving Australian supply chain that supports our operations, and we're proud to partner with great organisations and universities that support veterans, STEM and the communities we live and work in. As we look to the future, Boeing Australia is committed to advancing economic opportunity, sustainability and community impact. Learn more at www.boeing.com.au.