

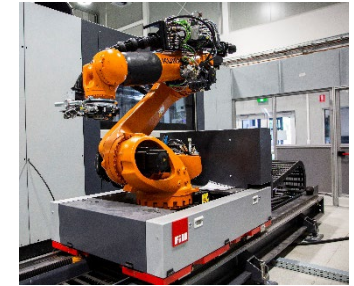
Products and services

Expertise in the development and prototyping of high-rate manufacturing of minimal viable product autonomous air vehicles, including long-range hydrogen propulsion eVTOL drones with low noise and infrared signatures.

- **Aerostructures design:** Design of aerostructures with a focus on integrated and concurrent design. Our engineering capabilities extend to both crewed and uncrewed air vehicles (UAVs or drones). We offer comprehensive services, from clean sheet design analysis, sizing and layout through to the development of prototypes.
- **Aerostructures simulation:** Advanced simulation and modelling services with unique expertise in the characterisation of materials, load cases and systems, and experimental validation of simulations.
- **Aerostructures materials:** Expertise in aerostructures materials development and characterisation (i.e., advanced composite materials, additive materials, joining materials and multi-functional materials).
- **Aerostructures manufacturing processes:** Unique expertise in manufacturing process development, characterisation, modelling and demonstration and testing for advanced manufacturing, in particular automated high-volume manufacturing.
- **Aerostructures education and training:** In partnership with Swinburne Edge, we provide bespoke industry-targeted education and training.

Capabilities and facilities

Our research and development optimises sovereign industry capability to produce and sustain next generation autonomous systems for littoral applications, surveillance/security and forward logistics.



- **Industry 4.0 Testlab:** The Swinburne-CSIRO National Industry 4.0 Testlab is dedicated to the automated manufacture of advanced composite structures, supporting the development of high-performance materials and processes.
- **Integrated digital design infrastructure:** Advanced software and supercomputing facilities provide integrated digital design and simulation capabilities. This enables us to conduct sophisticated simulations and design processes that enhance the precision and efficiency of our projects.
- **Drone Lab:** Our Drone Lab is a hub for drone prototyping and ground testing. It supports validation of designs and simulations through to physical demonstrators.
- **AIR Hub Flight Test Facility:** This facility provides comprehensive flight-testing capabilities in real-world conditions. It is an essential resource for validating the performance and reliability of our air vehicles.

Key partners and customers

Partners to collaborate on autonomous systems development including Nova Systems for flight testing and Quickstep for composites manufacture.



Through the AIR Pass program, AIR Hub experts assisted in the design, manufacture, and delivery of an EPS test rig for Dovetail Electric Aviation.

- **3D design:** Expertise in 3D design software enhances our design and simulation capabilities. These capabilities deliver design solutions to our partners, for example, Memko and Dassault Systemes.
- **Materials suppliers:** We partner with advanced material suppliers to ensure access to the highest quality materials. Partners include companies such as Quickstep Holdings.
- **Manufacturing equipment suppliers:** We partner with manufacturing equipment suppliers, including Langzauner, Siemens, Fill Aerospace Solutions, Furnace Engineering, Markforged and Emona Instruments.
- **Innovation and commercialisation:** In partnership with the Swinburne Innovation Studio, we foster commercialisation and innovation development, turning cutting-edge research into real-world applications via spinouts, startup partners and customer partners.

Quality standards and accreditation

- **Remote Operator Certificate (ReOC), CASA:** We are fully certified for Remote Drone Operations, including approvals for conventional take-off and landing (CTOL), fixed-wing remotely piloted air systems (RPAS), and powered lift vertical take-off and landing (VTOL) RPAS.
- **Defence Industry Security Program (DISP):** Pending approval, this accreditation will further solidify our commitment to meeting the highest security standards required by the defence sector.
- **Memberships:** Our memberships with the Australian Association for Unmanned Systems (AAUS), Aviation/Aerospace Australia (AAA), Latrobe Aerospace Technology Precinct (LATP), and the Smart Energy Council reflect our active involvement in the industry and our commitment to staying at the forefront of aerospace innovation.



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