

## Media Release

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### ADVANCED ROBOTICS TO TAKE DRONE TECHNOLOGY TO NEW HEIGHTS IN THE NORTHERN TERRITORY

- *Northern Territory Government to co-invest in the early-stage development of advanced hydrogen storage tank manufacture with commercial drone company Blueflite*
- *Darwin-based research and development premises and up to 17 new jobs to be created as part of Blueflite's global footprint*
- *Collaborative project between Blueflite, Charles Darwin University and H3 Dynamics to develop new additive and composite tank manufacturing process and products for use in long-range unmanned aerial vehicles*
- *The \$1.79 million project backed by a \$275,102 co-investment from the Northern Territory Government's AMEF, administered by the Advanced Manufacturing Growth Centre (AMGC)*

Blueflite Pty Ltd is set to address the growing global demand for safe and reliable storage of hydrogen fuels for unmanned aerial vehicles (UAVs) through a collaborative early-stage project supported by the Northern Territory Government. The ambitious project, which will also see Blueflite open its Darwin-based premises, seeks to develop a lightweight, high-pressure, hydrogen vessel (tank) using Advanced Fiber Placement (AFP) technology pitched squarely at the underserved, long-range, UAV sector.

The collaboration will see Blueflite leverage Charles Darwin University's (CDU) innovative additive manufacturing capabilities, including the use of an industrial robot with advanced Automated Carbon Fiber Placement (AFP) capabilities. The AFP robot at CDU is the only one of its kind in Australia and offers a significant improvement over traditional methods of composite vessel manufacture.

Long-range UAVs play a crucial role in numerous sectors, including medical, agricultural, services and mining industries – particularly in geographically isolated or vast regions such as the NT. In the medical field, they facilitate quick and efficient transport of medical supplies, vaccines, and even emergency medical services to remote areas, improving healthcare accessibility. In agriculture, UAVs can transform crop monitoring, precision agriculture, and pest control, leading to increased efficiency and sustainable farming practices.

Such is the growth trend in drone use that according to a recent Airservices Australia report<sup>^</sup>, the number of drone flights (single take-off and landing) will increase to approximately 60.4 million by 2043 – up from 1.5 million in 2024. This increase is driven primarily by drones being used for goods deliveries – an industry that is projected to grow exponentially over the next 20 years.

In all, the \$30 billion (USD)\* global drone market – of which long-range drones represent almost a quarter of the market – is set to grow to \$223 billion by 2033. With increasing demands for long range flights driving interest in new forms of fuel such as hydrogen, Blueflite plans to offer a scalable solution for all manner of

UAV applications. The integration of hydrogen fuel cell technology into UAVs has the potential to enhance range and efficiency of craft, as running on hydrogen rather than lithium-ion batteries is expected to increase range by 700 per cent.

**Chief Executive Officer of Blueflite, Frank Noppel said** the Northern Territory is the ideal location to develop, test and deploy long-range hydrogen powered UAVs.

“UAVs have the potential to shrink distances, increase services in remote areas and decarbonise last mile transportation. In conjunction with CDU, H3 Dynamics and support from the Northern Territory Government we will establish a composite hydrogen tank manufacturing capability that does not exist in Australia and integrate it into our proven UAV platform.”

“The long-term goal for Blueflite and our partners in Darwin is to coalesce a range of skills, knowledge and capability to position the NT as a leader in sustainable aviation and manufacturing, with ripple effects across various sectors, industries and the Top End economy.” said Noppel.

Working alongside CDU’s Energy Resource Institute, the project will conduct trials for remote site hydrogen generation and filling of the locally manufactured hydrogen storage vessels. These tanks will be integrated into Blueflite’s UAVs, and flight trials will be conducted at the Darwin UAV Flight Test Range.

**AMGC’s Northern Territory Director, Charmaine Phillips said:** “The Northern Territory is ideally positioned to assist Blueflite and its collaborators to succeed, not only do we have the right geographical conditions, but we also have the right support mechanisms and innovation ecosystem. Projects like this really lift our manufacturing industries eyes beyond the horizon and demonstrate our role in the transition to renewable energy.”

The project is expected to deliver \$9.6 million in additional revenue within five years and create at least seventeen new skilled roles at Blueflite’s new Darwin facility. Blueflite’s project is the tenth business to receive co-investment through the AMEF, which was launched in 2021. The AMEF has spurred manufacturing activity expecting to create up to 180 new jobs and generate up to \$94 million for the Territory’s economy within five years.

\* <https://www.factmr.com/report/62/drone-market>

^ [https://www.airservicesaustralia.com/wp-content/uploads/2024/02/Sizing-the-Future-Drone-Industry-in-Australia\\_February.pdf](https://www.airservicesaustralia.com/wp-content/uploads/2024/02/Sizing-the-Future-Drone-Industry-in-Australia_February.pdf)

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## **About Blueflite**

Founded in 2018 and headquartered in the United States, blueflite offers a drone-based logistics platform for faster and more cost-effective deliveries. The patented, unique, and all-electrical drone design has vertical take-off and landing capabilities, advanced manoeuvrability, and is built without compromise – to meet the rigorous demands of commercial operations.

Whether packages are large or small, its drone-based platform is built to scale in both size and quantity. Operating through our proprietary logistics systems blueflite’s digital network is designed to work with existing logistic solutions, making blueflite® the obvious choice for large logistic contracts.

[www.blueflite.com](http://www.blueflite.com)

## ***About CDU's North Australia Centre for Autonomous Systems (NACAS)***

Charles Darwin University's, North Australia Centre for Autonomous Systems (NACAS) conducts integrated industry-focused research into the application of autonomous systems across industries, businesses, and other sectors in northern Australia and the Asia Pacific regions.

In 2021, NACAS secured a grant under the Federal Government's Industry 4.0 Pilot Apprenticeship Scheme to build facilities in Darwin to Additively Manufacture composite parts for the Aerospace industry. These funds were matched by the Northern Territory Government, and the facility houses a full additive manufacturing suite for advanced composites. The Centre is also licensed by the Civil Aviation Safety Authority to manage large tracts of uninhabited land in the Northern Territory for the purposes of flight-testing novel UAV technologies. <https://www.cdu.edu.au/nacas>

## ***About Advanced Manufacturing Growth Centre (AMGC)***

The Advanced Manufacturing Growth Centre (AMGC) is an industry-led, not-for-profit organisation established through the Australian Government's Industry Growth Centres Initiative. AMGC's vision is to transform Australian manufacturing to become an internationally competitive, dynamic, and thriving industry with advanced capabilities and skills at its core.

Through the delivery of its world-leading research, Manufacturing Academy, workshops, and ground-breaking projects, AMGC aims to develop a highly skilled and resilient local manufacturing industry that delivers high-value products – via the integration of innovative technology – to domestic and international markets. <http://www.amgc.org.au>

## ***About the Advanced Manufacturing Ecosystem Fund***

The Advanced Manufacturing Ecosystem (AME) Fund of \$7.5 million seeks to build the advanced manufacturing ecosystem in the Northern Territory. The fund aims to grow advanced manufacturing capabilities and increase investment in and output of advanced manufacturing activity in the Northern Territory and grow the number of advanced manufacturing jobs located in the Northern Territory.

The AME fund will provide grants to industry led advanced manufacturing projects located in the Northern Territory across the Territory's priority sectors where those projects:

- Commercialise new products and processes, including transitioning a new product or process from prototype stage to full commercial operations
- Support early stage, fast fail, grants to support small scale and pilot research projects in advanced manufacturing

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