

Media Release

HYDROGEN-POWERED DRONE PROJECT HITS MAJOR MILESTONE WITH FIRST PROTOTYPE DELIVERED IN THE NT

- *Blueflite's collaborative project to develop advanced composite pressure vessels to store hydrogen for UAVs surpass halfway mark.*
- *First-generation Northern-Territory produced prototype tank delivered to blueflite.*
- *\$1.79 million project assisted by \$275,102 co-investment from the Northern Territory Government's Advanced Manufacturing Ecosystem Fund, administered by the Advanced Manufacturing Growth Centre (AMGC).*
- *Strong potential to meet rapidly growing international demand for long-range drones.*

A project enabling delivery drones to fly further by harnessing the Northern Territory's local strengths has surpassed its halfway milestone. Following the establishment of a Darwin site by US-headquartered blueflite, the collaborative project has achieved the successful production of a first-generation prototype pressure vessel for hydrogen storage.

The \$1.79 million project has been supported by a \$275,102 co-investment from the Northern Territory Government's Advanced Manufacturing Ecosystem Fund, administered by the Advanced Manufacturing Growth Centre (AMGC). Project partners, including Charles Darwin University (CDU) are contributing both its researchers and facilities – notably, the nation's only advanced fibre placement (AFP) industrial robot of its kind.

By enabling precise alignment and distribution of fibres within purpose-designed vessels, CDU's specialised equipment and expertise are helping to deliver lighter, stronger, safer and more economical hydrogen storage solutions – a critical step in powering drones for long-range logistics missions.

Frank Noppel, co-founder and CEO of blueflite, believes hydrogen fuel cell power and the new storage solution will enable a three- to five-fold improvement in range versus lithium-ion batteries.

"This opens up expanded use cases in logistics, healthcare, and industrial applications, especially in remote, rural, and offshore regions," said Noppel, whose background includes an aerospace engineering PhD and serial entrepreneurship.

"The solution also has dual-use potential for both civilian and government sectors." said Noppel.

Blueflite's milestone builds on CDU's growing commitment to drone innovation, highlighted by the launch of the North Australia Centre for Autonomous Systems (NACAS) and its Airspace Integration Research Facility (AIR-F) – the only purpose-built UAV flight test facility in northern Australia.

The project also involves CDU's Energy Resource Institute, which is trialing remote hydrogen generation and refueling the new tanks. Blueflite's drones are being equipped with the storage vessels and tested at the Darwin Test Range – a focus on long-range capability that aligns perfectly with the Territory's vast geography, local expertise and facilities. With a sparsely populated environment and the challenges of speed and cost of delivery, drones offer a natural solution for the region.

"The Northern Territory plays a pivotal role as an innovation testbed, and we are happy to align with its commitment to sovereign manufacturing, advanced R&D, and the development of clean aerospace and mobility solutions," added Noppel.

The tanks will be made available to an international UAV market with an appetite for the improved range that hydrogen can deliver.

According to market research from Fact.MR, the market for long-range drones is expected to grow 18.3 per cent a year to \$US 53 billion in 2035.

AMGC's Northern Territory Director, Charmaine Phillips said: "It's a big win not just for the NT but the nation to have a company like blueflite set up here. Their progress on this project has exciting implications, as they look to commercialise high-quality storage tanks, address a real market pull, and build up a network of local partners."

Administered by the Advanced Manufacturing Growth Centre (AMGC), blueflite is one of 13 businesses to receive co-investment through the AMEF, which was launched in 2021. Across all projects to date, the AMEF has spurred manufacturing activity, which is expected to create over 230 new jobs and generate over \$121 million for the Territory's economy in its first five years.

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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

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, 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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