

Charging, classing & collision avoidance: The journey of the Artemis EF-24 Passenger

CARL WEGENER

Senior Vice President – North America

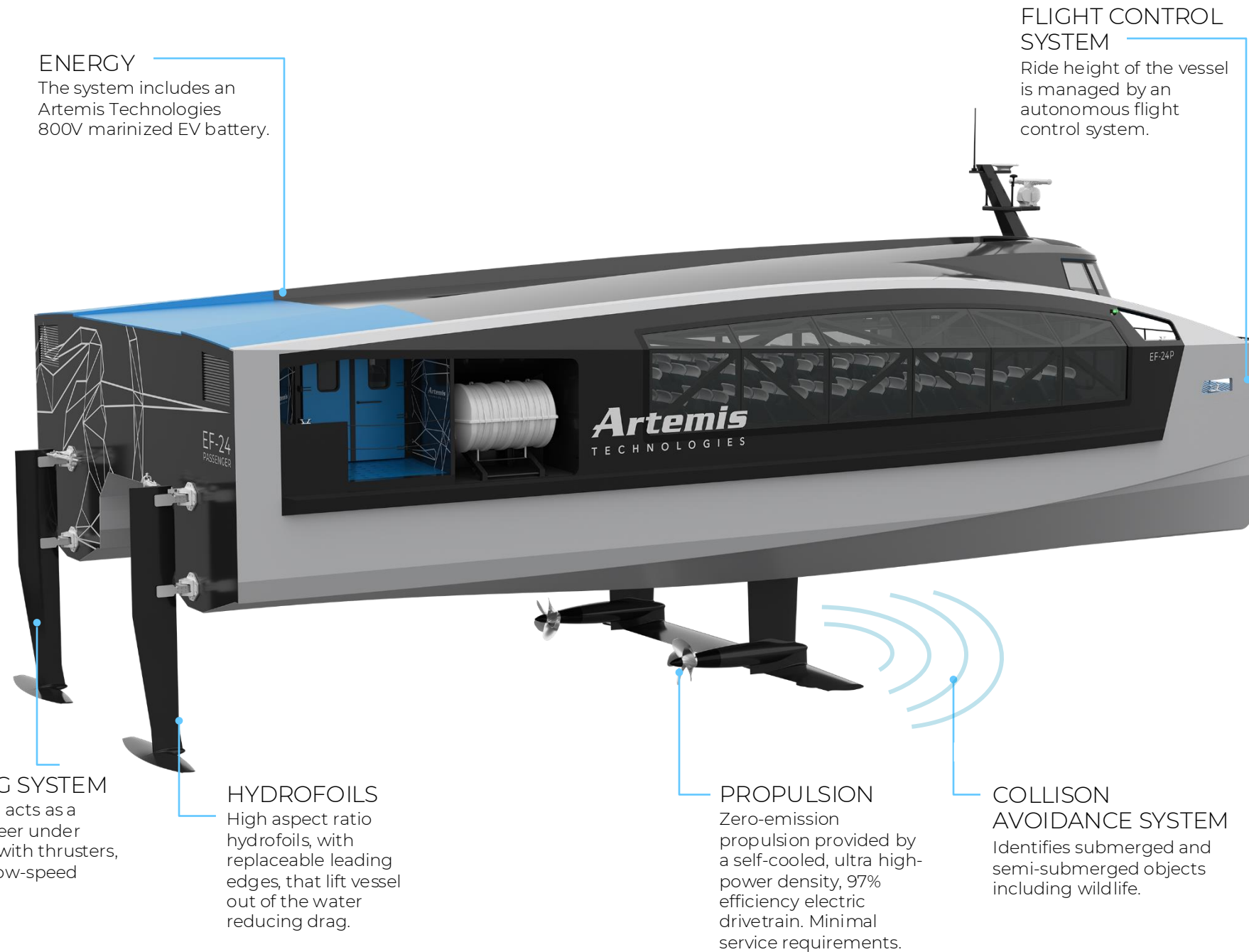
Artemis EF-24 Passenger

A zero-emission, 150-passenger ferry designed for commercial service.

Built for high-frequency routes in coastal and harbor environments, the Artemis EF-24 Passenger ferry combines hydrofoil efficiency with electric propulsion to reduce wake, noise, and energy use.

At its core is the patented Artemis eFoil® system - a fully integrated electric propulsion system that delivers enhanced stability, control and energy efficiency across a range of operating conditions.





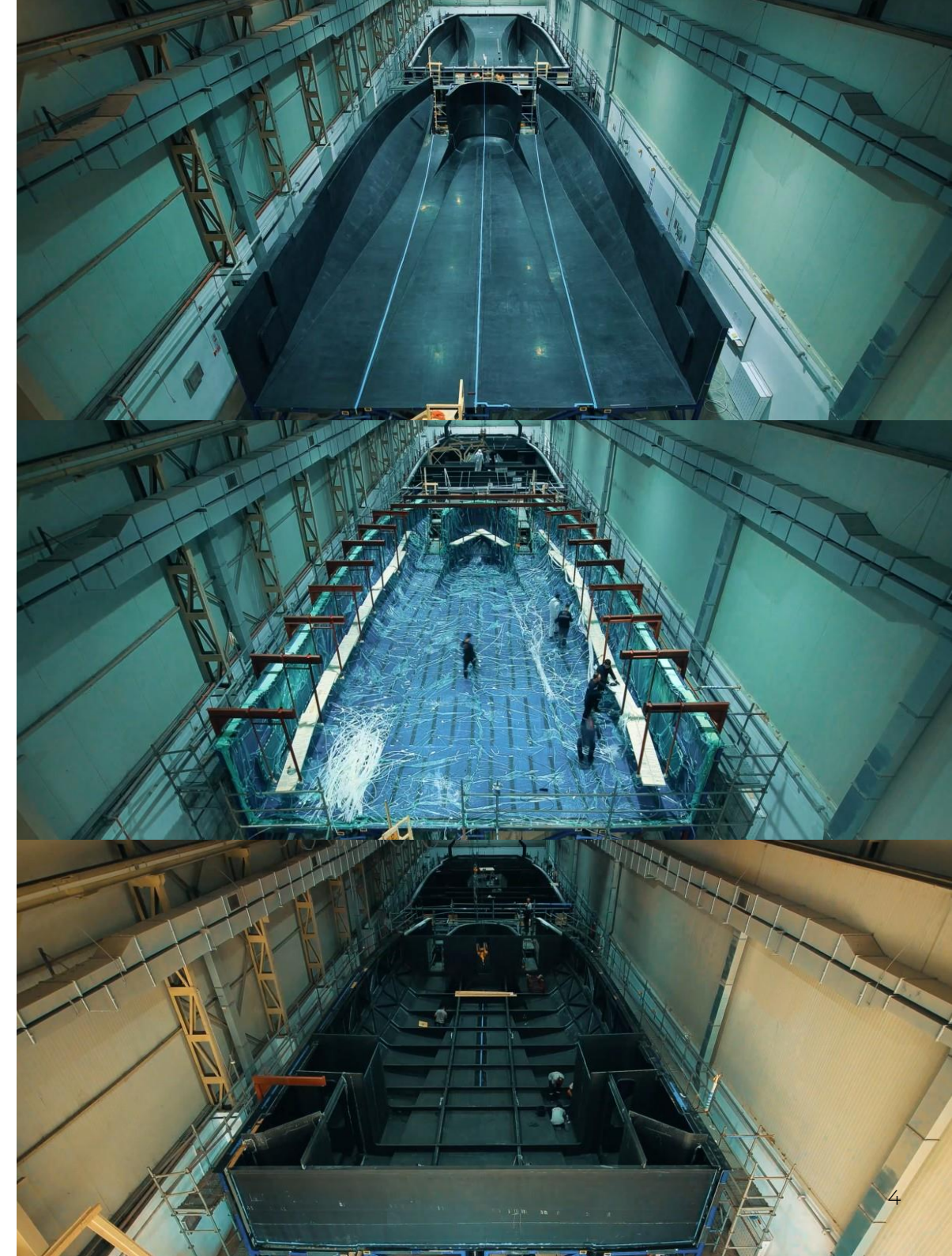
eFoiler®

Enables operators to reduce their environmental impact while reducing operating costs and improving ride comfort.

Our patented technology is built to last and is protected around the world.

From workshop to water

The Artemis EF-24 Passenger has progressed from concept to full-scale build through a tightly managed development cycle. At the heart of the vessel is a carbon fibre hull and superstructure, manufactured using advanced composite techniques. This lightweight architecture delivers high strength-to-weight performance.





Commercial-ready battery system

The Artemis EF-24 Passenger's modular battery system was developed in-house to meet the demands of commercial maritime service, representing a major step forward for zero-emission passenger transport.

Equipped with a configurable Battery Management System and advanced off-gas detection, it's built for safety, reliability, and long-term performance across rigorous duty cycles.

Charging at scale

The vessel is compatible with the Megawatt Charging System (MCS), enabling rapid turnaround and integration with shore-side infrastructure.

MCS deployment supports high-frequency service models and reduces operational downtime. The Artemis EF-24 Passenger's charging architecture has been tested for throughput, reliability, and interoperability - laying the groundwork for scalable electric maritime transport.



Globally demonstrated technology





BC trials

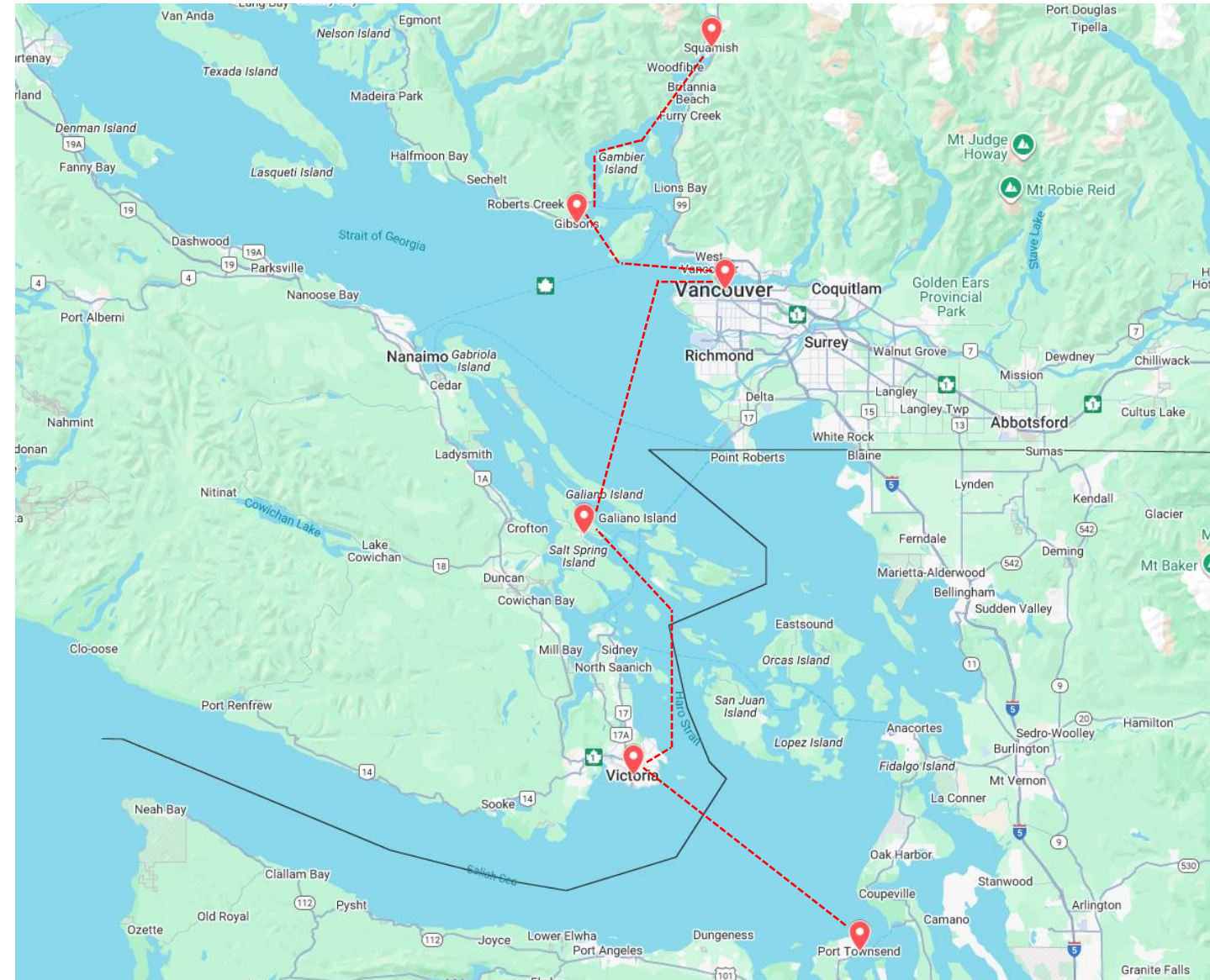
A 12-metre Artemis eFoiler® vessel, the Artemis EF-12 Escape, was trialed in British Columbia in partnership with FRS Clipper and CIRQL Ferries. Under real-world conditions, the trials focussed on:

- strengthening confidence among regulators, technical observers and the maritime industry
- wake performance and debris detection
- gathering operational and cost data
- proving full-scale vessel operation in BC waters



BC trials – transits & locations

- Port Townsend – Victoria
- Victoria – Ganges
- Ganges – Vancouver
- Vancouver – Gibsons
- Gibsons – Squamish
- Squamish – Vancouver



Map for illustrative purposes only

Testing

- Speed
- Endurance
- Debris detection / avoidance
- Power consumption
- Charge time
- Docking and maneuvering
- Pax boarding / discharge
- Noise
- Wake

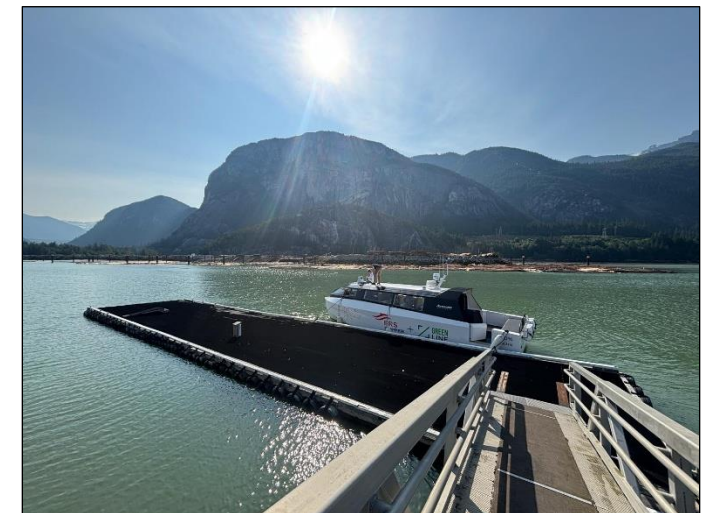


Modelling & analysis

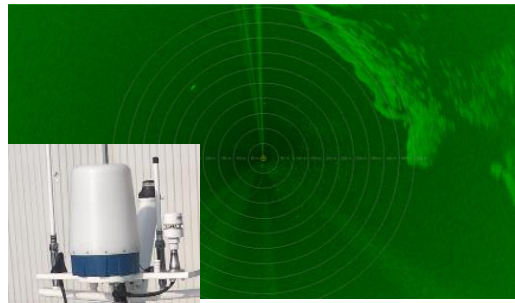
- Route economics
- Rider demand (by route, time, terminal location)
- Origin-Destination studies
- Door2Door journey time
- Financials

Remaining uncertainties from the trials:

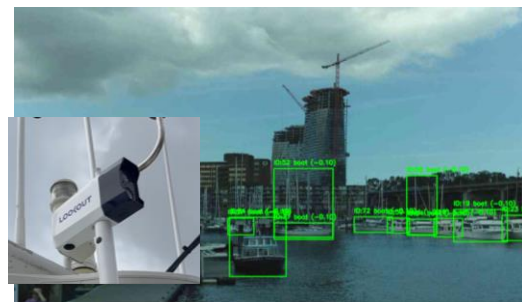
- Rider demand
- Terminal capital cost



Sensor fusion for small debris detection



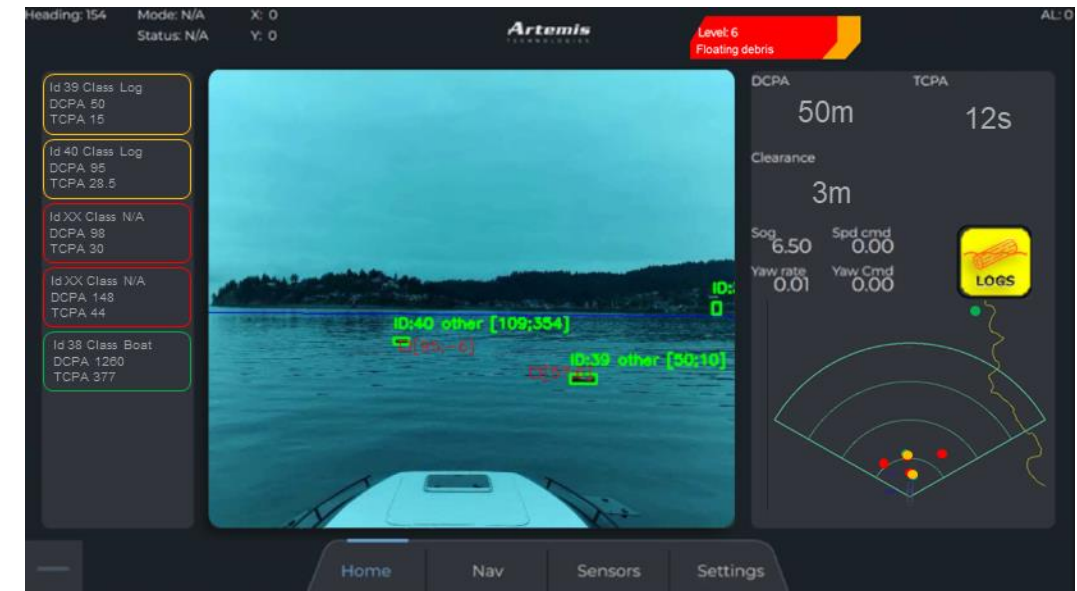
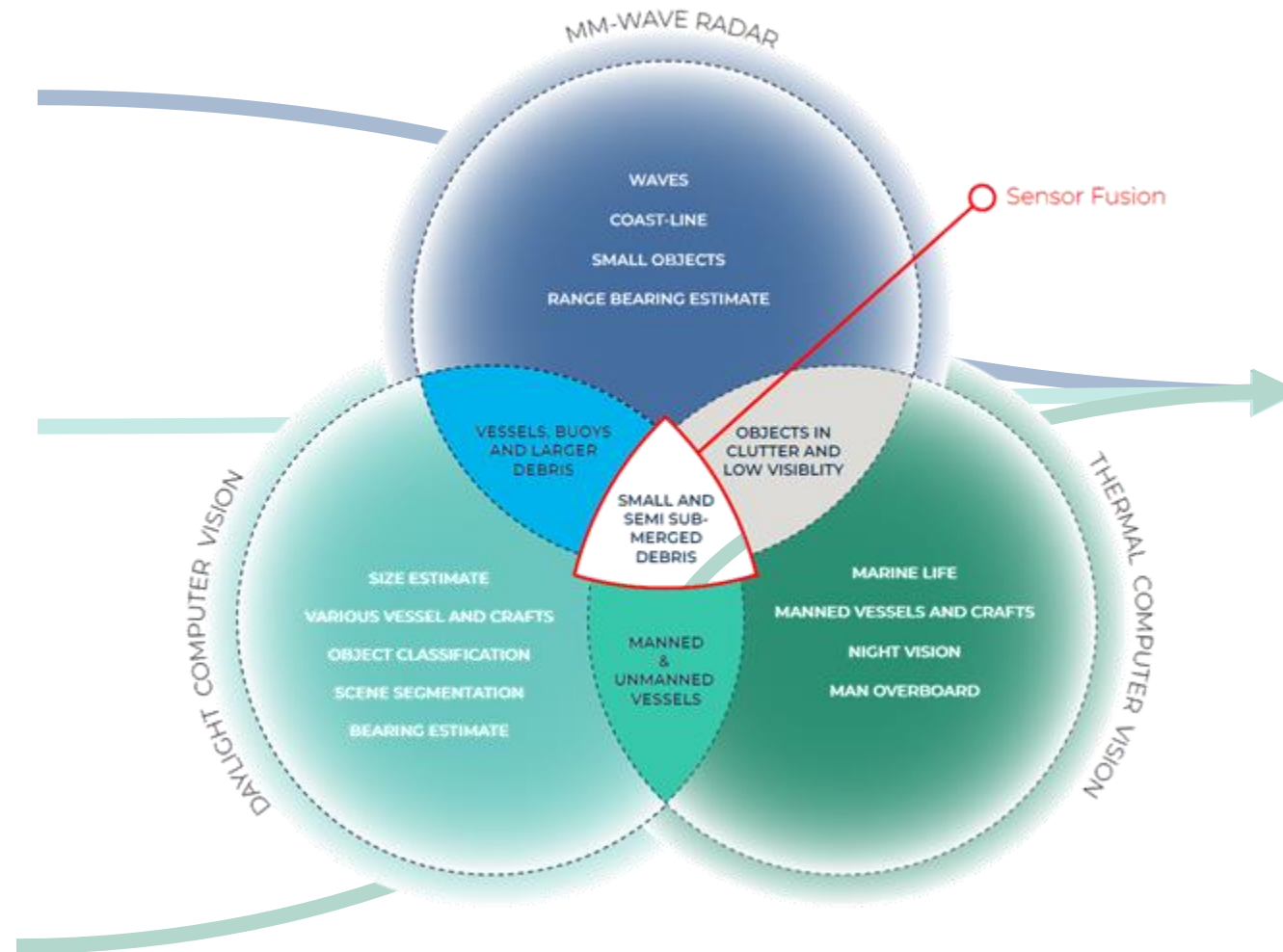
MM-wave radar - Navtech



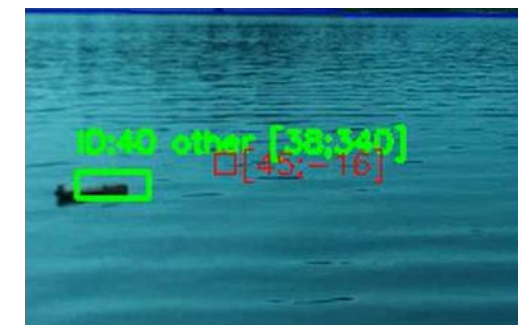
Optical computer vision - Lookout



Short wave infrared - Reach MSAS



Combined view and alerting dashboard



Small log detection example:

- Approx length 1m - 30cm diameter
- First radar contact: 344 m
- Stable radar track: 234 m
- Computer vision contact: 126m
- Fused track: 109 m

BC trials – next steps

- Examine the business case
- Finding the right balance of risk, cost, and profit
- Non-dilutive capital is interesting
- Not seeking operating subsidies

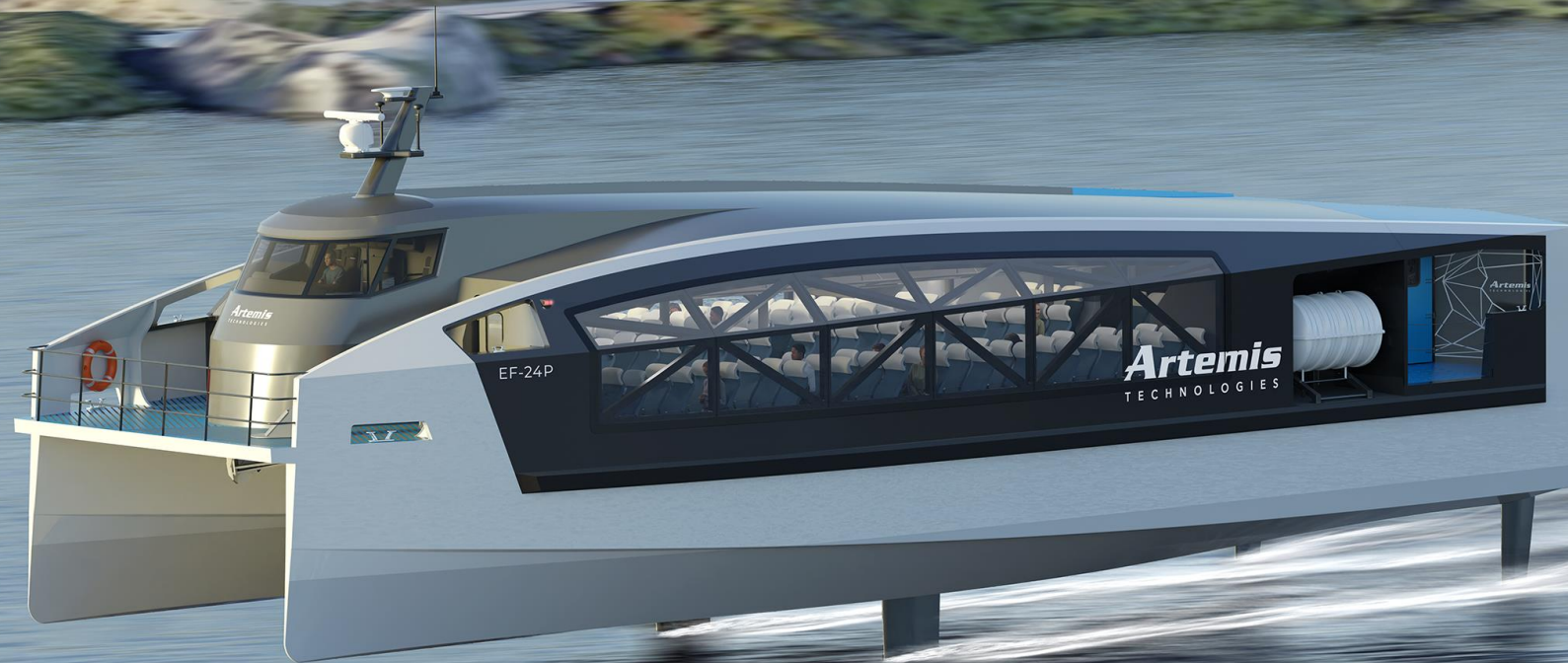
Challenges:

- Landing site rights
- Long term power supply agreements
- Cost effective construction estimates
- Ridership certainty
- Final investment decision TBD



Sufficient, reliable ridership are at the core of success

Lessons from our journey



- **COLAV lesson** - Combining multiple sensor technologies with sensor fusion enabled detection of floating debris that could not be seen until very late by the naked eye. Focusing on obstacles that present a real collision threat in the human-machine interface (HMI) is critical to build trust in the system where a high density of debris is encountered, like in BC waters
- **Classification isn't just a checkbox** - Electric foiling vessels challenge legacy frameworks, and we're working closely with DNV to shape new pathways that ensure long-term commercial viability
- **Collaboration drives commercialisation** - Delivering the Artemis EF-24 Passenger has required close coordination across industry partners and government stakeholders. Scaling electric foiling vessels demands more than solely engineering - it requires aligned infrastructure, policy support and industry momentum

ARTEMIS TECHNOLOGIES



THANK YOU