



S30 SPEEDER Specifications

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WINNER OF DRONE DELIVERY CHALLENGE
@ DUBAI AIRSHOW 23'



Patented Design
PCT/NL2021/050618

**SPEEDER
SYSTEMS**

Sending a 17kg (which is the average for a helicopter*) package to a wind farm may cost 5000€+ while the helicopter generates hundreds of kilograms of CO₂.

Speeders; designed by Speeder Systems can do the job cheaper, faster and cleaner.

*Data from 2020 Den Helder Heliport website.



S30 Speeder

Agile Maritime Transportation



Combining **electric VTOL & ground-effect** technologies, **S30** Speeder carries **17-25kgs*** to **90-150kms** with **75 knots** speeds.

Compared to a helicopter:



Up to 40% more efficient



6X cheaper to operate



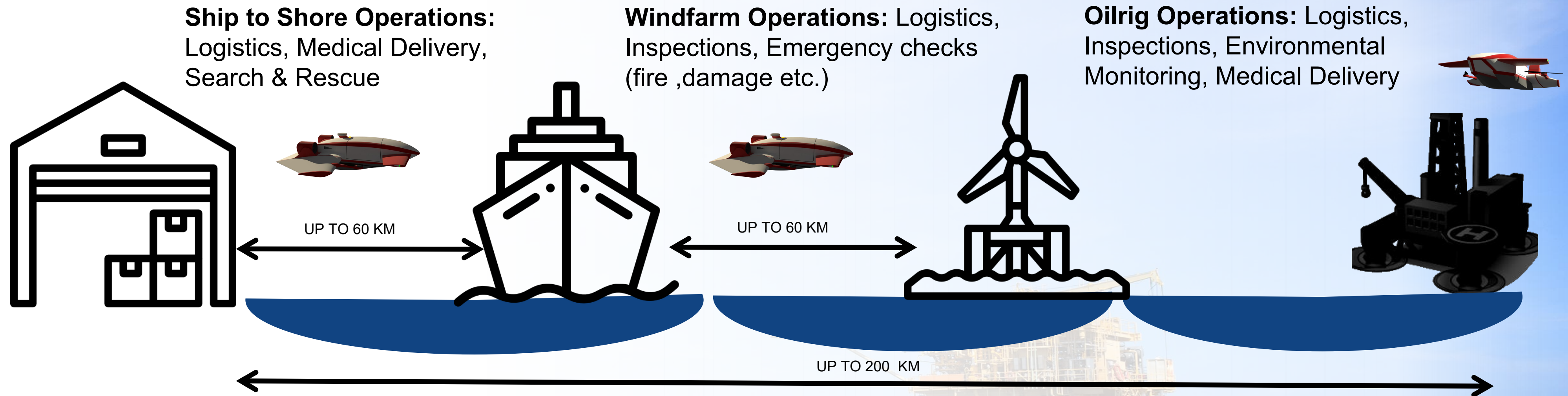
99% less emissions



*As the Speeder gets bigger, the air cushion gets bigger and more efficient. Therefore it is a scalable technology for bigger cargo or passenger transportation. Design studies were made for specific customers for bigger designs.

Use Cases

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Challenges Today:

- Specialized logistics: CTVs and helicopters are highly specialized, therefore costly logistics.
- Distance to shore: For inspection and logistic operations, range problems require rental of specialized boats- extra cost.
- Distributed locations: The locations are away from each other making timely and cheap operations difficult.
- High wind conditions: Low speed drones cannot operate in high wind conditions which reduces their ground speed up to %60.

Product Specifications

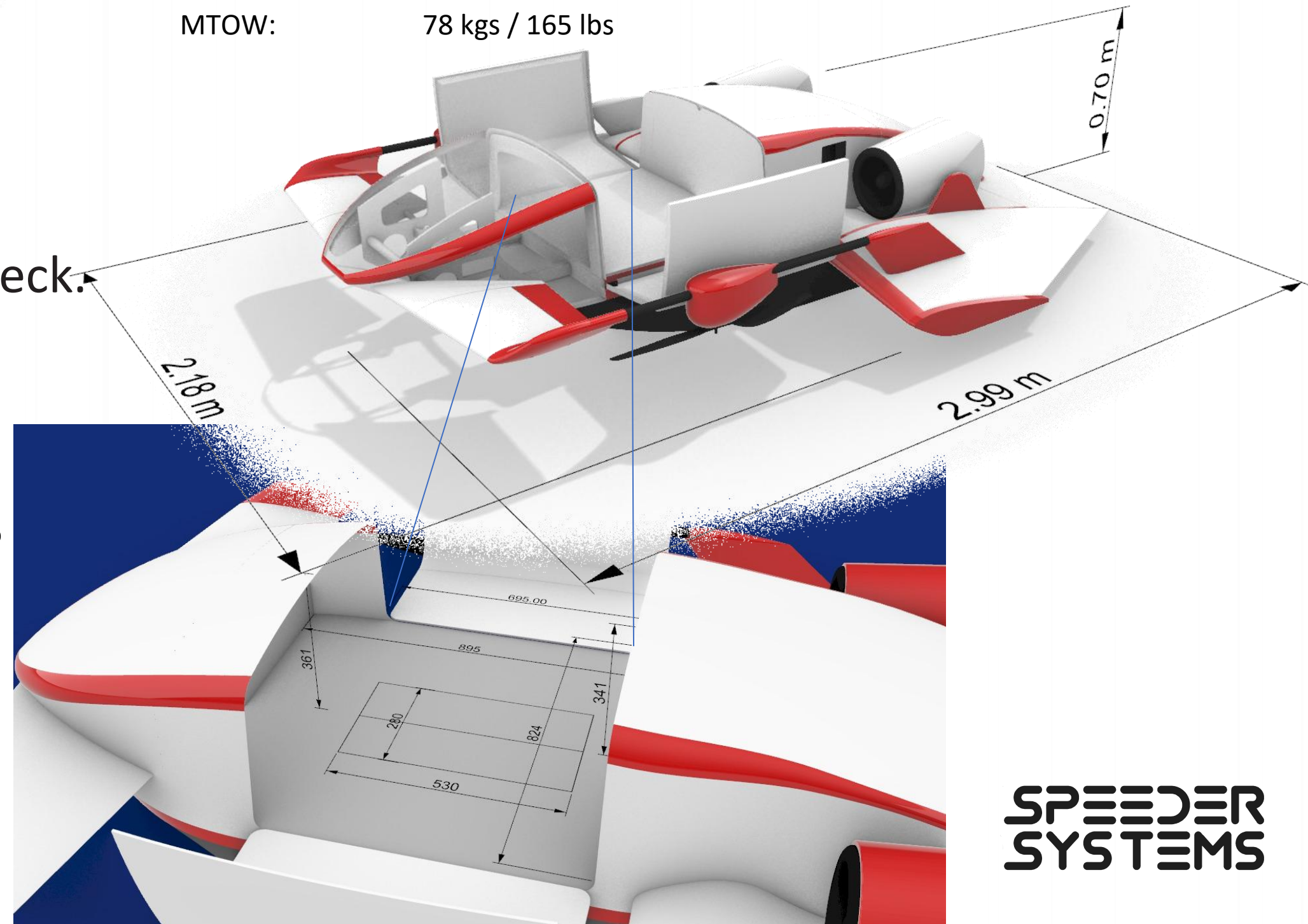
S30 is a VTOL capable flying ship that cruises above the sea surface with a dynamic air cushion in ground effect with eco-friendly propulsion systems .

Primary mission: Fast logistics and ISR

Speed & Flexibility: Can travel over water/ice/sand/air with extreme speeds or land vertically on a helicopter deck.

All weather operation: Can operate above the highest wave to avoid bad weather and can operate as a Type B ground-effect vessel.

Length:	2.99 m / 9.8 ft	Temp. Limits:	-10C/+45C
Wingspan:	2.18 m / 7.15 ft	Take-off Speed:	43 kts/ 80 kph
Height:	0.70 m / 2.2 ft	Cruise Speed:	67 kts / 124 kph
Operation GE:	Sea State 3	Max Speed:	79 kts / 146 kph
Operation Air:	Up to 400ft (Type B WIG)	Range@MTOW:	90-150 kms
Payload weight:	17 kgs-25kgs	Payload Bay:	168 lt
MTOW:	78 kgs / 165 lbs		



S30 Advantages

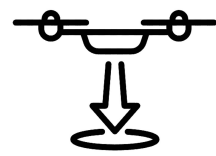
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Faster to Certify & Upscale: Ground effect vehicles are already out there and certified within IMO. 10x cheaper to certify and upscale compared to any other technology.



Efficient & Best in Class Range: Ground effect makes Speeders up to 40% more efficient in aerodynamics enabling the best in class range.



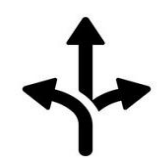
VTOL&Amphibious: Speeders can take-off/land from naval platforms, sea surface, helicopter pads and flat surfaces in harbour areas.



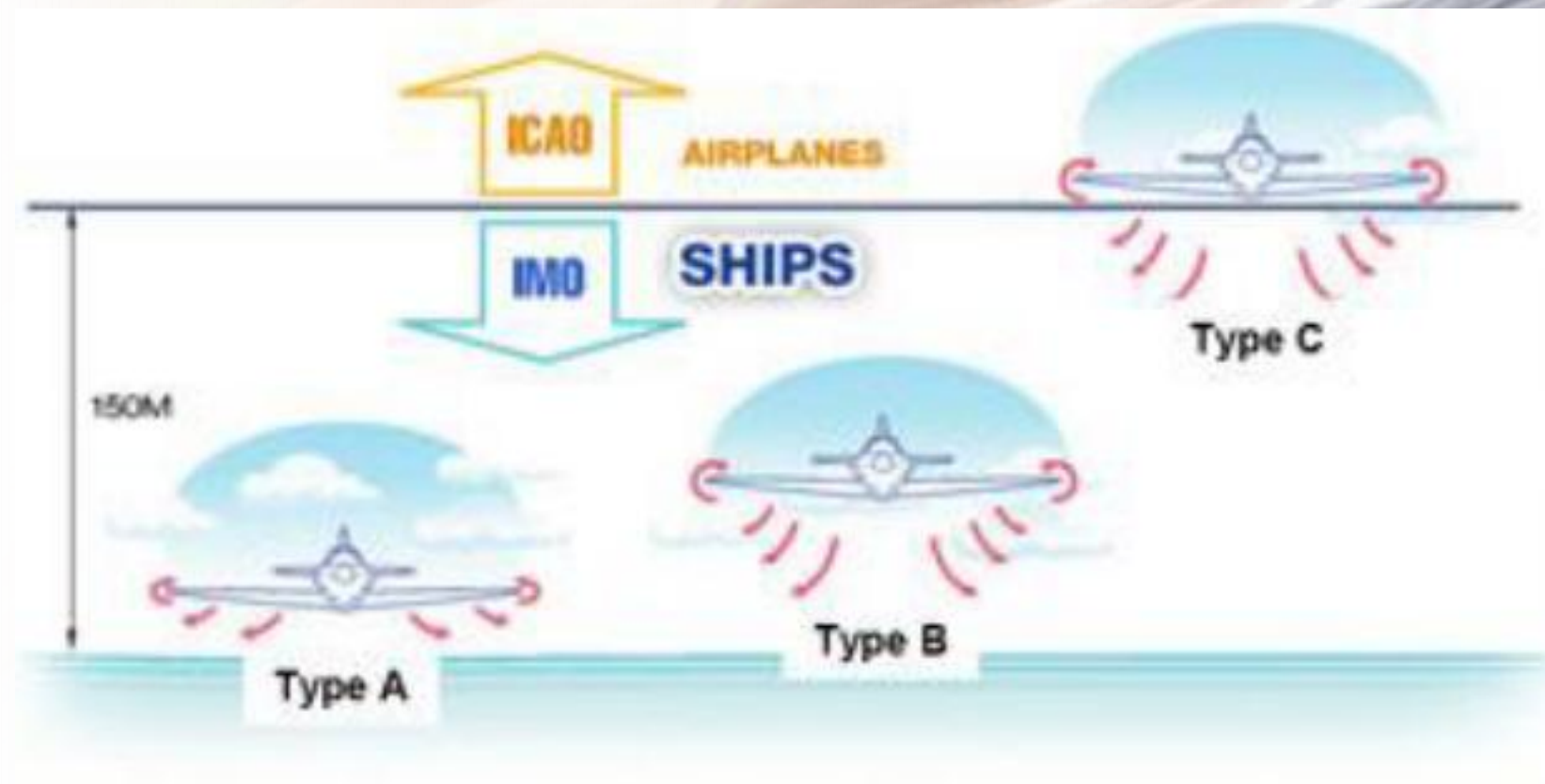
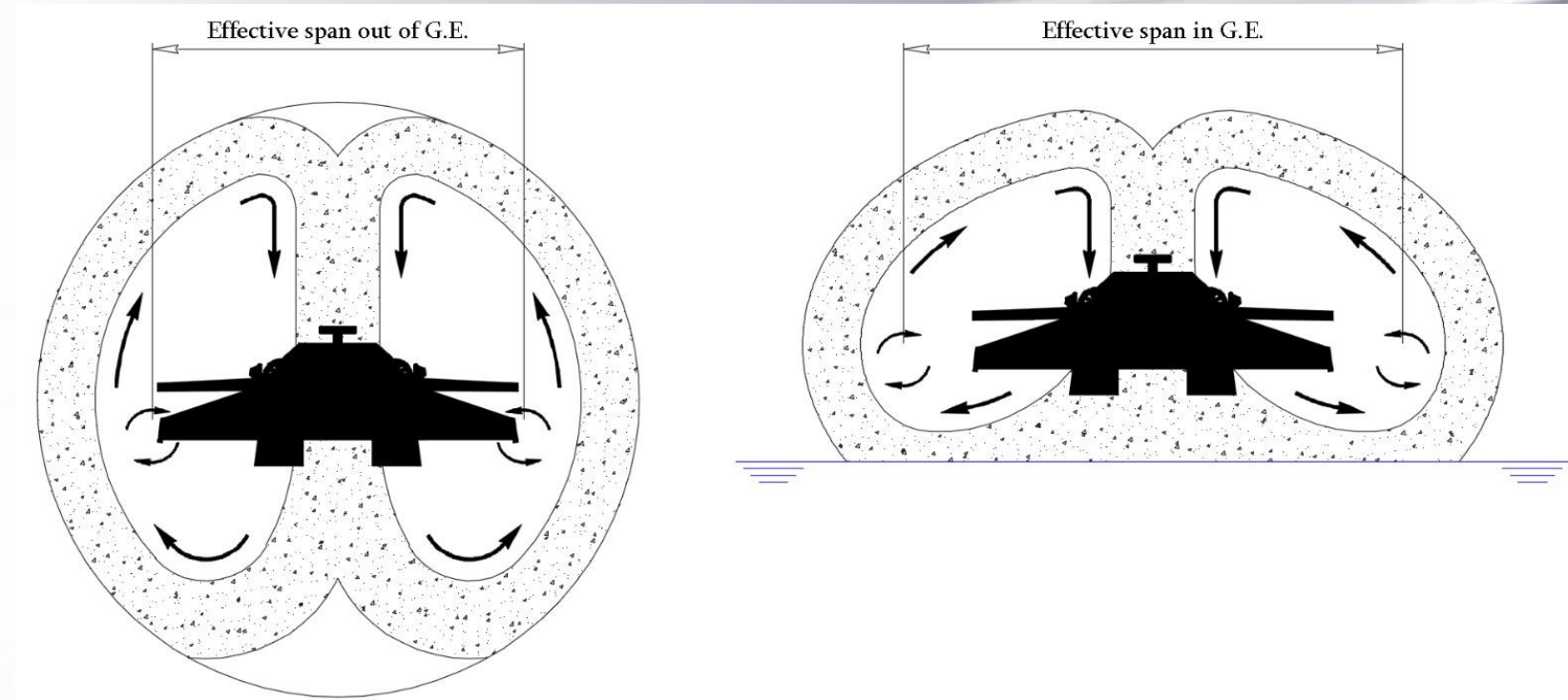
Low Emissions/Low Lifecycle Cost: Hybrid electric propulsion provides %60 lower emissions compared to surface vessels or helicopters. Electric propulsion and unmanned operation enables lower cost for maintenance and operation.



Feasible: Speeders provide a flexible, affordable, sustainable and reliable solution combining the benefits of helicopters and marine vessels.



Flexible: Ability to fly out of ground effect and VTOL capability enables rough sea operation. Ability to land over water allows waiting for longer durations for inspection/surveillance missions. Cargo bay can be modified for inspection or cargo missions.



Comparison to Competition

Comparison to USVs and marine vessels

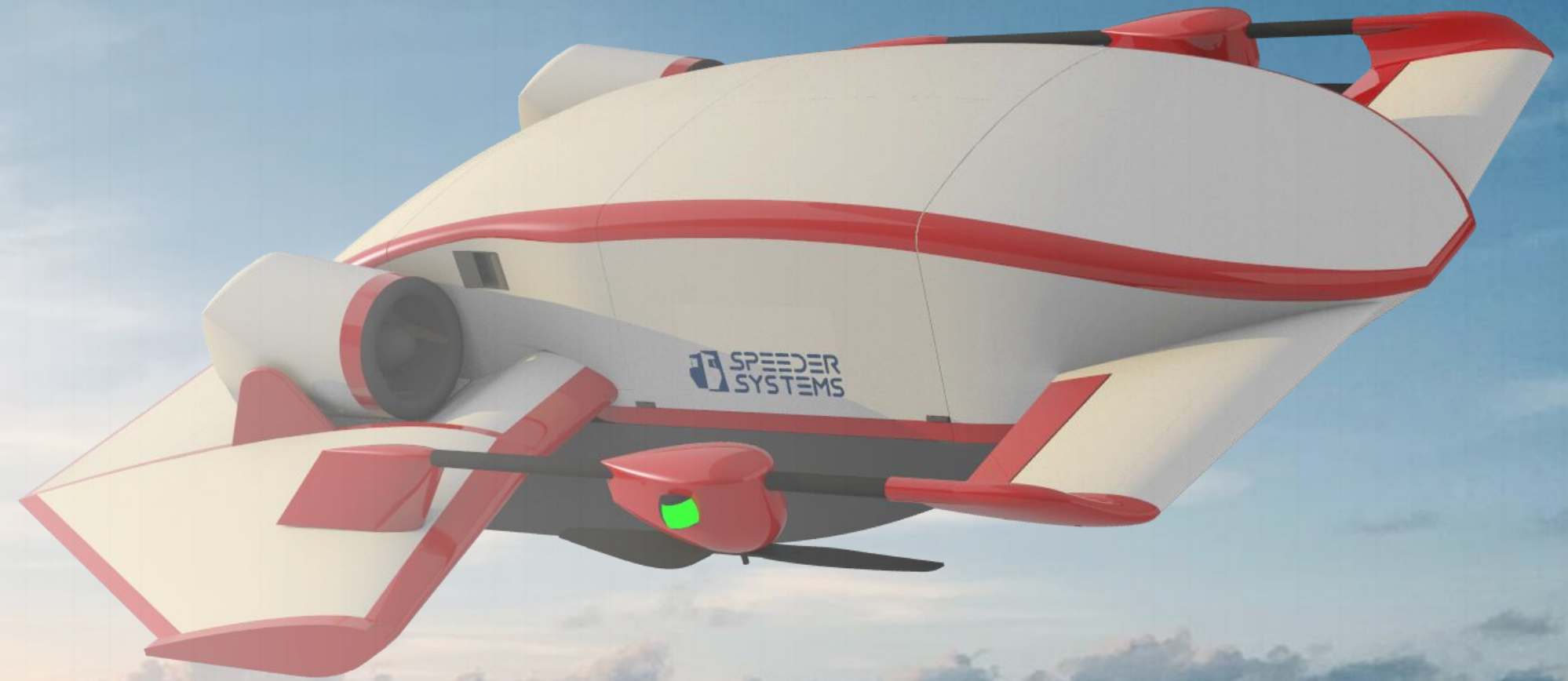
- 3X Faster & Cheaper for small cargo
- Able to land on helicopter decks
- Able to operate in rough seas

Comparison to Rotary UAVs and Helicopters

- 6X Cheaper for small cargo
- Better range & cargo capacity (for similar size)
- Ability to land over water
- Faster to certify and upscale

Comparison to Conventional(No-VTOL) Ground Effect Vessels

- Better maneuverability
- Able to land on helicopter decks
- Able to operate in rough seas



Camcopter – Austria



Orca – Germany/China



Aron – South Korea



Wiget Works- Singapore



Flying Ship - USA

Partners

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AnyMile is the first end-to-end drone-based logistics platform that seamlessly connects transportation, shipment, fleet, and services management, UTM's, ground infrastructure, and drones to empower companies, operators, and service providers to accelerate and scale their operations profitably while reducing their carbon footprint.



Acceleration program for Maritime Emerging Technologies in Den Helder, The Netherlands. Speeder Systems is a partner in the program and getting certain perks and access to talent and events.



Prestigious mentorship program for Sustainable Aviation Technologies in Hamburg, Germany. Speeder Systems is a selected Startup and mentored by Susan Ying and George Likourezos.



UAV operator in The Netherlands. Testing partner and potential customer for Speeder Systems. MOU signed for testing activities.



Irish UAV manufacturer and operator. Technical partner for electronic systems.



Dutch technical solutions provider. Altaventus provides CFD and control analysis for Speeder Systems.



Space grade carbon structure manufacturer.





THANK YOU

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