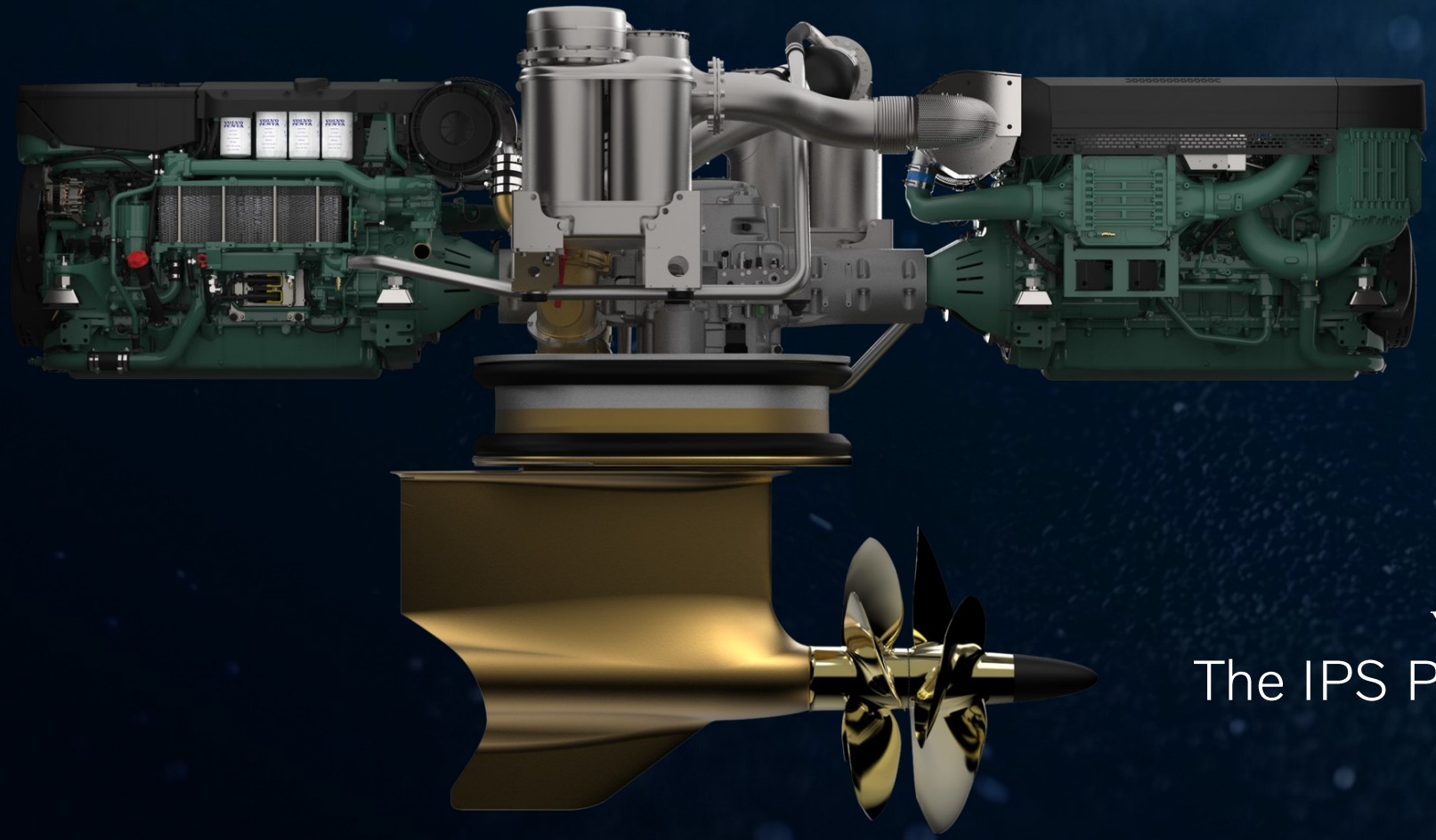


VOLVO PENTA

The IPS Professional Platform

From power to superpower

Braving bad weather and rugged seas, the new Volvo Penta IPS professional platform pulls its weight – in all conditions.

Cost of ownership
- Low fuel consumption, eco mode
- Longer time between service and overhaul

Performance
- Market leading manouverability
- Forward facing propulsion efficiency

Comfort
- Silence, low noise and vibrations
- Compact engine room, more space for crew and cargo

Sustainability
- Flexible with modular power input options, prepared for electrification
- Low exhaust emissions, IMO III

Uptime
- Central Uptime stock of IPS40 units, engines and spare parts
- Advance connectivity that enables remote diagnostics and monitoring
- 3 years warranty + 2 years warranty if monitored

Vessel size	Top speed range	Rating	Gear ratio	Installed power	Warranty	Fuel savings*
25 – 55+ m	12 – 40 knots	R2 – R5	2.91	2 060 – 5 880 kW	3 + 2 Years	Up to 30 %

VOLVO PENTA

*compared to a traditional inboard shaft installation

A fully integrated system

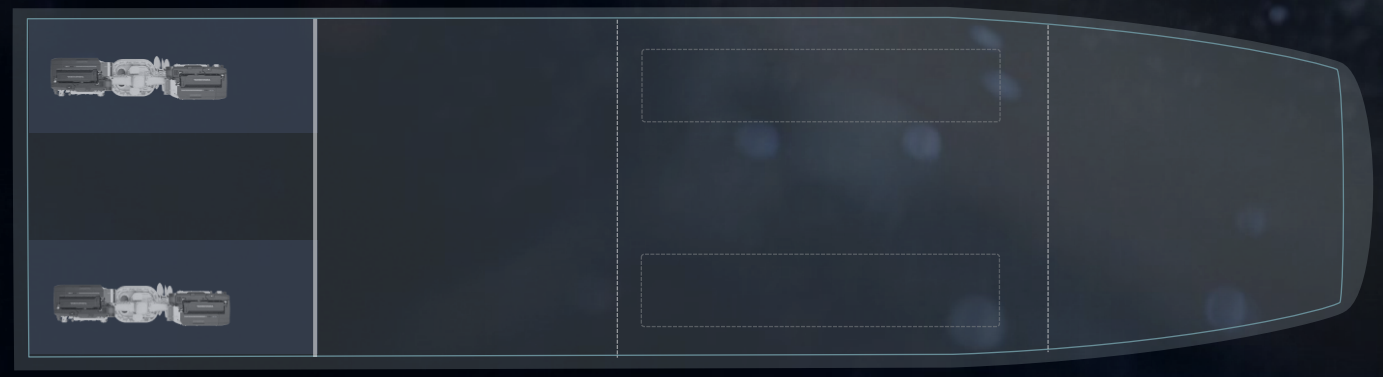
Delivering a fully integrated experience from antenna to the propellers, all aspects of the Volvo Penta IPS professional platform are designed to work in harmony.



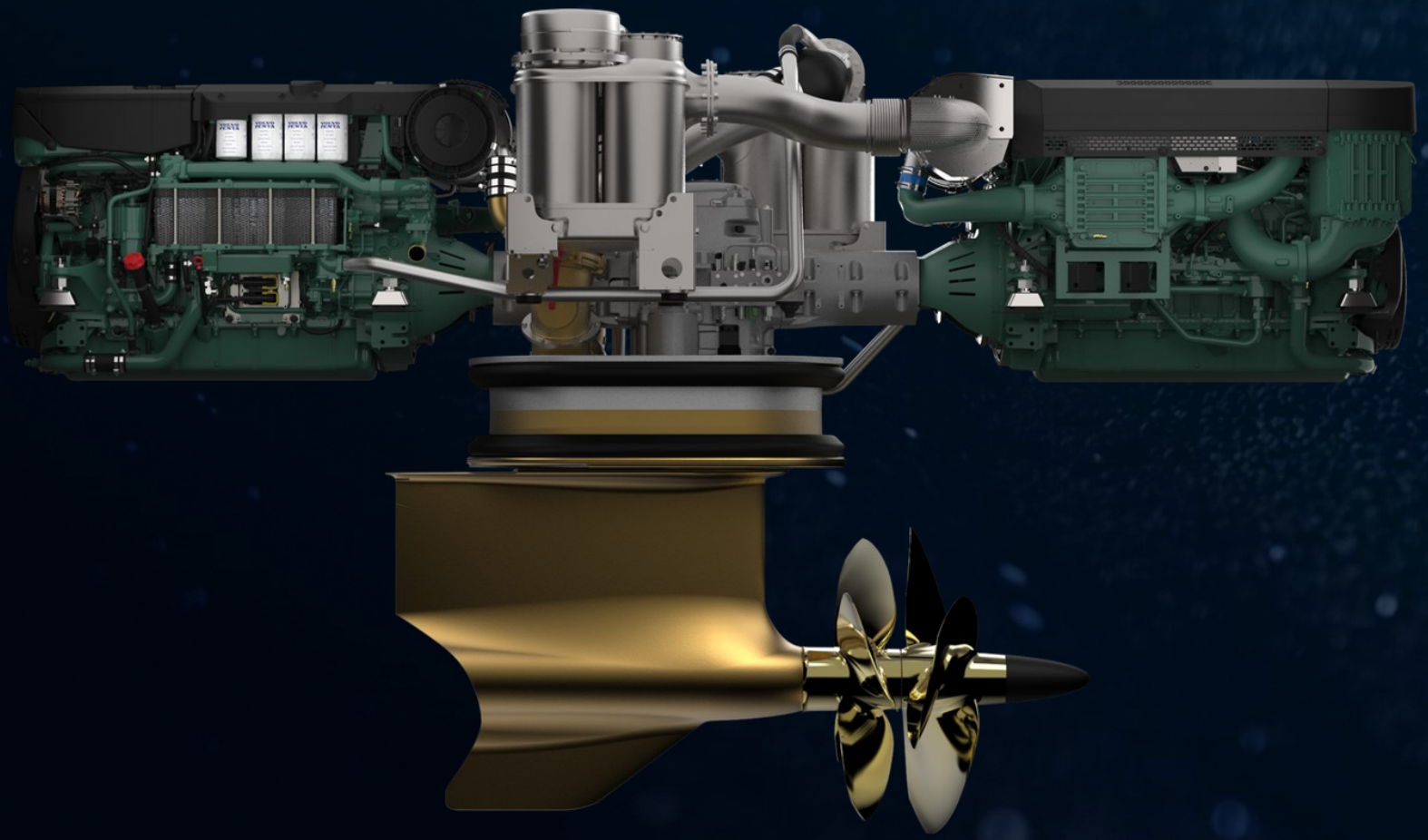
Built by us, designed around you

More space for what matters. The propulsion package is compact and positioned far aft. Compared to a conventional inboard shaft installation, this creates increased space on board for crew and cargo





Join the forward facing revolution



Dual power inputs per drive

2 x 515 – 735 kW (700 - 1000 hp)

Twin, triple or quad installations

4 - 8 power inputs per vessel

Join the forward facing revolution



Combustion engines

Powered by two Volvo Penta D13 engines. All Volvo Penta combustion engines are approved for use with HVO 100/biodiesel.

Available engine specs:

D13-700hp/515kW
D13-800hp/588 kW
D13-900hp/662kW
D13-1000hp/735kW

Join the forward facing revolution



Upper gear

The dual power input design unlocks a range of new possibilities for managing the power to the water in the most efficient way, enabling different combinations of powers sources.

The upper gear includes an hydraulic clutch to seamlessly engage the power sources and control propeller speeds down to 20 rpm.

Join the forward facing revolution



Steering angle up to 40°

Delivering unrivalled levels of manoeuvrability, precision, and control even in the tightest of quarters, while also enabling unique features like Volvo Penta Assisted Docking.

Join the forward facing revolution



Propellers

Forward-facing propulsion means future-proof efficiency and unbeatable performance. Our new propeller series is perfectly matched to the speed range for top speeds of 12-40 knots, while leveraging our trademark DuoProp design for the ultimate grip in the water.

Join the forward facing revolution



Aftertreatment system

This compact and modular system exceeds the requirements of the tough IMO Tier III regulations, without compromising on space or performance.

Join the forward facing revolution

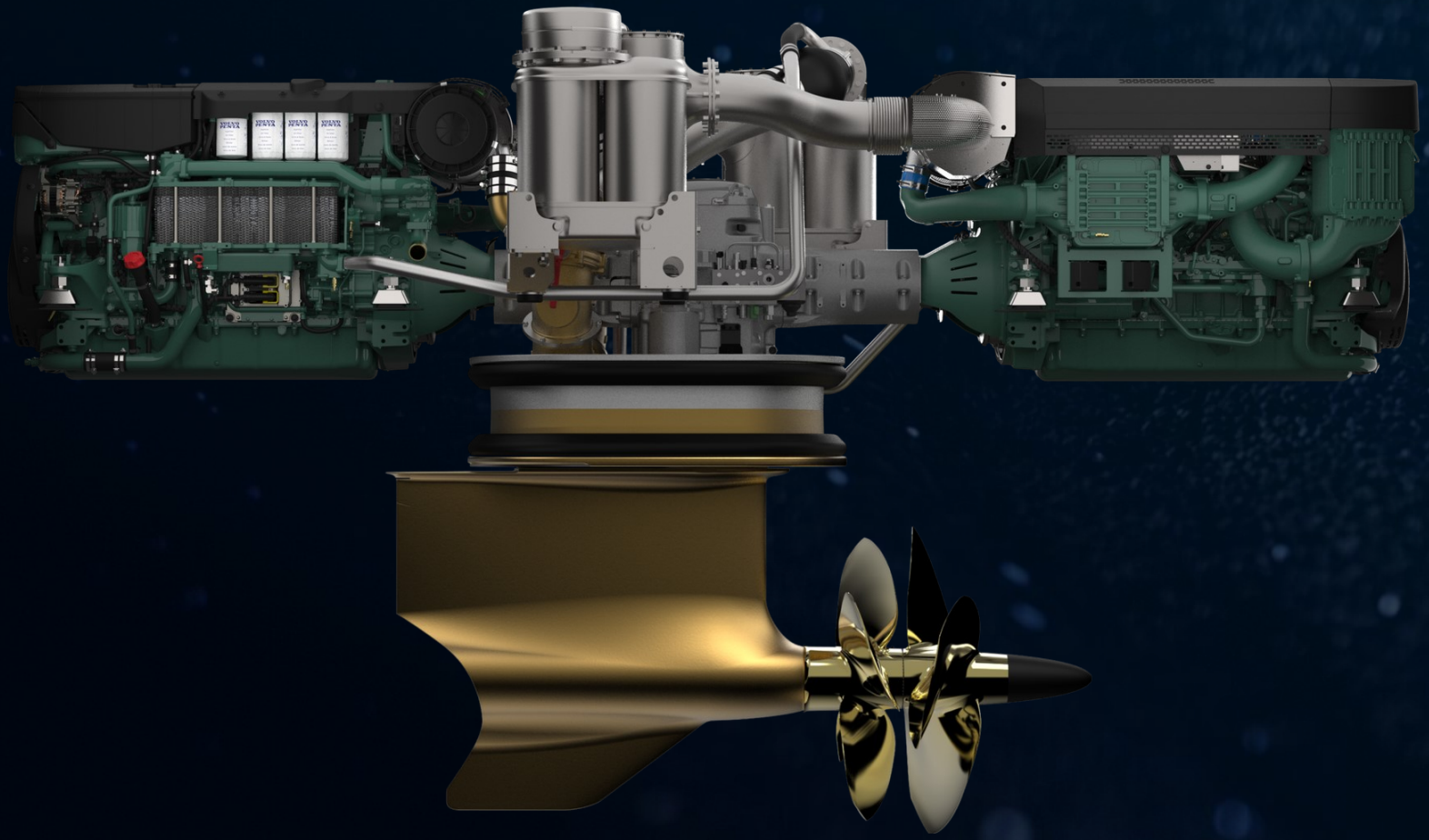


Integrated exhausts

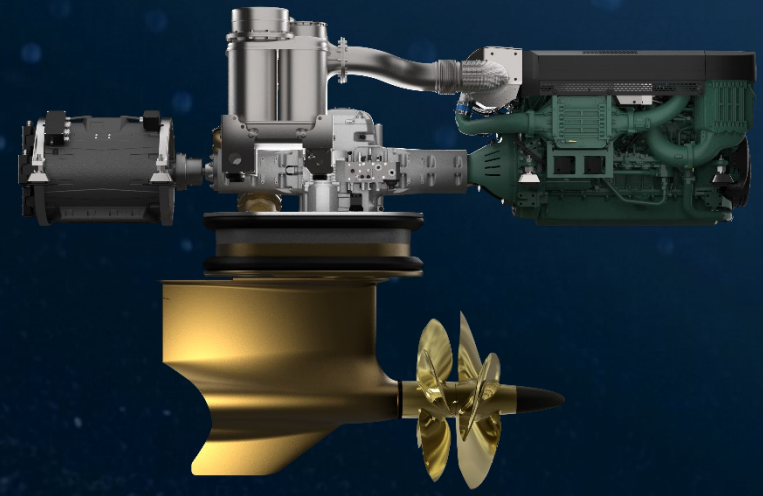
Ensures low noise and vibration levels and delivers premium onboard comfort. Volvo Penta IPS Professional platform provides up to a 50% reduction in perceived noise.

Designed for flexibility

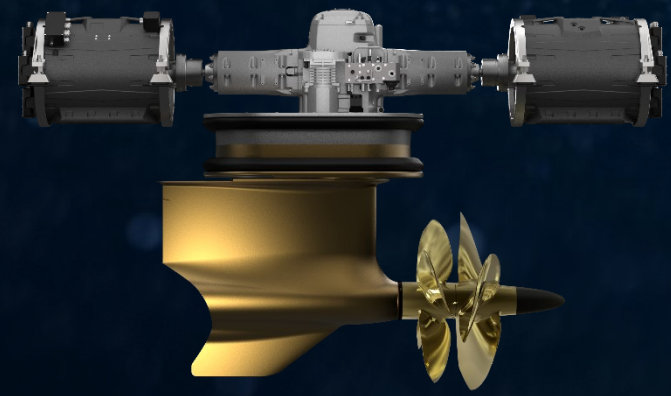
Combustion | first intro, 2025



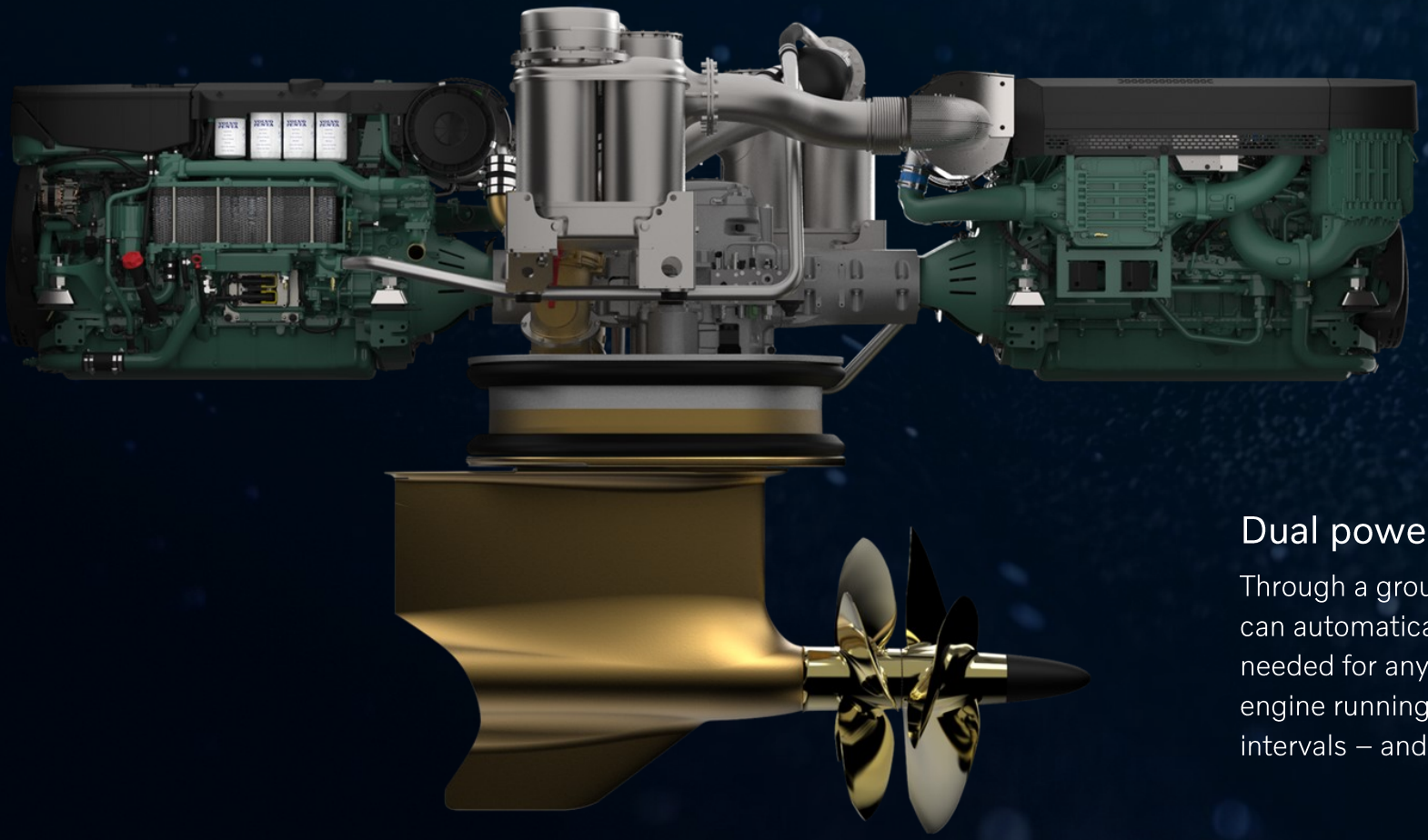
Hybrid



Electric



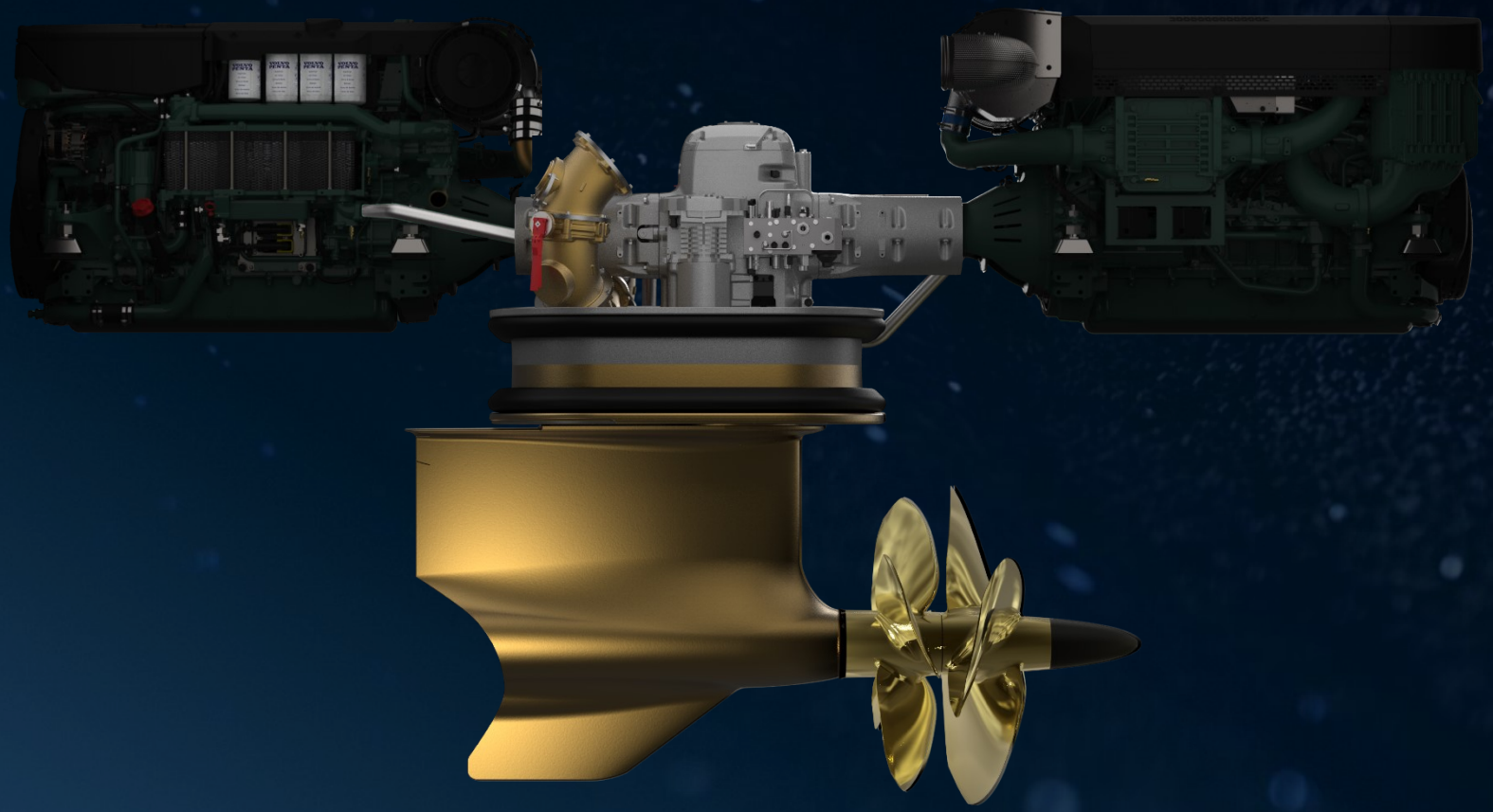
Optimized for efficiency



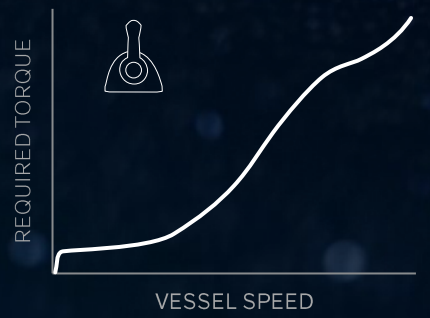
Dual power on demand

Through a groundbreaking and efficiency-driven feature, the system can automatically start and stop individual engines based on power needed for any given situation. This optimizes fuel consumption and engine running hours, leading to extended service and maintenance intervals – and entirely new levels of efficiency.

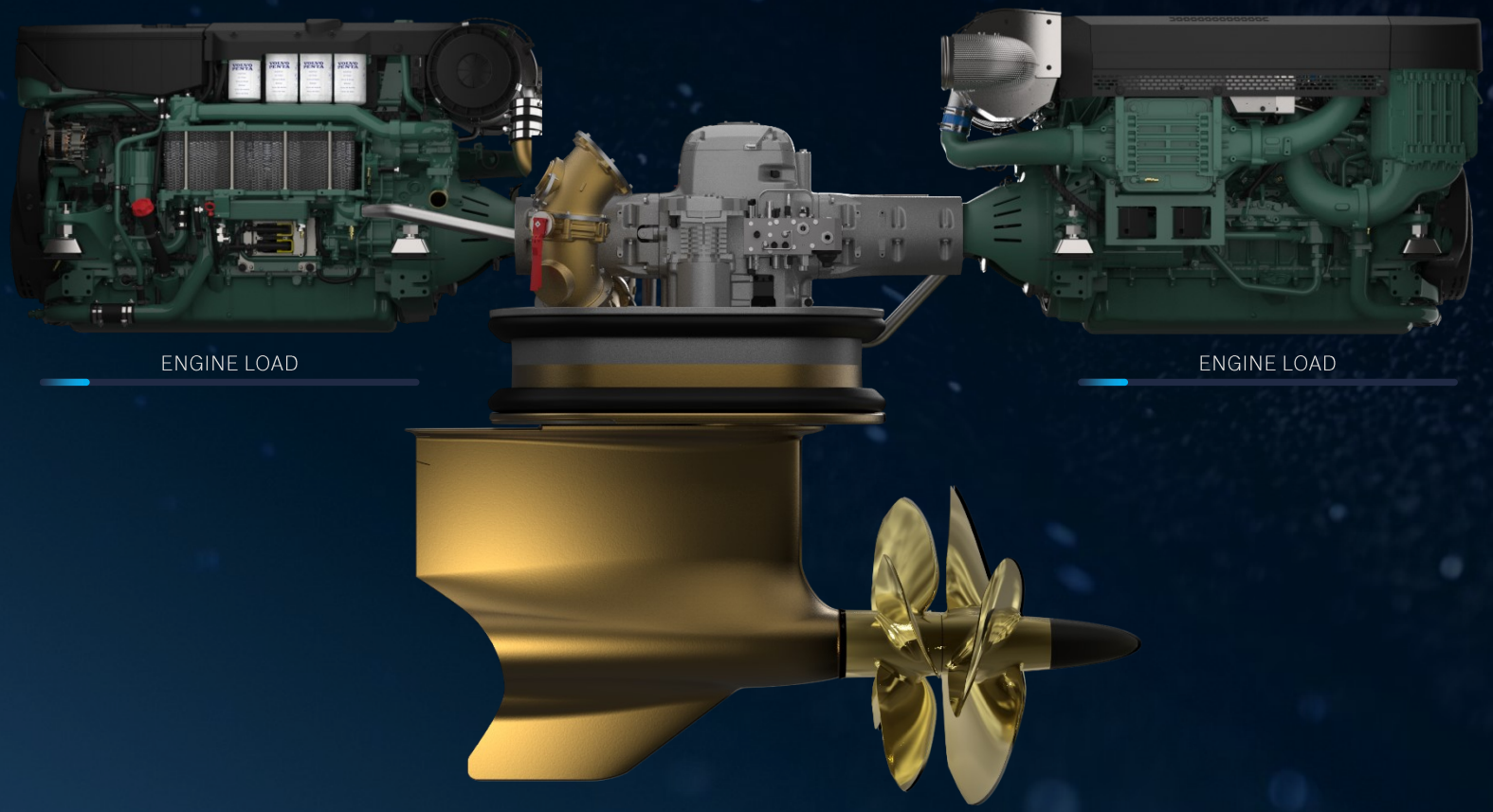
Optimized for efficiency | eco mode



Let’s go for a ride...

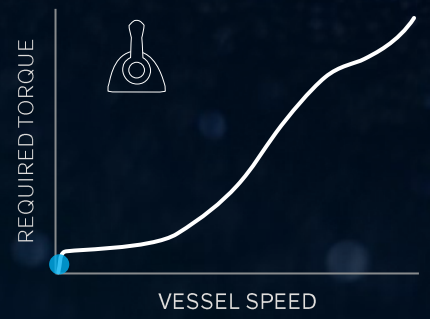


Optimized for efficiency | eco mode

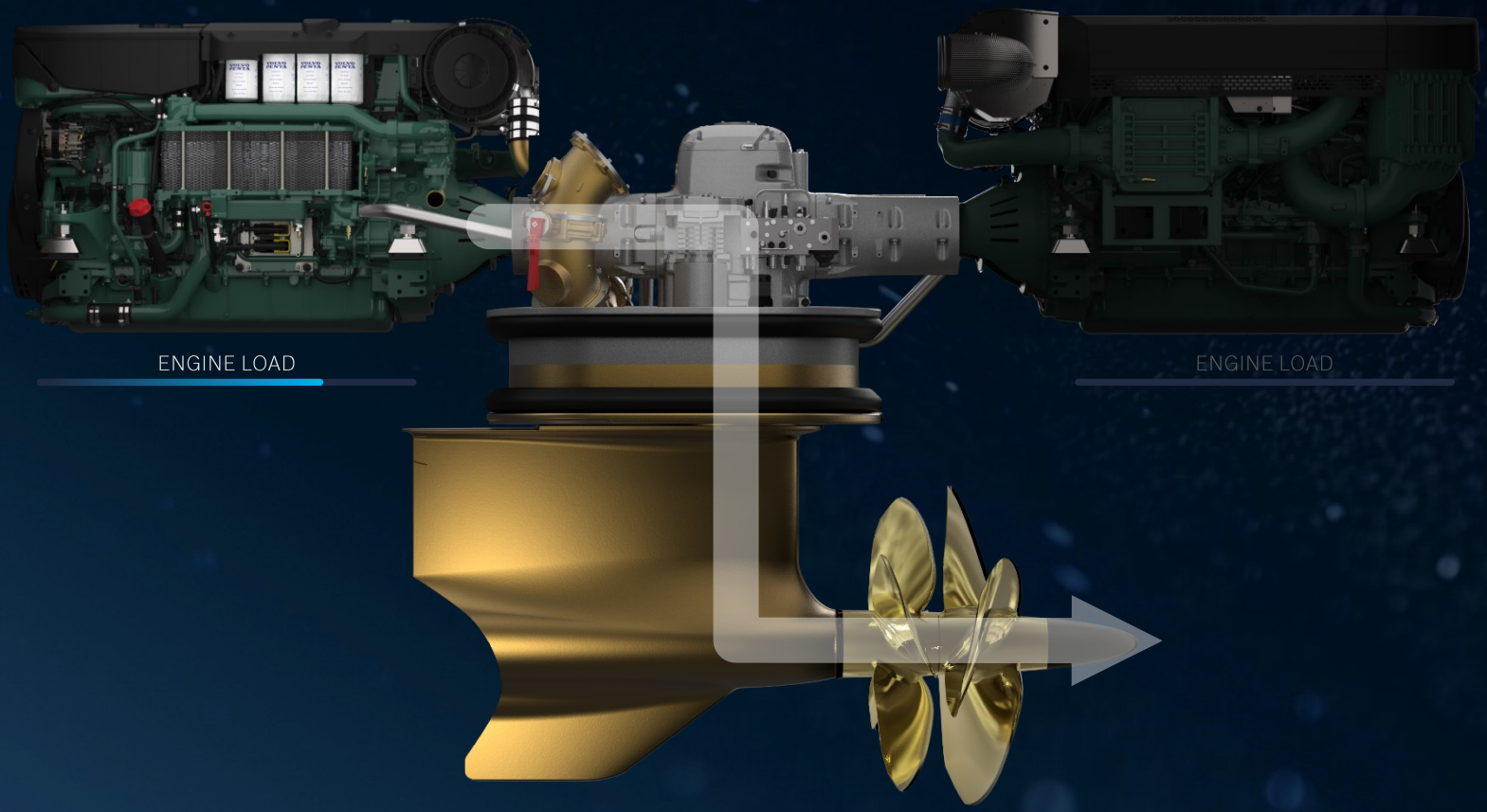


Startup

At startup, the EVC runs a health check on all engines as they warm up. Docking manouvers often require a lot of torque, so all engines are engaged and ready to provide propulsion power.

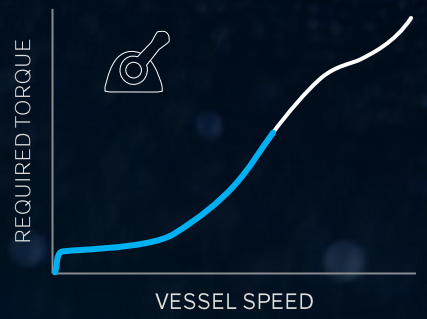


Optimized for efficiency | eco mode

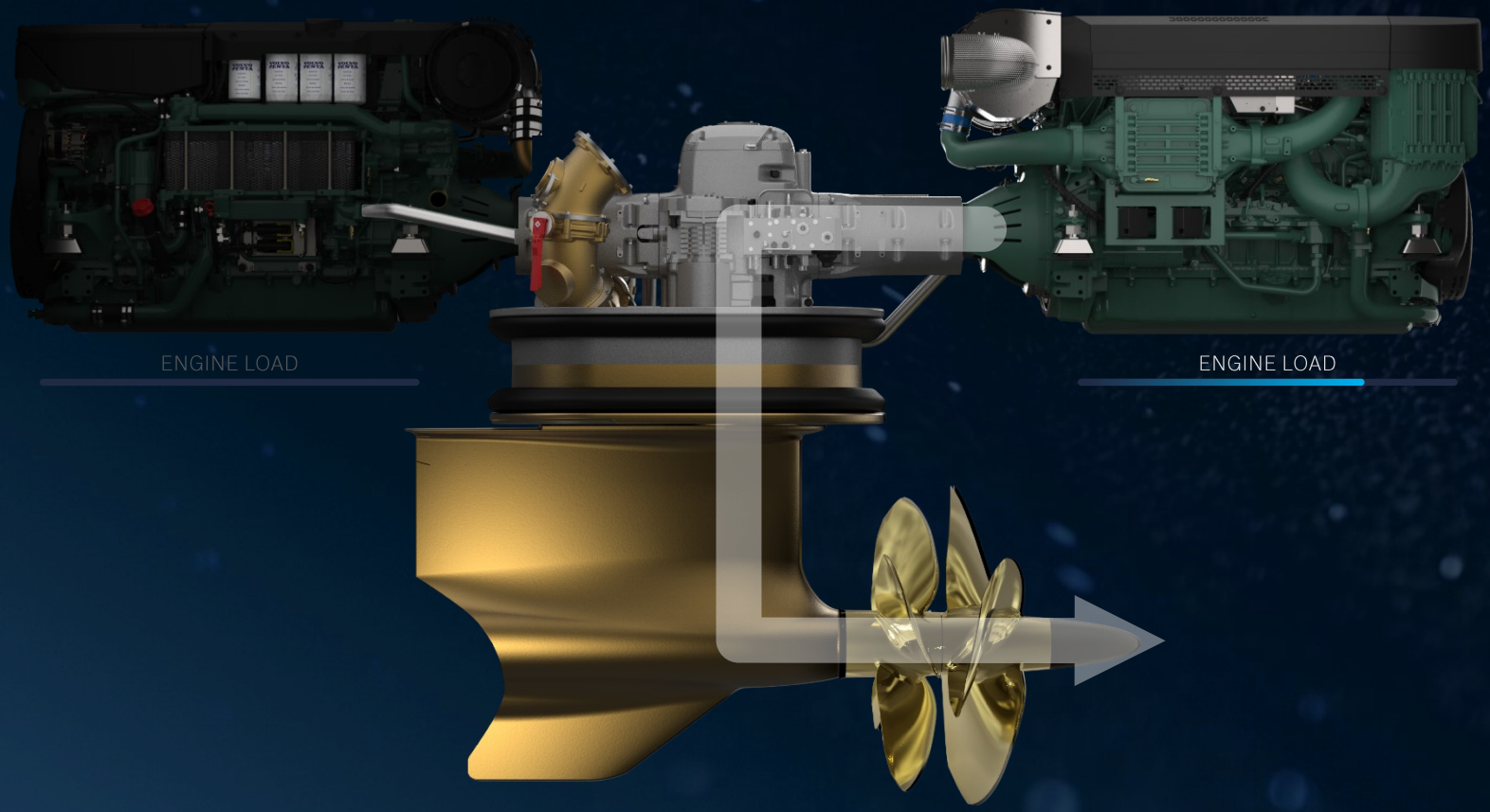


In lower speed range

When a vessel is running at low speed, the eco mode feature will automatically shut down half of the engines and keep them on standby. Eco mode will maintain this state as long as half of the engines are sufficient, and there is an adequate margin to provide power requested from the helmsman.

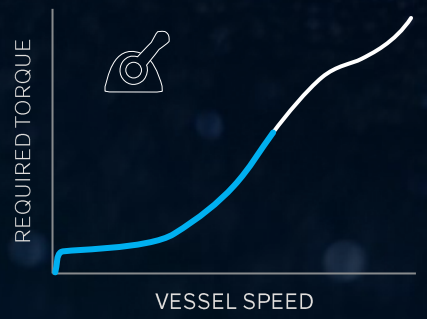


Optimized for efficiency | eco mode

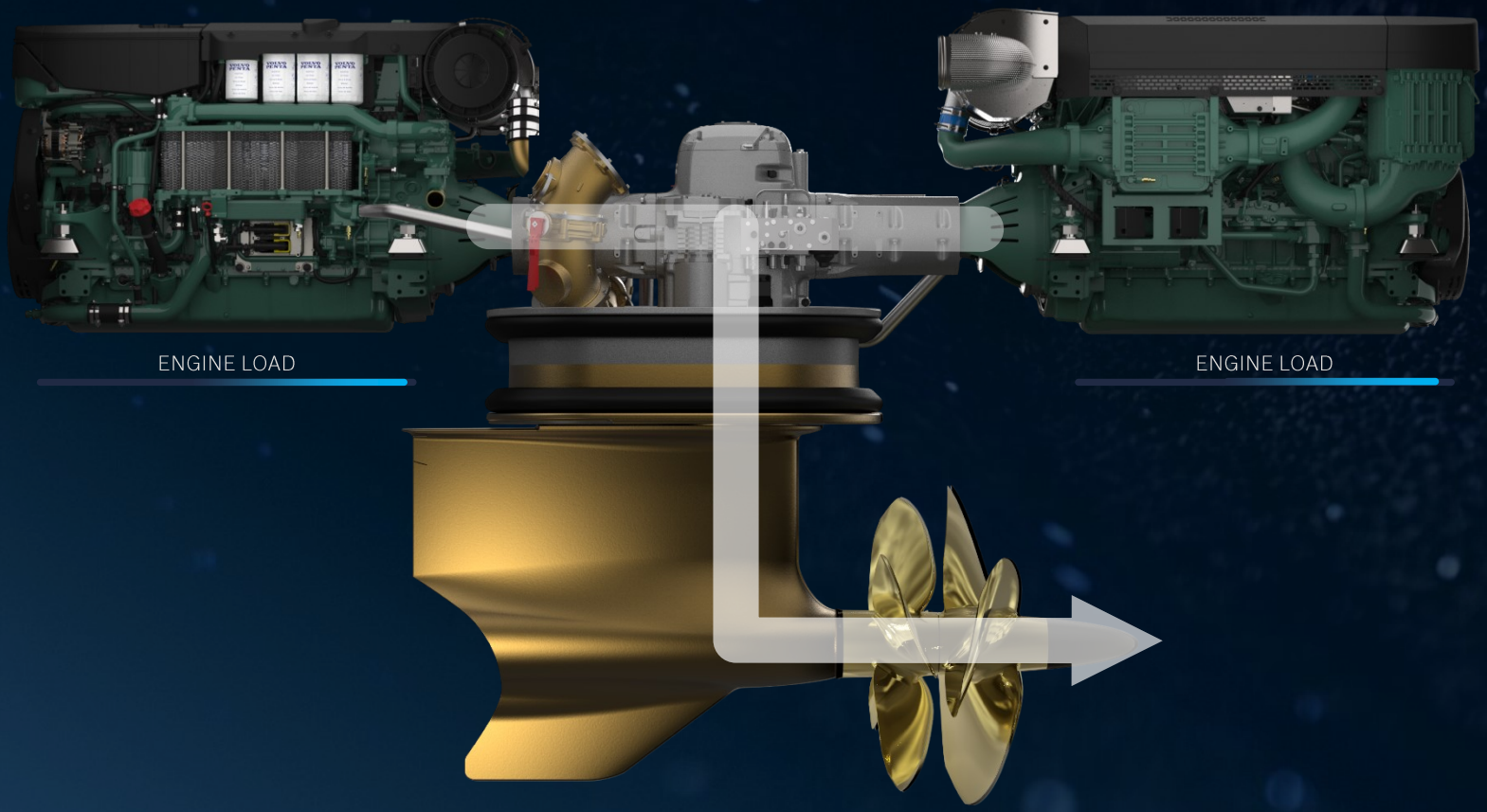


In lower speed range

The system will harmonize the engine running hours, and switch between the standby engines, in order to keep all available power ready and synchronize maintenance intervals.



Optimized for efficiency | eco mode

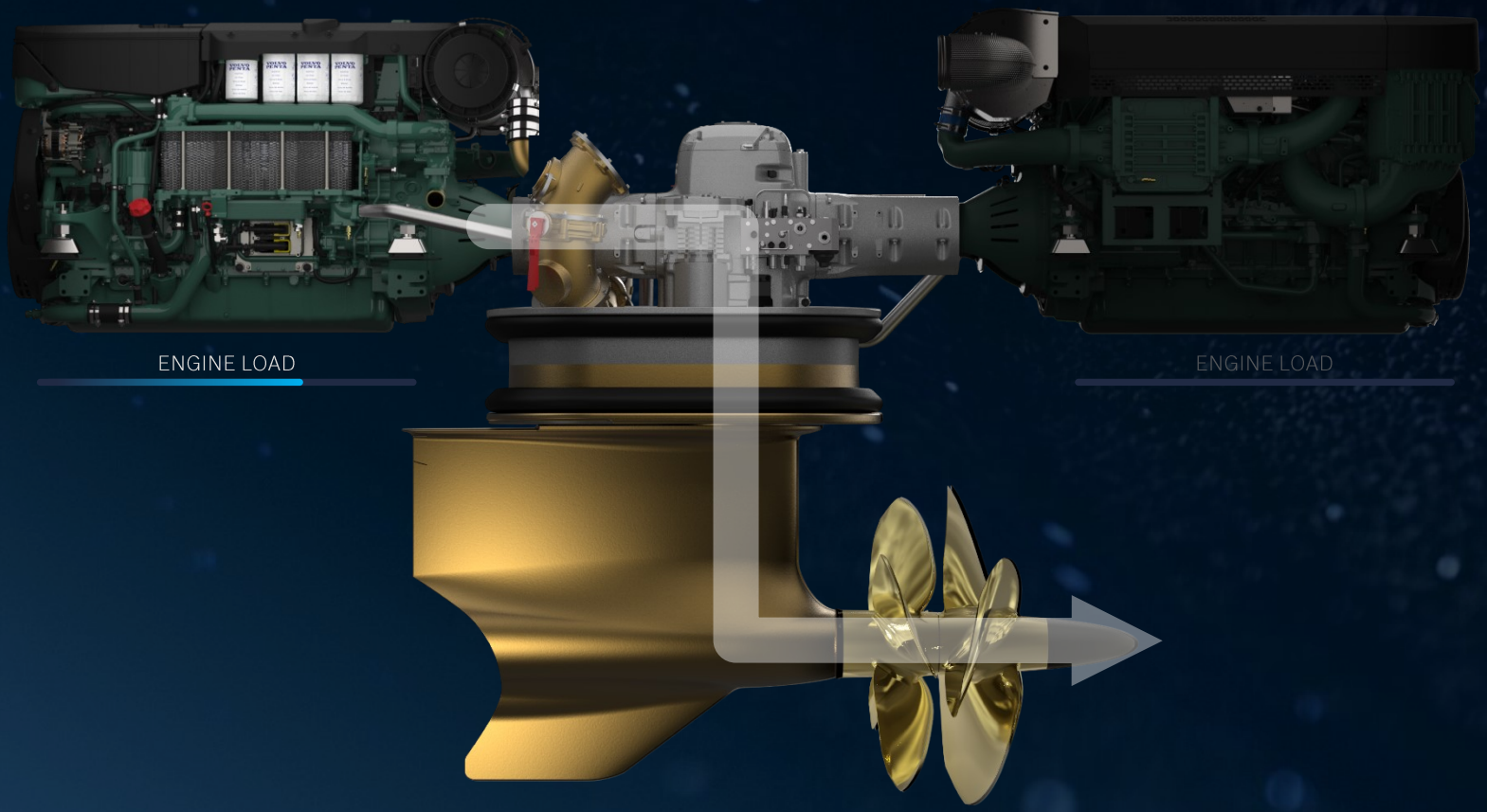


Enter upper speed range

When the helmsman requests a higher vessel speed than half of the engines can provide, the standby ones will be automatically started and seamlessly engaged. All running engines will share the load equally.

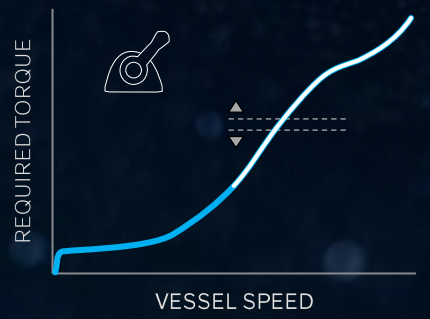


Optimized for efficiency | eco mode

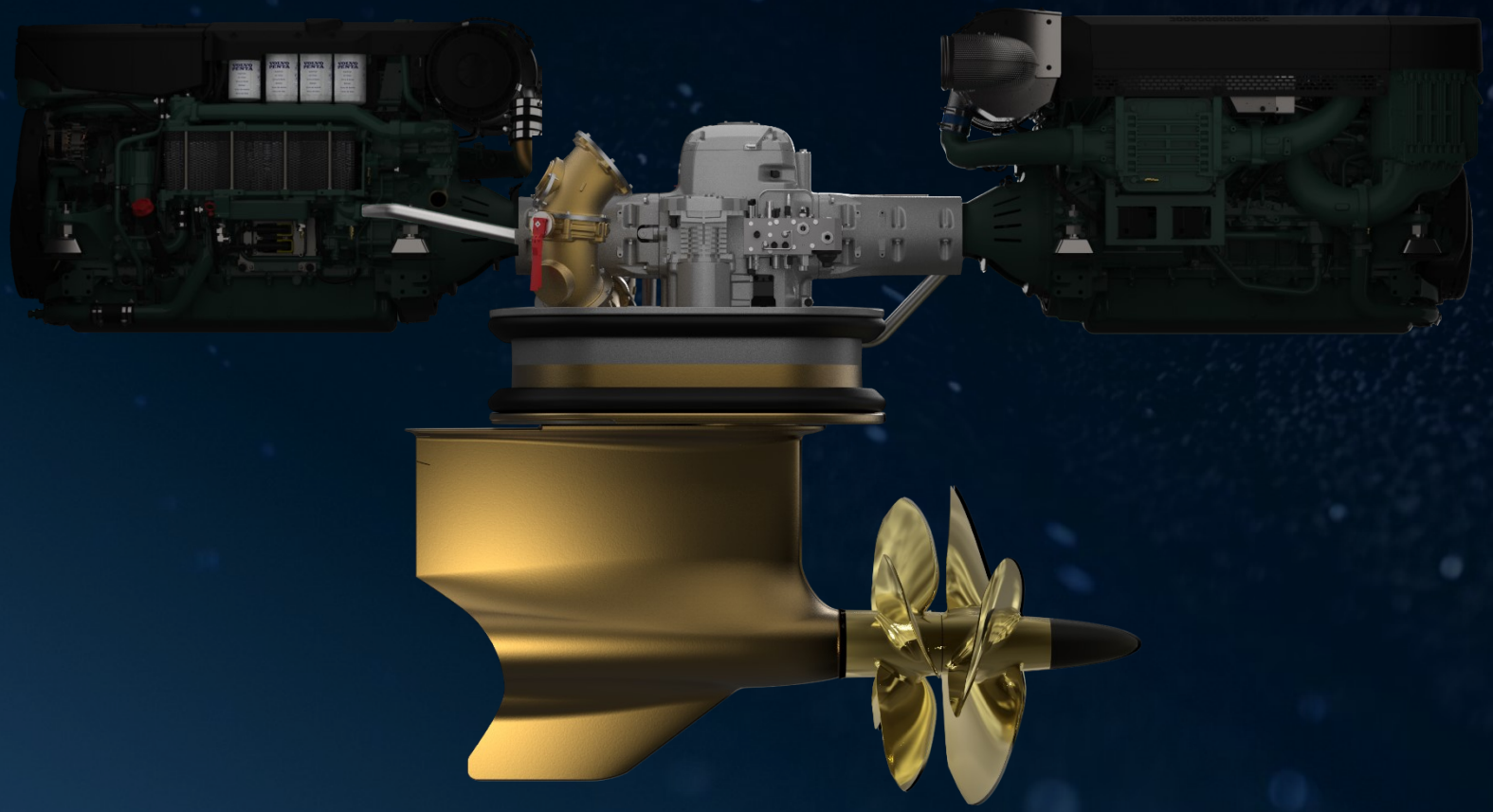


Enter lower speed range

Once the throttle is released and half of the engines are sufficient to provide power, the remaining engines disengage, temporary running idle in preparation for another manouver. Once the system determines no additional power is needed, it will put the engines with greatest running hours in standby.



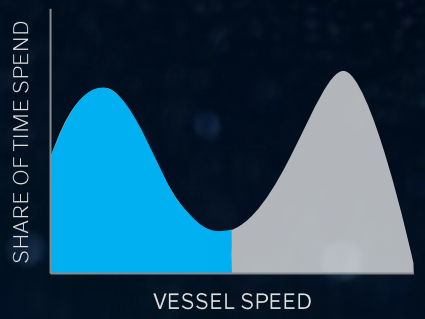
Optimized for efficiency | eco mode



Summary

According to logged vehicle data from 473 units powered with Volvo Penta D13-IPS1350 (846 200 hours), the average user is spending about 50% of the operation time in the lower speed range where half of the engines are sufficient to power the vessel.

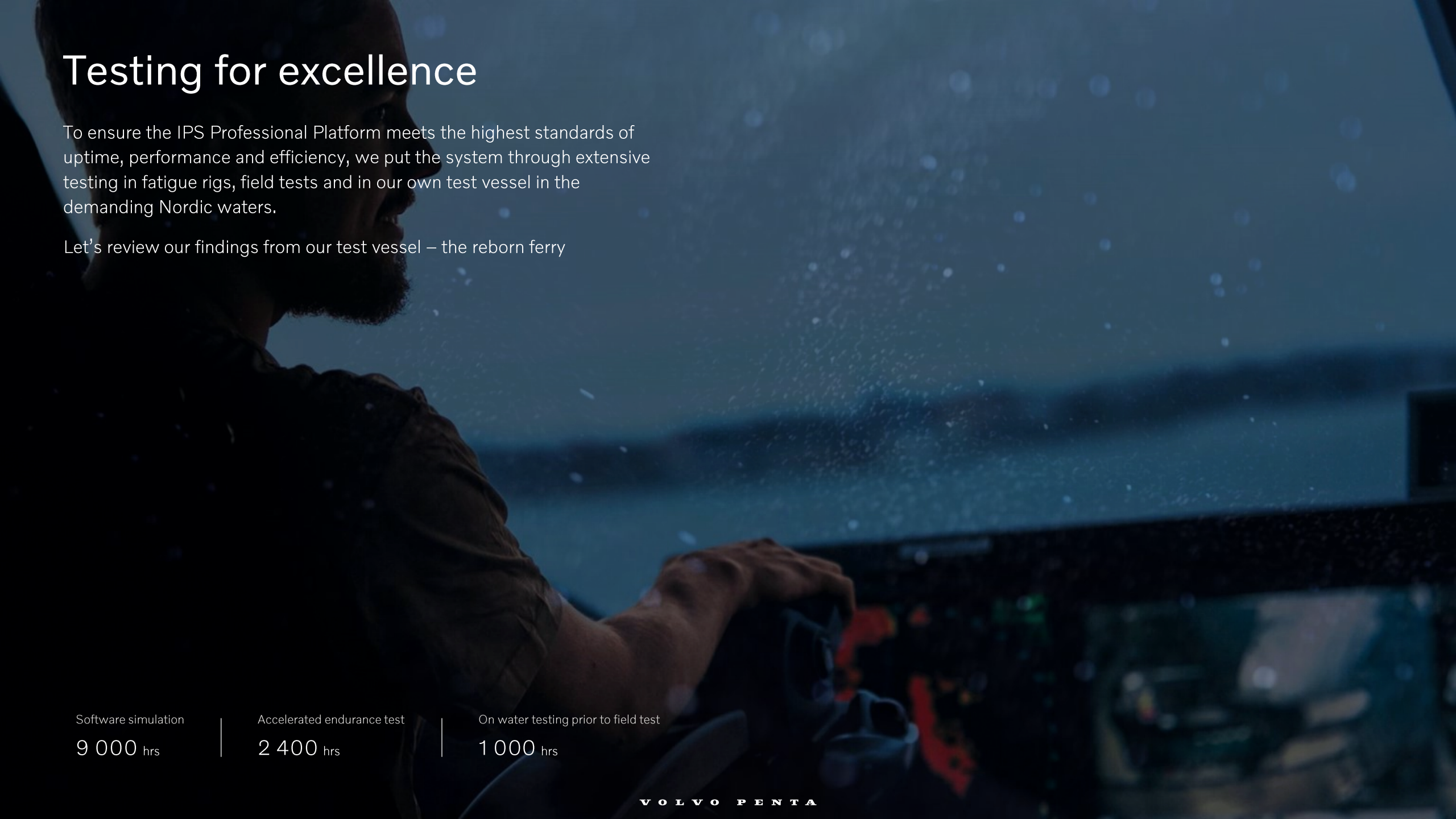
That's why eco mode contributes to lower total cost of ownership without compromising on performance.



Testing for excellence

To ensure the IPS Professional Platform meets the highest standards of uptime, performance and efficiency, we put the system through extensive testing in fatigue rigs, field tests and in our own test vessel in the demanding Nordic waters.

Let’s review our findings from our test vessel – the reborn ferry

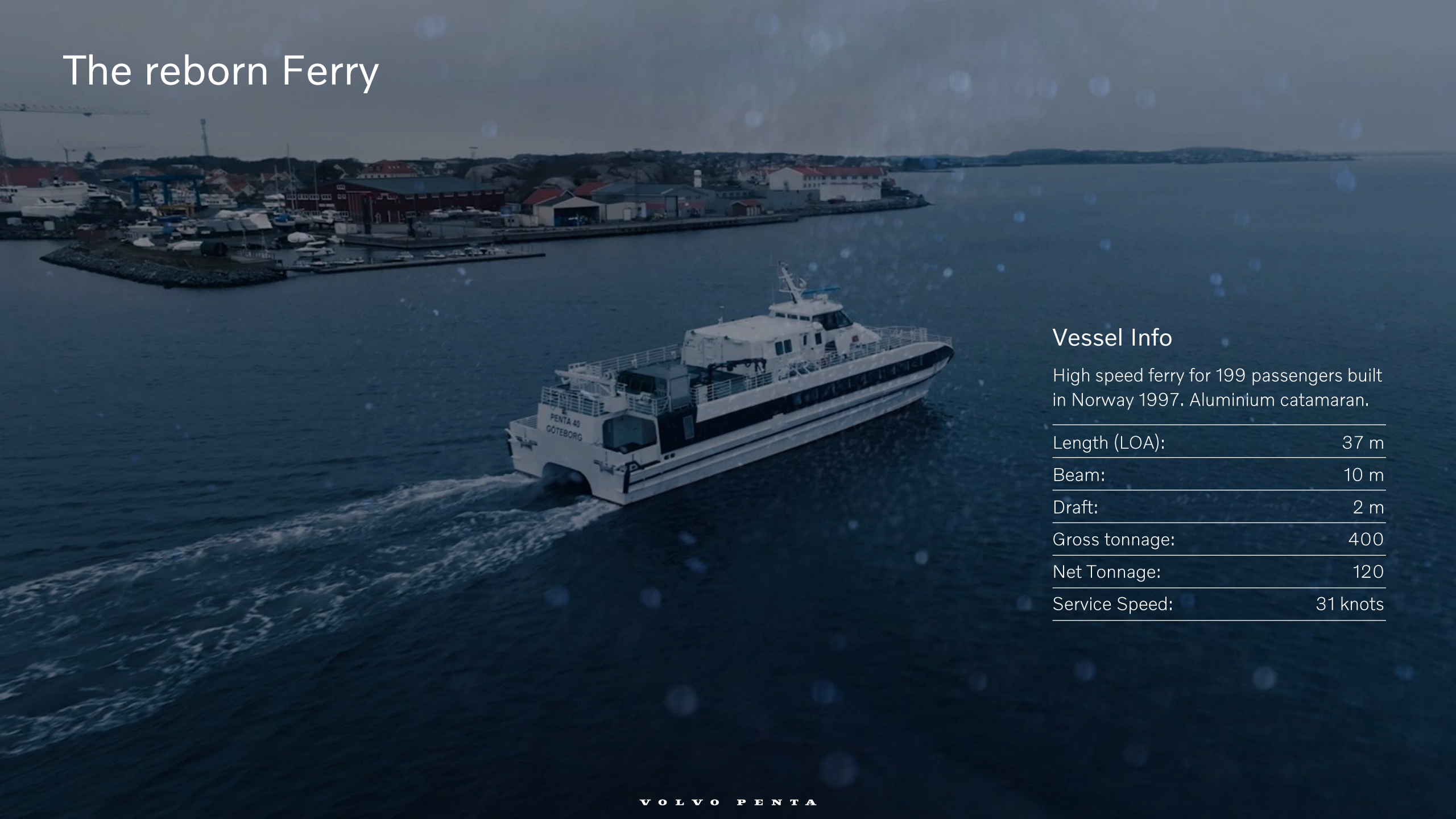


Software simulation
9 000 hrs

Accelerated endurance test
2 400 hrs

On water testing prior to field test
1 000 hrs

The reborn Ferry



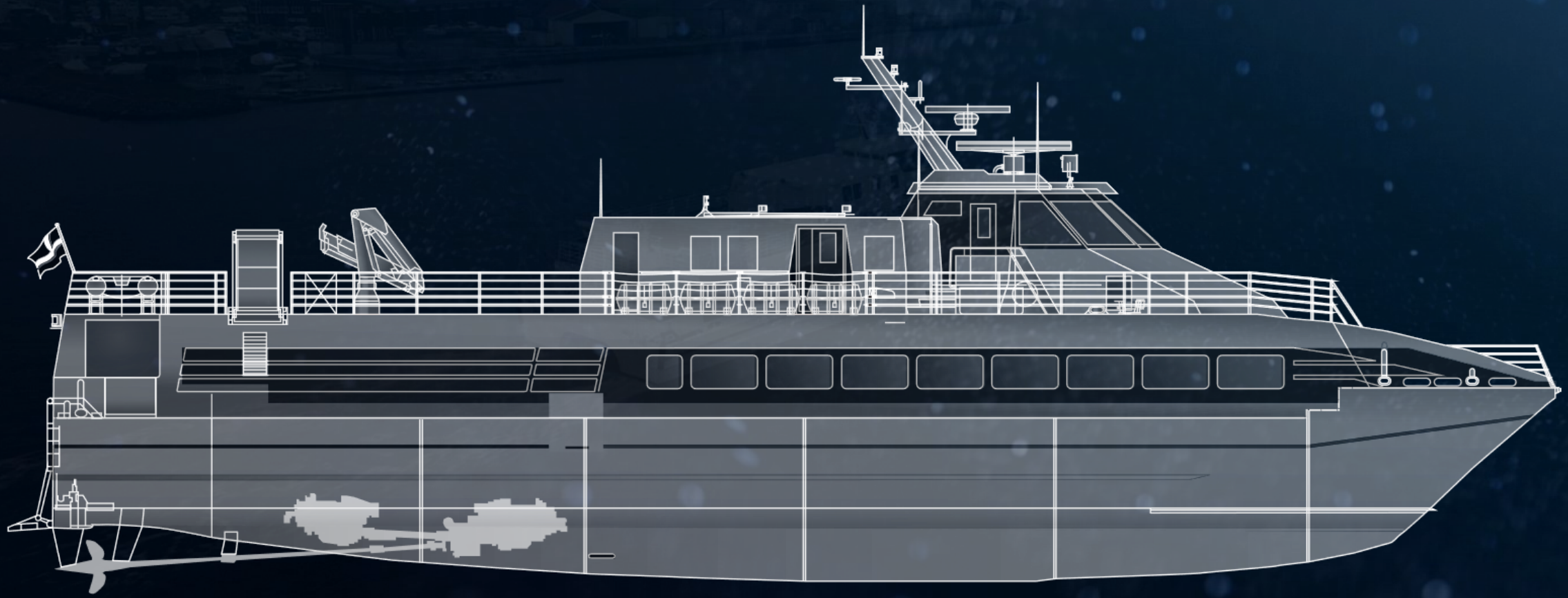
Vessel Info

High speed ferry for 199 passengers built in Norway 1997. Aluminium catamaran.

Length (LOA):	37 m
Beam:	10 m
Draft:	2 m
Gross tonnage:	400
Net Tonnage:	120
Service Speed:	31 knots

The reborn Ferry | before repower

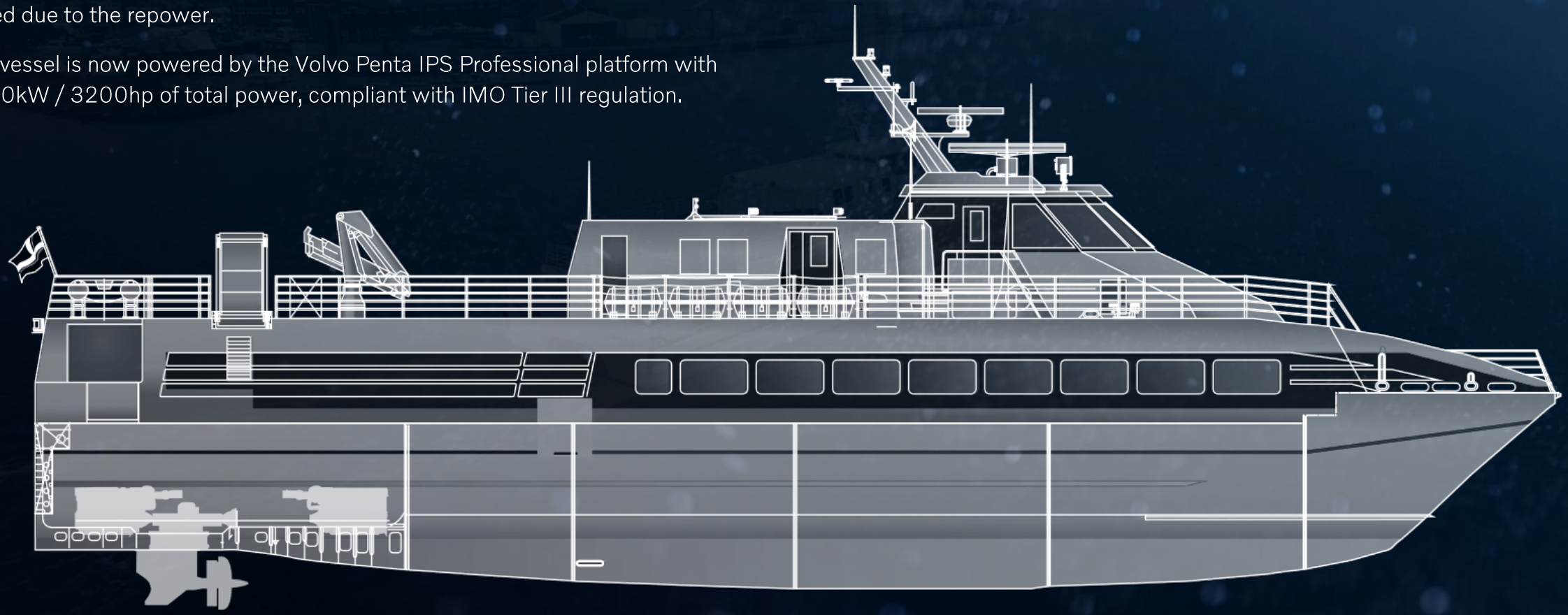
Before repower, the vessel was powered by a controllable pitch propeller (CPP) system with 2880kW / 3860hp of total power, compliant with IMO Tier II regulation.



The reborn Ferry | after repower

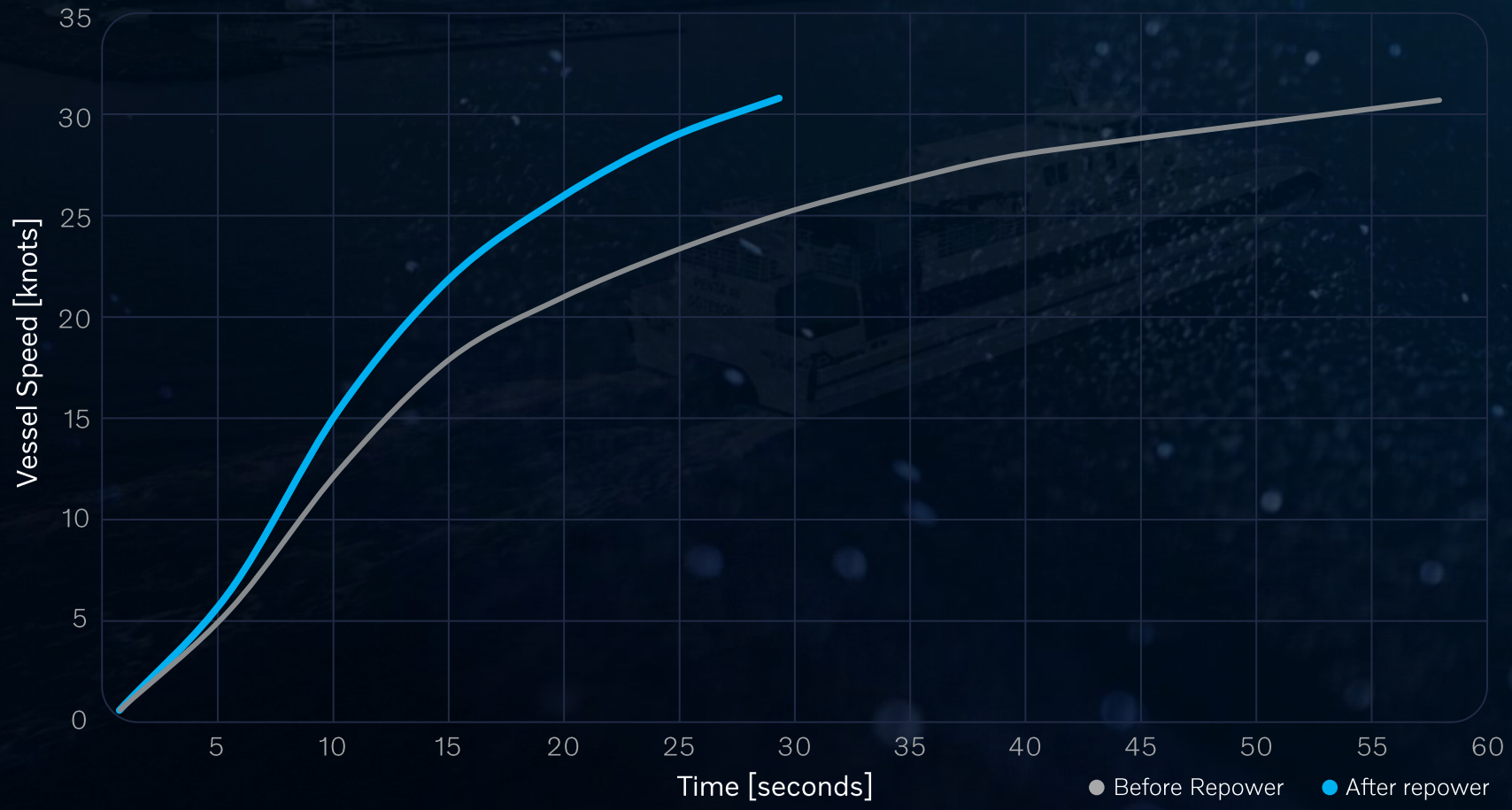
After repower the reborn ferry delivered a whole new experience – with outstanding acceleration and maneuverability, combined with reduced fuel consumption and lower total cost of ownership. 2000kg of weight and 4000mm of hull length was saved due to the repower.

The vessel is now powered by the Volvo Penta IPS Professional platform with 2360kW / 3200hp of total power, compliant with IMO Tier III regulation.



The reborn Ferry | acceleration

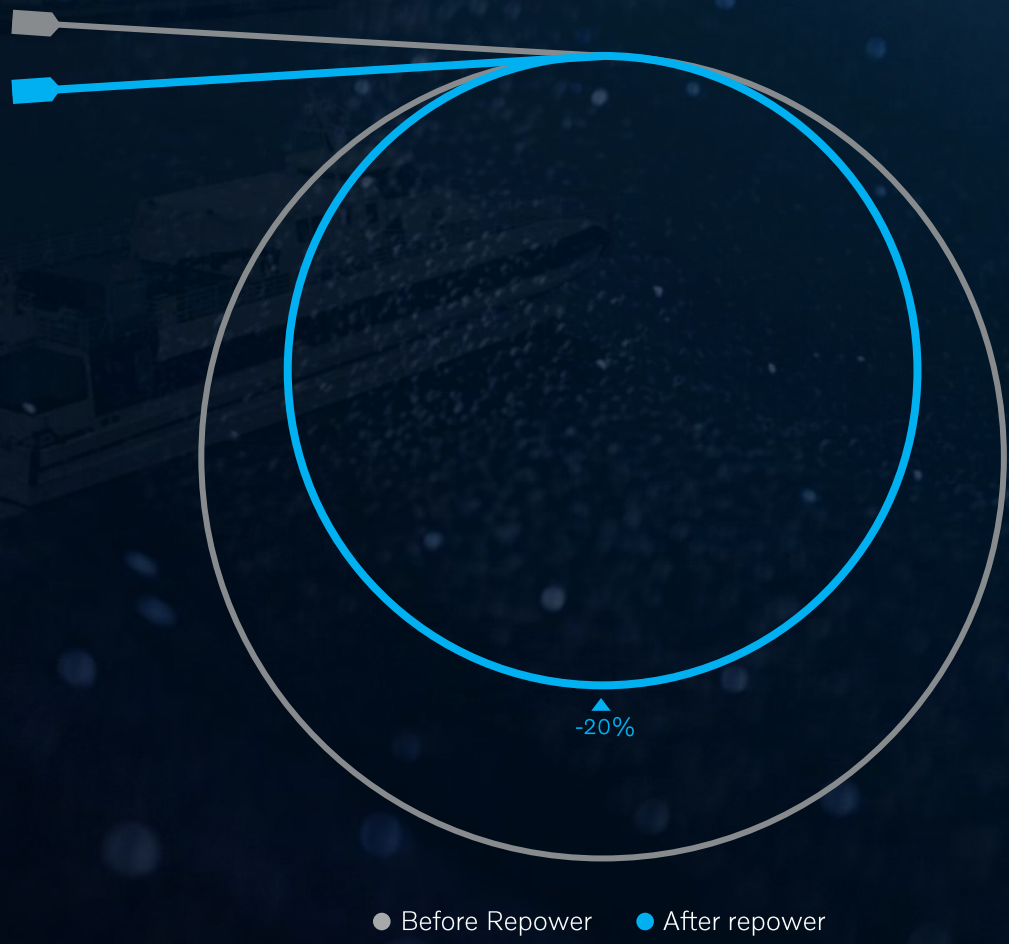
From standstill, the test vessel reached 30 knots in 28 seconds, compared to taking more than 50 seconds before the re-power to the Volvo Penta IPS professional platform.



The reborn Ferry | turning circle at full speed

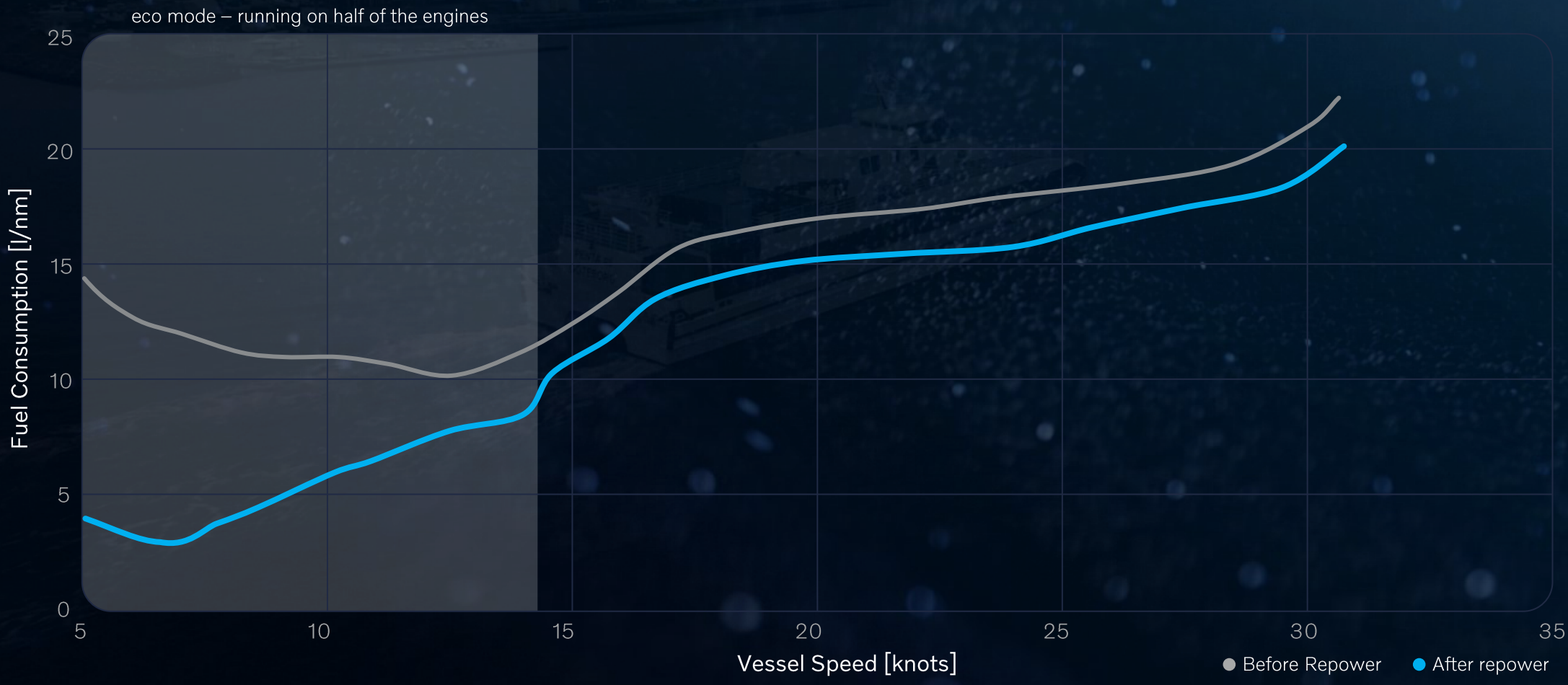
At full speed, Volvo Penta IPS professional platform decreased the turning radius by a minimum of 20% compared to the previous installation, making it possible to maneuver in narrow places quickly and easily.





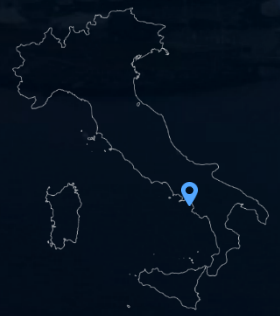
The reborn Ferry | fuel consumption

Reduced fuel consumption in all speed ranges – due to the efficiency of the system, the intelligence of our Eco mode feature, as well as the power of the fully integrated system working seamlessly behind the scenes.



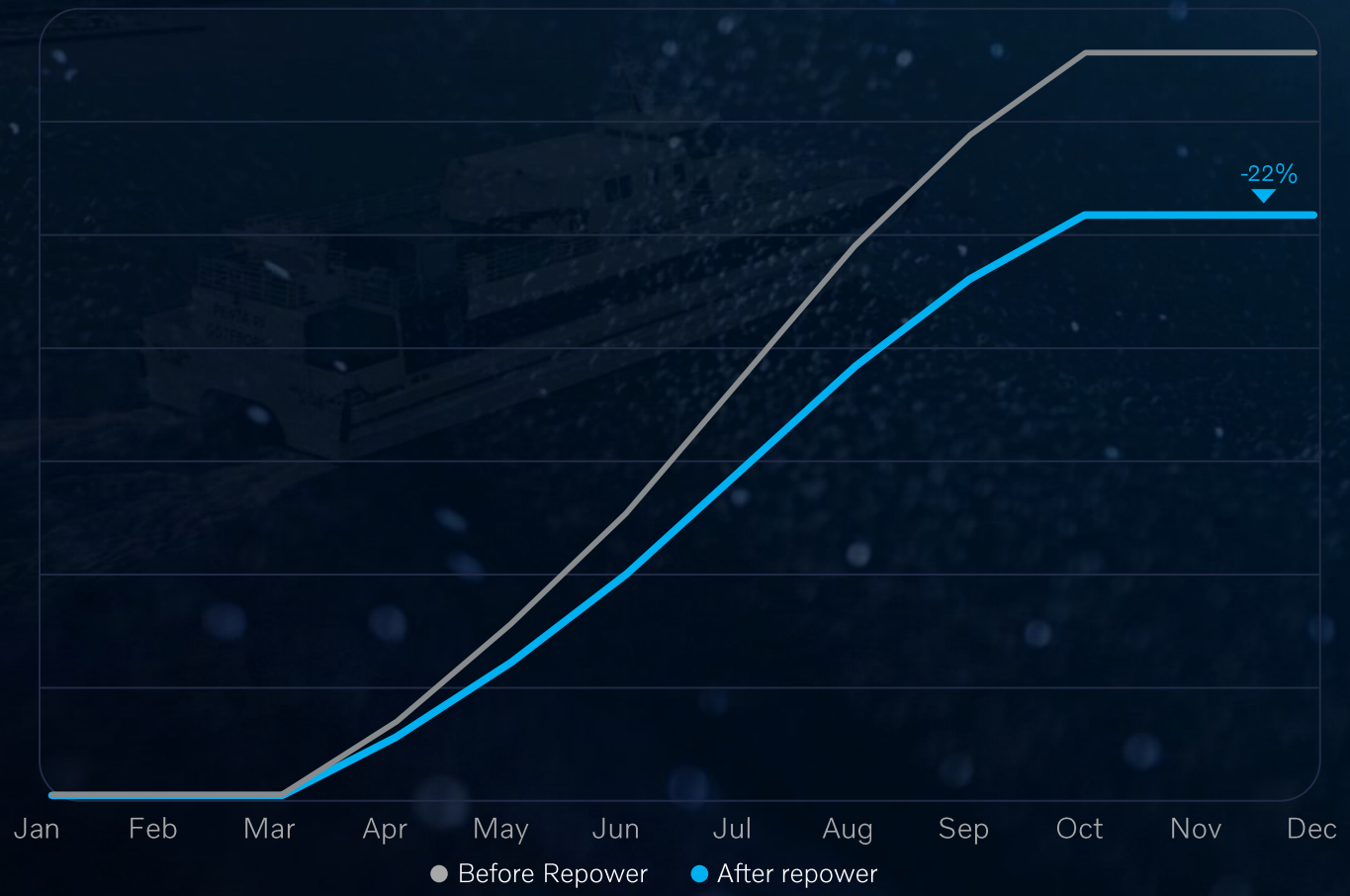
The reborn Ferry | case study of one year in operation

This case study is based on a customer boat running on the Italian coast of Amalfi. It operates around 2000 hours per year from March to October. As a test-case simulation, we applied data from our test ferry to the operating cycle of the real-life Italian vessel to calculate what the yearly savings would be.



Amalfi Coast, Italy
40°39'N 14°36'E

Vessel operating hours	2 000 hrs
Running hours per engine	1 420 hrs
Fuel Consumption	-71 m^3
CO_2 Footprint	-190 Tons




PENTA 40
GÖTEBORG