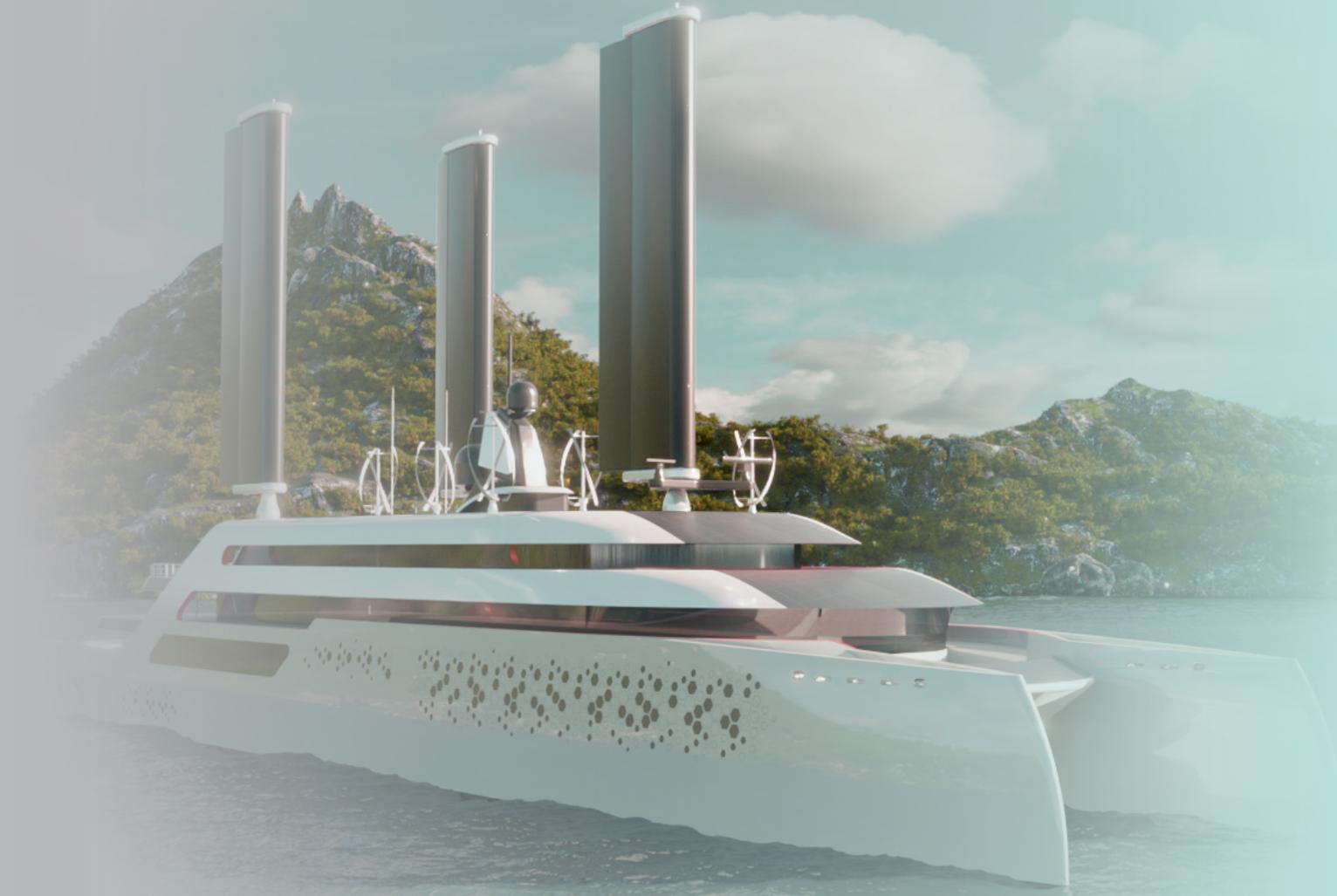


# ALBATROSS





## PHILOSOPHY

Viewing the world today, we all must admit that mother earth is not in a good shape. She is on the precipice of no return. With the dramatic pace of climate change, rapid increase in energy prices and the uprising in sensitivity of modern societies, this will quickly drive the Yachting sector in a radical different direction. Environmentally friendlier, socially more acceptable and economical "Green" Yacht concepts are the future.

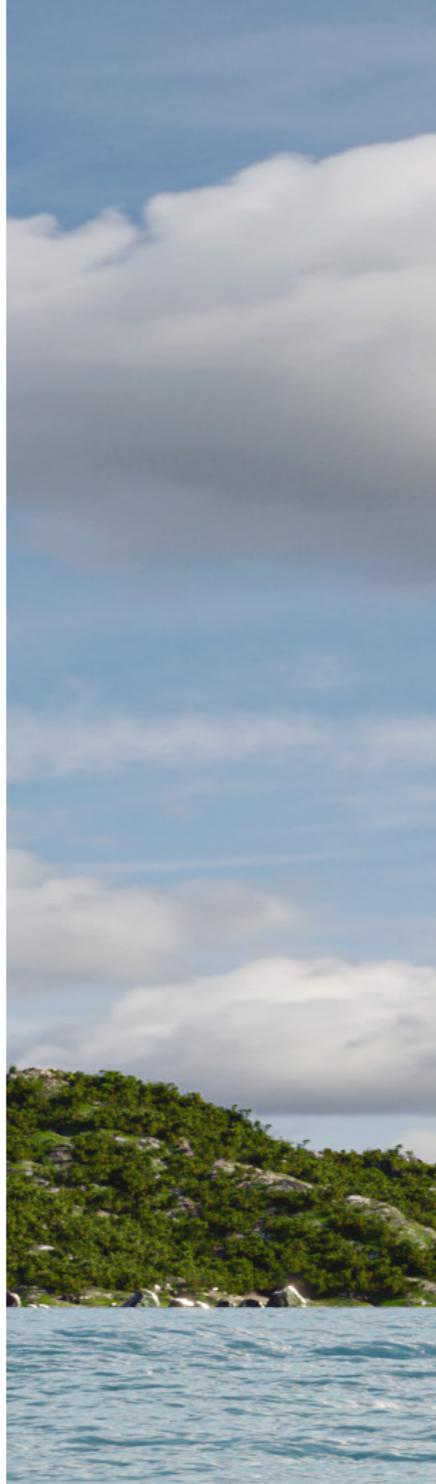
The ALBATROSS concept is based on using the three naturally occurring resources, Wind, Solar and surrounding Seawater, also known as the "free fuels".





## TECHNICAL DATA

Type :	Catamaran Hybrid
Hull :	Steel
Superstructure :	Alloy / Composite
Length :	125m
Beam :	29m
Draft :	5.6m
Gross Tonnage :	10.000
Main engines :	4 x 1800 kW
Propulsion :	2 x CCP
Shaft Generator :	2 x 1000 kW
Thrusters :	4 x 400 kW
Fuel Cells :	6 x 200 kW
Battery :	4MW Li-lo
Eco Speed :	12 knots
Max. Speed :	15 knots
Guest / Owners :	2050 sqm
Crew areas :	1750 sqm
Solar :	1150 sqm
Wingsails :	1000 sqm
Crew :	40-46



## SUSTAINIBILITY

The ambition and desire is to reduce the CO<sub>2</sub> footprint and energy consumption by 40%, as a result of adding these free fuels into the equation. Thus making the vessel more socially acceptable, minimising its impact on the environment and resulting in a greatly reduced running cost.

This will be realised using rigid Sail technology which discreetly fold away when not in use, assisting the ships propulsion. Able to deliver approximately 1200kW of free propulsion power with fair Winds and alone could potentially achieve speeds in the region of 7 knots. With the installation of 1150 sqm of photovoltaic Solar panels, 280kW of peak power per hour can be harvested, resulting in a real world average of 120kW per hour over 24 hours. Incorporating 5 vertical Wind turbines installed on the upper deck, allowing the vessel to capture up to 50kW of electrical power per hour, day and night when conditions are favourable.



## OPERATING MODES

The ALBATROSS concept is based on splitting operations into harbour/anchor mode and sea/sailing mode.

While in anchor/harbour mode, energy is generated by 6 methanol fuel cells of 200kW each, assisted by the Wind and Solar free fuel generators with a 4MW Lithium ion battery storage application allowing free power to be captured 24 hours a day.

The vessel utilises a DC Grid for controlling and delivering all energy suppliers and consumers.

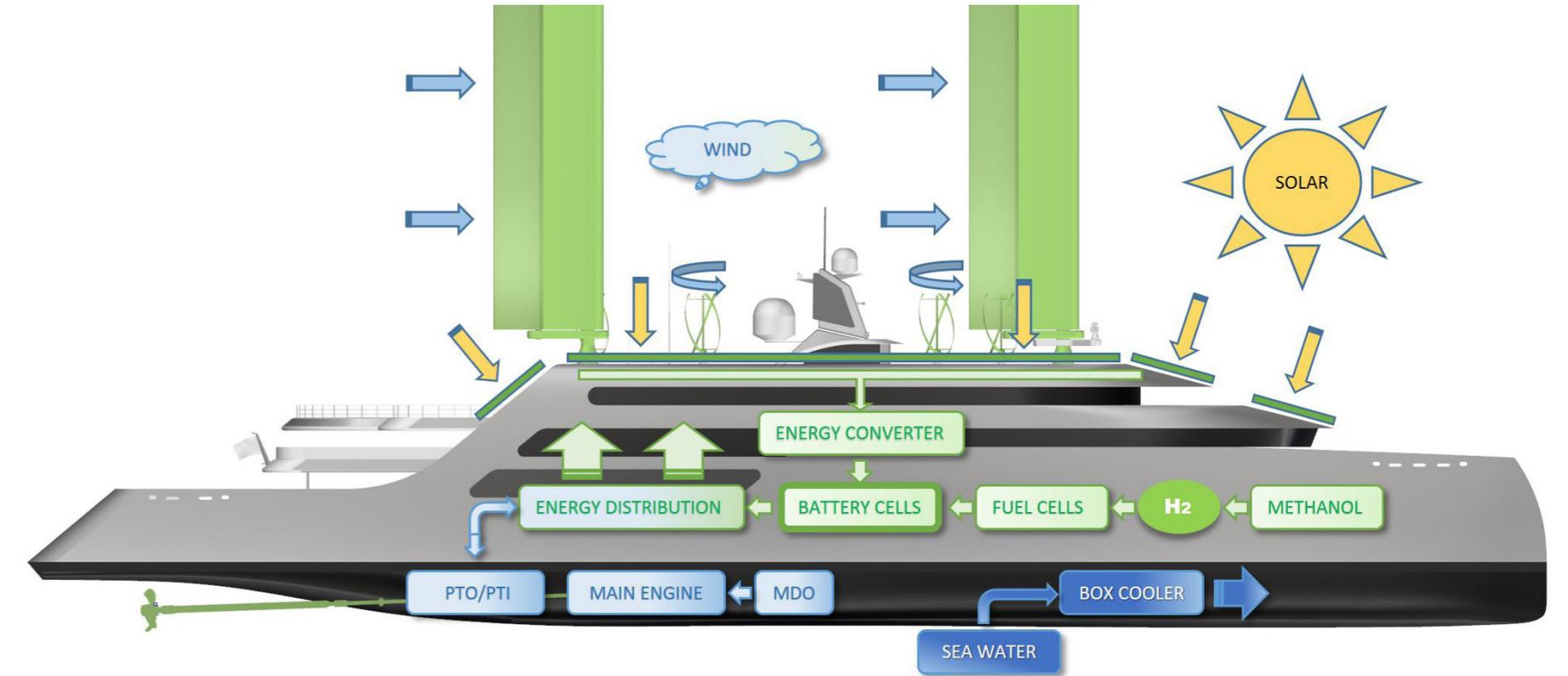
In driving/sailing mode, propulsion is generated by 4 main engines of 1800kW each, coupled in pairs to two gearboxes incorporating a PTO / PTI hybrid system for a 1000kW Generator / Motor attached to a controllable pitch propeller system.

Main Engines are powered using conventional marine gas oil, as there is little alternative for longer voyages, but consumption is reduced while utilising the rigid wing sail technology.

For use in both modes there are four 400kW rim drive thrusters installed. 2 in the bow and 2 in the stern, for safe and quiet manoeuvring of the Yacht in or out of port or anchorage.

Should there be a market shortage of methanol fuel, or unavailable due to remote geographical location, power can be generated via one of the two installed 1000kW shaft generator attached to each gearbox of the main drive application.

The Yacht has a fuel storage capacity of 400m<sup>3</sup> of Methanol and 500m<sup>3</sup> of MGO.



ENERGY FLOW

Utilising 6 box coolers instead of a conventional pumped cooling system, main engines, air conditioning machinery, fuel cells and other equipment become more efficient due to the reduction of electrically driven pumps required. This has the possibility of saving approximately 70kW of electrical power per hour.

In addition a comprehensive investigation of all energy consumers has been carried out, with an easily achievable 90kW per hour of savings to be made through the correct selection and placement of equipment, with only positive effect to owner or guest comfort, and a significant reduction in fuel consumption and emission.



## TENDER & BOARDING OPERATION

The Albatross concept encapsulates 4 Tenders, along with 4 Jet Skis in 2 separate Tender Garages, one in each hull. Looking towards the future, with a close eye on efficiency, emissions, restrictions in marinas and noise reductions, the predominant driving solution will be electric. Envisaged are, one 11m electric driven carbon fibre Catamaran, one 11m electric driven Limo/Sports Tender, one 8m electric driven Rib Tender and one conventional 8m diesel driven Rib Tender. Each Tender Garage incorporates 2 rapid charging units, which reduces charging times down to around 20 minutes. Garages are also prepared and equipped for any other combination of tenders, be it electric or diesel.



Both Tender Garages are equipped with 2 Shell Doors, each with a width of 13m. Installed are 2 Gantry Cranes allowing launching procedures on either inboard or outboard sides of both hulls. With Tender operations being one of the most time crucial and safety sensitive procedures onboard yachts, Albatross takes advantage of the large Catamaran design. Between both hulls is a wave breaker arrangement. A robust 9 x 6 meter flap, which is hydraulically extended down into the sea, creating a moon pool effect. This reduces swell and sea state noise, to ensure, launching, boarding and recovery of tenders is one of the safest and most comfortable procedures onboard, for owner, guests and crew.

# ALBATROSS



EXTERIOR & INTERIOR



If there is something that is not missing on the Albatross, it's space.

The yacht features an amazing swimming pool platform with an infinity pool and a beachclub located close to the swimming platform - offering unprecedented areas for owner and guest to fully enjoy the time on board.



Albatross concept pays very close attention to the details in all interior and exterior areas, with the idea to use lightweight and sustainable materials.

All materials are intended to be easily maintained, ensuring all areas are always kept looking fresh and new.



The heli deck and landing area are intended for any size and type of helicopter. Catering for conventional aviation fuel powered helicopters, fast charging units are also installed for future electrically driven helicopters.

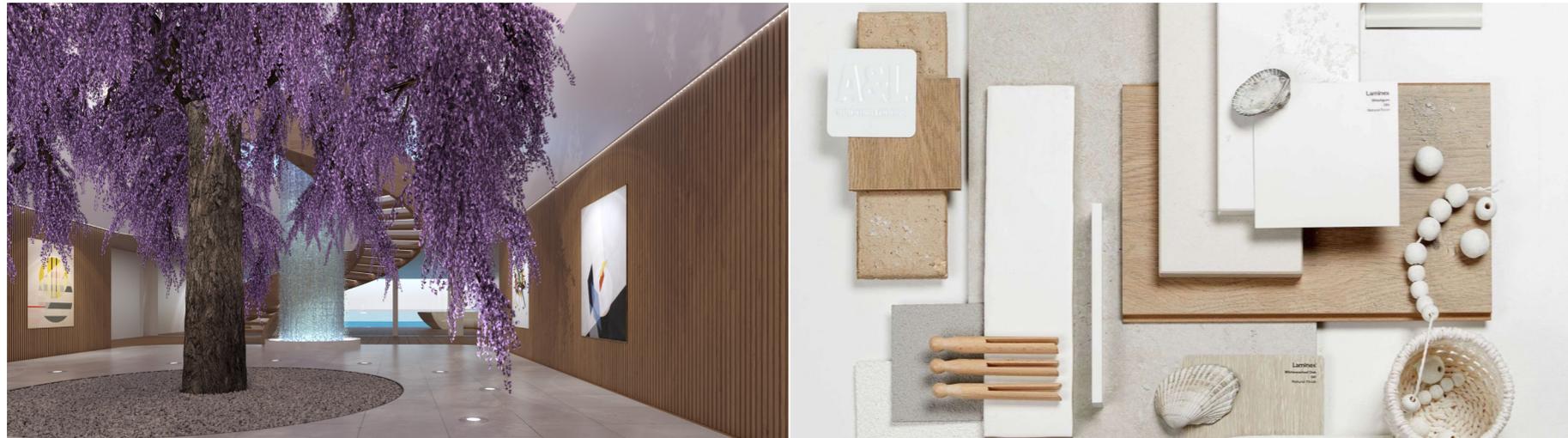


Exterior deck coverings are a personal choice. Teak, being one of the most popular over the years, is becoming unsustainable and deforestation now widely unacceptable by society. This issue will only be exacerbated in the years to come. Alternative synthetic solutions are now available, which closely mimic the look and feel of teak, but come at a fraction of the initial installation cost and require greatly reduce maintenance in both time and cost over the life of the yacht.

# ALBATROSS



EXTERIOR & INTERIOR



The interior of Albatross features a large gym, a beautiful spa, several saloons & dining areas to host events and welcome the 14 guests on board.

All interior layout proposals are open to all customer wishes, desires and suggestions.

As the Albatross concept is based on the „free fuels“ thought, we would love to integrate the nature also into the interior.

Anything is possible with the right amount of thought and investigation.





# ALBATROSS

EXTERIOR & INTERIOR

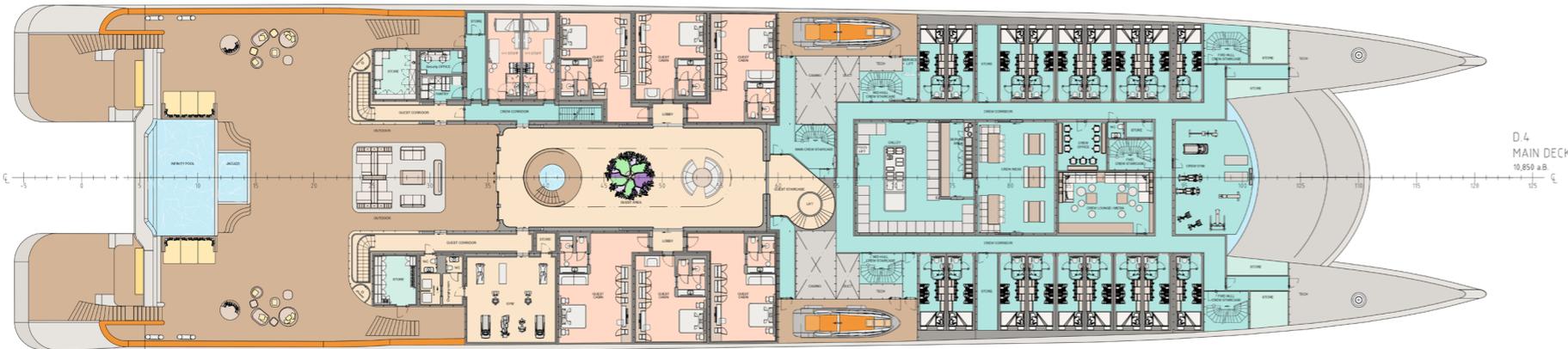
## NEW GENERATION - CREW AREAS

An area that is often overlooked or only given minimal thought, are crew living, working and social spaces. Some crew often spend most of the year on board, possibly up to 10 months, only visiting home for a few months of the year. These areas are vital for crew welfare, mental health and happiness, which is repaid in loyalty, dedication and devotion. The days of squeezing crew into multiple berth cabins are an image from the past that can be easily avoided.

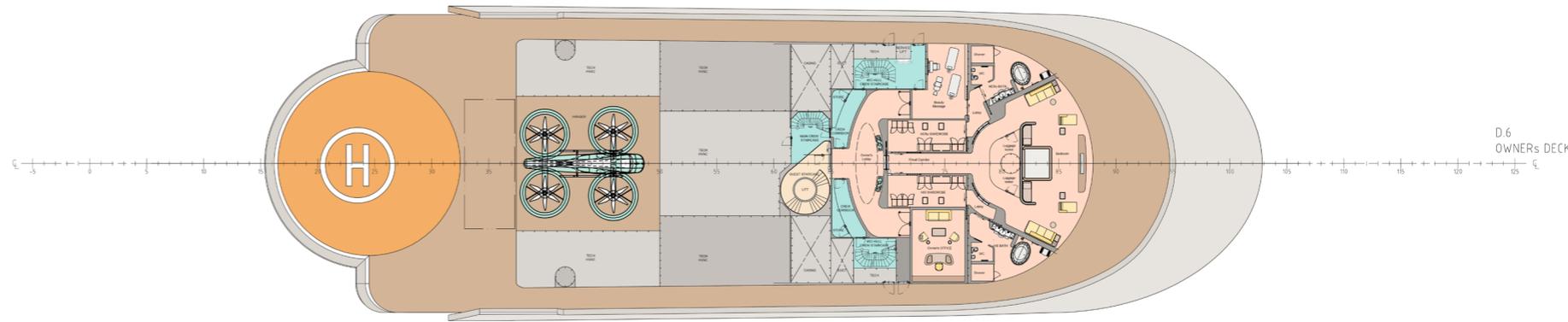
With the right planning during design phases it can be accomplished with minimal cost. Giving the crew warm inviting cabins, a well-equipped gym, an outside recreation area and a lounge to relax during down time, keeps them fit, healthy and content. This reduces crew turnover, training and agency costs. Work areas that flow and function well are a must to raise productivity while reducing unnecessary extra effort.

A happy crew atmosphere onboard will reverberate through the entire ship and a genuine smile is easily recognisable and contagious.

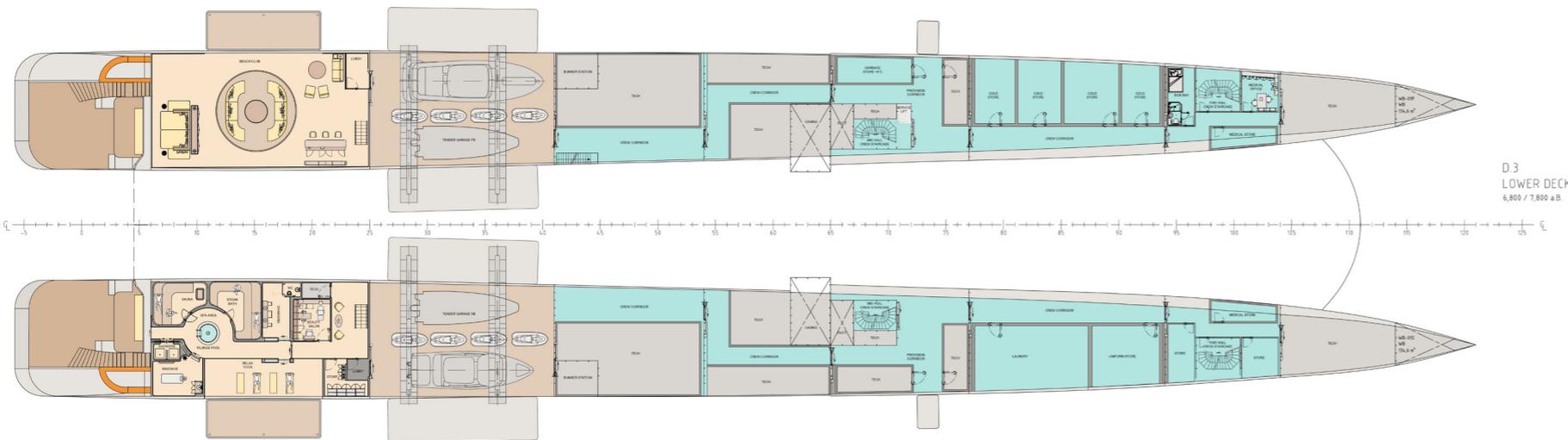
Albatross is intended to run with a crew in the region of 40, with a maximum of 46 berths. These are mainly single and double cabins.



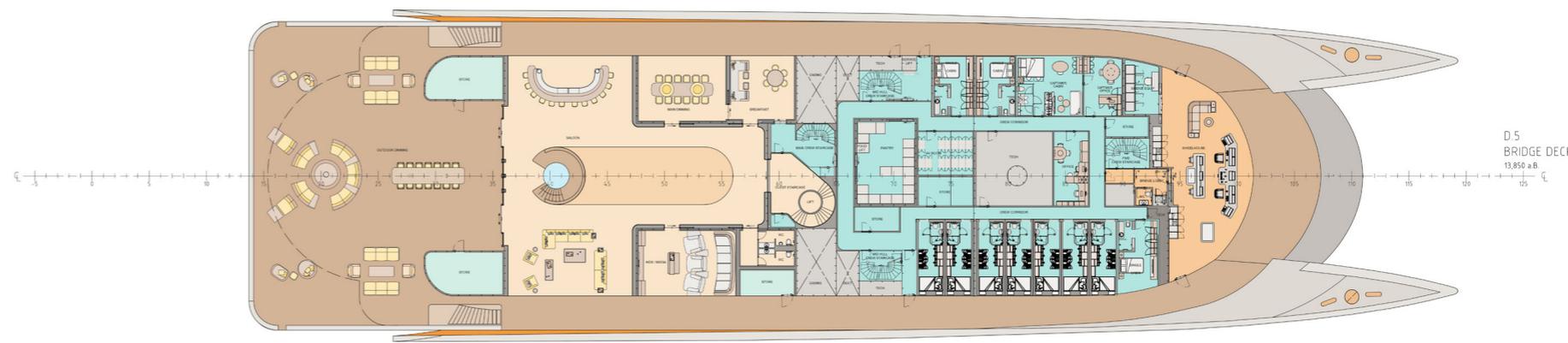
D.4  
MAIN DECK  
10,850 a.B.



D.6  
OWNERS DECK  
13,850 a.B.



D.3  
LOWER DECK  
6,800 / 7,800 a.B.



D.5  
BRIDGE DECK  
13,850 a.B.



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