



“Why Baleària opted for LNG?”

*“Reducing air pollution from ships in the
Mediterranean Sea”*

March, 28th 2017



CITTADINI PER L'ARIA



About BALEÀRIA

Brief summary of
Baleària activity



1. About Baleària

«Baleària is the leading Spanish shipping line in passenger and cargo services to the Balearic Islands, and one of the largest operators in the Strait of Gibraltar, while also having a presence in a further four countries»

5	18	20	25	1,500
countries	routes	regional offices	ships	employees

«The company, which was founded in 1998, is a watchword for service, innovation and social responsibility in the Spanish maritime transport sector, and it is notable for the constant growth achieved through opening new routes and adding ships to its fleet»

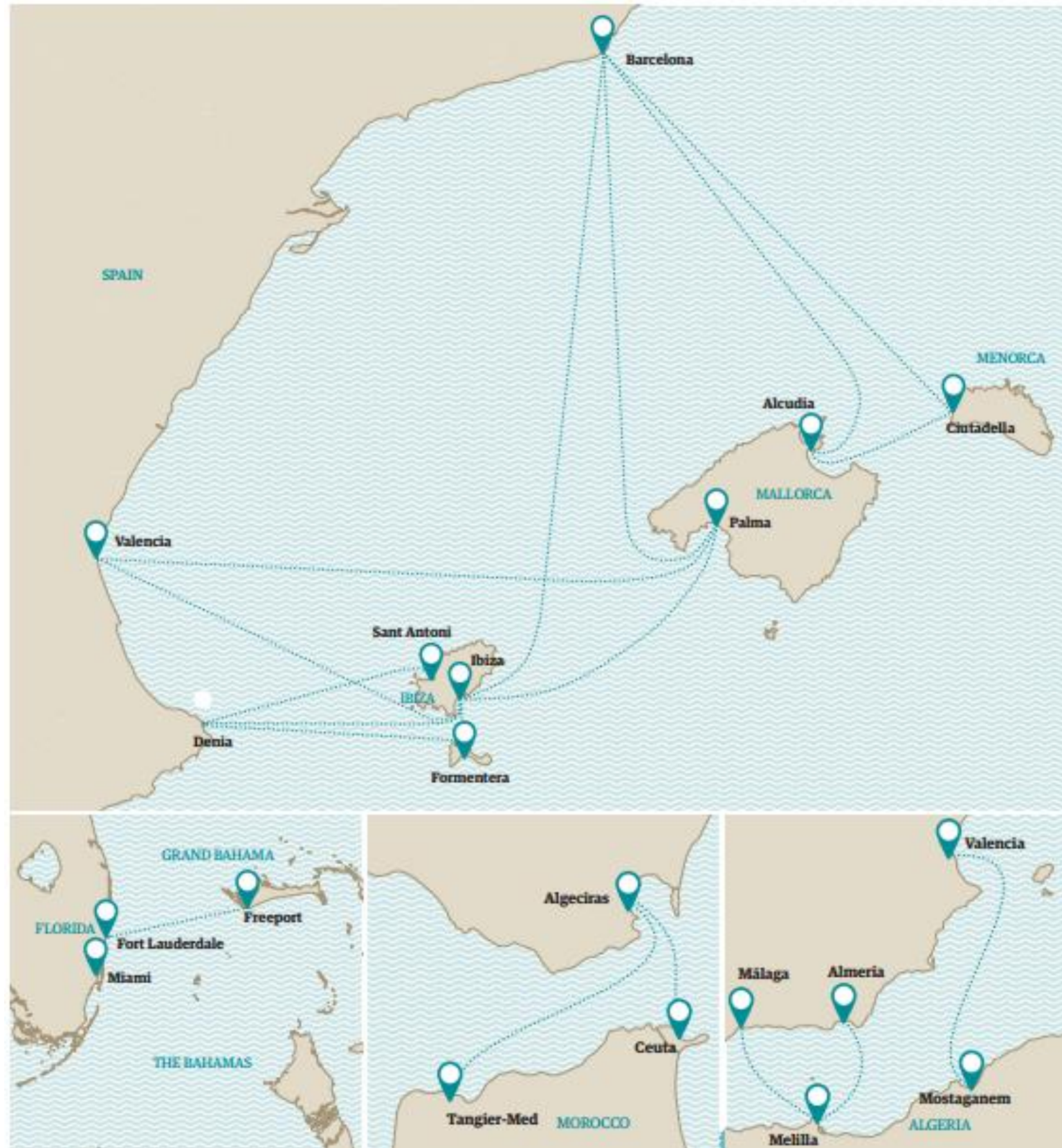
2. Mission

«The Baleària group mission is to respond to society's maritime transportation needs by offering customers quality services while at the same time respecting the environment»

«Company shareholders are provided with adequate profits; and employees enjoy the possibility of both professional and personal development»

«Baleària is a citizen company -we know our obligations and our rights- and responsible -we try to respond in a balanced way to the legitimate expectations of our stakeholders-»

3. Route Map



4. Innovation

«For Baleària, innovation is the way to make a company competitive and to achieve excellence in management. The company works above all on technological innovation projects connected with its ships and energy efficiency»

A sustainable fleet and efficient sailing

«The company's competitiveness is based on efficient ships capable of reducing fuel consumption (which accounts for some 40% of operating costs), while also minimizing pollutant emissions in accordance with its environmental commitment»

Pioneer in the use of liquefied natural gas (LNG)

«Ordered three LNG fueled ferries, is a pioneering shipping line in the use of this fuel as it reduces contaminating emissions»

«Installed the first natural gas auxiliary engine on a passenger ferry»

5. SDG

«Baleària is a United Nations Global Compact signer and renewed its commitment to society and the protection of human rights in all its activities, taking on the 17 sustainable development goals (SDG's) that the United Nations proposes towards sustainability»



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Why Baleària opted for LNG?

CCC Culture



1st «C».- Conviction

«We are an innovative, responsible and citizen company, enthusiastic about our activity: connecting territories by sea to increase the development and well-being of the people»

«Appears in our ethical code»

«We are not only efficient but we emit less GHG»

«We are eco-efficient and committed to sustainable development»

2nd «C».- Convenience

«The commitment to the LNG means reducing the bunker costs by 35% referring to the MGO»

«Betting on sustainable development increases our reputation, because it is what society & our stakeholders want»

3rd «C».- Coercion

«Risk Management → We anticipate to normative coercion»

«MARPOL VI Horizon → 2020: 0,5% Sulphur»

3 SMARTSHIPS

DOUBLE INNOVATION

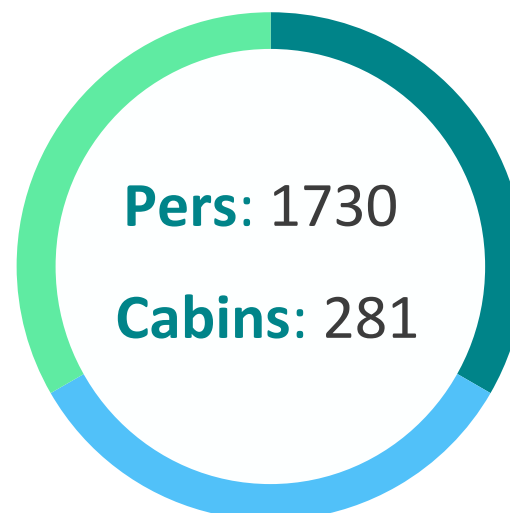
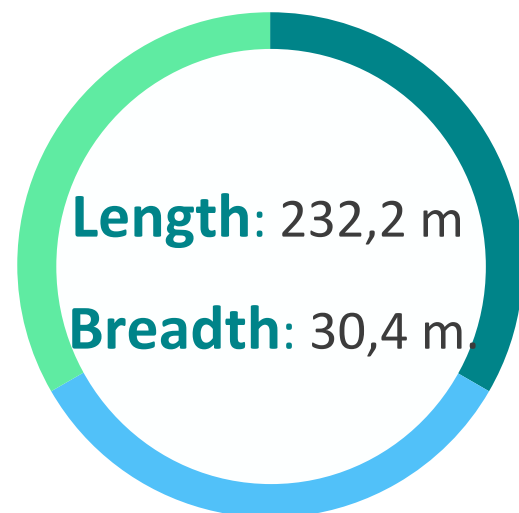
- ➡ 1. Eco-efficient Navigation
- ➡ 2. Technology - Customers

“Innovation, culture and values in 3 new Smartships”



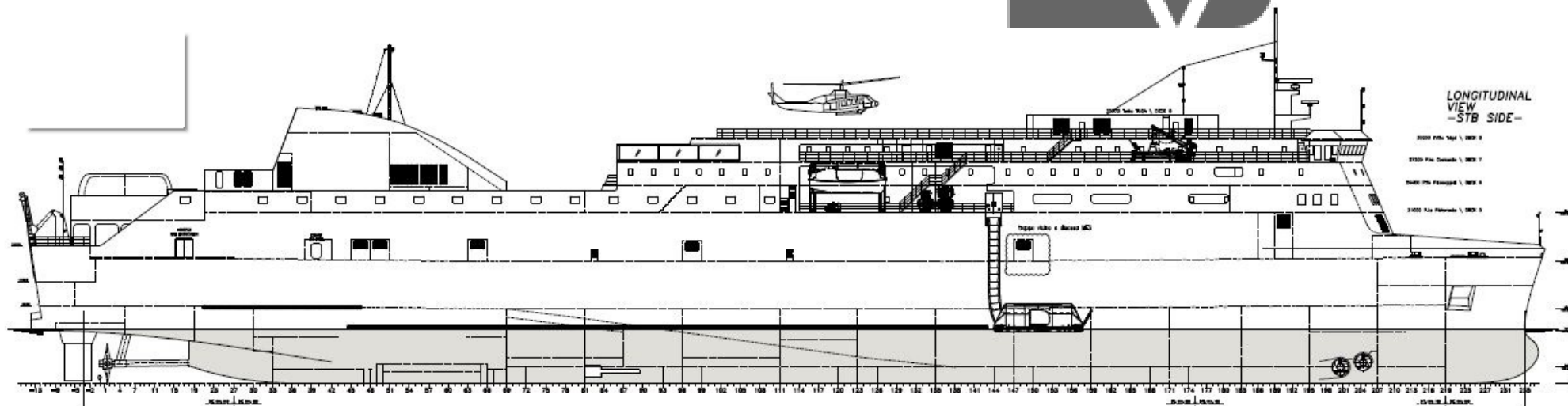
1. SMARTSHIP - BOB

***BALEÀRIA* + LaNaval = BoB**



2. SMARTSHIP – CN VISENTINI

BALEÀRIA +



Length: 186,5 m

Breadth: 25,6 m

Pers: 810

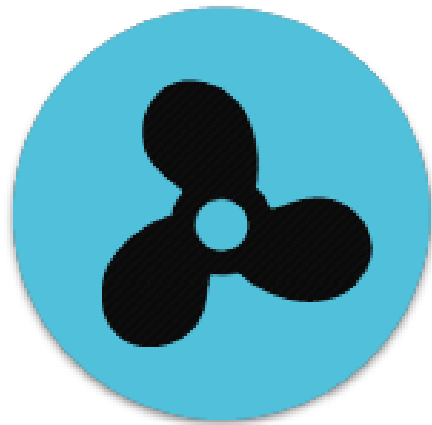
Cabins: 123

L/M: 2.180 ML

Cars: 170



3. TECHNICAL aspects



LNG

Dual engines:
LNG & Gasoil.
Emission reduction:
CO₂ (30%), NO_x
(85%), SO_x (99%) and
Particles (95%).



LED Lighting

LED Technology
throughout the
vessel.
The installation will
allow to segregate as
needed.



Air Conditioning Management

It will allow to
segregate by
independent zones.
Monitor and
automate the
setpoint temperature
control.

3.1 TECHNICAL aspects



Frequency Inverters

Allow to work with the propeller at its optimal point.



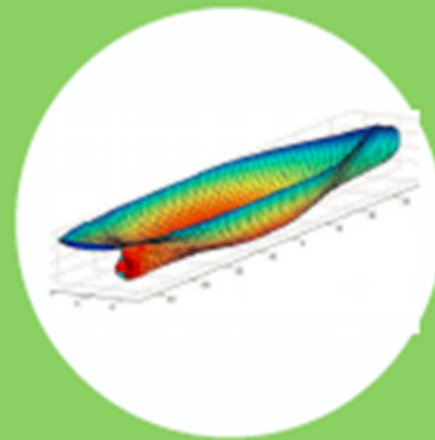
Photovoltaic Panels

700 m² in solar panels.



Monitoring

Consumption and power will be monitored.
Trim control.



Optimization of the Structure

Mathematical models and hydrodynamic tests are performed to optimize the structure

3.2 TECHNICAL aspects



Last Generation Antifouling Paints

Less consumption,
Less emissions.



Propulsion System Optimization

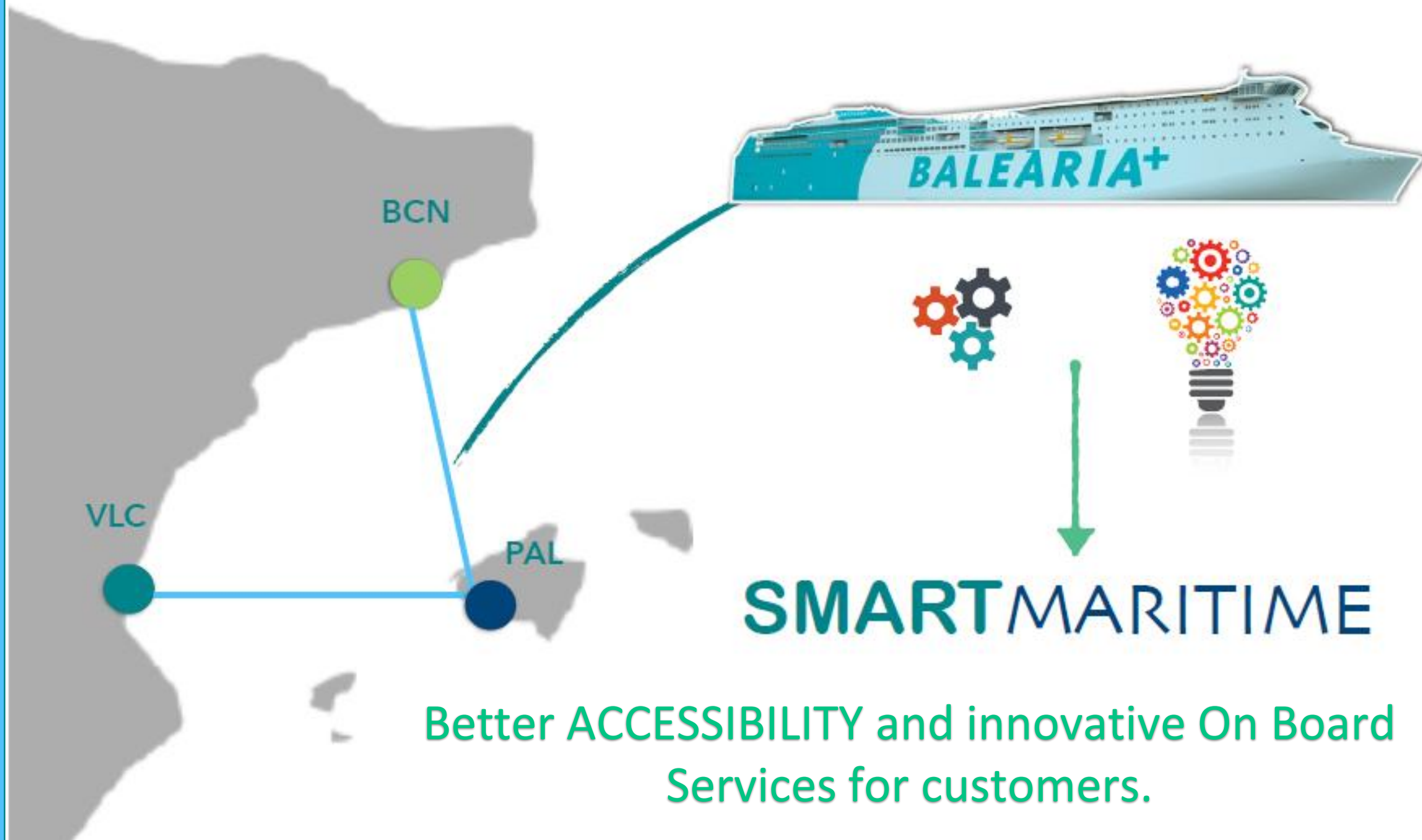
Conducted studies on
the number of shafts,
maximum efficiency
propellers, ...



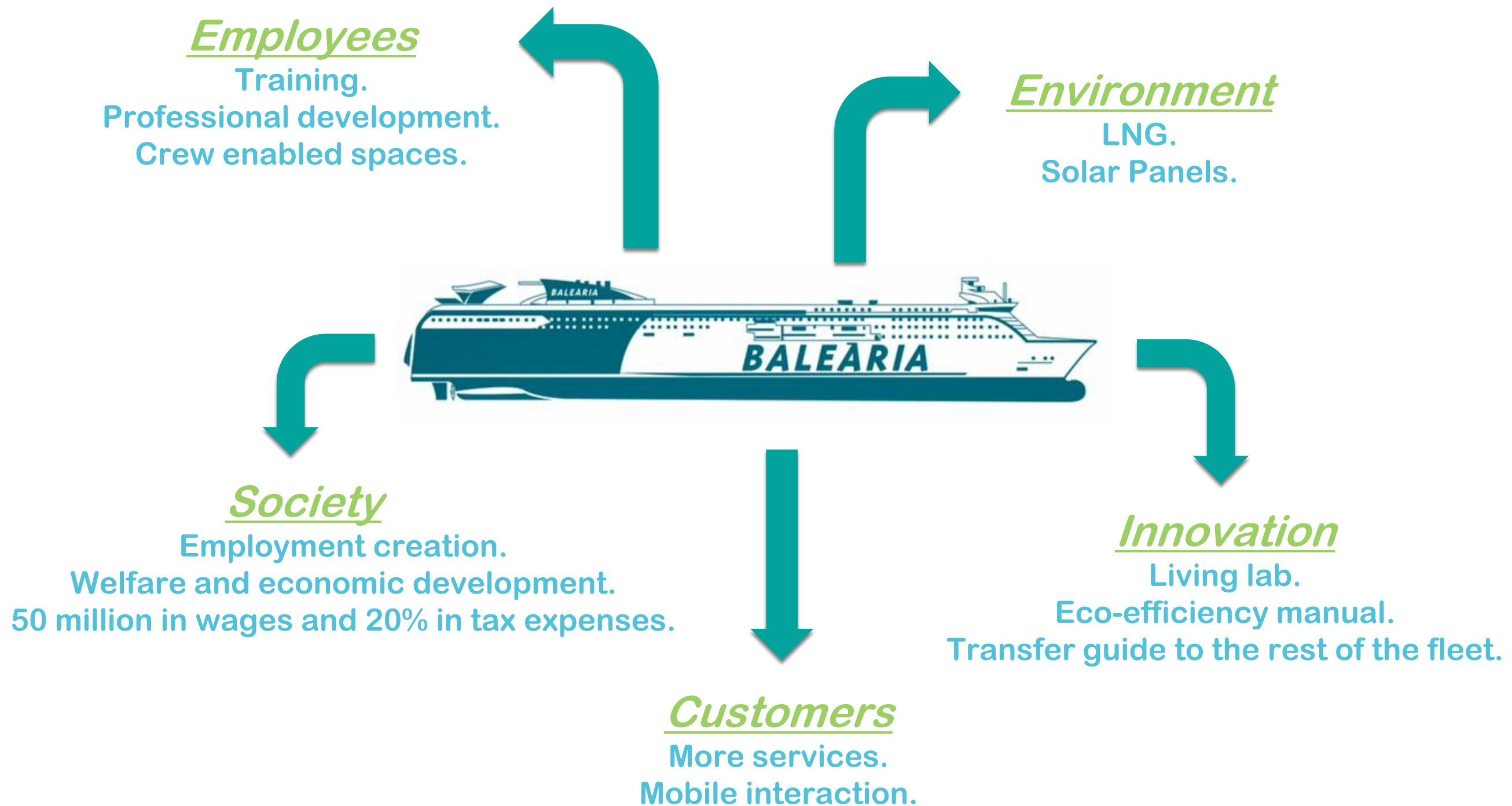
Dynamic Cooling System

Starts and stops the pumps
according to engine needs
and sea temperature.

4. SMARTMARITIME New Concept



5. SMARTSHIP Commitment



Thanks you for your attention.
