



# Multi-mission frigates FREMM

Lorient (56), France

Businesses : Digital solutions, HVAC

Type of contract : Implementation



Marine

## Client Information



Client	Marine nationale
Project management	NAVAL Group
Partnership	Axima - Automation Department
Start date	2007
Delivery date	2022
Amount	> 50M €

## Key figures

**6,000 t**  
Displacement

**142 m**  
Length

**20 m**  
Beam

## Decarbonation

**630 tCO<sub>2</sub> eq. avoided/year**  
or the equivalent of 60 households



## Customer's challenges

- Supporting operational ships to achieve their mission of preserving peace and defending national interests on the oceans
- Ensuring an optimum and reliable operating environment for critical equipment
- Ensuring the protection of crew against harmful risks



## Our solutions

- HVAC Turnkey Contracting - Per frigate:
- HVAC installation (> 200 tons): Appr. 50 Air Treatment Units and 5 Air Handling Units (AHU) ;
- Air flow process: 310 000 m<sup>3</sup>/h ; Refrigerating group: 3 units
- Control system: Communication on network Ethernet Siemens(20Siemens Plc; 1,200Inputs/outputs) AHU, cold water production



## Customer's benefits

- A global vision of Engineering from Preliminary Design to After-Sales.
- We support the client on a daily basis from the Preliminary Design stage to the actual operation of each vessel.



## CSR commitment

- Develop a low carbon marine solution = Chiller : 50% energy savings 1
- 1 The announced gains depend on the assumptions of climatology and operating time established for this calculation.