



En groupement avec



**GENAVIR**  
**Public Tender GNVR-08-2025**

**Supply or RADARS and ECDIS**

Cahier des Clauses Techniques Particulières (CCTP)



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# 1 GENERAL

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## 1.1 Preliminary

Genavir is a French shipping company created in 1976. Genavir's main missions are to manage oceanographic research vessels and equipment, maintain this fleet of vessel and collect technical data for scientific purposes.

Ifremer is responsible for the French Oceanographic Fleet since 2018. The French Oceanographic Fleet comprises several surface vessels (deep-sea vessels, mid-shore vessels and coastal vessels), manned and autonomous underwater vehicles, and underwater systems (marine seismic equipment, coring systems...).

Genavir is the fleet manager of the FOF.

The purpose of this framework agreement is to solicit competitive bids for the supply and installation of advanced navigation equipment, specifically radars and Electronic Chart Display and Information Systems (ECDIS) nacos platinum, for our maritime fleet. This initiative aims to enhance the operational efficiency, safety, and uniformity of our navigation systems across the fleet. By standardizing the equipment, we intend to streamline maintenance processes, reduce training requirements for personnel, and ensure seamless integration with existing onboard systems. This tender process seeks to identify a reliable supplier who can meet our technical specifications, provide comprehensive support and maintenance services, and deliver high-quality products that comply with international maritime regulations and standards. Ultimately, the goal is to secure a cost-effective solution that will contribute to the overall safety and effectiveness of our maritime operations.

## 1.2 Wording

BV: Bureau Veritas

IFREMER: Institut Français de Recherche pour l'Exploitation de la Mer

MED: Maritime Equipment Directive

R/V: Research Vessel

New System: Equipment package provided by the supplier to fulfill with this specification

I/O: Input / Output

FOF: French Oceanographic Fleet

CINNA: Centrale INTégrée de Navigation designed by Genavir

## 1.3 State of Play

- Pourquoi pas ? refit in 2025 fitted with warstila platinum system (solid state radars and full ecdis)
- Anita Conti under construction, she will be ready in the middle of 2026, and will be equipped with wartsila radars and ecdis system.
- L'Europe fitted with one Wartsila IMO radar installed in 2024, one Furuno IMO radar installed before 2010
- L'Atalante fitted with two IMO Furuno radars installed before 2010
- Thalassa fitted with two IMO Furuno radars installed before 2010
- Antea fitted with two IMO Furuno radar: one installed before 2010 and one installed in 2021
- Tethys fitted with two IMO Furuno radars installed in 2023

- Côtes de la Manche fitted with two IMO Furuno radars : One is brand new and the other was installed before 2010.

All vessels are fitted with home made integrated navigation system called CINNA.

## 1.4 Planning

This planning is only indicative and is not contractual part of the tender.

- 2026
  - Ecdis supply for R/V L'Europe
- 2027
  - Ecdis and 1 radar supply for R/V Côtes de la Manche
  - Ecdis and 2 radar supply for L'Atalante
- 2028
  - 1 Radar for R/V l'Europe
  - 1 Ecdis for R/V Tethys
  - 2 radars and ecdis for R/V Thalassa
- 2029
  - 1 radar and ecdis for R/V Antea

## 1.5 Regulation

All vessels are sailing under French Flag (1st Register) and are classed by BV.

The new system shall comply with all rules and regulations applying to the vessel,

Vessel	UMS	BV Class (nav eqt)	Vessel type (Permit for navigation)	Registration (acte de francisation)	Length overall	IMO Regulation
Pourquoi pas?	7854	SYS-NEQ-1	Special	Merchant vessel	107.6	Division 234 & 221
L'Atalante	3559		Special	Merchant vessel	84.6	Division 234 & 221
Thalassa	2803		Special	Fishing	74.5	Division 234 & 221
L'Europe	335		Cargo ship	Fishing	29.6	Division 222 & 226
Antea	571		Fishing	Fishing	34.95	Division 228
Tethys II			Fishing	Fishing	24.9	Division 226
Côtes de la Manche			Fishing	Fishing	24.9	Division 226

All supplied and installed new equipment shall comply with those class and regulations.

## 1.6 Scope of Supply

The offer shall cover the supply of service and equipment included in unit price list

- the supply of the radar kit
- the supply of ecdis kit
- the supply of route planner
- the supply of conning display
- The supply of spare parts as antennas, displays, keyboard and track ball, Ethernet switch, I/O module
- The supply of UPS compatible with regulation (minimum autonomy)
- Daily rate

Packing, customs and shipping costs to Genavir warehouse at Plouzané shall be supported by the Supplier as per Incoterm DAP and detailed in the offer.

When ordering equipment, if necessary, a specific quotation to the supplier for system configuration, installation, SAT or other service will be ordered. (à mettre dans chapitre installation + prévoir formation à la mer)

### **1.7 Environnemental conditions**

All equipment shall be designed for the following environmental constraints:

- Ambient air temperature :
  - o -20°C to 50°C for outdoor units
  - o 10°C to 35°C for indoor units
- Relative humidity: 95 % or less (max)
- They shall be prepared to work in marine environment and vibration proof.

### **1.8 Life cycle and obsolescence**

The planned life cycle of major components shall be detailed in the offer.

### **1.9 Language**

Language for screen view can be either in English or in French. French is preferred.

## **2 JUSTIFICATION FOR SPECIFYING A PARTICULAR BRAND**

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The requirement for Wartsila Nacos Platinum branded equipment in this contract is motivated by reasons of system uniformity and technical compatibility with navigation systems already installed aboard the fleet's vessels.

The most recent ECDIS installation are made with Wartsila Nacos systems. Maintaining this level of standardization is essential to ensure:

Full technical compatibility – The fleet will be equipped with Wartsila/Nacos systems, and centralized management of this equipment enables simplified maintenance, streamlined spare parts inventory, and optimized repair procedures.

Continuity in training – Ecdis training is mandatory. Crew members have been specifically trained on Wartsila systems. Switching to a different brand would require additional training sessions, resulting in increased costs and a higher risk of human error.

Operational safety requirements – Introducing non-standardized equipment could create safety and operational risks, due to potential incompatibilities between integrated radar, ECDIS. For example, with different brand of radar and ecdis, overlay will not be possible anymore. These systems must work together seamlessly to ensure safe and effective navigation.

In light of the above, the reference to a specific brand is essential to ensure operational continuity and system integrity. This requirement does not constitute an undue restriction of competition, as the equipment specified is part of a broader technical framework requiring full interoperability and safety compliance.

Therefore, it is not possible to accept alternative or equivalent products under this contract.

### 3 TECHNICAL SPECIFICATION

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#### 3.1 Radars characteristics :

- S band radar SSR :
  - S-band with Solid state technology
  - CAT 1
  - 12'- 14' antenna S-band corresponding to Maker's standard
  - Beam width :
    - vertical about 21°,
    - Horizontal less than 2°.
  - Power supply : 400V 3ph or 230V 1ph 50Hz
- X band radar magnetron :
  - X-band (Magnetron)
  - Min 25KW
  - CAT 1
  - 5'-7' or 7'- 9' antenna X-band corresponding to Maker's standard
  - Beam width :
    - vertical about 21°,
    - Horizontal less than 1°.
  - Power supply : 230 1ph 50Hz
- X band radar :
  - X-band (Solid state technology)
  - CAT 1
  - 5'-7' or 7'- 9' antenna X-band corresponding to Maker's standard
  - Beam width :
    - vertical about 21°
    - Horizontal less than 0.9°
  - Power supply : 230 1-ph 50Hz
- Antennas units include :
  - integrated performance monitor
  - Dicer option could be added later
- Both console will include following modes :
  - 2 independent EBL and VRM,
  - target alarm zone,
  - Target CPA sort capability
  - head up, north up, RM, True Motion with aided plotting,
  - ARPA functions meet IMO ARPA and USCG requirements,
  - automatic clutter reduction providing automatic sea and rain clutter control,
  - training simulator,
  - trackball unit for left or right hand operation,
  - specific radar console with direct access function (EBL, VRM, rain clutter control, target acquisition, ....)
  - Mouse full capability for secondary console
  - day and night brightness,
  - integrated conning mode
  - Radar Merging function for minimized blank sector

- Over maps from ECDIS capability
- 1 inter-switch function
- Processor must have following options that can be added later :
  - Ice detection software

### 3.2 Conning Characteristics :

- 5 pre-configured views must be available by one button access
- Each data and disposition must be personalized in term of fonts, size and presentation.
- A conning home mimic and WP view will a class approved
- The system will have engine mimic compatible. Requested signal between engine or INS system must be defined and arrange with engine manufacturer
- No-exhaustive list of sensors to display:
  - Depth, under keel clearance: must be displayed in time-based graph/chart. The time base must be change from 5 minutes to 12h. vertical scale can be fixed from 2 sounders
  - Weather:
    - Wind and current. Wind (speed and direction) must be displayed in time-based graph/chart. The time base must be change from 5 minutes to 12h. vertical scale can be fixed
    - Atmospheric pressure
    - Sea and air temperature
  - Heading, ROT, GNSS, ETA, VRU, BNWAS from many sensors
  - Rudder angle: must be displayed in time-based graph/chart. The time base must be change from 5 minutes to 12h. vertical scale can be fixed
  - Speed (log and sog) and distance
  - Track/auto pilot
  - Power management data's :
    - RPM for each propeller
    - % of each thruster
- Example of requested view:



### 3.3 Route Planner Characteristics:

The INS system will have route planner function.

The route planner function desired characteristics :

- Radar Overlay capability
- Waypoint interface from and to « CINNA » ECDIS by serial link capability
- Waypoint interface to Autopilot capability with APB NMEA sentences
- Touchscreen capability
- The system can be compatible with a 55inch 4K touchscreen planning station for further implementation
- The system could be compatible with a “Full ECDIS” system with some further arrangements

### 3.4 ECDIS Characteristics

Same route planner specification and:

- Fully compliant with IMO, IEC and applicable regulations for ECDIS
- 24” or 27” multifunction display (conning, radar, ecdis capability )
- Compliant with S57/S-63 and all other official ENC compliant with paperless, upgrade to S100 possible
- Cyber secure design, ISM compliant
- Online specific training with delivery of mandatory certificates for crew
- All necessary documents for BV and French authorities to confirm full ecdis compliance
- Touch screen
- Exchange waypoint with Cinna
- Real time environmental data (current, weather)
- Dead reckoning mode
- Chart update
- Aid for chart order
- Add all available option or add-on on the price list

#### Interfaces :

- INS system will have numeric (RS232 or 422 with NMEA sentences or ethernet or dry contact) interfaces to this not exhaustive list of interfaces and must comply with the regulations :
  - BWAS (dry contact)
  - DGPS system (serial link)
  - Gyrocompasses (serial link)
  - Speed logs (serial link)
  - CINNA Owner’s navigation system: serial link for ARPA target, and waypoints
  - wind measurement system (serial link)
  - echo sounder, (serial link)
  - A.I.S (serial link)
  - VRU (serial link : specific serial datagram)



- DP for propellers and helm datas (serial link : specific serial datagram)
  - AMS for generators data (serial link : specific serial datagram)
  - Autopilot (serial link)
  - S-VDR : must be compatible with FURUNO VR-7000S
  - Radar (arpa target and overlay)
  - all other interfaces required by system's maker or available
- If a special interface/buffer is needed with equipment, the supplier will add it to the price list unit

### 3.5 Warranty

A warranty period of 12 month on the complete delivery will start at the date of the Sea Acceptance Test signature.

The warranty will cover all equipment and delivery from the Supplier.

The warranty will include support from the supplier, replacement of equipment including shipment DAP to Brest - FRANCE, drawing and manual modification if requested, modification and adjustment on the software.

### 3.6 Installation

A subsequent contract will be placed for each vessel. The installation must comply with current regulations, and all mounting parts will be included in this package. The plans as built, up-to-date installation, operator, maintenance manuals and all required documents for the full ECDIS certification of the vessel will be provided.

The installation will include commissioning at harbour, sea trials, and crew training. For the sea trials, a test logbook will be provided.

Installation harbour will be defined in the subsequent contact, all charges shall be included.

## 4 UNIT PRICE LIST

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List is detailed in appendix (BPU).

### 4.1 Training

The supplier will provide a light training session onboard for users and for maintenance. This training shall be done together with the HAT and included in the offer. A dedicated period of 2 days is to be considered as a minimum (1 for user, 1 for maintenance).

### 4.1 Site work rate

Due to possible hazards in the progress of the work on board, it is necessary to know the daily rate to apply in the following cases :

- Technician daily rate at dockside including accommodation and specify working time
  - Technician daily rate at sea and specify working time
  - Technician daily rate in standby at dockside including accommodation
  - Technician daily rate in standby at sea
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End CCTP