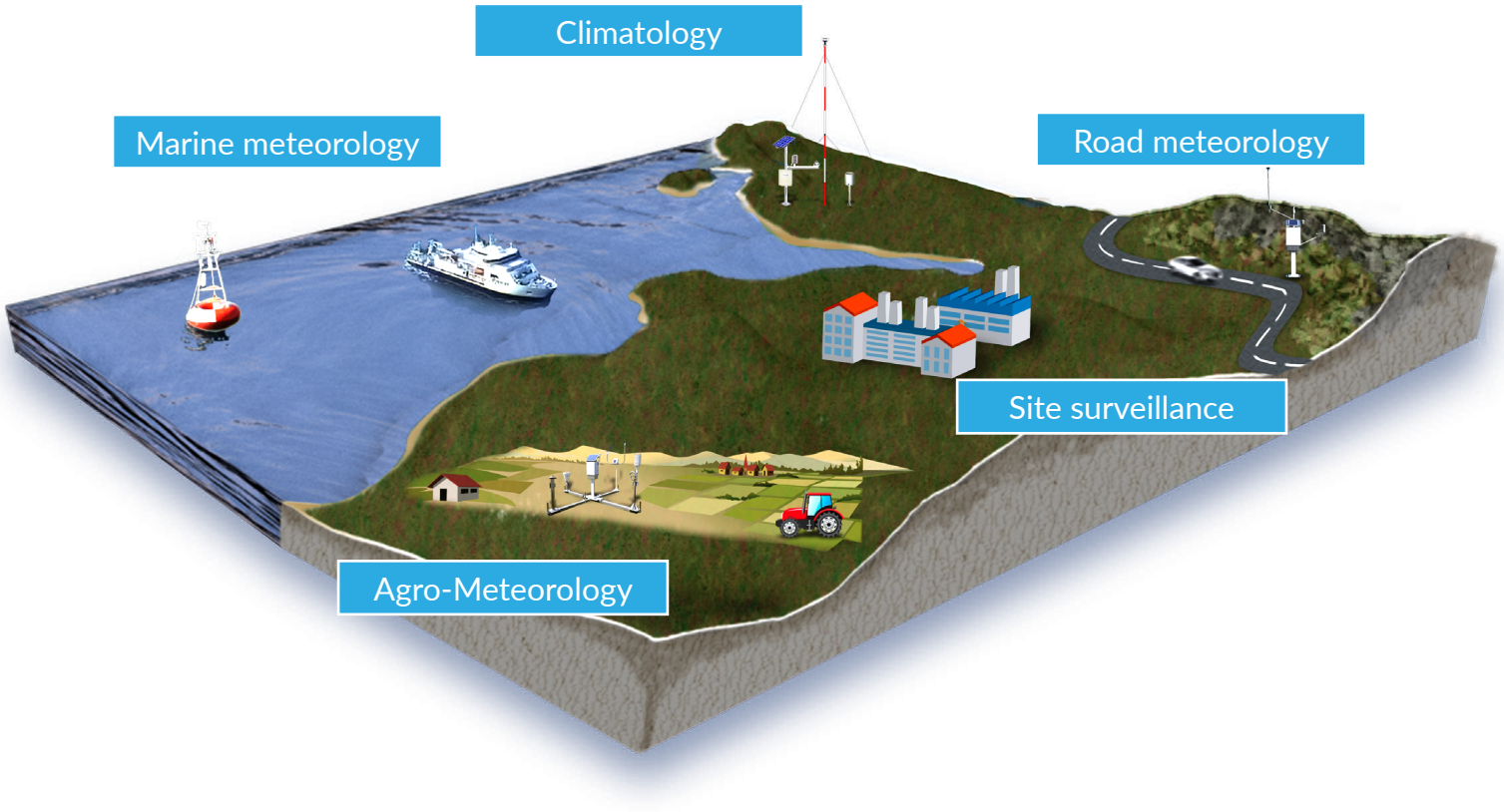
AUTOMATIC WEATHER STATIONS

Surface weather observation

NEPTUNE CATALOGUE

sterela METEO



mercury

- Meteorological observation station

neptune

- Marine meteorological observation station

STERELA meteo

Specialising in acquisition, communication and operating systems, STERELA has been designing and manufacturing weather stations for surface weather observation for more than 15 years.

Reliability and modularity

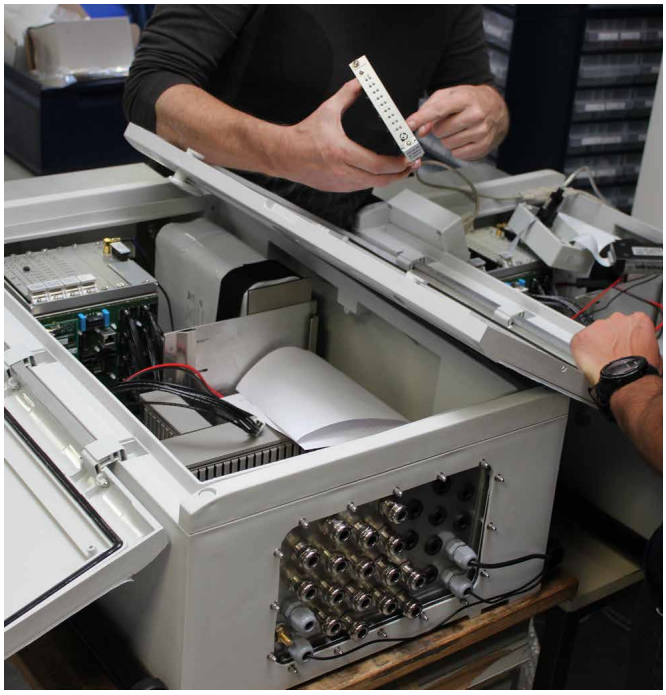
STERELA weather stations stand out first and foremost for their reliability and modularity. Many institutions have repeatedly placed their trust in us over recent years, making their projects reality with our 2 product lines

Automatic weather stations

Expertise, design and execution

Sterela helps you through every phase of your projects, from engineering to execution:

- Engineering
- Technical report
- Steering committee
- Management Plan
- Configuration and performance
- Obsolescence management
- Hot-Mail and Hot-Line
- Preventive and curative maintenance
- Technical support

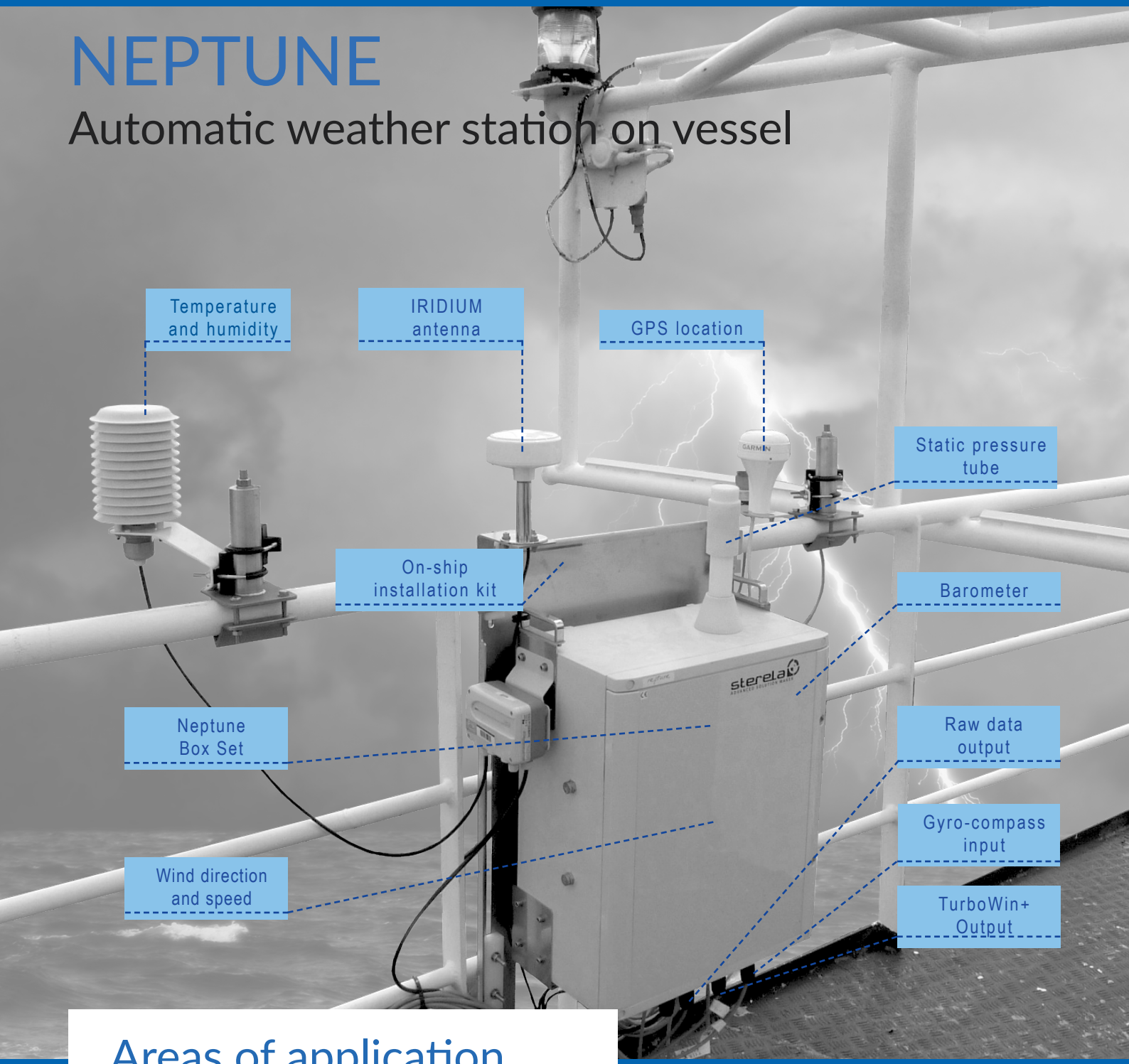


At your side

- Advice and professionalism
- Compliance with regulations
- Execution in line with the state of the art
- Continuing product improvement
- A single contact for your projects
- Technological watch

NEPTUNE

Automatic weather station on vessel



Areas of application

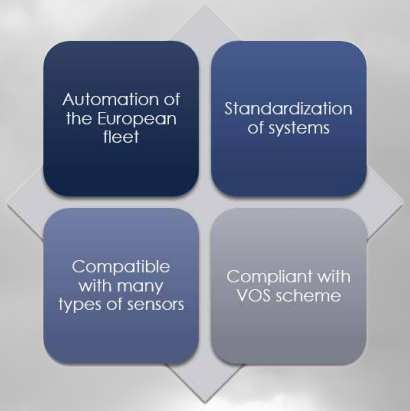
Global VOS programme

(Voluntary Observing Ship)

French National Navy

Research

Sterela offers an automatic weather station for installation on ships designed to acquire and transmit data in harsh environments.



Strengths

- Global coverage (Iridium satellite network)
- Standard FM94 - BUFR message
- Local and remote maintenance software tools
- Reliability and robustness
- Communication with navigation instruments
- Integration of human observations (TurboWin+)
- Marine environment
- IEC 60945:2002 compliant

Developed in partnership

sterela METEO

METEO FRANCE
Toujours un temps d'avance

Deutscher Wetterdienst
Wetter und Klima aus einer Hand
DWD

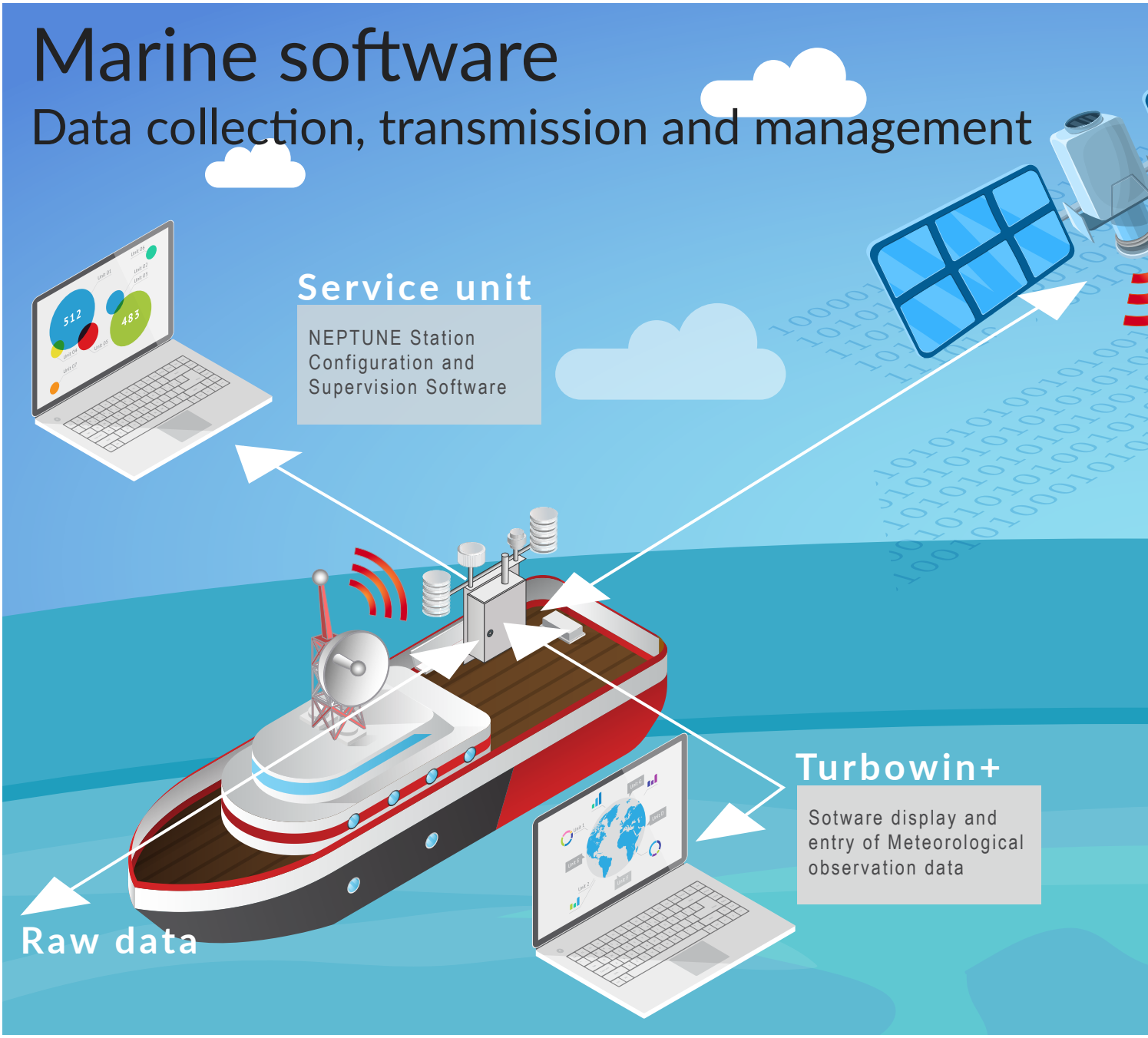
EUMETNET
European Meteorological Services Network

Koninklijk Nederlands Meteorologisch Instituut
Ministerie van Infrastructuur en Milieu

jcomm
Oceanography & Marine Meteorology

Marine software

Data collection, transmission and management



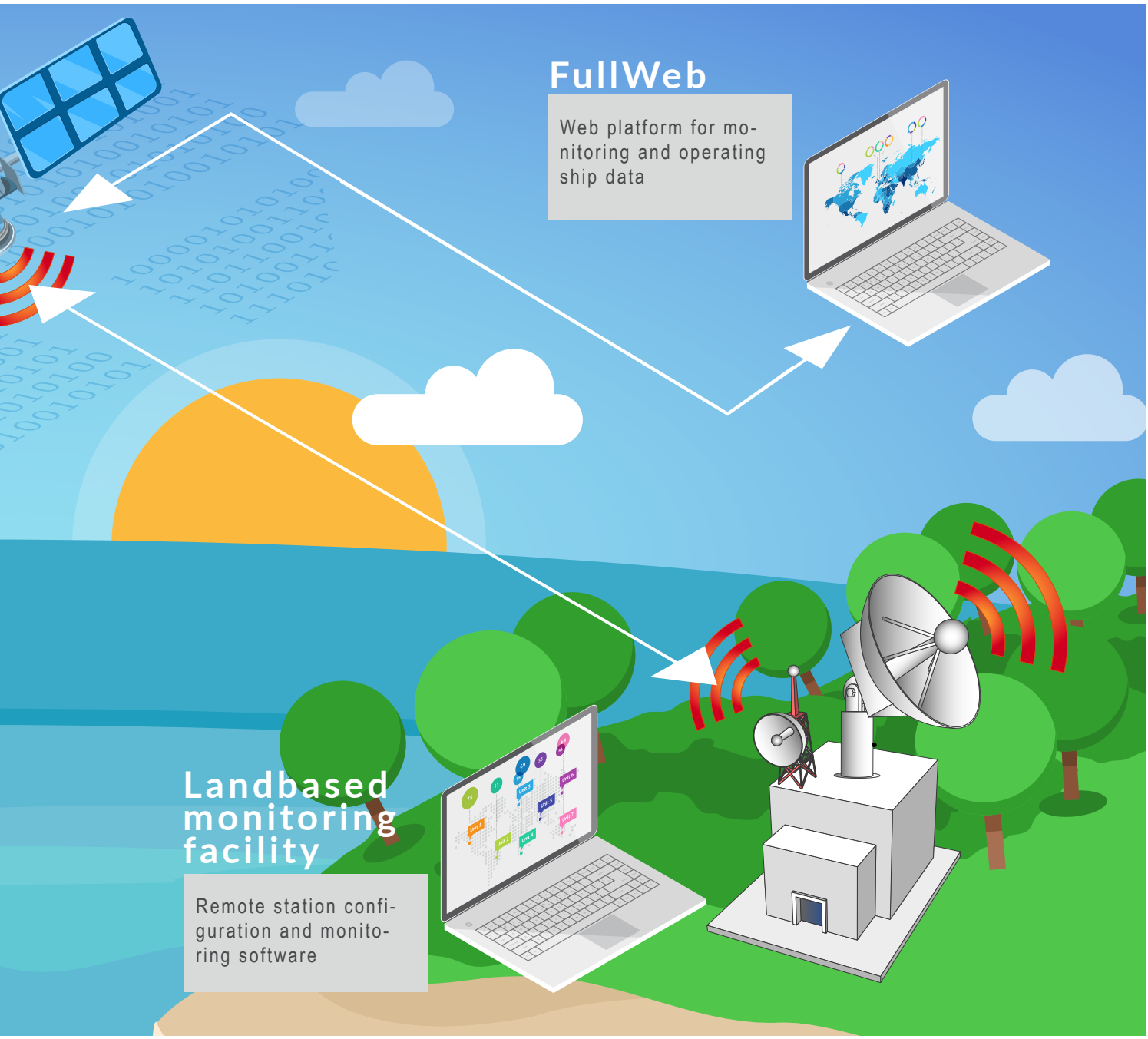
USER INTERFACES

SU : Maintenance Software
(Service Unit)

- Station set-up
- Configuration of data to be sent
- View raw sensor data
- Operating logs
- Memory and version management

LMF : La
Monitori

- Configuration of
  tion
- Station set-up
- Configuration of
- Station logs



...nd-based ...ng Facility

...Iridium communica-

...data to be sent

Turbowin + : On-board operating software

- Real-time data visualisation
- Entry of manual comments
- Over 200 quality controls on data

Full Web : Ground mining platform

- Real-time data and position decoding
- Web mapping interface with display of positions
- Automatic data distribution via FTP or e-mail
- Custom alerts (geo-dependency, sensor value) SMS/email

Main Sensors for NEPTUNE

Sterela AWS

Ultrasonic Wind Sensor

Manufacturer: Gill Instrument
Model: Windsonic

Ultrasonic Wind Sensor

Manufacturer: Vaisala
Model : WMT52

Ultrasonic Wind Sensor

Manufacturer: Thies
Model: 4.382X

Relative humidity of air

Manufacturer: E+E
Model: E+E33

Relative humidity of air

Manufacturer: Vaisala
Model: HMP110

Air temperature

Manufacturer: Guilcor
Model: K5

Barometer

Manufacturer: Vaisala
Model: PTB330

Barometer

Manufacturer: Vaisala
Model: PTB210

Modulus module for PT100

Manufacturer: ADAM
Model: ADAM 4013

Multi-sensors

Manufacturer: Vaisala
Model: WXT530 (P,T,U,W)

Multi-sensors

Manufacturer: Gill Instrument
Model: MetPak-II (P,T,U,W)

Multi-sensors

Manufacturer: Vaisala
Model: PTU300 (P,T,U)

Generic input for sensor

- Air temperature measurement: PT100 4 wire
- Air humidity measurement: 0...1V --> 0...100%
- Sea temperature measurement: PT100 4 wire
- Sea temperature sensor remote module: PT100 4 wires to digital: Adam 4013
- Wind: MESSAGE 0183 COVEA Format

Characteristics ▷

▷ INTERFACE

- 8 sensors
- GPS synchronisation and positioning
- Integrating navigation data
- Integration of human observations
- Static pressure port

▷ BOX

- Dimensions: H 55 x W 46 x D 26cm
- Weight 8 kg (without fixing)
- IP66 IK10
- Material: Polypropylene
- Resistant to saline environment
- Fixing kit with anti-vibration block
- Operating temperature: -35 to +65°C
- Humidity 0 – 100%

▷ COMMUNICATION

- Satellite Iridium
- Bi-directional
- SSL/TLS security, STARTTLS/normal
- Configurable frequency
- Message size: 30 to 51 bytes
- Message FM94-BUFR
- Triggering of transmissions on events: Area, hours, port mode

▷ POWER SUPPLY

- 18-30 Vdc
- Consumption: 50mA
- ON/OFF switch

Compliance ▷

► Corrosion	*EN-IEC-60945 (Exposed)*	Compliant
► Shock Half-sine shock	*A =150m/s² (=15g), D=11ms (x 3 x axis x direction)*	Class A
► Vibration	*EN-IEC-60945 (Exposed)*	Compliant
► Conducted emissions	*EN-IEC-60945 (Exposed)*	Compliant
► Radiated emissions	*EN-IEC-60945 (Exposed)*	Compliant
► Conducting radio frequency interference immunity	*EN-IEC-60945 (Exposed)*	Class A
► Radiated interference immunity	*EN-IEC-60945 (Exposed)*	Class A
► Fast transient immunity	*EN-IEC-60945 (Exposed)*	Class B
► Power supply failure	*EN-IEC-60945 (Exposed)*	Class C
► Electrostatic discharge immunity	*EN-IEC-60945 (Exposed)*	Class B

Complies with IEC Directive 60945: 2002

Requirements for Radiocommunications and Maritime Navigation Equipment and Systems

WORLD METEOROLOGICAL ORGANIZATION

EUMETNET

EUCAWS projet (European Common Automatic Weather Station)

The NEPTUNE station was developed as part of an E-SURFMAR project with the aim of equipping the ships participating in the VOS programme. The objectives are: automation of the European fleet, standardisation of systems, compatibility with many types of sensors and compliance with the VOS scheme.

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neptune

Ship Observations Team

EUMETNET
EUROPEAN METEOROLOGICAL SERVICES NETWORK

VOS Voluntary Observing Ship Scheme

Koninklijk Nederlands Meteorologisch Instituut
Ministerie van Infrastructuur en Milieu

Deutscher Wetterdienst
Wetter und Klima aus einer Hand
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METEO FRANCE
Toujours un temps d'avance

EIG EUMETNET is a grouping of 31 European National Meteorological Services that provides a framework to organise co-operative programmes between its members in the various fields of basic meteorological activities.

These activities include observing systems, data processing, basic forecasting products, research and development and training

EUCAWS PROGRAMME

Objectives

- *Coordinate, optimize and gradually integrate European activities for surface marine observations in support of the digital weather forecast and climate monitoring.*
- *Equip conventional NEPTUNE Marine Meteorological Station (S-AWS) vessels.*
- *Facilitate exchanges of best practices and technical information between participants.*
- *Managing the development and implementation of a common European NEPTUNE station (EUCAWS), purchased according to common specifications.*
- *Monitor the availability, timeliness and quality of the data produced by each service component and take appropriate action to correct the problems.*
- *Work closely with several teams of international organisations involved in surface maritime observations and Ship Observations Team (SOT).*

Our know-how

Research
Industrialisation and production
Installation and training
After-sales and maintenance

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