

Portugal's Naval Innovation: Mindset, Capabilities and Science

25th June 2025 | Brussels | LtCdr Tiago Monteiro | Head of Transformation – Portuguese Navy



- The mindset transformation
- The Portuguese Navy innovation ecosystem
- Disruptive Approach – NRP D. João II (multipurpose platform)
- Conclusions



Technological

Technology must support command

Rapid prototyping and testing

Openness to civilian tech

Designing for simplicity and interoperability

Relevant dimensions of mindset transformation

An agile, tech-informed, multi-domain-oriented doctrine

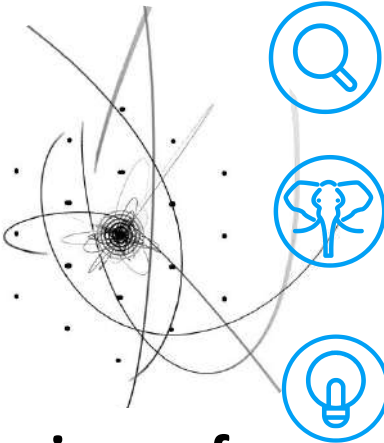
Leadership open to experimentation

People with hybrid profiles

Facilities and innovation-driven mindset

DOTMLPF-I

The mindset transformation



DATA
Data is the new fuel of operations

AI
Accelerates decisions, detects patterns, predicts failures, and optimises actions in real time.

“X” G
It enables fast, integrated links between sensors and decision systems.

Information

Processing power
Talent
Organisation

Platform-centric to effect-centric

Teaming (manned & unmanned)

New operational concepts

Adjustments in C2 structures and systems

Operational

Explore and Research

Naval Academy – **CINAVLAB**
(Robotics Laboratory)



Shaping the mindset of
future Naval Officers

Academia

Develop, Prototype, and Experiment

CEOV – Innovation and
Operational Experimentation
Cell for Unmanned Vehicles



IH SENSORTECH – Centre for
the development of Ocean
Observation Technologies



CEOM – Navy Operational
Experimentation Centre



Research Centres, Industry and Companies

Operate

COMAR – Maritime Operations
Centre



X31– Unmanned Vehicles
Operational Unit

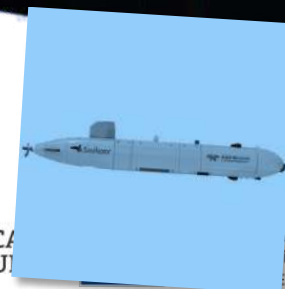


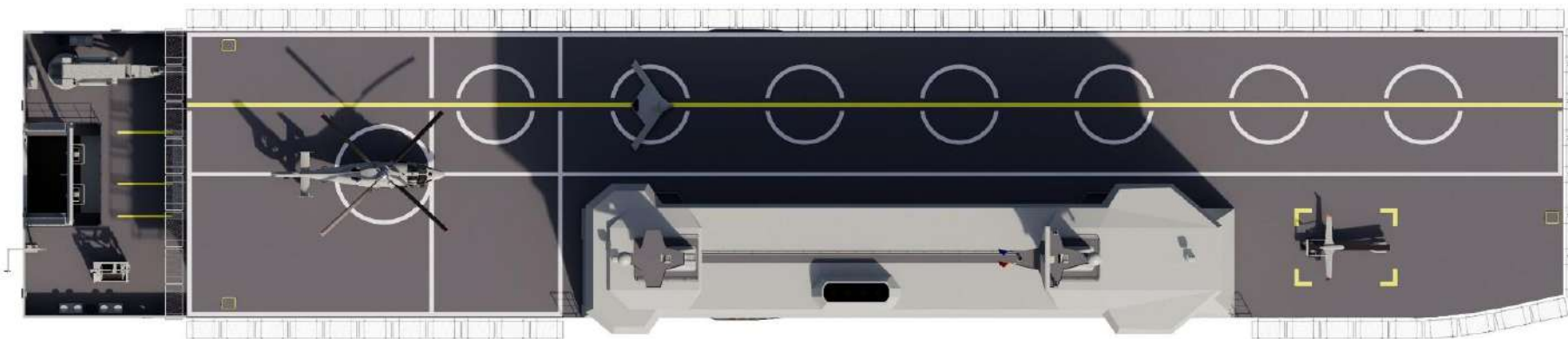
Allies and Partners



Multi-purpose Support Ship

NRP D. JOÃO II





Collection, processing and transmission of data about the Portuguese Sea



Co-operation with civil security authorities



Sovereignty Missions in the Portuguese Sea

S

Scientific operations, seabed prospecting

Support for economic, scientific and cultural development

SECU

RITY

Disaster relief

Search and rescue at sea

SOVERE

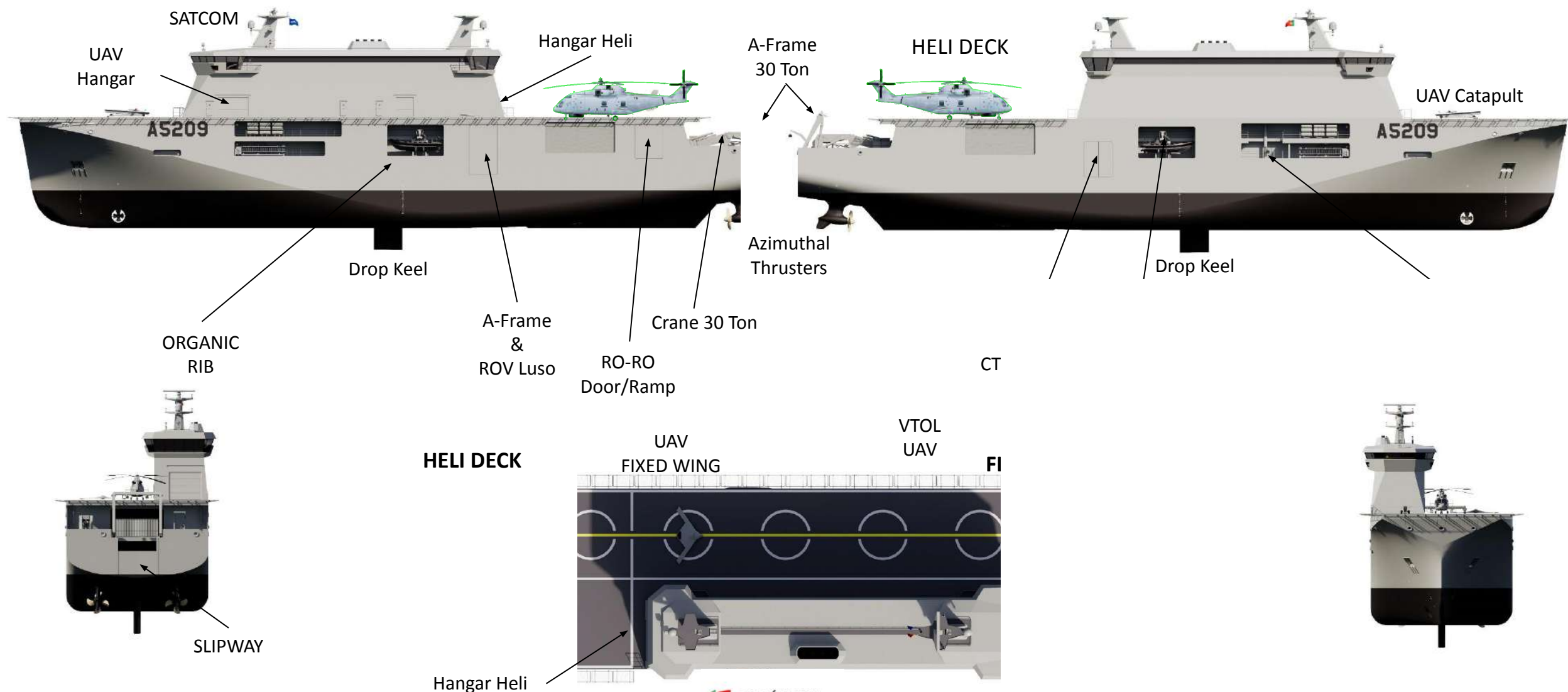
IGNTY

Surveillance, inspections and supervision in the Portuguese Sea

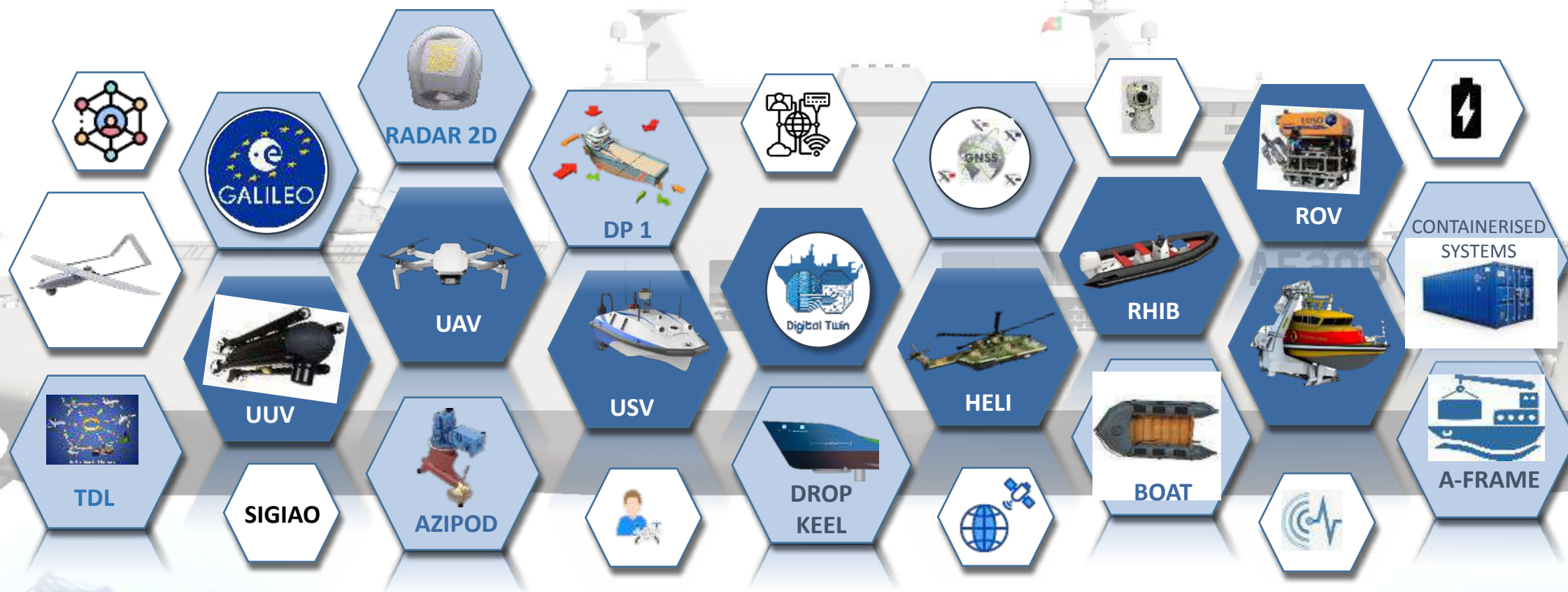
Evacuation of nationals from dangerous areas

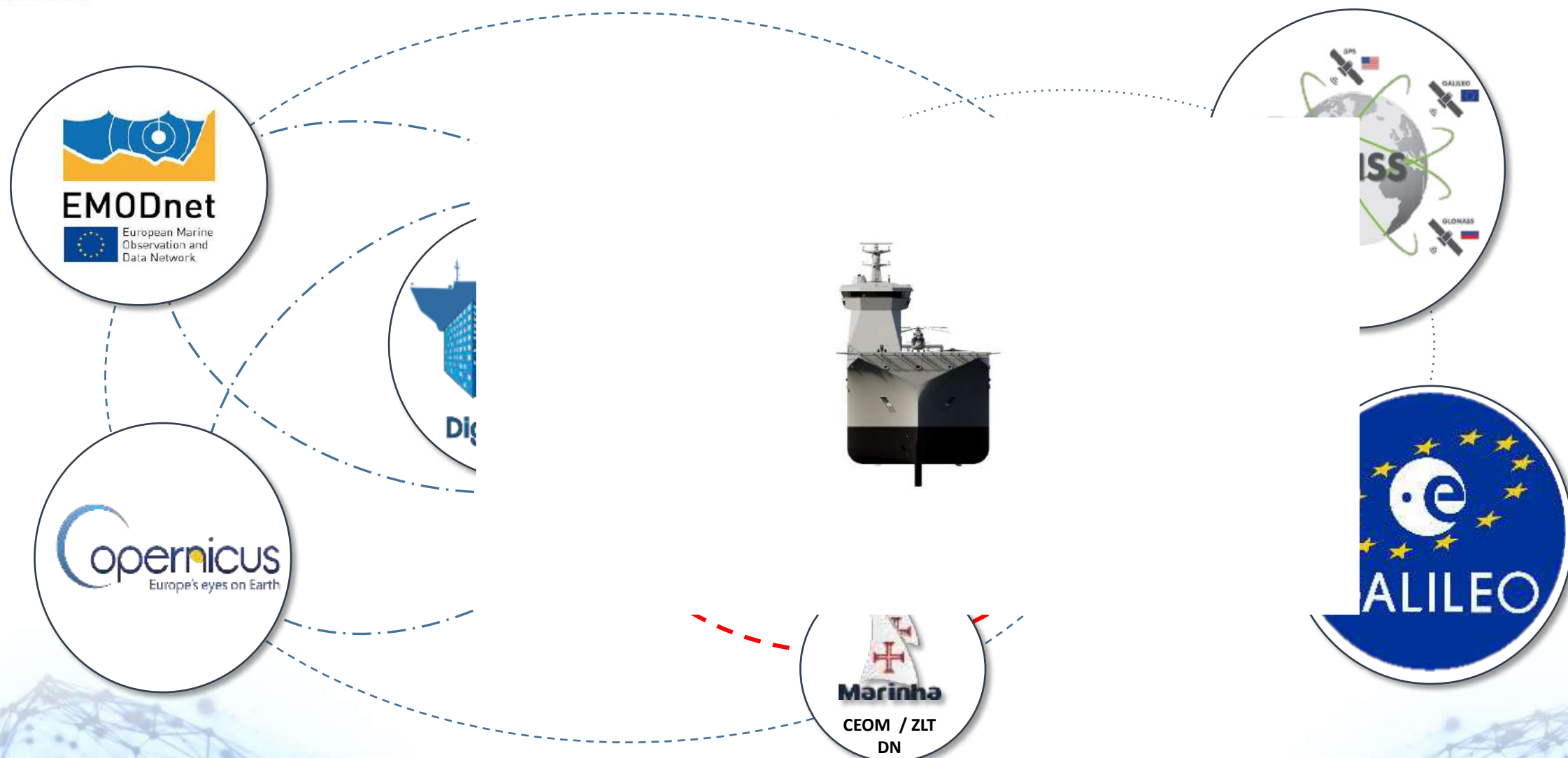
Multi-Purpose Support Ship

The Ship



Ship's Integrated Capabilities





- The Portuguese Navy is embracing a transformation of mindset integrating innovation not only in platforms, but in **doctrine, culture** and **partnerships**.
- Our innovation ecosystem connects academia, industry and operators turning ideas into tested, deployable solutions.
- The NRP D. João II is not a drone carrier: it is a scientific support ship, modular, interoperable and designed for civil-military collaboration in Europe's maritime spaces.
- Portugal is proving that strategic impact does not require scale

Innovation shapes technology but mindset shapes the future

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