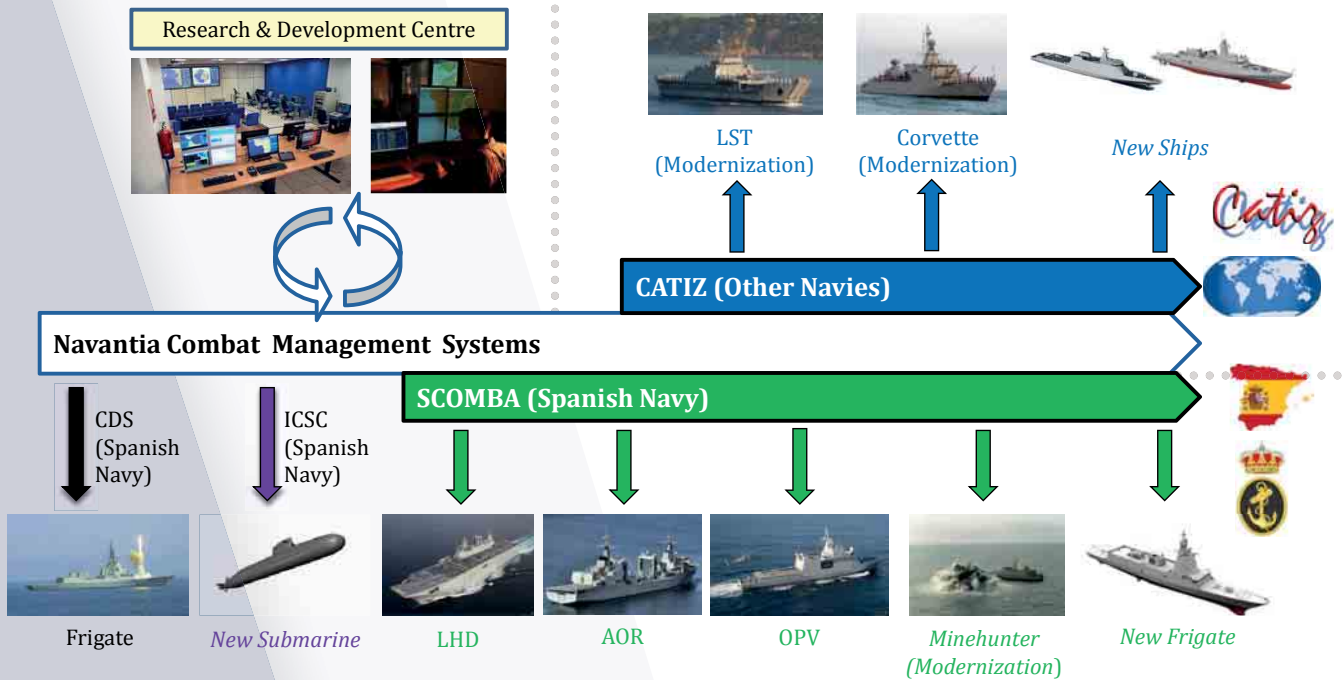




Navantia

# COMBAT MANAGEMENT SYSTEMS

# EVOLUTION



# CAPABILITIES

NAVANTIA's CATIZ Combat Management System integrates Sensors and Weapons to provide increased capability to monitor Air, Subsurface, Surface (including Asymmetric Warfare and Naval Gun Fire Support missions) and Electronic Warfare environments, and to engage weapons for neutralizing or destroying the targets in support of the assigned ship missions

$$\text{Catiz} = \text{COMMON CORE} + \text{ADDITIONAL MODULAR CAPABILITIES}$$

- Readiness control and readiness assessment
- Tactical information management
- Sensors management
- Doctrine management
- Navigation aids and tactical navigation
- Multi-mission consoles
- Display support
- Mission evaluation

**MARITIME SITUATIONAL AWARENESS**

**INTEROPERABILITY WITH ALLIED FORCES**

- Electronic Warfare Management
- Identification and classification
- Threat evaluation, weapon selection & weapon control
- Tactical decision aids
- Air control
- Data recording
- Integrated on-board training

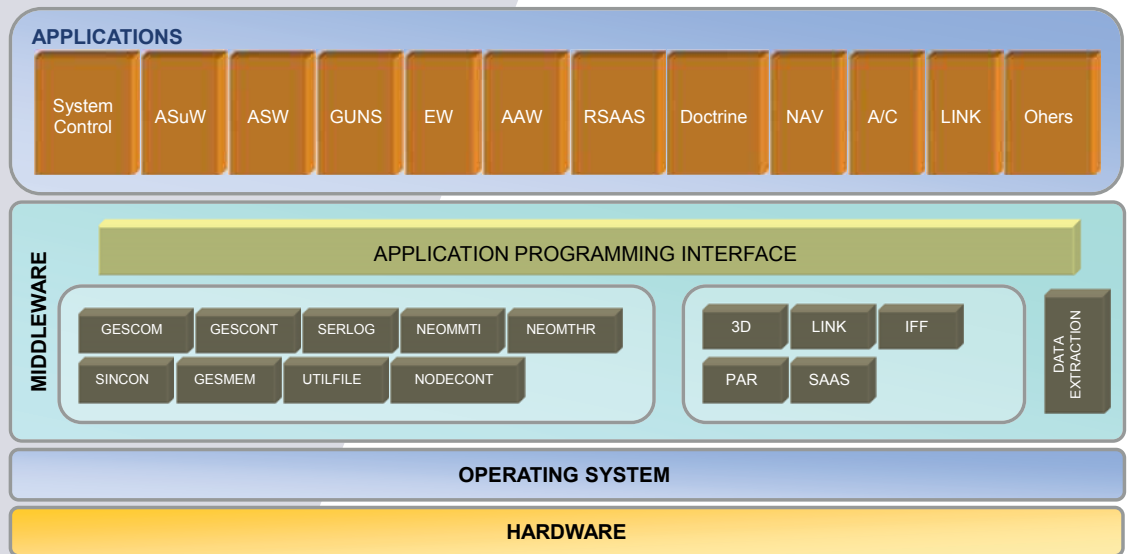
# HARDWARE

- Process Servers
- Local Area Network
- Tactical Multifunction Consoles
- Large Screen Displays
- Video Distribution System
- Monitoring and recording station
- COTS

# SOFTWARE

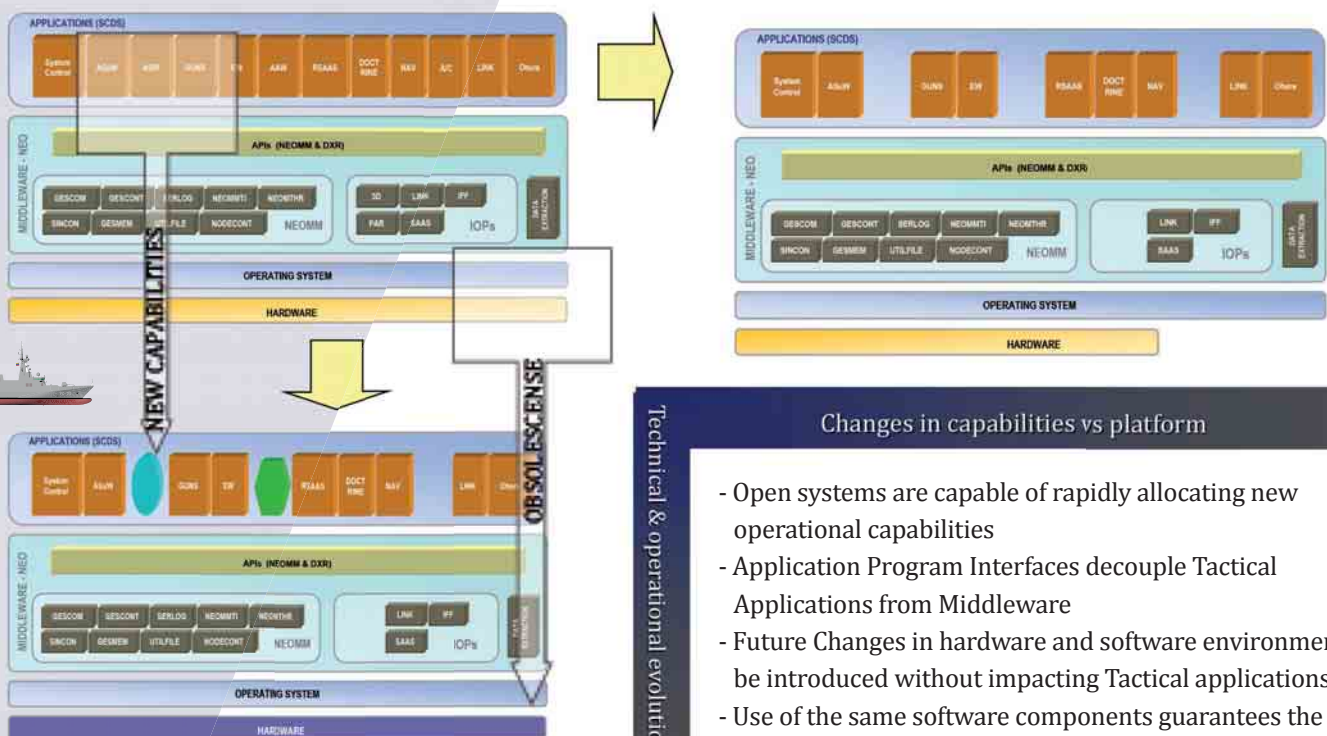
- Tactical Process CCTS (Command & Control Tactical System)
- Graphics Process CCGS (Command & Control Graphical System)
- Middleware NEO-CATIZ software infrastructure
- Integrated On Board Training

*CATIZ middleware provides standard APIs to applications*



# SCALABLE

Reusability. The same software components are used in many Systems  
Software components are switched on/off depending on the required functional capabilities



- Open systems are capable of rapidly allocating new operational capabilities
- Application Program Interfaces decouple Tactical Applications from Middleware
- Future Changes in hardware and software environment will be introduced without impacting Tactical applications
- Use of the same software components guarantees the System Interoperability



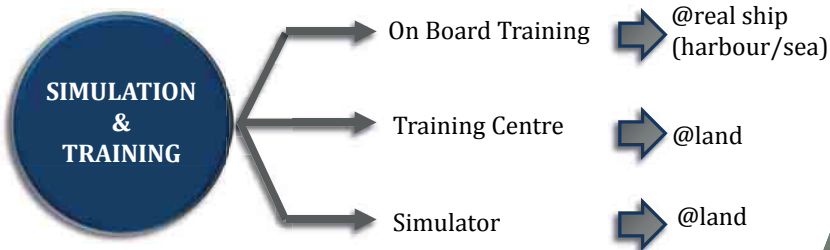
# FEATURES AND MISSIONS

CATIZ IS  
CUSTOMIZABLE  
TO THE  
CLIENT'S NEEDS

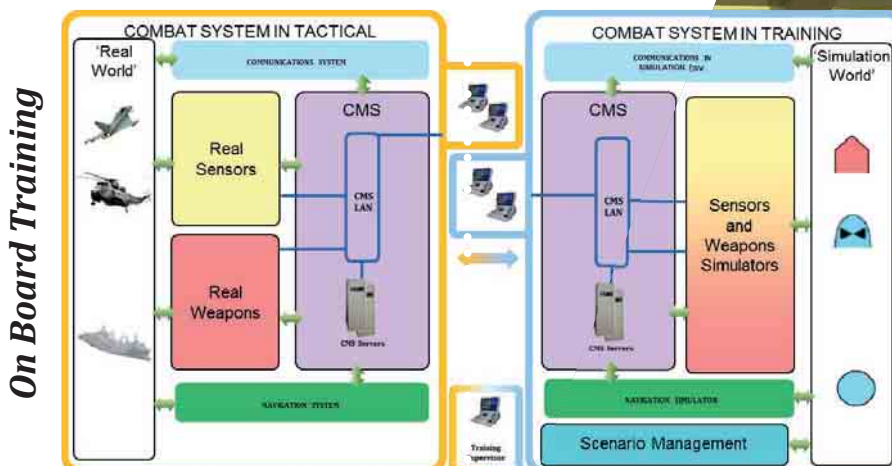
- **Adaptable:** Open architecture that allows re-configuration to meet customer requirements
- **Flexible:** Distributed architecture simplifies integration of new sensors, weapons and technologies
- **Modular:** Able to meet the requirements for a wide range of vessels and modernizations
- **Standardization:** Using open Standards technologies
- **Scalable:** Capacity to be enhanced and incorporate new capabilities from an initial basic proven design.
- **Cost-effective:** Design features allow varying levels of complexity and cost.
- **COTS** with mechanical enclosures, allowing operation within required environmental conditions



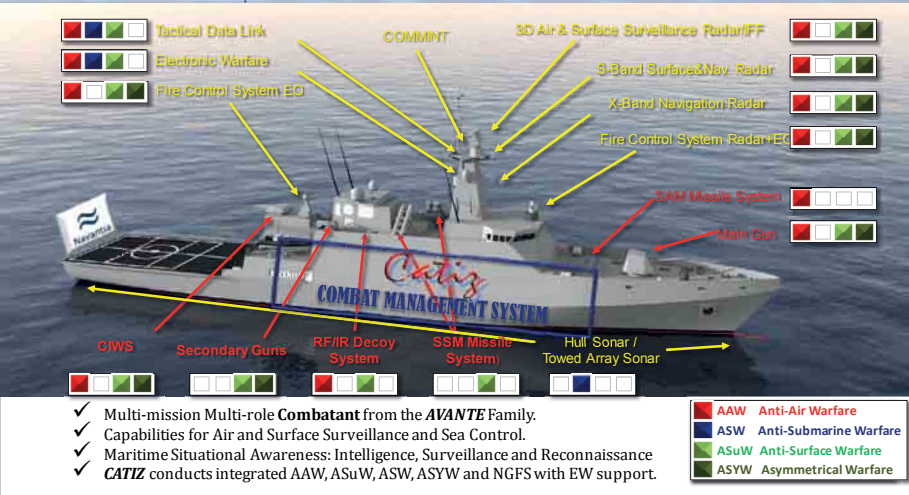
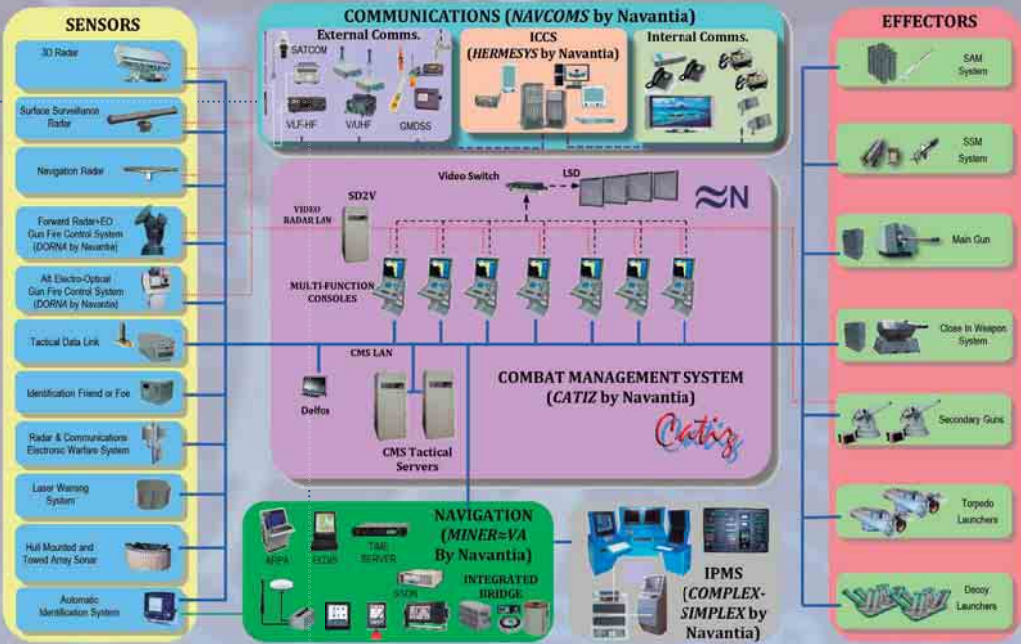
## TRAINING



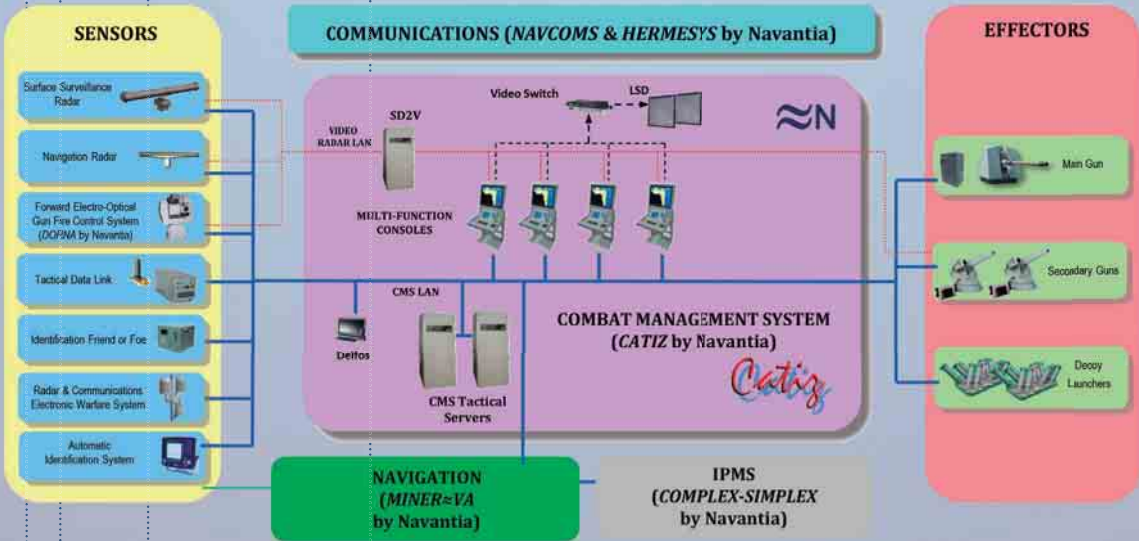
- Readiness
- Tactics
- System manning
- Analysis



# COMBATANT EXAMPLE










# PATROL VESSEL EXAMPLE





# ABOUT NAVANTIA

Navantia is a Spanish Government Owned Company and is an Industrial Group with the following Business Lines

-  Naval shipbuilding and design.
-  **Systems.** -----
-  Ship repairs and conversions.
-  Diesel engines, gearboxes and power generation.
-  Through Life Support.
-  Transfer of Technology solutions
-  Offshore merchants and wind energy

Command and Control systems  
Integrated Platform Management Systems  
Surveillance systems  
Gun Fire Control Systems  
Naval guns  
Communications systems  
Navigation systems  
Simulators and training

More than  
20  
countries...

...with  
offices  
worldwide

 **Navantia**

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