



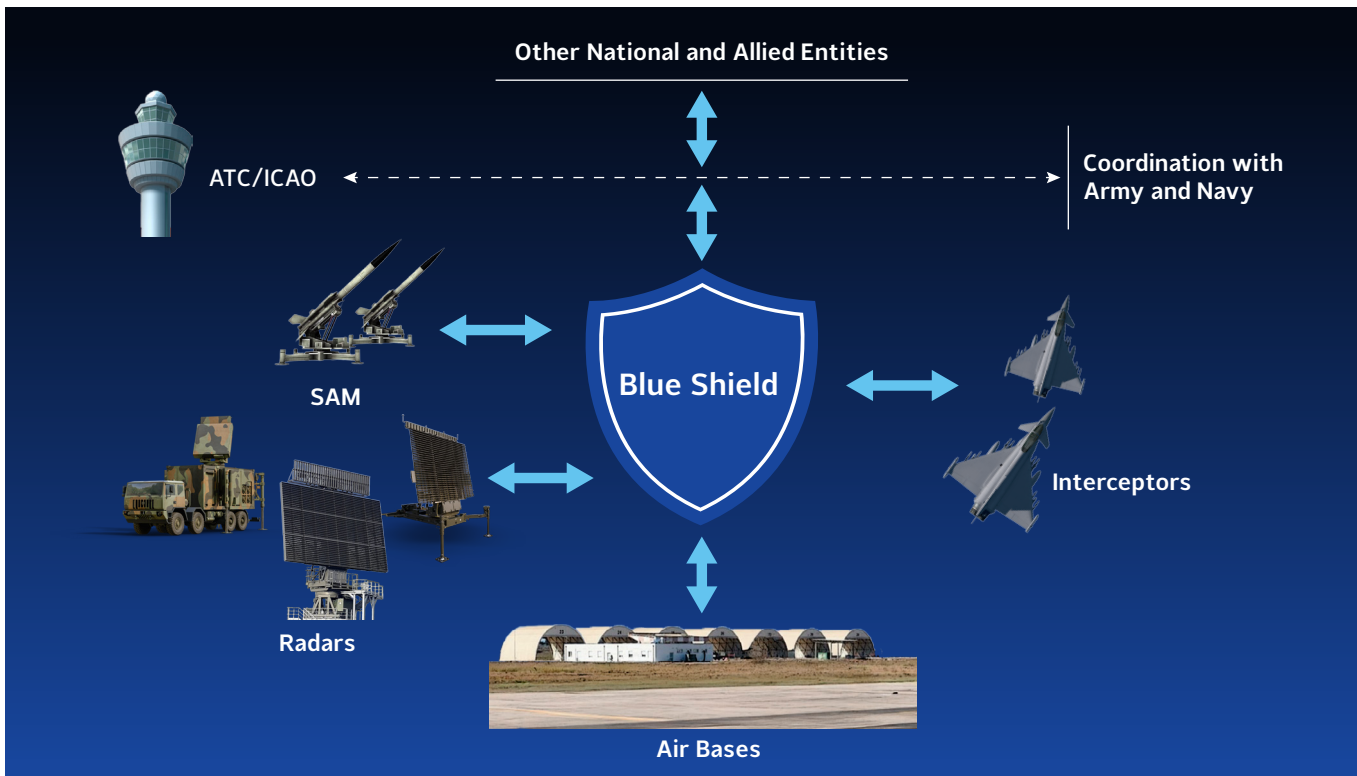
LEONARDO ELECTRONICS

Blue Shield

Advanced C2 solution for
Air Defence



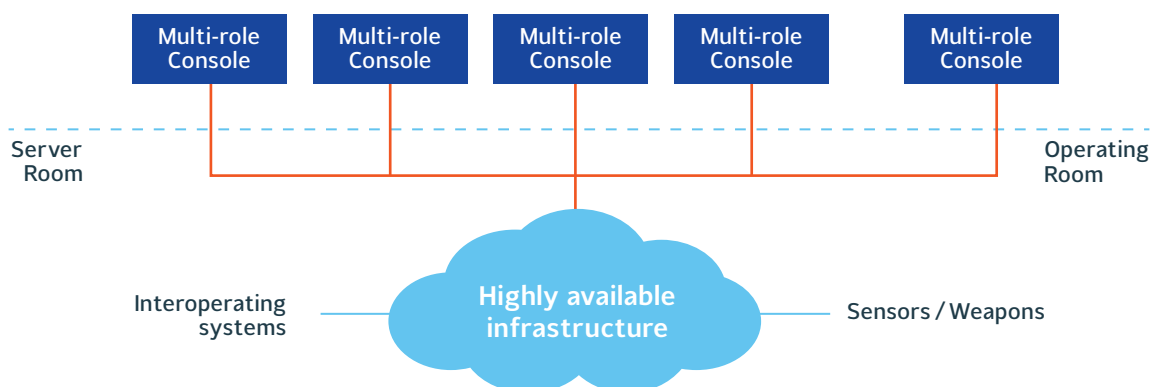
BLUE SHIELD is Leonardo's new advanced Command and Control (C2) system for Air Defence, designed to deliver real-time situational awareness and enable rapidly informed decision-making and self-protection within the modern complex geostrategic environment. Thanks to a modular, flexible, scalable, interoperable, and configurable architecture, BLUE SHIELD solution can be seamlessly integrated with existing infrastructures across typical air-defence scenarios.

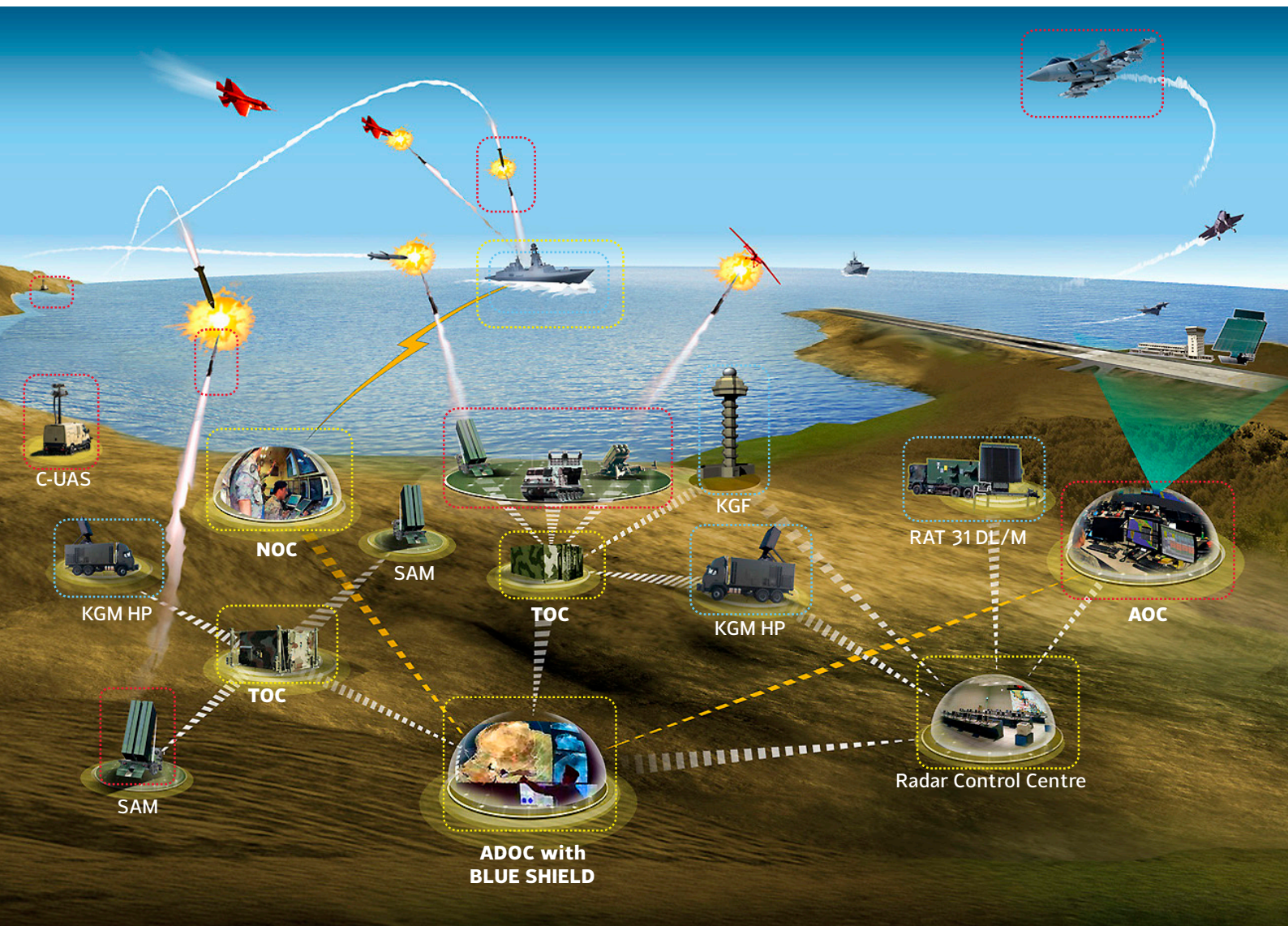


Interoperability through REAP (link 16, Link 22, VMF)

BLUE SHIELD is based on Hyperconverged infrastructure (HCI), a software-defined IT architecture that virtualises all elements of conventional "hardware-defined" systems:

- **Total virtualised system architecture** for computing nodes, with remote video signals transmitted from the server room to the operating room. This makes the system highly versatile and easy to install.
- Scalable Solution, Deployable on a Data Processing Centre (DPC) and/or Cloud, resulting in a **very quiet operating room**.
- A human-machine interface designed to provide a highly configurable system that is **simple to use and quick to learn**.
- Hardware architecture and an intuitive user interface that together form the basis of a **cutting-edge system**.

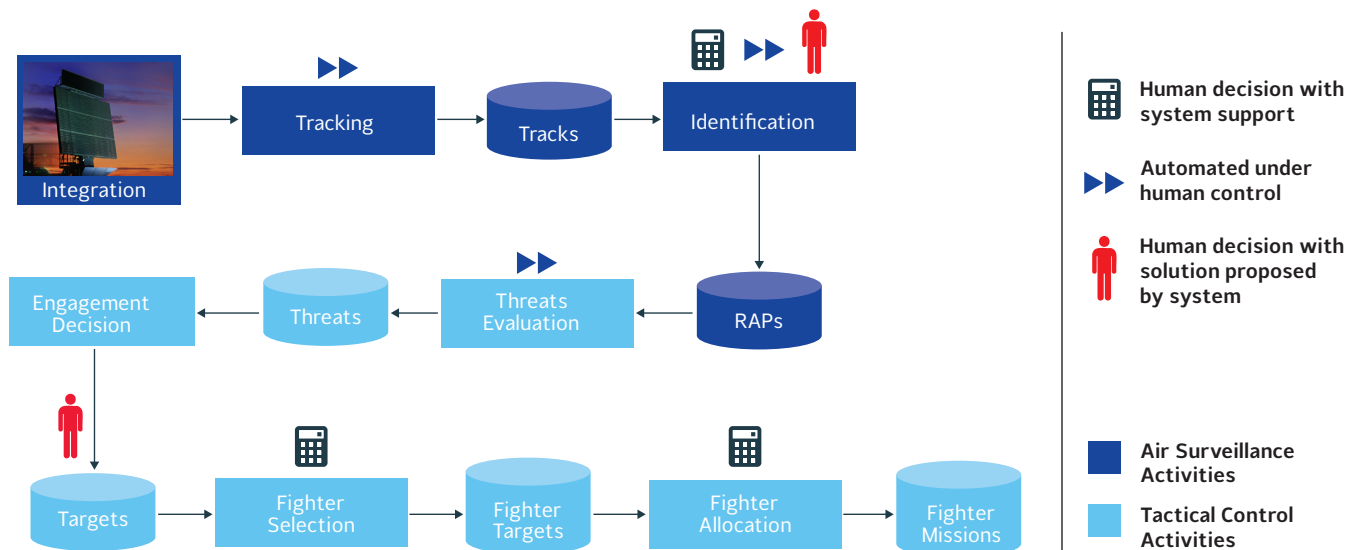




C2 Centres
 → Air Defence
 → Air Operations
 → Naval Operations

Radar Network
 → Early Warning
 → Air Surveillance
 → Surface Surveillance
 → Fire Control
 → Weather radars
 → MPA

Weapon Network
 → BMD SAM
 → MRAD SAM
 → SHORAD SAM
 → VSHORAD SAM
 → Naval SAM
 → C-UAS



KEY BENEFITS

- **CONSISTENT FUNCTIONALITY AND HUMAN-MACHINE INTERFACE (HMI)** across all Air Defence System facilities, ensuring a seamless user experience and unified operations.
- **HIGH LEVELS OF AVAILABILITY, INTEROPERABILITY, AND RESILIENCE** to guarantee mission continuity in all operational scenarios.
- **REDUCED OPERATOR TRAINING TIME** through standardised interfaces and harmonised procedures.
- **OPTIMISED WORKFORCE MANAGEMENT ACROSS MULTIPLE CONTROL CENTRES**, enhancing efficiency and resource allocation.
- **SIGNIFICANT REDUCTIONS IN CAPEX, OPEX, AND TOTAL COST OF OWNERSHIP** through streamlined system design and lifecycle optimisation.
- **ENHANCED CIVIL-MILITARY COORDINATION**, improving flight safety and efficiency while optimising shared use of airspace by civil and military operations.
- **PROGRESSIVE TRANSITION TOWARDS A PLATFORM-AS-A-SERVICE (PAAS) MODEL** by decoupling service delivery from local infrastructure, increasing automation, connectivity, and data-distribution capabilities; moving from a project-based to a service-oriented deployment (including Private Secure Cloud solutions).
- **IMPROVED TRAFFIC FLOW MANAGEMENT**, leveraging advanced tools to assess and plan optimal geographical sectorisation and enhance overall air-traffic efficiency.
- **COMPREHENSIVE SYSTEM HARDENING AND CYBERSECURITY MEASURES**—including cyber analysis and implementation planning—to minimise risks of downtime from cyberattacks, DDoS, malware, or unauthorised access.

KEY FEATURES

The typical system mission is to provide Air Defence functions within the Area of Responsibility (AOR) assigned to the C2 centre, ensuring:

- Monitoring and control of all aerial activities within the assigned airspace;
- Recognised Air Picture (RAP) transmission to a High-Level Operational Centre (SOC/ADOC);
- Protection of the assigned airspace from intrusion flights, potential conflicts, emergencies, and other threats;
- Threat interception through fighter coordination.

TECHNICAL INFORMATION

Leonardo BLUE SHIELD C2 is intuitive and has been designed in collaboration with operators to ensure the typical operational activity of Air Defence missions, presenting accurate, clear information to enable authorities to take appropriate action to meet the mission requirements:

- **Air Surveillance:** Multi-Radar Tracking (MRT) and Identification (IDE)
- **Conflict Alert:** Minimum Safe Altitude Warning (MSAW), Short-Term Conflict Alert (STCA), Area Proximity Warning (APW)
- **Tactical control:** threat assessment, target allocation, threat trials missions, mission control, and assessment
- **Support functions:** Data recording, playback and analysis; Simulation for training.

For more information:
infomarketing@leonardo.com

Leonardo Electronics
Via Tiburtina, Km 12,400 - 00131 Rome - Italy
T +39 06 41501, F +39 06 4131133



[leonardo.com](https://www.leonardo.com)

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