

CYBER & SECURITY SOLUTIONS

DEFENCE4FUTURE SOLUTIONS



Cyber has become a contested operational domain, where digital actions can impact the physical world, mission-critical infrastructures and operational continuity. These activities are often part of hybrid strategies carried out by state and non-state actors, exploiting the difficulty of attribution and the interconnection between military networks, civilian infrastructures and private operators. As a result, modern Defence extends beyond traditional domains to include cyberspace and space as permanently contested environments, where resilience, continuity of operations and control of digital capabilities are essential.

COMPLETE SOLUTIONS

Leonardo supports the increasing need of multidomain Defense capabilities to face cyber-physical risk acting as a:

- **technology provider**, designing and developing Defence-grade platforms, systems and solutions that contribute to national and supranational digital sovereignty
- **system integrator**, orchestrating national and international partners contributing to Defence programs within complex and federated operational environments.

Leonardo provides a structured mission-oriented approach to security aimed at improving Defense capabilities across all domains. According to this paradigm, the cyber domain provides tools, skills and intelligence capabilities needed not only to conduct cyber defense, but also to ensure mission continuity in the other domains.

Advanced Joint Operations Centers are essential for integrating information from cyber and physical domains, operational procedures, decision-support processes, and secure communications. By leveraging advanced technologies, they provide superior situational awareness and enable timely, informed decision-making in complex and contested environments.

In this multidomain military environment, a defense cloud represents a critical operational enabler. It ensures secure, resilient and real-time data integration across land, sea, air, space, and cyberspace, supporting information superiority. By connecting sensors, platforms, and command-and-control systems, the cloud accelerates decision-making, enhances interoperability among forces and allies, and strengthens resilience, acting as the digital backbone of multidomain operations.

BENEFITS

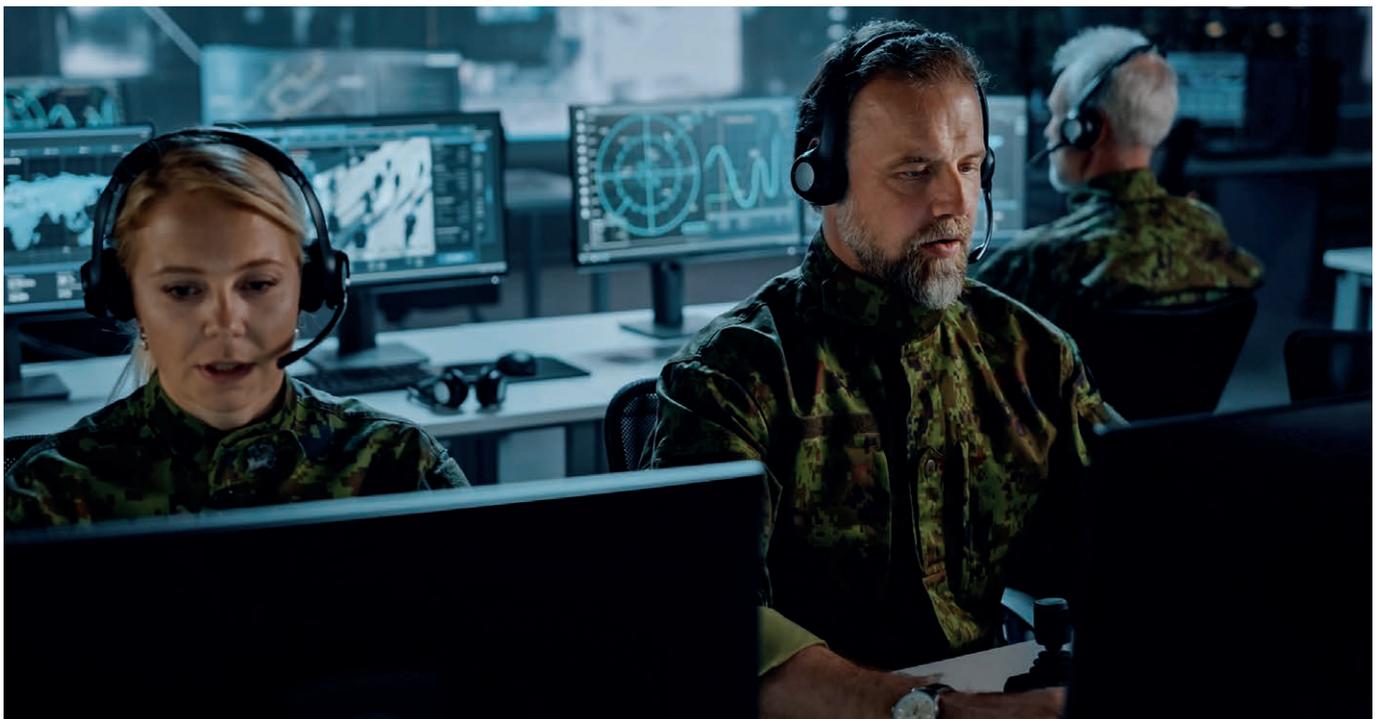
- Continuous strengthening of the cyber resilience levels of Defense infrastructures and mission-critical assets, through innovative models and tools applied also across operational environments and the Defense supply chain.
- Reduction of cyber-physical risks through comprehensive, multi-domain situational awareness supporting operational decision-making.
- Availability of actionable and trusted information to enable timely prevention, response and decision-support actions.
- Timely execution of cyber response and containment actions including remediation activities, malware analysis and local management of critical operational data.
- Enhancement of cyber defense and cyber operations skills through advanced modelling and simulation tools enabling realistic training environments and digital twins.



SECURE DIGITAL: GLOBAL MONITORING & SECURITY

The security of barracks, military bases, and operational headquarters is of paramount importance, as these facilities represent critical nodes for command, control, and force readiness. Ensuring their protection requires continuous monitoring and the ability to rapidly detect and respond to potential threats. Artificial intelligence applied to video analytics significantly enhances early warning capabilities by enabling the automated detection of anomalous behaviors, intrusions, and suspicious activities in real time. At the same time, AI-driven massive data analytics supports military operations and asset monitoring by correlating information from multiple sources, identifying patterns, and generating actionable insights. Together, these capabilities strengthen situational awareness, improve force protection, and enable more proactive and effective defense operations.

<p>genesiX</p>	<p>genesiX is the new Leonardo web platform which in the different operational domains exploits available data and systems to generate information and provide knowledge and decision-making superiority”.</p> <ul style="list-style-type: none"> → Collection of information from structured (data bases, archives) and not structured (video, sensors, media) data sources. → Data processing, correlation and analysis with the support of AI, dashboard and context specific indicators. → Geolocation of all information on multilayer map (digital twin), events and resources management (safety, operation, maintenance), decision support through procedural workflows → Coordination of field operations with mobile app and comms (MC_linX).
<p>Forge2Know</p>	<p>Forge2Know is a Big Data analytics platform designed to ingest, store and analyze both structured and unstructured data, turning them into actionable insights. It provides advanced AI/ML, governance and real-time processing features, scalable to large amount of data to support data-driven decision-making.</p>



Leonardo security platforms are designed to provide a common operational picture for Command & Control, security management, situation awareness and resilience, creating a safety and security to manage security of barracks, military bases, operational headquarters, plants and critical areas to monitor and control.

<p>SC2</p>	<p>SC2 is a very flexible, scalable and reliable PSIM (Physical Security Information Management) solution to manage security with a high level of configurability and the possibility to create a federate architecture connecting different sites. The solution allows complete situational awareness with all info, resources and alarms, actionable on a geo-localized map. Different systems of various brands can be included and operations can be also enhanced by AI Video analytics.</p> <p>Dozens of brands for many different security systems are integrated. The solution also provides the possibility to command-and-control drones and robots, body worn camera and voice communication to coordinate on field resources.</p>
<p>Ganimede</p>	<p>Ganimede is Leonardo advanced framework for managing AI-based algorithms for analysis of audio/video sources, live or recorded.</p> <p>A single platform with more than 20 algorithms easily configurable and applicable to already existing multi-brand video sources. Possibility to apply multiple algorithms on the same streaming.</p> <p>Implementation and training of algorithms in Leonardo labs specialized in AI, scalability for projects up to 10,000 cameras with 20 different algorithms.</p> <p>Natively integrated in Leonardo platforms, Ganimede provides interfaces for integration in third party systems.</p>



A defense and combat cloud is a secure, distributed digital infrastructure designed to support military operations across all domains.

It enables real-time data collection, fusion, and dissemination from sensors, platforms, and command-and-control systems. Built with high resilience and cyber-hardening, it ensures continuity of operations in contested environments. The architecture supports interoperability, scalability, and rapid deployment of mission applications. By leveraging AI and advanced analytics, it enhances decision superiority and operational effectiveness.

Secure Cloud

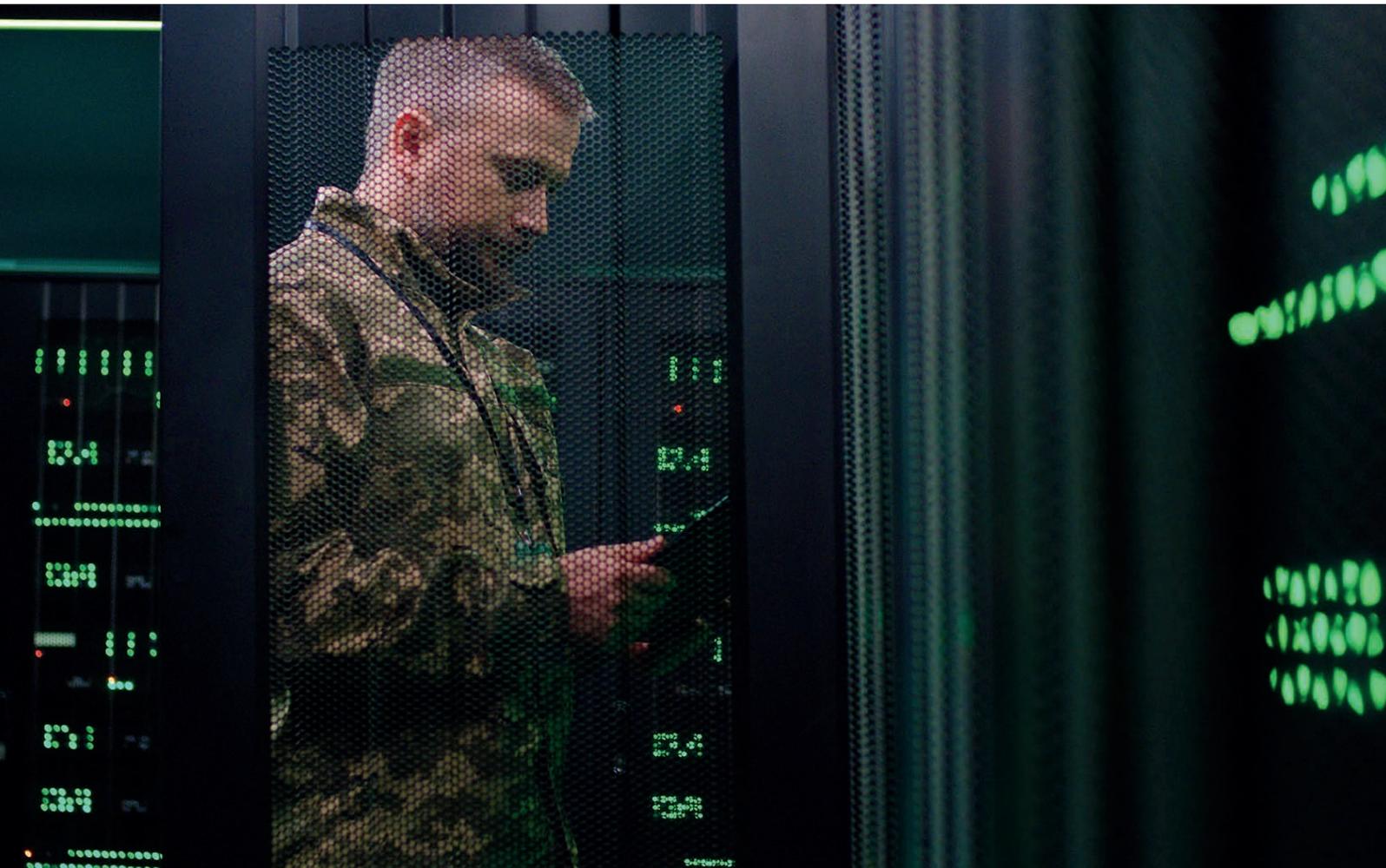
Defence cloud is a cloud-based infrastructure that guarantees distributed access to resources and the interconnection of different Security Domains, with heterogeneous classification levels, for the conduct of operations, including multi-domain operations. It can be composed by

- **High-Classified Region (Private)** It ensures high reliability and operational continuity, leveraging architectural resilience and dedicated disaster recovery services
- **Low-Classified Region (Public\Hybrid)** It is based on Cloud Providers whose security is guaranteed through Data Encryption “at rest”, “in transit” and “in use”
- **High-Ranking Edge Systems** A transportable and deployable solution in operational and tactical contexts

The solution is supported by:

MovinCloud platform to manage governance, orchestration, provisioning, security and monitoring of multi domain and multi-classification cloud

Forge2Know, the Big Data and Analytics platform turning data into strategic insights using AI algorithms to enhance processes and mission critical decisions



CRITICAL COMMUNICATIONS

Critical communications are a key enabler of Defence to operate in military bases, vessels, ports and airports, etc., also during critical situations that require fully integrated information and communication solutions which need be reliable, robust, and designed to operate in mobile environments and during emergency situations.

Leonardo acts both as a technology provider (TETRA, DMR, MCX broadband applications, and hybrid networks) and as a system integrator, delivering turnkey mission-critical communication infrastructures.

<p>MCX (broadband)</p>	<p>MC_linX is the next-generation mission-critical broadband communications platform based on the 3GPP MCX standard, designed to support secure, real-time voice, data and video services for safety and security and critical infrastructure operators.</p> <p>The solution includes a mobile client app, a web-based dispatcher and management tools for seamless push-to-talk, multimedia messaging, location services and situational awareness over LTE/4G/5G networks as well as WiFi.</p>
<p>TETRA / DMR (narrowband)</p>	<p>Adaptanet is a complete modular, scalable suite of TETRA products, satisfying requirements of high performance and secure encrypted communications of a transport network. The solution provides all the essential core equipment and services for voice and data calls, as well as a comprehensive range of supplementary and enhanced services (Core network, Base Stations, terminals and cab radio, Network Management System, dispatcher, and more).</p> <p>ECOS DMR solutions are characterized by a high degree of scalability and flexibility that allows selecting the most suitable configuration for Customer's requirements. The same radio base station can operate in DMR Tier II, with simulcast option and dynamic analogue FM, or DMR Tier III in simulcast or cellular configuration.</p>
<p>Hybrid networks</p>	<p>Leonardo Hybrid Network Platform is a solution designed for long lasting integrated narrowband-broadband infrastructure supporting professional network evolution. The core network provides coordination and control functions for the integrated network and core network services for TETRA, DMR and MCX components.</p>



CYBER RESILIENCE

In the current geopolitical landscape, cyberspace has become a fully contested operational domain, where defensive and offensive cyber actions anticipate, accompany and amplify military operations across all domains. Cyber activities can generate tangible effects on the physical world, impacting mission-critical infrastructures, command chains and operational continuity, while the difficulty of attribution and the convergence between state and non-state actors increase complexity and uncertainty.

In this context, cyber resilience represents a core operational capability, tightly interconnected with the ability to conduct cyber operations. It enables Defence organizations to preserve mission continuity, maintain freedom of maneuver and support decision superiority, while operating in degraded, contested or denied environments. Defensive and active cyber capabilities therefore act in synergy to protect, shape and sustain operations across land, sea, air, space and cyberspace.

Leonardo supports Defence customers through a mission-oriented cyber approach based on advanced platforms, federated operational centers and intelligence-driven capabilities. By integrating continuous monitoring, cyber operations enablement, realistic training environments and proactive threat intelligence, Leonardo strengthens the capacity to prevent, withstand, respond to and recover from complex cyber threats, while supporting the planning and execution of cyber operations throughout the entire operational lifecycle.

<p>Cyber Defence</p>	<p>Global Cybersec Platform is a unified Cyber Defence platform enabling end-to-end control of the cyber domain through an AI multi-agent ecosystem. Global Cybersec Center is Leonardo’s cyber center of excellence, leveraging the Global Cybersec Platform, and operating through a federated model ensuring national sovereignty and decision authority.</p>
<p>Cyber Operations</p>	<p>C3NTRIX is a next-generation Cyber C2 platform enabling and orchestrating the planning, simulation, execution and debriefing of cyber operations. Through AI-amplified analytics, it supports decision-making from defensive actions to active cyber response.</p>
<p>Cyber Backbone</p>	<ul style="list-style-type: none"> → C-THINK is a Cyber Threat Intelligence platform, supporting analyst teams in highly classified environments enabling the prediction and prevention of the most likely threats. → LENS is an innovative and flexible EDR platform based on distributed agents and probes, enabling early detection of anomalies and configurable response and containment actions.
<p>Zero Trust</p>	<p>Leonardo Zero Trust is a Defence-grade ecosystem based on EU technologies, covering all stages from access and authorization management to the protection of data in transit, at rest and in use, supporting operations across multi-domain and multi-classification environments.</p>
<p>Cyber Simulation</p>	<p>LX Range is a Cyber Range enabling the simulation of highly realistic hybrid federated theaters to create advanced training environments for cyber experts, test the cyber security of products and technologies, and assess the cyber resilience of complex and distributed infrastructures.</p>



HIGHLIGHTS

- A tailored maturity model and innovative and advanced simulation environments to assess the cyber resilience posture of Defence people, processes and both existing and new technologies.
- Interoperable systems and solutions designed and developed to capitalize heterogeneous multi-domain information to obtain an operational advantage on the adversary.
- An integrated portfolio of proprietary platforms and solutions enabling cyber operations, resilience, training and mission support across realistic, virtualized and operational environments, to prepare for complex cross-domain and cross-ecosystem incidents.

For more information:
cyberandsecurity@leonardo.com

Leonardo Cyber & Security Solutions Division
Via R. Pieragostini, 80 - Genova 16151 - Italy

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