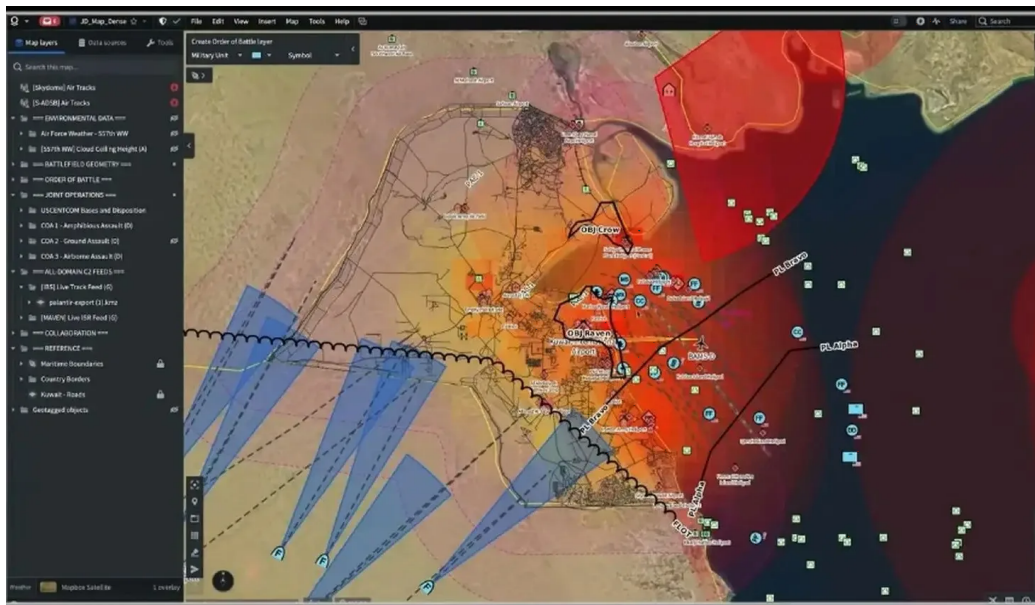




# Defense and Digital Sovereignty: Why the LISA Infrastructure is a Strategic Turning Point for Our Armed Forces

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Next Thursday, June 11, the Tecnopolo of Bologna will mark a decisive step for the technological autonomy of the continent. With an investment of 28.2 million euros, the supercomputer **Leonardo** – already among the top ten most powerful computing systems on the planet – will receive a massive upgrade called **Lisa** (*Leonardo improved supercomputing architecture*).

The announcement, released by the Minister of University and Research Anna Maria Bernini, describes Lisa as the first infrastructure in Europe entirely dedicated to the development of advanced language models (LLM) and generative artificial intelligence within the EuroHPC framework.

While for the civilian and academic world this is an extraordinary research opportunity, for the **Defense and National Security** sector this acceleration represents something much deeper: the fundamental piece for building **algorithmic sovereignty applied to real operations**.

# Beyond Foreign Dependence: The Need for a "Sovereign" AI

In the modern operational theater, information superiority (*Information Superiority*) dictates the success or failure of a mission. However, the adoption of artificial intelligence in the military sector has always clashed with a huge strategic limitation: dependence on foreign-derived cloud infrastructures and commercial models (predominantly American).

For obvious reasons of security, secrecy, and data classification, the Armed Forces cannot "feed" external commercial systems with sensitive or intelligence data. The arrival of Lisa exactly fills this gap. Composed of **166 high-performance GPU servers** fully interconnected, the infrastructure offers the computing power necessary to train artificial intelligence models *in-house*, within cyber-protected national and European perimeters.



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## How Lisa Will Impact Real Operations: The Three Tactical Pillars

Lisa's ability to simultaneously process text, images, data, and video (multimodal models) paves the way for three direct applications for the Defense Staff:

1. **Strategic Forecasting and Predictive Intelligence:** By analyzing massive flows of open-source intelligence (OSINT), satellite images, and interceptions, the trained models will be able to simulate complex geopolitical scenarios, anticipating potential crisis hotspots or

asymmetric threats well before they manifest on the ground.

2. **Course of Action Planning (COA):** During real-time crisis management, commanders will be able to use advanced algorithms to virtually test thousands of different tactical options, instantly assessing risks, logistical needs, and success rates.
3. **Development of Frontline Capabilities (Edge AI):** It is crucial to understand the technical flow: the supercomputer will not guide drones in battle, but will act as a "forge." It will be the place where target tracking algorithms (Target Recognition), electronic warfare, or anti-swarm defense (C-UAS) will be trained. Once ready, these "lightened" models will be installed directly on tactical hardware at the front (edge computing), ready to operate even in isolated mode (*comms-denied*).

## The Future of Multi-Domain Doctrine

With the evolution of military doctrine towards the concept of **multi-domain operations** (where Land, Sea, Air, Space, and Cyber must act as a single synchronized organism), the volume of data generated every second is simply too vast to be processed by human analysts.

The Lisa infrastructure offers Italy the autonomous computational capacity not to fall behind in the digital arms race. Technological autonomy today is no longer measured only in tanks or frigates, but in computing power per second. And from June 11, Italy's Defense has a new, powerful weapon in its digital arsenal.