AIR

(IT) Integrated Multi-Layer Air and Missile Defence System (IMLAMD)

(Established in May 2023)

For Public Release

PROJECT DESCRIPTION

The IMLAMD project aims to develop a comprehensive, interoperable, and modular air and missile defense architecture capable of countering a wide spectrum of threats, including ballistic missiles, cruise missiles, UAVs, and advanced air-breathing threats. The system will integrate multiple layers of defense assets (short-, medium-, and long-range) into a unified command and control structure.

OBJECTIVES/PRODUCTS

To provide an innovative concept for future IAMD and to mature the new features of the Battle Management, Command, Control, Communication, Computer, Intelligence (BMC4I) module, required for the new IAMD architecture. Furthermore, a dedicated Test Bed will validate the main features and demonstrate the overall architecture. Furthermore, a dedicated Test Bed will validate the main features and demonstrate the overall architecture In the Integrated Multi-layer Air and Missile Defence System architecture, each Module (Major End Item originally enslaved to a specific System) will be able:

- To operate in a coordinated hierarchical way and in a “distributed” way.
- To use a variety of effectors and sensors in order to assure the maximum level of efficiency.

The project will also focus on developing key products, including:

- Develop an integrated air and missile defense system combining various national capabilities.
- Achieve interoperability among European armed forces’ existing and future systems.
- Deliver a modular, scalable architecture adaptable to multiple operational scenarios.
- Demonstrate system performance through simulations and live trials.
- Command & Control (C2) module, sensor fusion layer, interceptor systems, demonstrators.

IT, FR, HU, SE

DE, EL, NL, PT

IDEATION
INCUBATION
EXECUTION
CLOSING

Contribution to the more binding commitments
Yes

Capability Perspective

CDP priority
Airborne Command and Inform Capabilities

CARD references
Anti-Access Area Denial (A2/AD) Capability

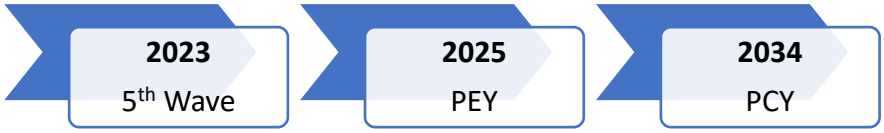
Operational Viewpoint

HICG
Surface Based Air and Missile Defence

EDA support
No

INDICATORS

Project Execution Year (PEY) and Project Completion Year (PCY):



DELIVERABLES ACHIEVED

- Italy held the first Technical Meeting last September, during which national industry presented an initial demo showcasing the capabilities of the IMLAMD system.

CRITERIA FOR SUCCESS

Risk indicators

- Technologies for cyber and communications may not be able to support the full set of requirements. Mitigation: the Concept Phase will assess options so that final output will mitigate risk.
- A major standardization effort within EU and NATO coalition forces may not reach full objectives. Mitigation: use the experience matured in the tactical links standardization (L16 in particular) to implement the proper approach at Module level.
- Working with Modules and not a full System represents a major change in the User's way of doing things, who then may retain some level of reluctance to adopt this new way of doing things.
- Mitigation: User teams will be involved from the very beginning of the project in the definition of the Concept of Use of the future architecture. The various CONUSE will be experimented and assessed by the user teams in the early phases of the project through the Test Bed / Battle Lab.

Criteria for success as agreed by Project Members

- Unified CONOPS; CONEMP; CONUSE across Europe.
- Qualified and skilled personnel to work together.
- CONOPS, CONEMP, CONUSE demonstrated in the Test Bed.

Improved granularity

- Dealing directly at Module (Major End Item) level and not at main System level is a sound measure of improvement of granularity and flexibility.
- As far as the 10-year schedule depicted in Roadmap, the 3-phase approach clearly provides added granularity to the project elements description.