

OPERATIONAL EXPERIMENTATION CAMPAIGN 2025

AUTONOMOUS SYSTEMS FOR CROSS-DOMAIN LOGISTICS



EXECUTIVE
BRIEFING



HEDI OPERATIONAL EXPERIMENTATION

The **EU Defence Innovation Operational Experimentation Campaigns (OPEX)** are unique tools for speeding up the uptake of defence innovation.

They bring together leading European industries, innovators, Member State experts and end-users to assess next-generation systems in real-world conditions. As part of the Hub for EU Defence Innovation (HEDI), OPEX campaigns help bridge the gap between emerging technologies and operational needs.

The first edition focused on autonomous systems for military logistics and took place in summer 2025 in Italy.

The five-week campaign tested unmanned systems – both in the air and on the ground – from several countries to assess their performance in battlefield simulations. Data and insights gathered during these experiments will allow to adopt these systems faster.

OPEX25 proved that EU defence innovation can move faster and stay ahead of the curve. It connects innovators with end-users and turns emerging technologies into future operational capabilities through focused field testing.

TECHNOLOGIES



**Low-Cost
Attritable UAS**
BEYOND VISION



BVT516

x1



BVQ418

x3



**Medium Wheeled
Logistical UGS**
ŁUKASIEWICZ – PIAP



IBIS

x2



HUNTeR

x1



**Vertical Take-Off
and Launch VTOL
UAS ALTUS**



ATLAS8

x2



**Heavy Lift
VTOL UAS
SCHIEBEL**



S-100

x2



**Low-Cost
Attritable UGS
ALISYS**



V-60

x3



**Medium Tracked
Logistical UGS
ARX ROBOTICS**



GEREON

x4

HIGHLIGHTS

Experts and industry validated OPEX as an **effective framework** to accelerate operational experimentation and rapid adoption of emerging technologies.

The field-tested **UAS and UGS demonstrated** robust safety, promising technological maturity, and readiness to become military capability.

The OPEX25 Campaign highlighted the urgent need for **EU-level harmonisation of experimentation frameworks**. This will enable timely, low-bureaucracy access to test areas, with minimum viable safety and regulatory requirements to accelerate testing.

Adversarial operational scenarios drew strong interest from Member States' experts. They emphasised the urgent **need to further test cutting-edge concepts of operations** and generate insights into emerging threats and mitigation measures.

The OPEX25 Campaign underscored the need for **more agile procurement frameworks** to provide end-users timely access to the latest emerging technologies. National initiatives can expand access to solutions and refine the harmonisation of requirements and relevant use cases.

RAPID ADOPTION BLUEPRINT

The main deliverable of OPEX25 is the Rapid Adoption Blueprint (RAB). This document will establish a structured set of principles and conditions to accelerate the development, experimentation and integration of emerging technologies. Drawing on lessons learned from HEDI OPEX25, the first RAB will focus on Autonomous

Cross-Domain Logistics. The RAB will provide Member States with a structured set of best practices and a practical roadmap for the rapid adoption of emerging technologies. It will identify key enablers, requirements, and conditions needed to accelerate EU-level operational experimentation and capability development.

WHY?

- Different national approaches limit EU-wide testing and slow the uptake of new defence technologies
- Fragmented regulations limit test access, stifle relevant field testing and risk-taking
- Lack of EU-wide platforms slows development, underscoring the need to expand initiatives like HEDI OPEX

WHO?

- EDA coordinates data collection and analysis of HEDI OPEX25
- EDA works with industry to gather insights on possible RAB enablers
- Member States will discuss OPEX findings and help define the RAB

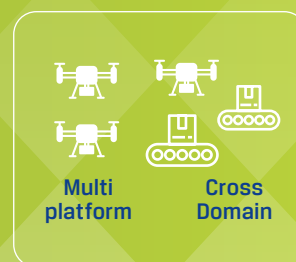
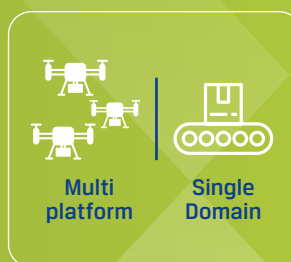
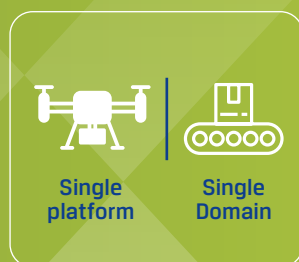
HOW?

- EDA gathers evaluation reports from HEDI OPEX25 and discusses them with participants to draw RAB insights
- EDA works with Member States to shape RAB principles and a roadmap for faster EU-wide testing and adoption of new technologies

TESTING FRAMEWORK

HEDI OPEX25 was divided into three phases, each increasing in difficulty, operational complexity and risk. This approach allowed a deep assessment of system resilience and performance under real operational conditions.

EXPERIMENTATION PHASES



SIMULATION OF CONTESTED ENVIRONMENTS

PASSIVE
Environmental

PASSIVE
Mutual/Low Interference

ACTIVE
Medium/High Interference

KEY STATS



5

Weeks of
field testing



17

Countries
represented
(EU, CH, UA)



18

UAS/UGS
Systems



150

Field
participants



280

Testing
hours



333

Missions



1,2m€

Total cost
of initiative

FOR MORE INFORMATION

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