LAND, FORMATIONS

(EE) Integrated Unmanned Ground Systems 2 (iUGS 2)

(established in May 2023)

For Public Release

PROJECT DESCRIPTION

The Unmanned ground systems (UGS) field has gone through a rapid development during last 5 years. We are seeing more and more platforms from European providers and around the World who are developing very capable systems. Especially important are the innovative solutions regarding autonomous functions, as the AI is getting more capable.

In addition, we have already seen medium size UGS-s deployed to the conflict zones to support infantry units for base operations and foot patrols.

Many countries have started their internal Robotic and Autonomous System (RAS) project to test new platform and develop the concepts for integrating these to the existing armed forces structures and concepts of operations. Sharing the results of these has not been very successful and it is understood that we are duplicating some of the tests without proper acknowledgment of them. All of this have built a strong understanding towards a need for effective cooperation between countries interested in the UGS topic.

The PESCO iUGS2 project will provide a great platform for the information sharing and long-term cooperation in this field. We see that individual cooperation projects between smaller groups of pMS-s would not give the equal opportunity to all interested counterparts and therefore this framework is best suitable for a long-term of this magnitude and importance.

EE, FI, FR, DE, HU, IT, LV, NL, SE

BG, EL, LT, PL, PT, ES

IDEATION
INCUBATION
EXECUTION
CLOSING

Contribution to the more binding commitments
Yes

Capability Perspective

EU CDP priority
Ground Combat Capabilities

CARD references
Unmanned Ground Systems

Operational Viewpoint

HICG
Land Intelligence, Surveillance, Target Acquisition & Reconnaissance (ISTAR)

EDA support
No

OBJECTIVES/PRODUCTS

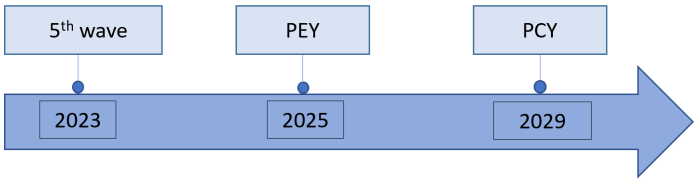
The objective of the Project is to develop a UGS capable of manned-unmanned and unmanned-unmanned teaming with other robotic unmanned platforms and manned infantry fighting vehicles/Main Battle Tanks to provide them full support on the battlefield (both logistical and direct support by fire). The final outcome of the development will be an integrated system of manned vehicles in combination with unmanned ground and air vehicles with different effectors, sensors, and mission capabilities. Meaningful human control will be guaranteed for all payloads with lethal weapon systems in this development Project.

The UGS will be a modular unmanned system with autonomous and semi-autonomous features and deployable capability that provides the tactical commander direct support during armed conflicts, which requires only minimum man-in-the-loop involvement. MUGS will be designed for operations encompassing the entire spectrum of conflict from permissive to denied environments.

Depending on the payload, MUGS will support humans fight battles and will be used as an enabler for supporting all types of combat missions. MUGS will accomplish its mission by integrating the actions of manned and unmanned ground vehicles, UAS, unmanned sensing systems, EWC, AI, autonomy, swarming, manned-unmanned teaming, and other capabilities derived from emerging technologies.

INDICATORS

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



DELIVERABLES ACHIEVED

- No deliverables achieved yet.

CRITERIA FOR SUCCESS

- Ongoing and upcoming UGS Research & Development projects are aligned (e.g. standards) “Initial Operational Test” ensure optimal use of resources in Europe.
- European UGS and enabling technologies are globally competitive and operationally effective by 2029.
- The UGS are matured enough for full use and integration to the European Armed Forces by 2029.
- Unmanned system that is capable of supporting mechanized and motorized infantry in all types of geographic and operational land environments, including denied environments, with evolving levels of autonomy and robustness.