

rOcket dePloyed deEp Reconnaissance AND Transmission system

The goal of OPERANT is to develop a cost-efficient, enduring, and autonomous distributed acoustic sensing network, providing vital information in adversarial terrains.



About

OPERANT is dedicated to developing a cost-efficient, enduring, and autonomous distributed acoustic sensing network, delivering critical information even in challenging and adversarial environments. By combining smart masts, a mobile ad-hoc network (MANet), and modular sensor and effector platforms, OPERANT enables situational awareness, automatic verification, and flexible applications—from detection to decision support.

By integrating commercially available (COTS) technologies into existing defense systems and enabling rapid deployment on the battlefield, OPERANT is expected to unlock a range of new technological and tactical options—particularly through passive sensing and real-time data collection directly from the field. This enhanced situational awareness not only supports conventional warfare but also enables:

- Improved tactical decision-making
- Faster synchronization between operational and deployment phases
- Increased force protection and preservation of lives

In essence, OPERANT strengthens information superiority and operational effectiveness, providing critical advantages in complex and dynamic combat environments.





Vision

Our vision is to provide armed forces with an “eye and ear” deep within the battlefield. We aim to create an autonomous, resilient, and connected reconnaissance system that delivers

real-time, actionable information, enhancing decision-making, reducing risk to personnel, and securing information superiority in complex scenarios.



Motivation

Modern operational environments are becoming increasingly complex, pushing conventional reconnaissance systems to their limits—especially in adversarial or electronically contested terrains. OPERANT was initiated to address these challenges

by offering modular, rapidly deployable sensor and effector platforms that increase operational readiness, close critical information gaps, and enhance force protection and response capability.



Mission & Objectives

Our mission is to develop a scalable, rapidly deployable reconnaissance system that bridges military

requirements with commercially available technology.

OPERANT pursues the following objectives:

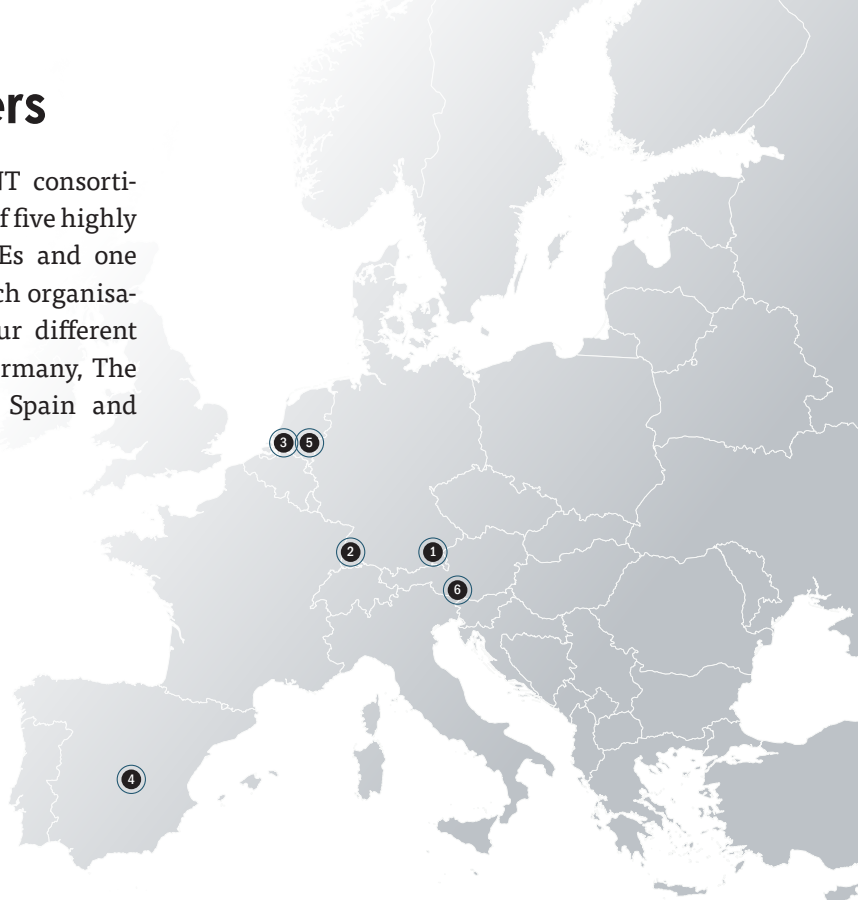
- Develop a flexible, modular sensor network with scalable complexity levels
- Ensure system reliability through redundant communication and power supply solutions
- Integrate various sensors and effectors for detection, identification, and classification missions
- Deliver a system compatible with existing and future deployment methods, including rocket-based deployment
- Validate the system through proof-of-concept demonstrations and simulations

By engaging end-users and experts throughout the development process, OPERANT ensures a user-driven,

mission-ready solution tailored to current and future operational needs.

Partners

The OPERANT consortium consists of five highly qualified SMEs and one public research organisation from four different countries (Germany, The Netherlands, Spain and Austria).



1



Zippermast GmbH,
Germany [Bad Reichenhall]

2



Fraunhofer Gesellschaft zur
Förderung der angewandten
Forschung EV
Germany [Freiburg]

3



T-Minus Engineering BV
The Netherlands [Delft]

4



Unmanned Technologies Appli-
cations S.L.
Spain [Madrid]

5



Microflown AVISA
The Netherlands [Arnhem]

6



Technikon Forschungs- und
Planungsgesellschaft mbH
Austria [Villach]



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Facts



Budget

€ 3.9 Million

€ 3.9 EU-funded



Consortium

6 Partners

4 countries



Duration

36 Months

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