



BLUE SENSE

Citymesh Group

Jens Buysse
Innovation Manager

BLUE SENSE



Consortium Partners

Citymesh: Jens Buysse, Mattis Persoons

Luxor One: Simon Vervisch, Thomas Sabbe

Howest: Johan Galle

Duration

6 Months

Budget

€350.000

Sovereign 5G Drone Infrastructure-as-a-Service for Critical Maritime Infrastructure Protection

Context and strategy



Hybrid Threat in the North Sea

The Belgian coast and ports are under increasing pressure from hybrid threats, sabotage of undersea cables, and drone espionage targeting critical infrastructure. Rapid, continuous situational awareness at sea and around ports is essential for Defence and Maritime Security Services.

FaaS Bottleneck

The existing Citymesh 5G-Drone network operates as Flight-as-a-Service (FaaS) via commercial data centers. Defence cannot legally use this for sensitive operations. There is a strict need for data sovereignty, GDPR compliance, scalable Pilot Experience (PX) and direct routing to Defence ROCs.

Critical sovereign infrastructure for national security

The Solution: Sovereign IaaS



Sovereign Data Routing

All telemetry and video streams are segmented at the network level and flow directly into Defence's sovereign network, completely bypassing private data centers.

Dynamic Asset Claiming

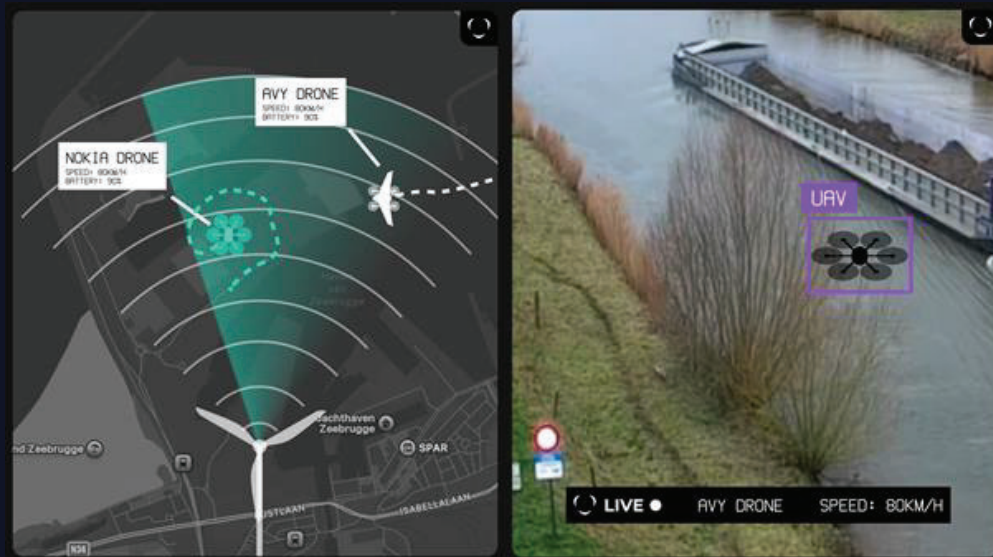
Authorized government services (Navy, Police, Coast Guard) can dynamically "claim" shared drone infrastructure and control it autonomously via their own ROC.

Dual-Use Efficiency

Reuses the existing 5G SENSE drone network. Avoids expensive, isolated military hardware silos and maximizes the ROI of civilian infrastructure.

Secure, compliant, sovereign, and safe drone operations for national security services

Multi-Platform - Focus on Pilot Experience



Fixed-Wing UAVs (Macro Surveillance)

Fast, large-scale patrols over sea and ports for early detection of anomalies (such as suspicious vessels or illegal activities).

Rotary-Wing Hexacopters (Micro Inspection)

Automatically cued for close-range visual verification, perimeter inspection, and deterrence against threats.

Pilot Experience & Workflow

Combining live video feeds, telemetry, and automated AI detections into a single intuitive dashboard, this integrated operator interface uses guided workflows to allow non-specialists with limited drone experience to safely execute complex BVLOS missions.

An aerial platform delivering comprehensive maritime domain awareness and threat response

Operational Use Cases



DETECT

Broad Sea & Coast Patrols

Continuous situational awareness using advanced aerial coordination:

- Detection of suspicious patterns using fixed-wing UAVs.
- One-click cued deployment of a hexacopter for close-range target identification.

DETER

Dynamic Infrastructure Defense

On-demand sovereign control for national defense forces:

- Dynamic claiming of shared drones by Navy and Police with access control
- Rapid perimeter inspections of critical maritime infrastructure against active sabotage threats.

Proactive detection and rapid response mechanisms safeguarding critical national infrastructure

Project Planning & Roadmap (6 Months)

Months 1–2

Phase 1: Setup

- ROC hardware setup
- Operational requirements analysis
- Network segregation design

Months 3–4

Phase 2: Security

- UX platform development by Luxor One
- Penetration testing conducted by Howest

Month 5

Phase 3: Integration

- Integration of drone fleet and network pipelines
- Pre-demonstration testing

Month 6

Live Demo Day

- Execution of operational use cases
- Live demonstration at Navy Captains of Industry Day 2026

Structured 6-month roadmap ensuring secure, compliant, and rigorously tested deployment