



Innovate



LoraSecureAl

Al-enhanced, Ultra-low power LoRaWAN connectivity for secure building and energy systems

EUROGIA PO Day – Istanbul, 26 Sept 2025

Presented by Kibria Rana Founder, Knarkz Solutions Limited, UK Lead UK Partner – ITEA Allegro Project

THE PROBLEM – INSECURE AND FRAGMENTED SMART BUILDING CONNECTIVITY



 Growing demand for connected sensors in housing, offices, care homes, and campuses Most LoRaWAN deployments lack:

- End-to-End Data Privacy
- Power Efficient Al Processing
- On-Device Intelligence

- Reliance on Cloud Services Includes:
 - Security Risks
 - Latency
 - Vendor Lock-In

Governments and cities need privacy-respecting, interoperable infrastructure to Scale IoT



Innovate UK





Our Solution — LoRaSecureAL

LoRaSecureAI is a plug-and-play, open LoRaWAN framework with embedded AI:

- End-to-end encrypted data flow
- Low-power Al-on-the-edge
- Supports multi-vertical use cases (Heating, CO₂ sensors, doorbells, baby monitors)

Modular, affordable, and BMS-compatible design







Roadmap & Collaboration Outlook

Current TRL: 4 → Target TRL: 24 over 36 months

- Focus Areas: LoRaWAN Gateway development, Edge AI, secure in-building communications, multi-country pilots
- Multi-phase R&D and validation process
- Open to pilots, demonstration sites, tech integration, or localisation partners

Looking for partners who can:

- Contribute to LoRaWAN or AI R&D
- Deploy in local settings (public or private buildings)
- Offer insights on security, energy, air quality, or smart infrastructure
- Support multi-country coordination





WHY EUROGIA & WHAT WE'RE LOOKING FOR

- Supports Eurogia's low-carbon and energy efficiency goals
- Builds on UK-Funded ITEA Allegro Project (Smart Community)
- Ready to Expand into Broader LoRaWan Al Infrastructure
- Looking For Partners in:
 - Smart building integrators
 - Universities, landlords, BMS platforms
 - European co-applicants









LET'S COLLABORATE – NEXT STEP

Looking to Build a 2-4 Country Eurogia
Consortium

We Welcome

- Co-Applicants (R&D, Hardware, Pilots
- Demonstration Sites (Smart Buildings, Campuses & Housing)
- Subcontractors (BMS, AI, LoRaWAN Experts)
- Open to adapting scope to partner strengths Target submission: 30 October 2025 via the Eurogia portal

