



eu - radion

Project name and abbreviation: Enhancing European Union Preparedness and Response Capabilities to Radiological and Nuclear Threats (EU-RADION).

Programme: Horizon 2020.

Project duration: 1 September 2020 - 29 February 2024.

Budget: €3,490,626.35

EU-RADION in a nutshell:

Chemical, Biological, Radiological, and Nuclear (CBRN) threats pose significant risks to public safety and security, exacerbated by the rising use of such agents by terrorist groups within the EU. The EU-funded EU-RADION project aims to enhance the European Union's preparedness and response capabilities to these threats, focusing particularly on radiological and nuclear (RN) materials.

The EU-RADION project seeks to address the critical need for rapid detection and identification of RN materials, filling capability gaps identified in key studies such as ENCIRCLE and IFAFRI. The project's objectives are fourfold:

1. Cover Capability Gaps: Develop technologies to fill the capability gaps of European first responders and CBRN practitioners.
2. Enhance Situational Awareness: Improve situational awareness for first responders during preparedness and response missions.
3. Boost Market Innovativeness: Enhance the innovativeness and competitiveness of the European CBRN market.
4. Showcase Operational Solutions: Demonstrate the operational EU-RADION solution to stakeholders under relevant conditions.

Key Achievements: The project developed an integrated system for real-time detection and identification of RN materials, incorporating advanced sensor technologies and data processing into a networked solution that enhances situational awareness. The main components include:

- Sensor Integration Unit (SIU): A modular unit deployable across various platforms.
- Swarm of Unmanned Ground Vehicles (UGVs): Autonomous and semi-autonomous UGVs for field operations.
- Tactical Command Tool (TCT): A tool for operational coordination and situational awareness.

These innovations significantly boost the EU's capabilities in responding to CBRN threats, enhancing public safety, and reducing potential health impacts and casualties. The project has undergone extensive testing and demonstrated its results through various channels, emphasizing stakeholder engagement for future adoption.

Project Partners: The project consortium includes leading institutions and organizations from across Europe, collaborating to advance the EU's CBRN security framework.

Potential Impacts:

- Socio-Economic Impact: Enhancing CBRN detection and response capabilities reduces the potential economic fallout from CBRN incidents, safeguards public health, and improves societal resilience.
- Wider Societal Implications: Bolstering public confidence in the EU's ability to handle CBRN threats and supporting the safety and effectiveness of first responders.
- Future Exploitation: Technologies and methodologies developed have broad application potential beyond CBRN response, including industrial monitoring, environmental surveillance, and emergency management.
- Knowledge Advancement: Contributing to the body of knowledge in CBRN detection and response, inspiring future research and innovation.

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More information about the project: <https://eu-radion.eu/final-demonstration/>.

More information on CORDIS: <https://cordis.europa.eu/project/id/883204>.