PRESS RELEASE - <mark>ENGLISH</mark>

For immediate release

Innovators from across Europe Join Forces to Protect Citizens and Transform Urban Security Against Emerging CBRN-E Threats

1st September 2025 - The BEHOLDER Horizon Europe project aims to protect citizens by developing an integrated, IoT-based detection system for chemical, biological, radiological, nuclear, and explosive (CBRN-E) threats. Launched in June 2025 and running for three years, this EU-funded initiative brings together 14 partners from 7 European countries, coordinated by the Dutch Institute for Safe & Secure Spaces (DISSS). By its final stage in May 2028, BEHOLDER will deliver a scalable, interoperable platform designed to enhance real-time detection, assessment and response capabilities—helping to safeguard public spaces across Europe.

Cities today face growing risks from CBRN-E threats that can endanger public safety. Unfortunately, many current detection technologies operate in isolation, lacking integration with smart city systems and limiting their impact. BEHOLDER tackles this challenge head-on by building a flexible, vendor-neutral ecosystem that integrates seamlessly with existing urban infrastructure—such as SmartCity platforms and SmartFurniture networks—without compromising the look and feel of public spaces.

Project background and the consortium

The BEHOLDER project emerged as a direct response to the European Union's call for innovative actions addressing the critical need to enhance security in public spaces against CBRN-E threats. The initiative builds upon the vision of the European Union to maintain urban spaces as liveable and welcoming areas, while also anticipating emerging threats and increasing safety in these

areas using a security-by-design approach. The project is a collaboration between organisations from across Europe, each bringing their own experience related to topics such as CBRN-E, smart cities, disaster resilience, crime prevention through environmental design and urban security.

The BEHOLDER consortium consists of the following members: Dutch Institute for Safe and Secure Spaces, OpenRemote, Sioux Technologies and Municipality of Eindhoven (the Netherlands); SFC Nonprofit Llc. and Ideas Science (Hungary); ITTI and the University of Warsaw (Poland); the International Union of Railways; Politecnico di Milano (Italy); Université Catholique de Louvain and Local Police Meetjesland Centrum (Belgium); Municipality of Tampere and Ministry of the Interior (Finland).

An open-source monitoring system for different urban environments

Over its lifecycle, BEHOLDER will develop and validate a next-generation platform that brings together advanced, IoT-enabled CBRN-E sensors with an open-source monitoring system powered by AI-based anomaly detection. This system will ensure smooth interoperability with both current and future smart city technologies, while offering plug-and-play deployment options that can be tailored to different urban environments.

A key part of the project is the creation of open, accessible standards for CBRN-E data, supporting vendor-independent integration and encouraging widespread adoption. Real-world pilot deployments across urban settings will test the system's performance, providing actionable insights and improving response capabilities for complex threats.

Smart city technology combined with stakeholder training

To support long-term success, BEHOLDER will also offer a comprehensive training programme for stakeholders—ensuring cities have the skills and knowledge to maintain the platform effectively. Specific operational and training needs will be identified through workshops and interviews with representative end-users. Based on these insights, a modular curriculum will be developed, covering the BEHOLDER functionalities, operational procedures, safety protocols and data interpretation for situational awareness. An online platform will also be established with regular refresher courses, Q&A sessions and additional resources for system updates and advanced use cases.

By blending cutting-edge detection technologies with the evolving fabric of smart cities, BEHOLDER represents a significant step forward in urban security. Its goal is clear: to help cities across Europe become safer, more resilient and better prepared for the challenges of tomorrow.

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