



Institute of Security Technologies "MORATEX,,

Specialized materials and protective solutions
- partnership in Horizon Europa

Succesfull R&I in Europe
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Our expertise offer:

- **Specialized materials and textiles:** (composites, polymers, high-strength materials, elastomers and energy absorbers),
- Development of **material structures** and selection of **technological parameters** for new ballistic products,
- **CBRN solutions** including protective clothing and medical packages,
- **Risk analysis** and **risk management** methodologies (particularly circular economy),
- **Definition of scenarios** and identified risk prevention,
- **Direct contact with security institutions**, stakeholders and end-users (uniformed services, border protection, infrastructure protection, ballistic and material solutions),
- **Advanced VR laboratory** and simulation software for training and simulations dedicated to: rescuers, officers, end-users involved in CBRN neutralization,
- **Physico-mechanical, ballistic and chemical testing** of special materials **in our accredited laboratories**,
- **Non-destructive testing** of composites,
- **Individualization** of PPE clothing and weariness.



Experience in EU Funding:



IMMUNE

The aim of **IMMUNE (Advanced EU-made mineral-based materials for a new generation of ultralight, more resistant, eco-designed, morpho- and REACH-compliant Personal Protection Equipment's hard-components for EU Military)** is to develop a personal protection system that will be 25% lighter, provide better protection performances and 10% cheaper on its life cycle than the current vests on the market – **European Defence Fund 2023**



„Demining tool-BOX for humanitarian clearing of large scale area from anti-personal landmines and cluster munitions” – **D-BOX** – EU FP7 SEC 2011 - The toolbox contains a wide range of tools, guidelines, procedures, sensors and software which have the potential to improve the effectiveness of humanitarian demining in countries that still have to cope with this serious problem.



UTILE

Ensuring Circularity of Soldier Personal Protection Equipment

The **UTILE (Ensuring Circularity of Soldier Personal Protection Equipment)** project aims to develop technologies to implement circularity concepts for the recovery and reuse of exemplary items of Soldier Personal Protection Equipment (SPE) that are used by the EU armed forces. The role of "MORATEX" Institute is to attempt the process of recycling ballistic UHMWPE materials from SPE – **European Defence Fund 2022**




preventpcp

Augmenting the **security in public transport** and public areas in the vicinity through **innovative procurement** of technology solutions

- DETECTION OF UNATTENDED ITEMS IN PUBLIC TRANSPORT
- IDENTIFICATION AND TRACKING OF PERPETRATORS
- TECHNOLOGY INTEROPERABILITY IN CRISIS MANAGEMENT SYSTEMS AND VMS

PREVENT-PCP.EU

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101020374

PREVENT PCP funded under **Horizon 2020**, aims to improve security in public facilities (e.g. train stations, airports, metro stations). The developed prototypes with the detection of unattended items was tested in a real operational conditions

We are looking to join the Consortia as WP leaders or Task Leaders in:

HORIZON-CL3-2026-DRS-01: Designing new ways of risk awareness and enhanced disaster preparedness

- **Risk analysis** and **risk management** methodologies,
- Scenarios **definition** and identified risk prevention,
- **Direct contact with security institutions, LEA's**, stakeholders and end-users,
- **Personal Protective Equipment** for Civil Security and Uniformed Services,
- **CBRN contamination indicators** with functional materials,

HORIZON-CL3-2026-01-SSRI-01: Open topic on supporting disruptive technological innovations for civil security

We can help within the scope of:

- **Development of advanced, functional materials** (e.g. ballistic protection/vests with additional functionality for civil security),
- **CBRN contamination indicators** with functional materials,
- **Protective clothing** from construction to models – laboratory scale,
- **Clothing individualisation** – e.g. for women officers,
- **Physico-mechanical, ballistic and chemical testing** of specialized materials **in our accredited laboratories**,
- **Personal Protective Equipment** for both civil security and Uniformed Services,
- **Functional underwear** for protective suits,
- **Non-Destructive Testing** of composites,
- **VR laboratory** and simulation software for training dedicated to: rescuers, officers in duties, end-users, practitioners.

Other possibilities: Horizon-CL3-2026: RIA Open Topics



MORATEX
INSTYTUT

MORATEX technology begins in the laboratory

SEE MORE

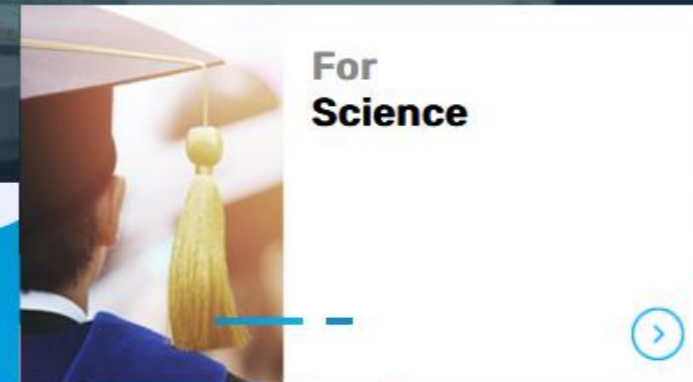


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