

Project Facts

Work programme: Horizon.2.3

Topic: HORIZON-CL3-2021-BM-01-03

Funded under: Civil Security for Society

Duration: 36 months | Starting from 1 January 2023

Total cost: €4.59 million

Coordinator: SOFTWARE IMAGINATION & VISION SRL



Unobtrusive Technologies for Secure and Seamless Border Crossing for Travel Facilitation

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Consortium



ODYSSEUS has received funding from European Union's Horizon Europe Innovation Programme under GA N°101073910. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Research Executive Agency. Neither the European Union nor the European Research Executive Agency can be held responsible for them.



About ODYSSEUS

ODYSSEUS is a 3-year, Horizon funded project consisting of 14 partners from all over Europe and the United Kingdom aiming to improve border crossing experience for travelers and border authorities' staff, while maintaining security and monitoring of movements across land and sea EU external borders.

ODYSSEUS will provide a holistic framework for improving border checks performed by the authorities and facilitate travelling for citizens. A combination of strong multi-behavioral and biometric continuous user

identity verification mechanisms will ensure the identification of the citizens, allowing them to cross the border without any interruption or queue. In the meantime, a novel luggage and baggage check will allow citizens' vehicles and cargos to be remotely checked on the land border in terms of goods and thus speed up the border check processes in a secure and reliable manner. The **ODYSSEUS** platform will be applicable for both land and water scenarios including on the road, in a maritime port, and in the train.

Expected impact



- Improved border crossing experience for travelers and border authorities, while maintaining security and monitoring of movements across EU external borders.
- Improved security of EU land, air borders, sea borders and the maritime environment, against accidents, natural disasters, and security challenges.
- Improved customs and supply chain security through better prevention, detection, deterrence, and fight of illegal activities. Improve situational awareness, decision making and reaction for both land and maritime border control by utilizing bespoke visual analytics tools and multimodal data fusion.

Project Objectives



DESIGN and DEVELOP a unifying platform that enables seamless, fully non-stop border crossing in a highly secure manner, assisting Law Enforcement Agencies (LEA) with automated, reliable, and accurate border checks, while improving the travelling experience for EU citizens in a privacy-preserving way.



ADVANCE the identification and control capabilities of Border Authorities through robust and reliable identity verification mechanisms introducing an EU mobile (virtual) passport protected by continuous behavioral authentication.



IMPROVE border control checks without stopping cargos and vehicles through safe, unobtrusive, and portable screening based on X-ray backscatter technology, UAV-assisted image processing and AI-based data analytics.



VALIDATE the effectiveness of the proposed **ODYSSEUS** platform through its demonstration in real-life environments with the active engagement and training of security practitioners in two diverse landscapes and various operational environments (inside a train, on the road, onboard a ship in a port area).



SPEED UP the rapid uptake by relevant security stakeholders of the **ODYSSEUS** innovations through wide communication, scientific dissemination and targeted commercial exploitation activities coupled with contributions to relevant standardisation bodies.

Pilot Activities

The **ODYSSEUS** solution will be tested, validated, and demonstrated in three real operational scenarios selected for their high societal, economic and security impact on the EU citizens and the Border Authorities.

The foreseen scenarios include **seamless border crossing on Land, Sea, and Train**.

