

## The Horizon Europe PARSEC Project: Protecting EU postal and express courier flows

### 1. PARSEC Project Information

#### Practical project information:

Subject: **BORDER MANAGEMENT**  
 Programme: [HORIZON.2.3.2 - Protection and Security](#)  
 Topic: [HORIZON-CL3-2021-BM-01-04 - Advanced detection of threats and illicit goods in postal and express courier flows](#)  
 ID: Horizon Europe Grant agreement ID: 101073963,  
 Budget: Budget around 4.7 million € of which an EU Contribution of 3.185.442,25 € and 1.5 million € of additional funding by UK Research Institute and Swiss Research and Innovation SERI.  
 Duration: Project duration from 01 October 2022 until 28 February 2026.

**Challenge to be addressed:** Being able to detect threats and illicit goods in an ever-increasing number of postal and express courier flows is vital to the security of the EU. However, this area faces key challenges such as the lack of technology capable of screening volumes of goods efficiently in line with the time constraints.

**Objectives:** The EU-funded PARSEC project is trying to solve the challenges facing eCommerce by developing a system-of-systems, which is a Customs and Border Forces control equipment architecture for detection accuracy, speed, and reliability.



**Solution description:** On all incoming parcels firstly advanced data science is applied to improve risk management for selection of parcels for further testing.

Secondly the development and testing of three next-generation non-intrusive detection technologies. These are composed of a multi-energy photon counting detector, neutron-induced gamma-ray spectroscopy, and X-ray diffraction.

For an optimum implementation a simulation flow tool is being developed for an optimal design of the "system-of-systems" to maximise detection of illicit items in the parcel flow in a given postal/express courier sorting centre. The simulator will analyse different combinations of detection technologies and scenarios to determine the best operational characteristics for achieving high throughput and high hit rates.

Lastly, a 'Total optimisation model' is being prepared which collects information on the 'best available numbers on true scale of smuggling via international postal and express services', across a variety of illicit commodities and materials of high customs interest'. Secondly, we collate the most realistic numbers on 'comprehensive socio-economic costs caused by success in smuggling', across the chosen set of illicit commodities and materials, thirdly, we compile all available PARSEC technology cost and performance data, labour cost, electricity & maintenance costs etc. And finally, the model calculates the minimum total



cost when combining prevention costs and societal impact costs, the total optimal cost. As a result, the model will provide evidence for customs policy makers as well as for strategic decision-making in customs administrations. In summary the system-of-systems seeks to find the balance between speed and security targets under resource and operational constraints

**Implementation method:** The project team has 20 partners from 9 different countries, which are composed of 4 groups:

- End-users: Postal Services
- Enforcement authorities: Customs administrations, Border Forces, Police services
- Academic partners: different universities and research bodies
- Detection equipment providers: Halo and Smiths detection technology, Varex Imaging, Technologies

## 2. Involvement of the Project Coordinator 'CBRA Services BV'

### **Motivation to take up the role of Project Coordinator:**

Back in 2021 Dr Juha Hintsa and Frank Janssens met and discussed the serious and increasing challenges related to the control of eCommerce parcels. They agreed to found a new company in Flanders, Belgium based on their joint expertise on border control and research project management to search and find a team of partners to form a project consortium in response to a Horizon Europe research and innovation call. The joint proposal was positively evaluated and started in October 2022.

### **Coordination team:**

- Dr Juha Hintsa, who unfortunately unexpectedly passed away in September 2024, had a long research career in customs border management and has been a motivated coordinator and a source of inspiration in many research and study projects.
- Mr. Frank Janssens, official coordinator of the PARSEC Project, managed many customs projects of the past years, as a former Head of Unit in the European Commission responsible for customs modernisation and as an international consultant on customs & trade facilitation, currently at the World Bank.
- Ms. Valentina Scioneri, a senior researcher with many years of experience in Horizon Europe project management.
- Drs Ger Koomen, who joined the PARSEC Project early 2025 as an experienced former Dutch Customs project manager and customs innovation advisor.

### **Role of the coordinator:**

The main tasks of the coordinator are to ensure a smooth implementation of the research project, respect of the Grant Agreement (contract), ethical conduct of all involved, a timely execution of all tasks at a good level of quality and to keep the project advisor at the Research Executive Agency and competent Commission officials well informed of progress and status of the project.

In practice this comes very much down to being in active contact with the project partners, provide advice and support where needed, be available to project partners as a person of trust who helps to overcome challenges and unforeseen obstacles. The coordinator is expected to take initiatives where required to keep the project on track and ensures good and constructive relations with the EU and national authorities who are funding the project

What's in it for the coordinator? Being involved in a central role in a research project brings valuable professional insights, is a source of inspiration for further tasks and initiatives and brings the privilege to meet and work together with motivated colleagues in a most interesting environment. Working together to stop the abuse of postal and express courier flows for criminal and terrorist purposes is a rewarding occupation of one's valuable time.