PROTECT Pervasive and UseR FOcused **BiomeTrics BordEr ProjeCT** 



## Introduction

Traveller numbers are rapidly increasing, which in turn is increasing queuing times and pressure on border authorities. It would be ideal if new technologies could be developed to enable free-flowing border control systems, reducing the need for physical border lines/eGates.

PROTECT, a 10-partner EU funded H2020 project, directly addresses this vision by building an advanced contactless biometric person identification system that operates across land, sea and air borders and that has strong user-centric features.

### **Scenarios**

### **Biometric corridor**



A lightly supervised multimodal contactless biometric sensor network configuration.

# Multimodal biometric dataset

PROTECT has collected the first version of a new multimodal biometric dataset. The dataset comprises 47 anonymized subjects including a wide range of age and gender.









A subset of the PROTECT Multimodal DB containing 20 subjects is freely available to academia and industry upon request. Visit the project webpage or scan the QR code for more details.

Spans a corridor performing reliable person identification while travellers are 'on the move'.

Biometrics include face (VIS, NIR, 3D, Thermal), periocular, iris, finger/hand vein, voice and anthropometrics.

Enables non-intrusive, non-stop robust and rapid throughput. CCTV-based tracking of travellers used to limit number of biometrics templates to match against to 1:few.

### **Mobile devices**



Utilisation of travellers' mobile devices to perform biometric template storage and transmission to enable fluent identification process.

Analysis of potential for usage of mobile devices for biometric data acquisition.

Utilises Bluetooth/NFC to alert biometric system to passenger arrival.

#### **e**Passports

## **Technical solutions**



#### Illustration of biometric corridor solution for air borders





Greater exploitation of data held within next-generation travel documents.

To enable storage/access of other/enhanced biometrics in ePassport chip.

Research includes (1) new ways of providing biographic and biometric data to verification system; (2) new access and transmission modes to increase efficiency; (3) new technologies to enhance storage.

Enforces data security and privacy while enabling data transmission over greater distances by using technologies such as Wi-Fi or Bluetooth Low Energy.

#### **PROTECT** website: www.projectprotect.eu

#### Illustration of mobile scenario solution for land borders

## **Privacy issues**

Privacy aspects are thoroughly investigated and addressed at all levels. System-wide privacy enhancing solutions are being specifically investigated. The goal is that the PROTECT system performs its task using a minimum of privacy intrusive information and grants travellers visibility of their personal data and its meaning.



This project has received funding from the European Union's Horizon H2020 research and innovation programme under grant agreement no. 700259.