

Final report from the WG on the ICT Solutions for the Member States with External Land and Sea Borders

Theofanis SYRIGOS
Chairperson of the EES AG,
Customer Relationship Officer, eu-LISA

Industry Round Table
24 April 2019

eu-LISA PUBLIC

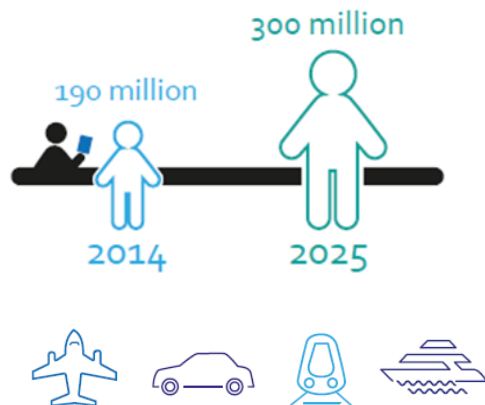


Agenda

- Presentation of EES
- Problem statement at Land and Sea borders
- Objectives of the Working Group
- Processes at land borders
- Processes at sea borders
- Technical requirements

Smart Borders

Forecast of border crossing number(*)



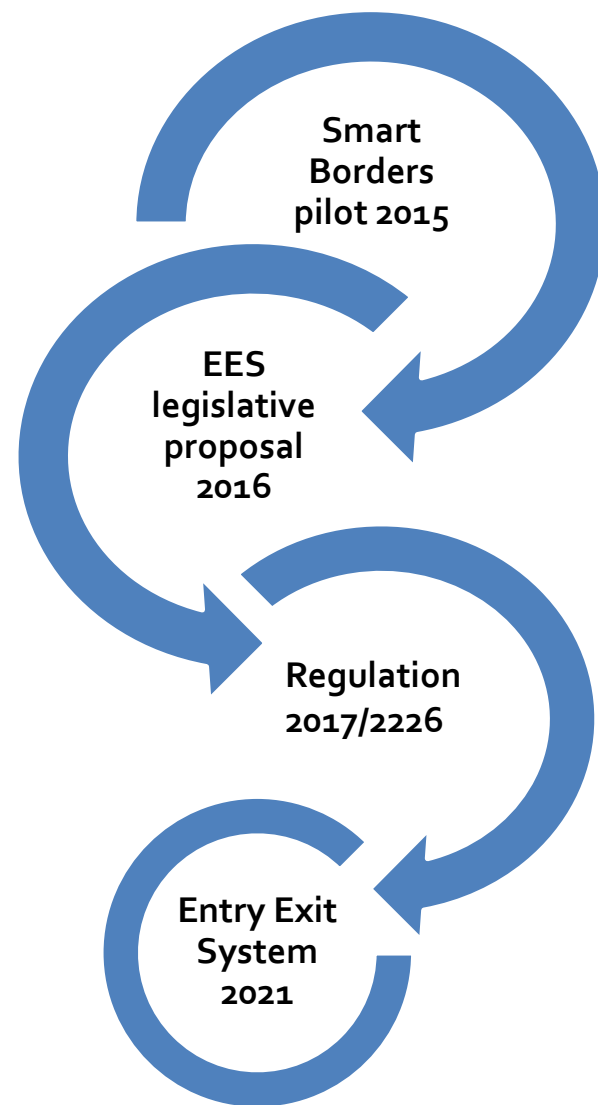
 Introduce **biometrics technology** in all types of borders and **register entry and exit electronically**



[EES Regulation 2017/2226](#) entered into force on 29 December 2017



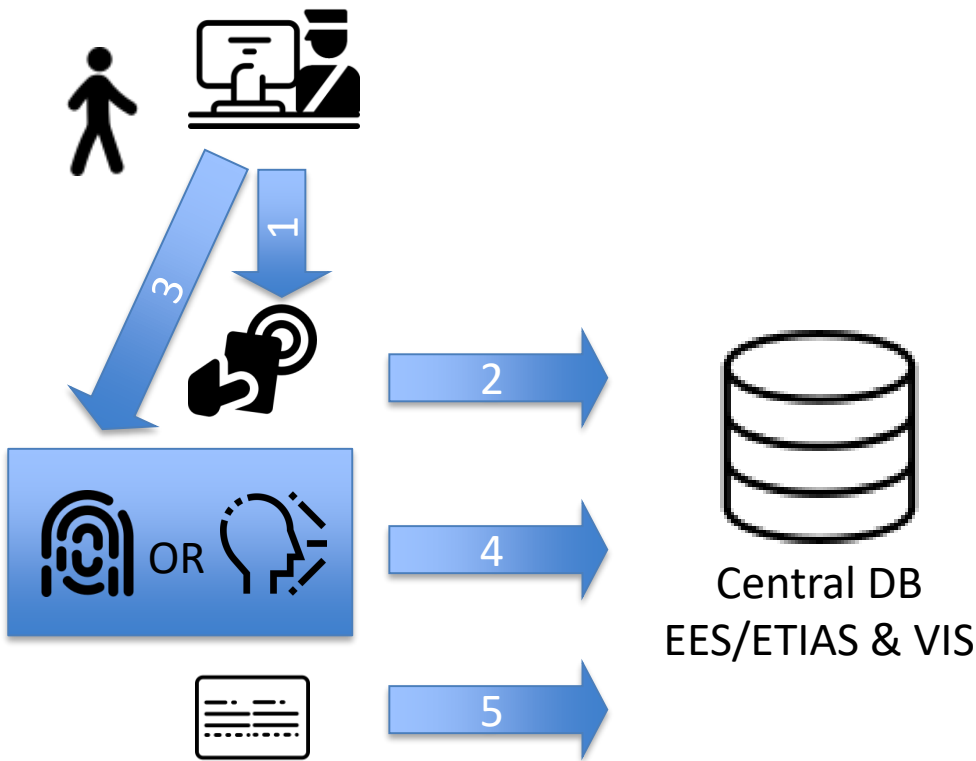
EES development and operational management entrusted to **eu-LISA**



(*) European Commission, Technical Study on Smart Borders, 2014, ISBN 978-92-79-41798-6

EES process at the border

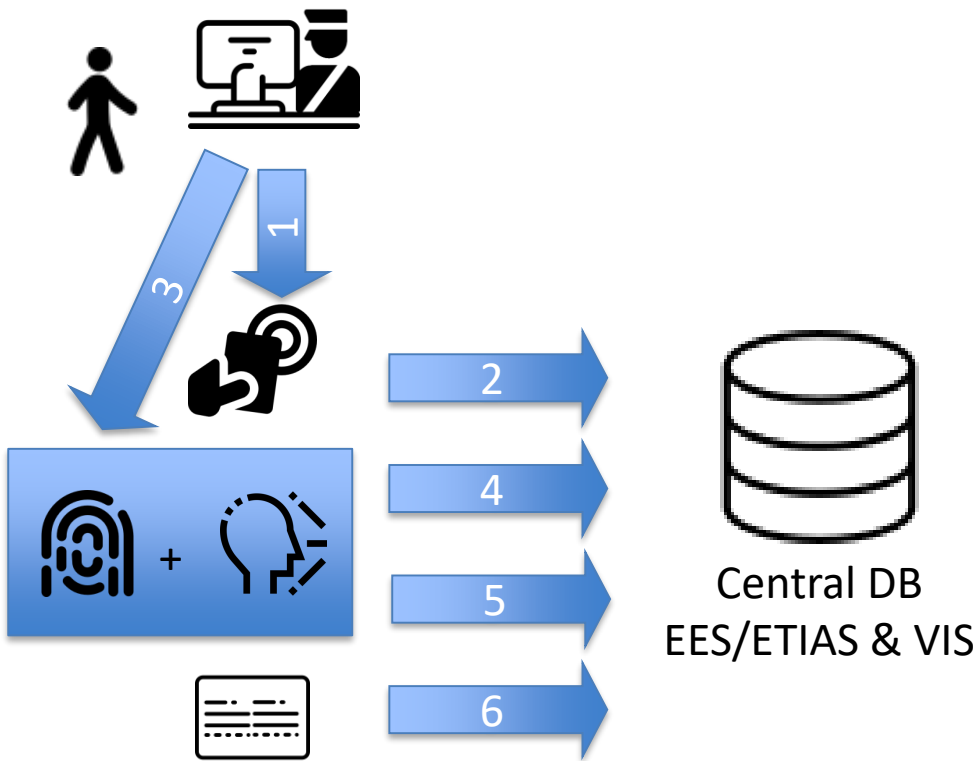
TCN already registered



1. Scan MRTD
2. Search
3. Capture one biometric modality
4. Biometric verification
5. If match
Creation Entry, Exit,
Refusal record

EES process at the border

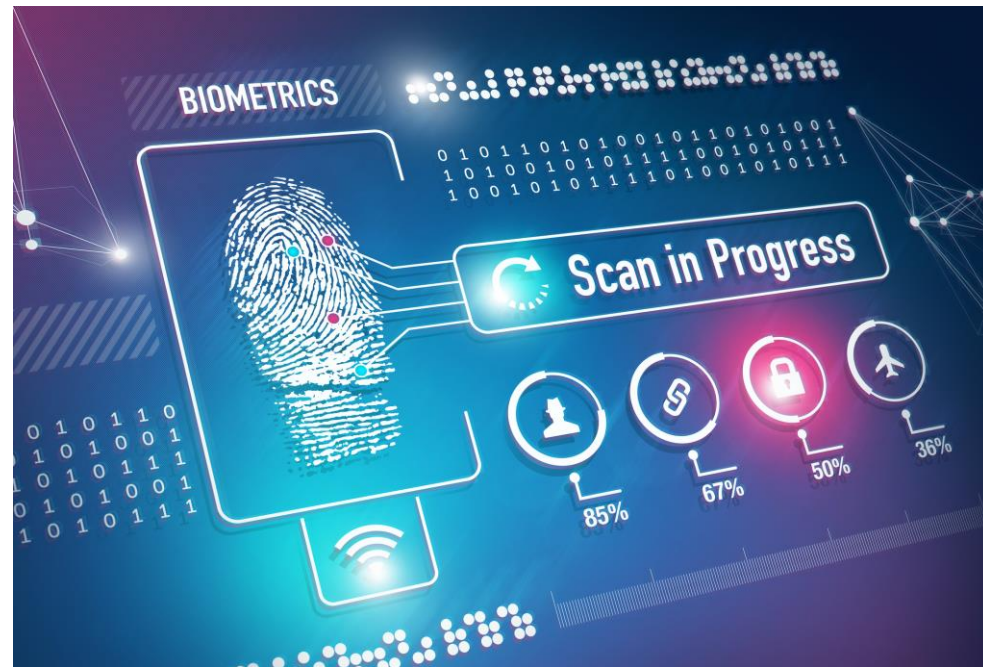
TCN not yet registered



1. Scan MRTD
2. Search
3. Capture both biometric modalities
4. Biometric Identification
5. Enrolment
6. Creation Entry, Exit, Refusal record

Problem statement

- Main constraint is the capture of biometric data in optimal conditions
- Impact on the border crossing time process as biometrics needed at entry and exit



Problem statement

- Air borders
 - process already in place
 - Use of self services
 - Biometric capture under controlled conditions



Problem statement

- Land borders
 - Various configurations: pedestrians, cars, coach, trains, trucks
 - Uncontrolled environment for data capture
 - Infrastructure constraints



Problem statement

- Sea borders
 - Various configurations: ferry, vessels, cargo, sailing boats...
 - Uncontrolled environment for data capture
 - Inadequate equipment



Objectives of the working group

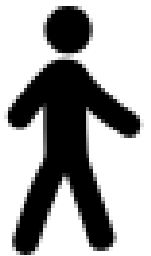
- Identify viable solutions and common architecture for the implementation of EES at the external EU sea borders, land borders
- Activities started in November 2018
- Monthly meetings
- Report issued in March 2019

Objectives of the working group

- Elements driving the activities of the working group:
 - Compliance with the legal basis
 - Identification of technical requirements for solutions, not process optimisations

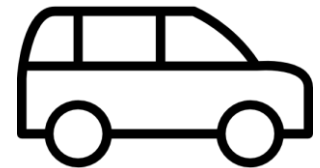
Land border processes

- Border crossing for pedestrian
 - Similar to air border
 - pre-registration desks/kiosks, ABC systems, Self-Service Systems or booths
 - Process executed in controlled environment



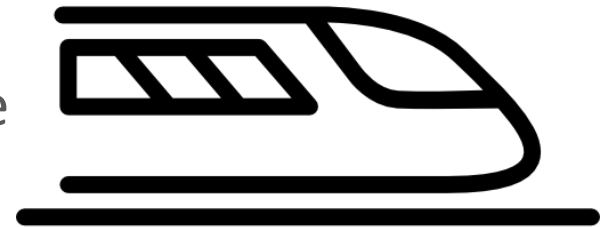
Land border processes

- Border crossing for cars (including trucks)
 - Pre-enrolment desk:
 - Travellers should leave the vehicle
 - Controlled conditions for data capture
 - Other checks should also be done on the vehicle
 - Mobile equipment:
 - Uncontrolled conditions for data capture
 - Network connectivity
 - Security of the border guards



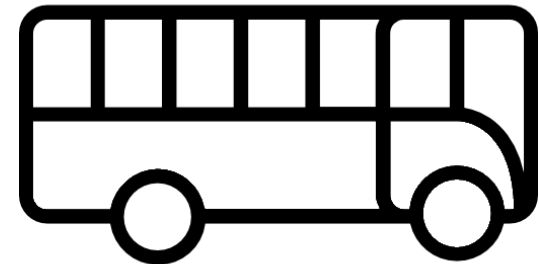
Land border processes

- Border crossing for trains
 - The checks are done before entering or when exiting the train
 - Similar to airport
 - Controlled conditions
 - The checks are performed in the train while stopped or in movement
 - Network issues
 - Difficult conditions for data capture



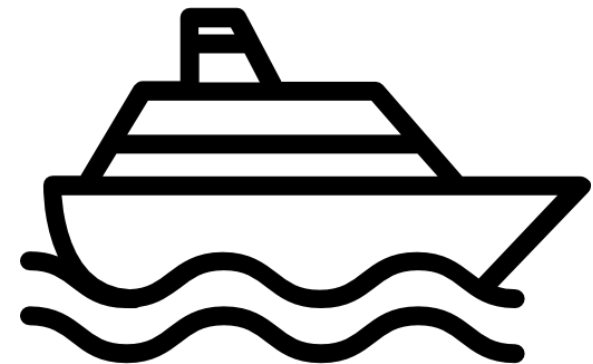
Land border processes

- Border crossing for coaches
 - The travellers remain in the coach and the border guards are doing the verifications within the coach
 - The travellers are requested to leave the coach and the verification is done at a booth
 - The travellers send all register data from their own devices and border guards are doing the verifications (within the coach)



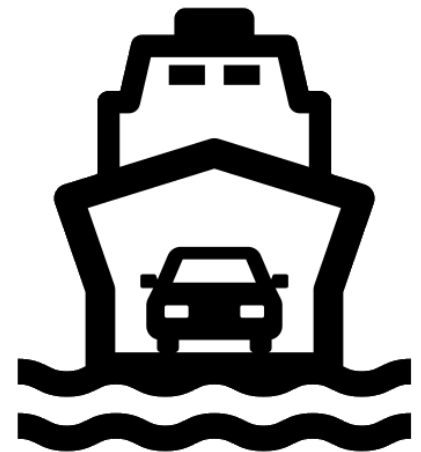
Sea border processes

- Border crossing by means of Cruise vessels
 - All travellers that are embarking/disembarking (start and end of the Cruise);
 - Part of the travellers are embarking/disembarking (stops);
 - Crew members' rotation



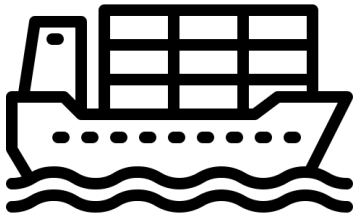
Sea border processes

- Border crossing by means of Ferries
 - Verification on the Ferry
 - Requires an agreement between the carrier (ferry owners) and the Member states to install booths (Self-service and real booth) on the boat themselves.
 - Verification before embarking.
 - Requires installation of booths in a non EU Member State.



Sea border processes

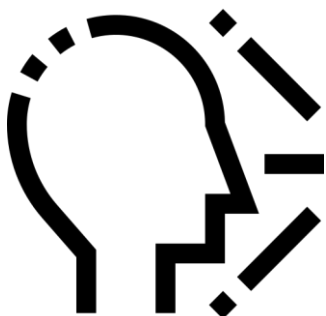
- Border crossing by means of cargo and /or fish boat
 - Variety of ports that could be used (not always equipped as a border crossing point)
 - No clear planning



Technical solutions

- WG concluded that 3 categories of equipment shall be made available for land and sea borders
 - Static equipment: booth, self-service systems, kiosks
 - Mobile equipment: same as static but that can be moved from one location to another depending on the peaks/needs
 - Hand Handheld equipment: lightweight equipment that can be carried by one border guard

Static equipment - requirements



- Facial Image
 - Capture color facial images
 - Mobile on rails for correct alignment
 - Min 600x800 px (in portrait mode)
 - Max 1200x1600px
 - Min 120px between eyes
 - ISO/IEC 19794-5:2011 Frontal image type

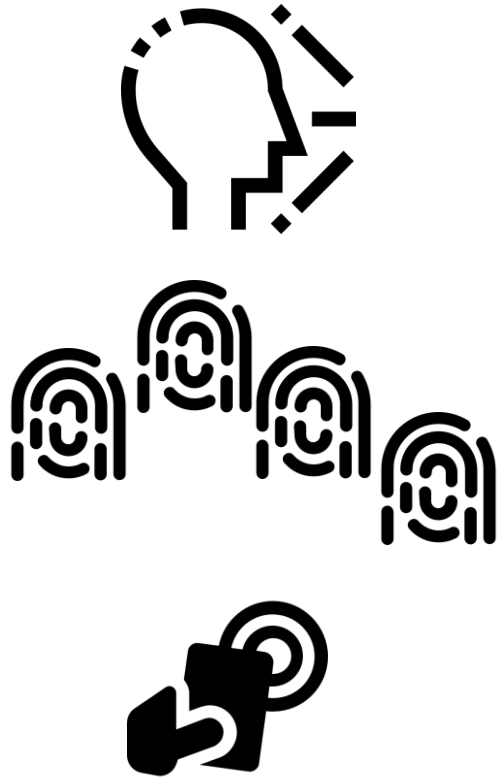


- Fingerprints
 - 4 fingers
 - 500 or 1000ppi +/-10ppi
 - 256 grey levels
 - ANSI/NIST-ITL 1-2011 Update 2015 standard



- Document Reader
 - Error proof scanning
 - Near Field Communication (NFC)

Hand Handheld equipment - requirements



- Biometric Data
 - Facial image (same requirement as static equipment)
 - Important: Lightening
 - Fingerprints (same requirement as static equipment)
- Document Reader
 - Error proof scanning
 - Near Field Communication (NFC)

Hand Handheld equipment - requirements



- Battery powered
 - High capacity 8-12h
 - Removable/swappable batteries
 - Fast charging
- Network connectivity
 - Ensure strong connection (also off shore)
 - Safe communication channel
 - TETRA integration
 - Second/backup channel (i.e: 4/5G)
- Security
 - Support access control
 - Radio frequencies perturbations protection
 - Polarised screen
- Localisation
 - Include GPS for position recording

Additional challenges

Prior to the EES Entry into Operations:

- Solutions have to be tested
- The border guards have to be trained on the basis of those solutions and in relation to the updated EES processes

Therefore, does the industry has :

- Adequate solutions meeting the requirements?
- the capacity to meet high demand by 2020?

Thank you for your attention

Questions?

eu-LISA PUBLIC



Purpose of the EES

(1/4)

The EES has the following specific purposes (EU Regulation 2017/2226):

- Enhance the efficiency of border checks by calculating and monitoring the duration of the authorised stay on the entry and exit of third country nationals admitted for a short stay
- Assist in the identification of third country nationals who do not or no longer fulfil the conditions for entry to, or for short stay on, the territory of the Member States



Purpose of the EES

(2/4)

- Allow for the identification and detection of overstayers and enables the competent national authorities of the Member States (MS) to take appropriate measures;
- Allow for the effective management of authorised short-stays (entries, exits and refusals);
- Enable automation of border checks and improve detection of document and identity fraud;



Purpose of the EES

(3/4)

- Inform TCNs of the duration of their authorised stay;
- Gather statistics to improve assessment of risk and support migration policy making;
- Support MS in operating their national facilitation programmes;



Purpose of the EES

(4/4)

- Helping MS in dealing with ever increasing number of travellers to the EU without having to increase the number of border guards;
- Reinforcing internal security and the fight against terrorism and serious crime by identifying perpetrators, suspects and victims of those offences (Law Enforcement).

