



SMILE



The H2020 project SMILE:

SMILE: SMart mobILity at the European land borders

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Grant Agreement #740931

Project summary

- July 2017 to June 2020
- Activity: SEC-14-BES-2016 - Towards reducing the cost of technologies in land border security applications
- Work Programme Objective: Secure societies - Protecting freedom and security of Europe and its citizens
- Grant Agreement No: 740931
- Duration: 36 Months
- Coordinator: CERTH / ITI

Website: <http://smile-h2020.eu/smile/>

Twitter: @smile_h2020

LinkedIn: <https://www.linkedin.com/company/smile-smart-mobility-at-the-european-land-borders>

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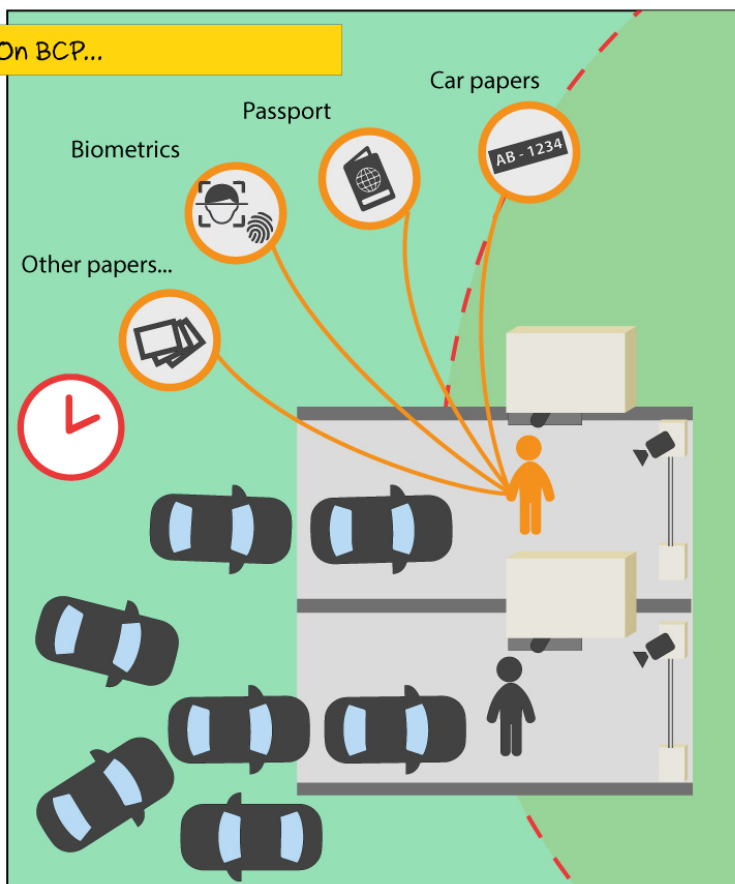
- Delivered a palette of **low-cost technological solutions** that make the management of land border control points **less resource intensive**, while at the same time **contribute to the traveller's convenience without sacrificing security**
- Explored the capabilities of **smart mobile devices** in **biometric control** for low-cost but **secure and trusted authentication**, embedding their exploitation as a part of a **multimodal biometric verification process** that complements existing approaches.
- The long-term goal of the SMILE team is to **provide a set of affordable and easy to be installed modules**, to support the needs of EU Land Border Infrastructures.



- Project ended as of 30/06/2020
- Finalized all applications/developments
 - Travellers' application (mobile and web based)
 - BCP officers application (tablet)
 - High-ranking officers application for monitoring and statistics (web)
 - Backend services
- Pilot demonstrations
 - Three pilot sites:
 - Nadlac: Romanian – Hungarian borders
 - Ruse: Bulgarian – Romanian borders
 - High-security building scenario (Bucharest)
 - Pilots were active from 11/2019 – 03/2020
 - Total number of participants: 524
 - Interrupted due to COVID-19

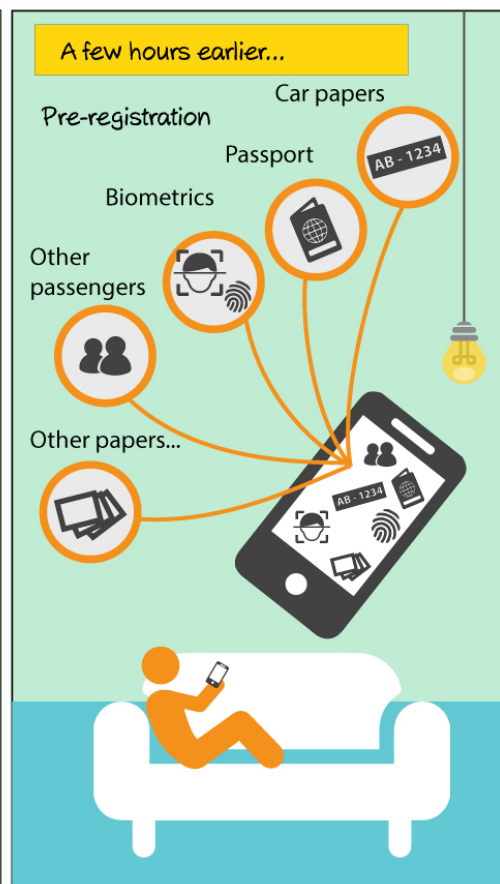
BEFORE

On BCP...

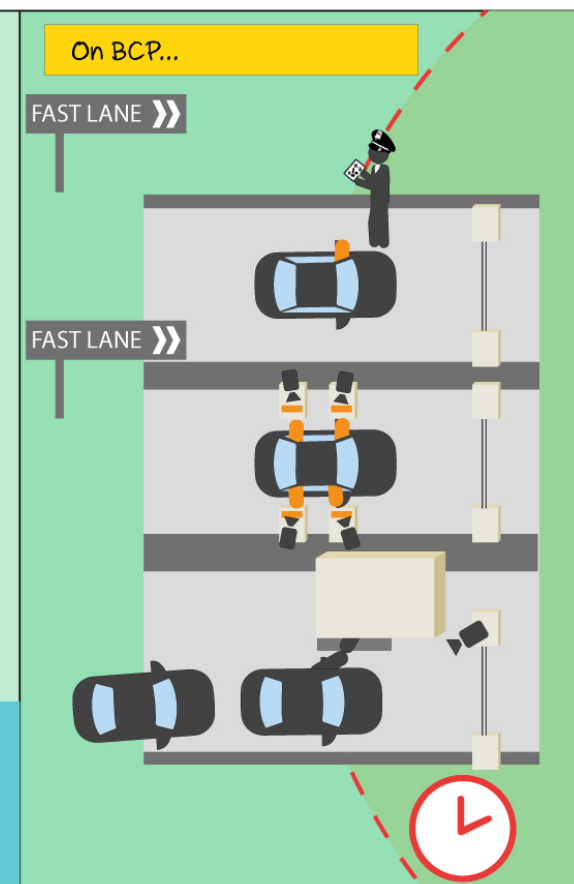


AFTER

A few hours earlier...



On BCP...



Participants

**Number of
participants**

136

Pilot test stages and duration

Pilot test	Duration
Briefing & Informed consent signing	7'
Enrolment and pre-registration	7'
Checks time	3'
Debriefing	3'

Traveller experience	Participants percentage (%)
Negative	0
Negative-Neutral	0
Neutral	2.9
Positive-Neutral	2.2
Positive	94.9

Main remarks:

- ✓ Overall satisfying results
- ✓ Face and soft biometrics false detections caused by ambient light dependency
- ✓ Flawless performance by iris and fingerprint modules
- ✓ About 1 in 10 travellers willing to participate

Participants

Number of
participants

221

Pilot test stages and duration

Pilot test	Total time needed
Briefing & Informed consent signing	15'
Enrolment and pre-registration	13'
Document check	1'
Biometrics check	3'

Traveller experience	Participants percentage (%)
Negative	0
Negative-Neutral	0
Neutral	10
Positive-Neutral	35
Positive	55

Main remarks:

- ✓ Promising results
- ✓ Face and soft biometrics were widely tested.
- ✓ Iris and fingerprint modules were evaluated with satisfying results only to few officers due to COVID-19 restrictions
- ✓ Officers' familiarization with SMILE system and resolution of minor technical issues are expected to reduce the border checks' duration **to less than 1 minute.**

Pilot sites: High-Security Building

Modalities and number of participants

Tested module	Number of participants
Enrolment	147
Document check	147
Integrated checks	20 (COVID-19 period)

Pilot test stages and duration

Pilot test	Duration
Briefing & Informed consent signing	10'
Enrolment and pre-registration	9'
Document check	5'' (application time)
Face Biometric check	3'' (application time)

Main remarks:

- ✓ Promising results for document scanning and face biometric check
- ✓ Accelerated check procedures that last less than 10 seconds
- ✓ The pilot was greatly impacted from COVID-19 restrictions
- ✓ Many updates and troubleshooting took place during COVID-19 depriving the chances for testing the new versions

- ❑ The proposed system is used only for **1st line authorization**
 - 2nd line remains as-is
- ❑ SMILE uses the concept of “**pre-registration**”:
 - Similar to air-travel “**check-in**”, travellers provide their information (documents, biometrics, travel plans, ETA etc.) **prior to their arrival** at the Border Crossing Point
 - Checking are performed **off-line**. SMILE system collects information from national and international databases (e.g., EES, ETIAS, VIS, SIS etc.) and runs a “**risk analysis**” on the travellers.
 - If no alerts are risen, the travellers are allowed to go through the “**fast-lane**”, where a **final identification** is required
- ❑ Similar approach applied to **lorries** (only for border crossing, NOT for customs)
- ❑ Special case of buses: passengers treated as **group** instead of individuals, aiming to improve the flows at the borders.
- ❑ The SMILE platform also can **suggest the best arrival time period**, based on the expected traffic, thus improving the flows and reducing waiting times.
- ❑ As reported by end-users, communication delays between various systems can increase waiting times by a lot. **The “pre-registration” application improves in this point.**

Thank you for your attention!



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