D.I. Bernhard Strobl
Department Safety and Security

# MobilePass

A secure, modular and distributed mobile border control solution for European land border crossing points

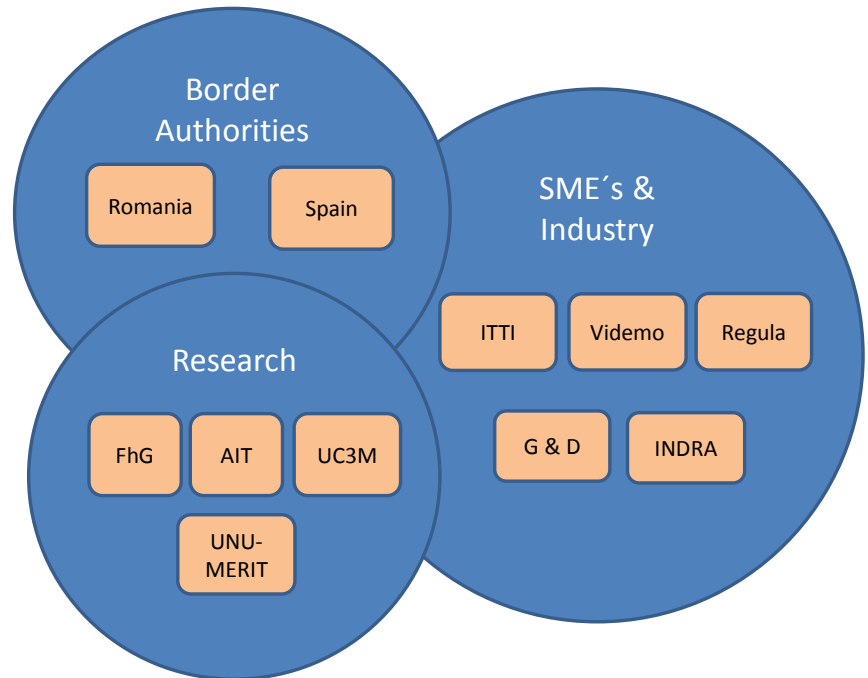| Proposal | MobilePass - 608016 |
| --- | --- |
| Funding | Security Call, 7th Framework Programme |
| Topic | SEC-2012.3.2-3: Mobile Equipment at land border crossing points |
| Type | CP – Capability Project |
| Duration | 2.5 Years |
| Budget | ~ 4.2 M€ |
| | Develop new technologies needed in mobile scenarios and embed them in the actual border crossing workflow. Bring together system- and component producers, research institutions and governmental authorities. The entire innovation process, from development to integration, will continuously be evaluated by border guard authorities. |
| Coordinator | MobilePassCoordinator@ait.ac.at; +43 (0) 664 815 78 42 |

# MobilePass

**A**

**secure**, (TPM, re-engineering, remote attestation, access control)
**modular**, (embedded hardware, used only as a scanner, interfaces, API´s)
**distributed**, (communication, wireless connectivity, nat./int. DBs, certificate stores)
**and mobile** (usability, battery, robustness, HMI, requirements)
**border control solution** (processes, workflows)

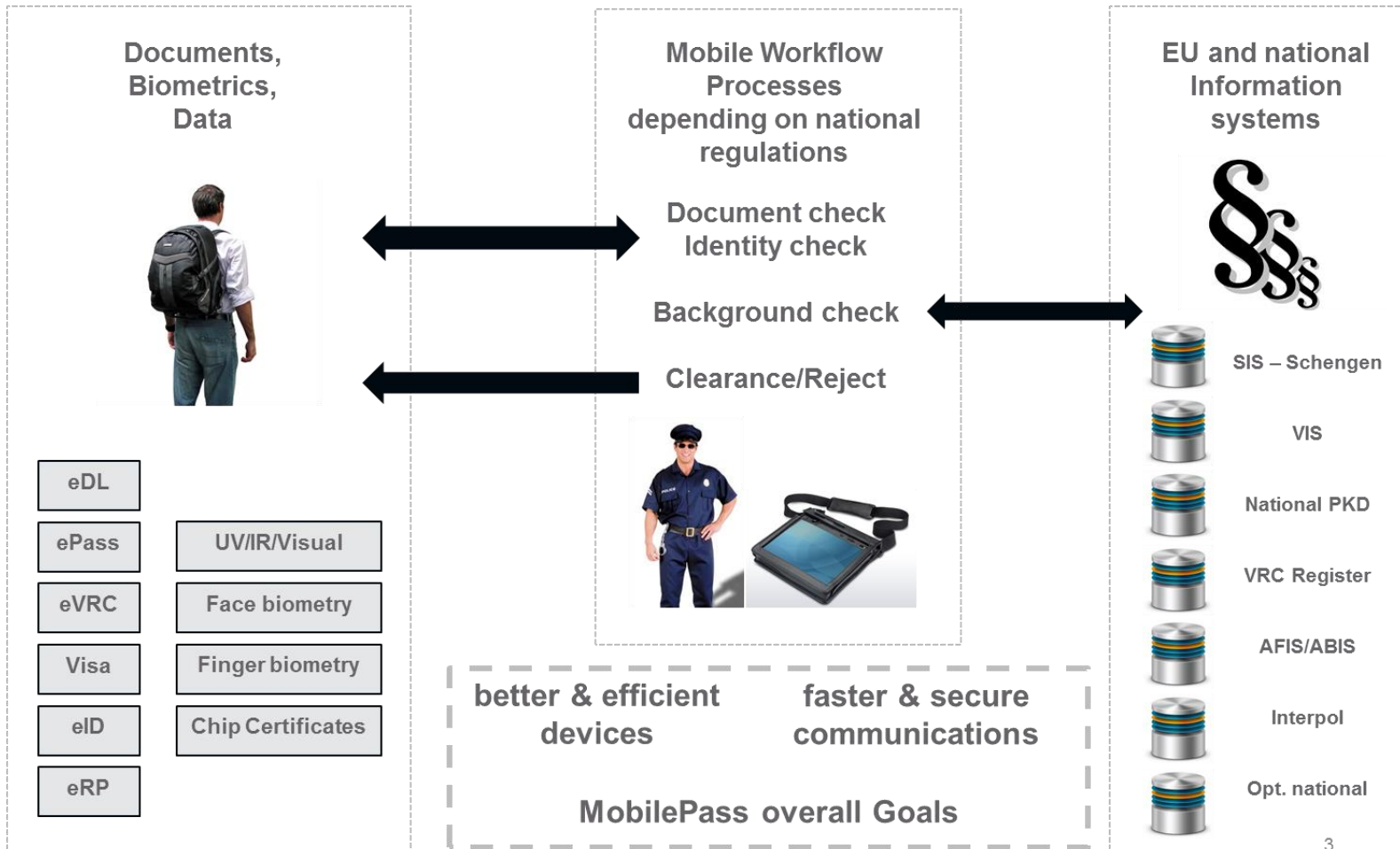for European land border crossing points.

# Consortium

- University and Research Centers
  - AIT (Embedded systems, Architecture on mobile devices)
  - FhG (2/3D Capture and image enhancement)
  - UC3M (Identification technologies, Fingerprint Biometry, standards and evaluations)
- SMEs
  - Regula (Fullpage Passport Reader)
  - ITTI (communication systems)
  - UM-MERIT (Ethics)
  - VIDEMO (Face Biometry)
- Industry
  - G&D (Integrator)
  - INDRA (Integrator)
- National Service Provider, National Authorities
  - RBP Romanian Border Police
  - SBP Spanish Border Police

Border Authorities: Romania, Spain

Research: FhG, AIT, UC3M, UNU-MERIT

SME´s & Industry: ITTI, Videmo, Regula, G & D, INDRA

# The Problem

- **Where stationary systems can't be used**
    - Cars, busses, trains
    - Control in the outback, manhunt, Interpol
    - Additional mobile systems at airports
- **Requirements of the EU tender:**
    - Better technical mobile equipment for identity check
    - Secure wireless transmission
    - Optimized workflow for officers
    - Respect legal, ethical and social factors
    - Increase of security and passenger flow

# Overview



**Documents, Biometrics, Data**

- eDL
- ePass
- eVRC
- Visa
- eID
- eRP

- UV/IR/Visual
- Face biometry
- Finger biometry
- Chip Certificates

**Mobile Workflow Processes depending on national regulations**

Document check
Identity check

Background check

Clearance/Reject

**better & efficient devices**     **faster & secure communications**

**MobilePass overall Goals**

**EU and national Information systems**

- SIS – Schengen
- VIS
- National PKD
- VRC Register
- AFIS/ABIS
- Interpol
- Opt. national

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# Status now

- While there are advances in ABC systems, mobile solutions lag behind
- Partial mobile solutions available
- No practical & fast mobile fingerprint scanners
- No real mobile face biometrics verification system
- No mobile full page document scanners
- Reliable, fast & secure data transmission to information systems is to be improved
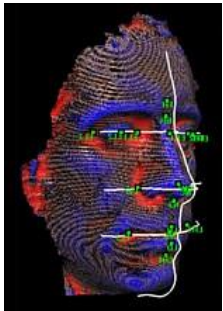
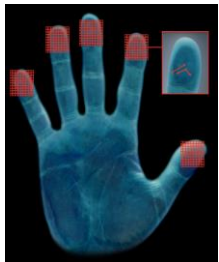**Modular System Architecture**
**Objective: 1**
**Objectives for MobilePass:**

**Fast, Mobile**
UV/IR, fullpage
Passport scanner

**Advanced Components,**
**Objectives: 2,3,4**

**Fast, Mobile**
face verification
camera

**Information systems**

**Fast, Mobile,**
**contactless**
fingerprint
scanner/camera

**Terminal Devices**

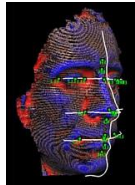**Fast, Reliable, Secure**
**communication**
**Objective: 5**

# Consortium approach (technical)

**Fraunhofer**

**Regula**

**AIT**

**Videmo**

**UC3M**

**UM-
MERIT**

**G&D, INDRA**

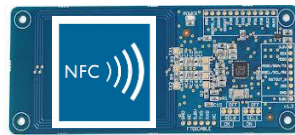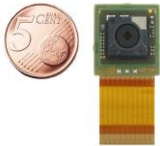**ITTI**

# Device approach (birds eye view)

# Device approach (birds eye view)



- Camera for MRZ, OCR-B Text (at a distance)
- NFC ePassport Reader
- Face Capture & Verification (integr. Illumination)
- Fingerprint Capture & Verification (contactless)
- BT,WIFI,WIMAX,3G,4G,LTE
- Connectivity to other
  other Scanners (e.g. FullPage passport scanner)
  and Information systems
- Pipeline Operation
- Trusted Platform Module (encrypted boot)
- Simple one-handed Operation
- Open API´s

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