Bruk av biometri vid grensekontroll
Use of biometrics at border control

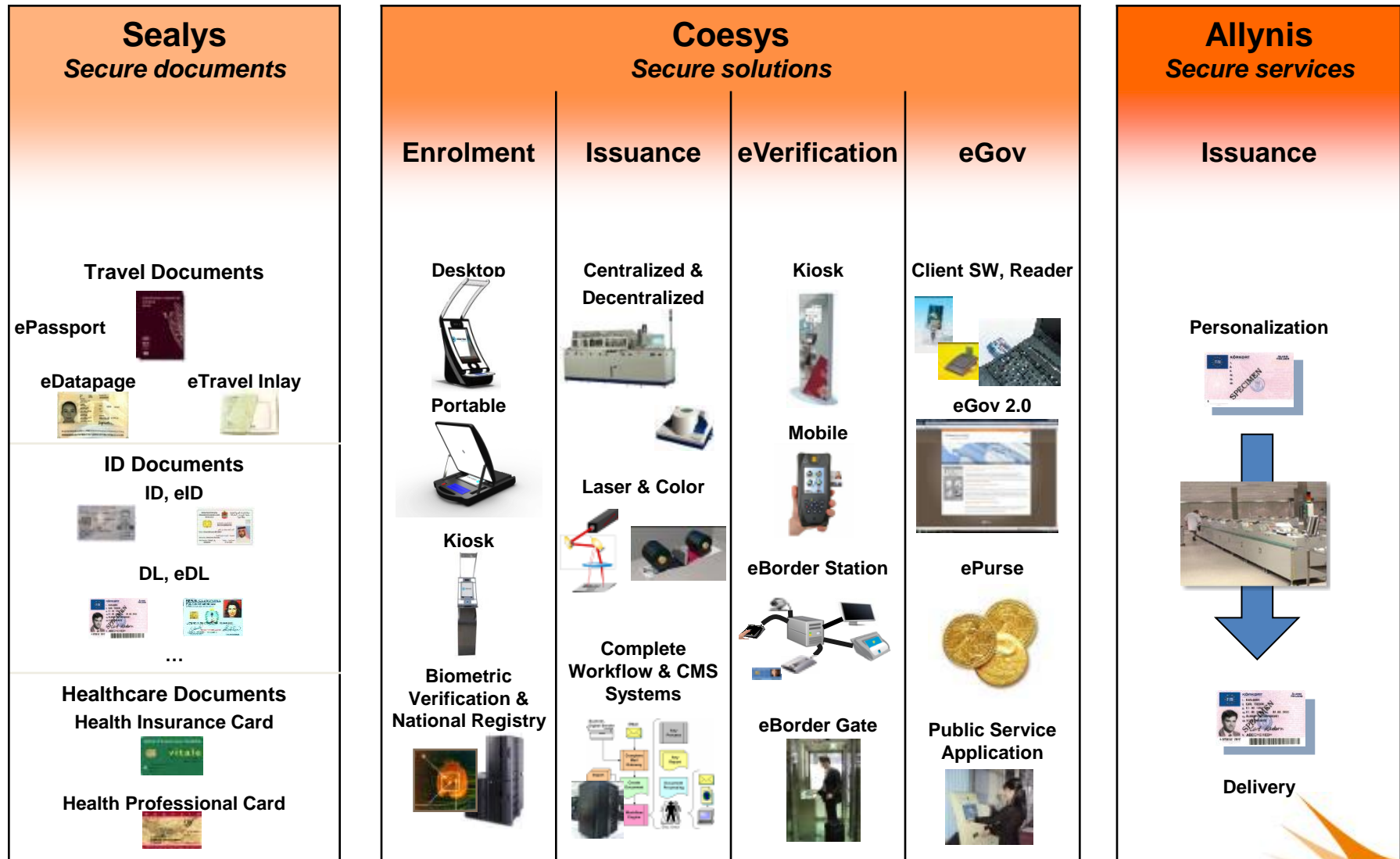Biometri og Identitet -
NID Senter seminar April 2012

Kristian Honkanen
Gemalto

Agenda

✕ Gemalto in brief

✕ Biometrics and Border control

✕ Automated Border Control – ABC

✕ ABC in Europe

✕ Mobile border control

✕ Norway eGate-project - Politiet

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Gemalto: a complete offering

Sealys
Secure documents

Travel Documents

ePassport

eDatapage   eTravel Inlay

ID Documents
ID, eID

DL, eDL

…

Healthcare Documents
Health Insurance Card

Health Professional Card

Coesys
Secure solutions

Enrolment

Desktop

Portable

Kiosk

Biometric Verification & National Registry

Issuance

Centralized & Decentralized

Laser & Color

Complete Workflow & CMS Systems

eVerification

Kiosk

Mobile

eBorder Station

eBorder Gate

eGov

Client SW, Reader

eGov 2.0

ePurse

Public Service Application

Allynis
Secure services

Issuance

Personalization

Delivery

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eVerification

Document Delivery Station

Self-service Verification kiosk

Border Control Station

Automated Border Control

Mobile Verification Terminal

Tablet PC vehicle

Gemalto Identity references

Over 50 e-Identity projects, including

23 e-Passport	4 e-Drivers License
14 National e-ID	10 e-Health

Over 50 turnkey solutions / operated services

13 Enrolment	7 e-Verification
29 Issuance	10 e-Gov

EUROPE

Passport
- Denmark
- Estonia
- France
- Italy
- Latvia
- Malta
- Norway
- Poland
- Turkey

Passport (cont'd)
- Portugal
- Slovenia
- Sweden

Visa
- Estonia
- Denmark
- Finland
- Latvia
- Norway
- Finland

ID
- Belgium
- Finland
- Lithuania
- Portugal
- Sweden

Driver license
- Czech Republic
- Finland
- Norway
- Sweden

Health
- Belgium
- Bulgaria
- Finland
- France
- Germany
- Slovenia
- UK

NORTH AMERICA

Passport
- USA

Health
- Mexico

Driver license
- Mexico

SOUTH AMERICA

ID
- Ecuador
- Brazil

Driver license
- El Salvador

MIDDLE EAST & AFRICA

ID
- Bahrain
- Benin (enrolment)
- Oman
- Qatar
- Saudi Arabia
- Tunisia
- UAE

Driver license
- Zambia

Passport
- Ivory Coast
- Qatar
- Morocco

Health
- Algeria
- Azerbaijan
- Gabon
- South Africa

ASIA

Passport
- Hong Kong
- India (diplomatic)
- Singapore

ID
- Hong Kong
- Singapore
- Taiwan

Driver license
- Australia
- India

Health
- China

Updated October 2010. Detailed country names include public references only.

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Biometrics and Border Control

- **Two main tasks of Border Control**
  - Verify that a person has the right to enter (and exit) a country
    - Travel document
    - Visa
    - Additional documentation and information
  - Verify that the travel document holder is the right person
    - Biographical data
    - Biometric data
    - Watch lists

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Biometrics and border control

- 193 countries* in the world
- Variety of travel documents
  - ePassport
  - Passport
  - (e)ID cards
  - Resident permits
  - Visas
  - Driving license

- Choice of biometrics
  - Face
  - Fingerprint (1-10)
  - Iris
  - Signature

  - Gait
  - Veins
  - Others

* UN Member States

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Biometrics and border control

Facial picture
- Mandated by ICAO and EU
- Frontal picture
- Stored on the passport chip
- Protected by BAC, "Open data"
- ePassport , EU eID & eRP

Fingerprints
- Mandatory for EU and EEC passports
- 2 index fingerprints stored
- Protected by EAC

- EU Schengen Visa
- 10 fingerprints stored in central database
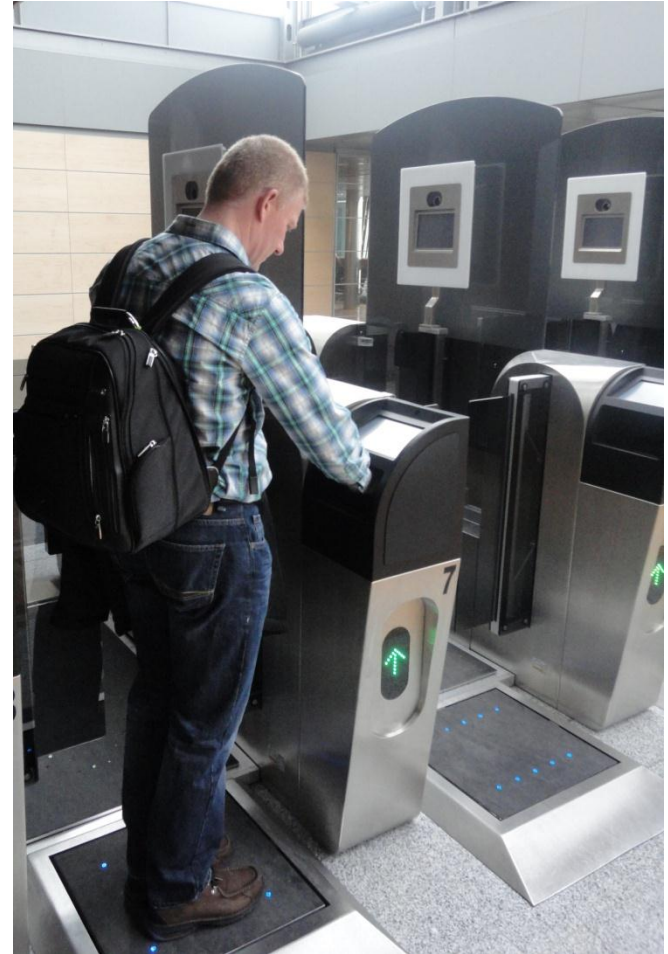
Why Automated Border Control?

✖ **Service**

- better service for passengers
- better service for airports
- better service for border control

✖ **Security**

- same controls as in manual control
- in addition biometric matching , i.e. facial recognition
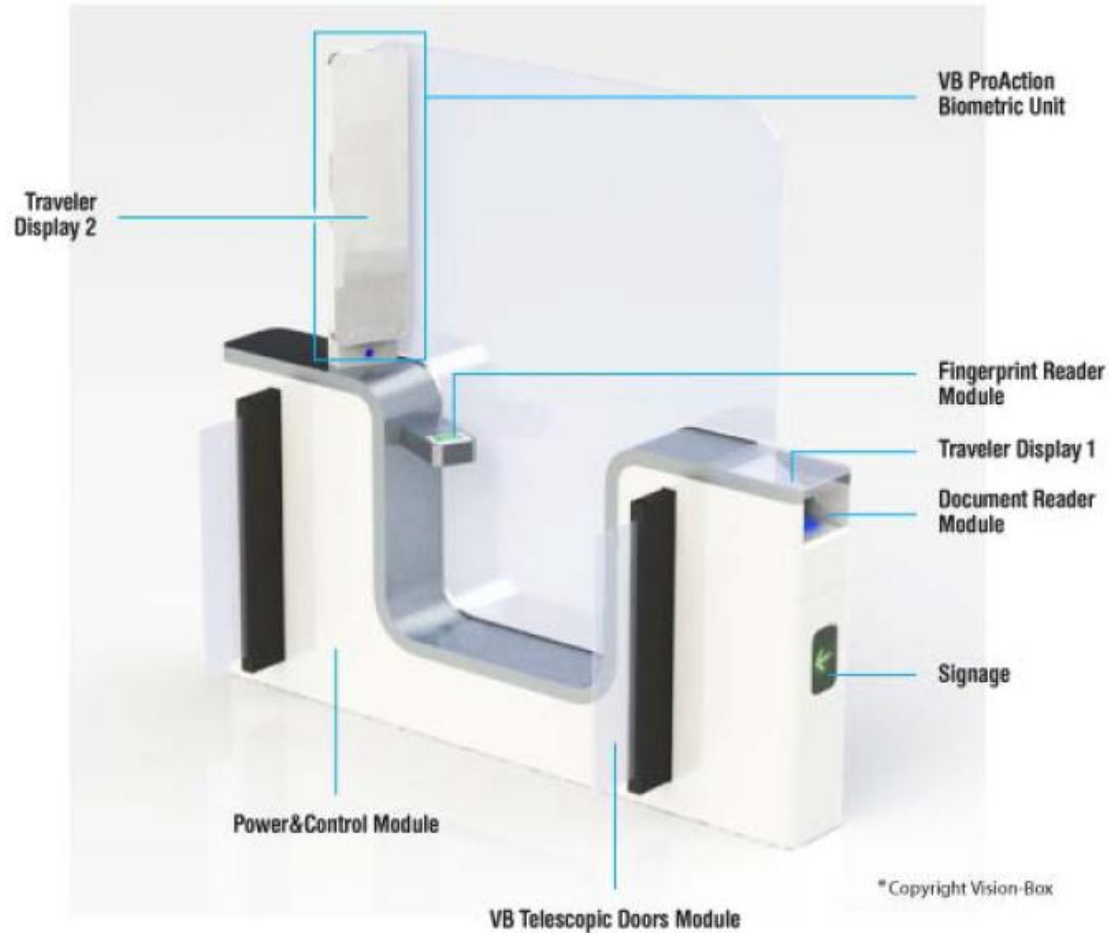- ABC is unbiased, same procedures for all passengers

✖ **Resource optimization**

- one border officer can control 3-7 eGates
- manual resources on high risk travelers

Helsinki Airport eGates

eGate modules and functions

Traveler Display 2

VB ProAction Biometric Unit

Fingerprint Reader Module

Traveler Display 1

Document Reader Module

Signage

Power&Control Module

VB Telescopic Doors Module

*Copyright Vision-Box

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ABC in Europe

ABC ePassport

- Finland
- Portugal
- Norway
- Netherlands
- Germany
- UK
- Czech Republlic

ABC token or registration

- UK - Iris
- France - Parafe
- Netherlands - Privium

Europe

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Mobile eVerification use cases

✖ Document and Identity verification

- Document reading
  - ✓ eDriving License
  - ✓ eIDentity card
  - ✓ eResident Permit
  - ✓ ePassport
  - ✓ eHealth card
- Document Authentication and security features
  - ✓ BAC, BAP, SAC, AA, TA, EAC, EAP
- Biometric Verification
  - ✓ 1:1 verification (Match on Card or Match on Terminal)

✖ Biometric Identification

- Finger Print acquisition
- 1:n verification (AFIS with back end access)

✖ Back end verification

- Document data base re-search
- Peoples data base re-search

✖ Electronic Infringement notice

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Capable to read all electronic identity documents
Capable to capture and match fingerprints

Fingerprint Scanner
Capacitive high performance – FIPS 201

Contact Card Reader
- Compliant to ISO 7816 1/2/3
- Fully interoperable to read all type of e-ID documents

Contactless Card Reader
- Compliant with ISO 14443
- Fully interoperable to read all type of e-passport

Swipe MRZ Reader
- Miniature Bi-directional hand-swipe.
- Machine Readable Travel Document Conforming to ICAO Document 9303.
- 1 to 3 lines MRZ

OCR A
OCR B

RFID

IMAGER

BLUETOOTH

WiFi

Verification of all identity documents with one single terminal

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What is there for the future?

- ✖ Alternative biometrics
  - ● Fingerprints
  - ● Iris
  - ● DNA
  - ● ...
- ✖ New type of eGates and processes
- ✖ Mobile verification units
- ✖ 3rd country nationals
- ✖ EU entry-exit program

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What is common with these celebrities?

They all look like me!!!!

Match: **68%**	Match: **67%**	Match: **65%**	Match: **63%**	Match: **61%**
Tony Blair	Bryan Adams	Francis Ford Coppola	Simon Cowell	Daryl Hannah

Courtesy http://celebrity.picadilo.com/

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Thank you for your attention

Questions?

kristian.honkanen@gemalto.com

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