



The European Digital Passport

- From Macro to Micro Level –
(EU Funding No. 507974)

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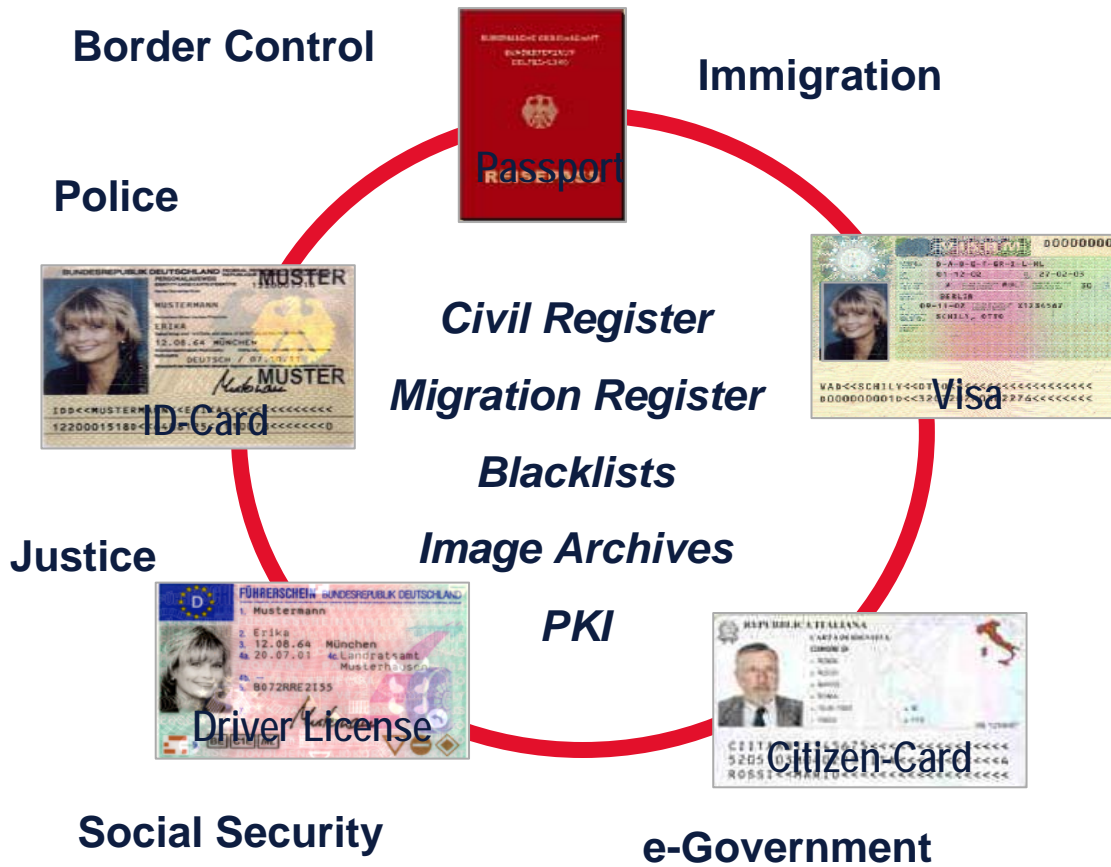
The European Digital Passport

From Macro to Micro Level



The Macro View

The new passport is part of an overall national security infrastructure

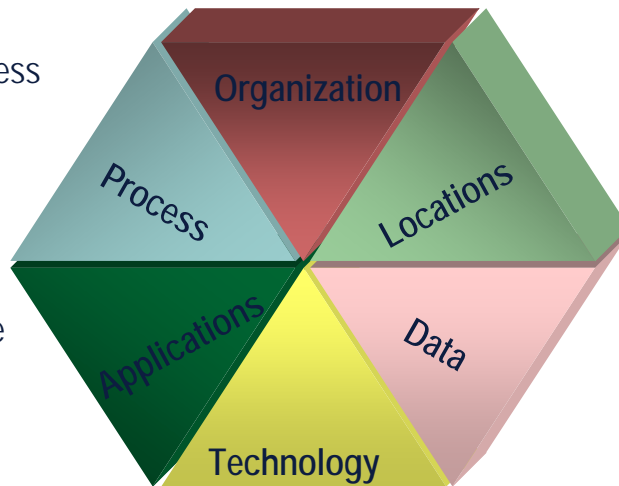




Domains of Change

The new electronic passport requires more than just additional equipment and IT applications

- Biometric Enrolment
- Biometric Verification
- New Passport Production Process
- New Border Control Process
- Adapt internal organization
- New roles for employees
- Provide Training
- Upgrade Data Capture Sites
- Upgrade Border Control Points
- Centralize passport production
- Upgrade site security



- Data Capture Applications
- Fingerprint Recognition Software
- Face Recognition Software
- Card Operation System
- Card Management System
- Public Key Infrastructure
- Network upgrade (capacity and security)
- Capture and Verification Systems
- Upgrade Civil Register
- Image archives
- Upgrade blacklists
- Increase safety and security
- Connect to international registers
- Key Distribution
- Revocation Lists





«A chain is not stronger than its weakest link»

- Document security → ICAO Standards and Recommendations
- Infrastructure security → national authority, EU, supplier
- Production security
- Process security
- Operational security
- Holder Privacy



Common border for all Schengen states:

The weakest identity, passport document and border control defines the quality of the security of the Schengen area

- Requires common security policy
- Requires harmonization of security level and technology
 - of implementation variants (ICAO)
 - of production and issuing processes
 - in the identification of applicants
 - in passport implementation on national level
- Requires EU standardization and Verification of Standards



Attacks may move

- **Improved communication between EU member states**
- **Improved background identity verification**
- **Improved verification of third party nationals on naturalization / immigration**
- **Improved infrastructure (IT-Systems)**
- **Security challenges for new business models**

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The Micro View



Travel Documents: Programs and Regulation

- **Benchmark-Tests** (driven by government)

Australia	Q3/2004	(Immi. Office)
USA	Q4/2004	(DHS)
Thailand	Q4/2004	(MHA)
Japan	Q4/2004	(Mol)

Mechanical & electrical stability

- **Interoperability-Tests** (driven by ICAO/NTWG)

1 st Canberra, Australia	February 2004
2 nd West Virginia, USA	July 2004
3 rd Sydney, Australia	August 2004
4 th Tsukuba, Japan	March 2005
5 th Singapore	November 2005

Contact less interface

- **Pilot** (driven by government)

Netherlands, Enrolment	Q4/2004
Netherlands, Border Mgmt	Q2/2005
USA / Australia / NZ	Q3/2005
China/Hong Kong	Q3/2005
Japan/Korea	Q1/2005 (ID Card)

MRZ reading
+
Contact less interface
+
Biometric recognition

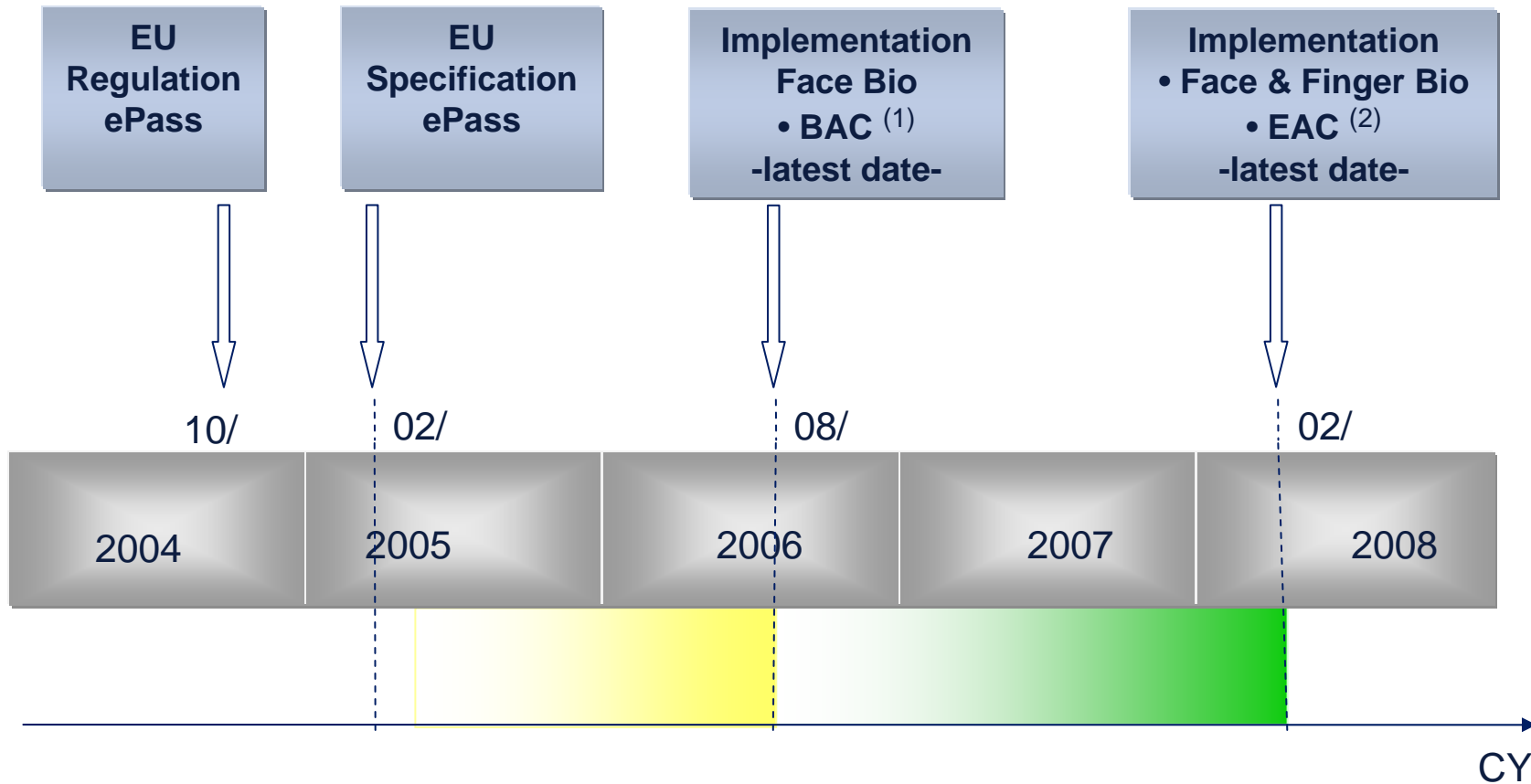
EU Roadmap ePassport



EU Regulation 2252/2004

Step 1: Bio Face and BAC

Step 2: Bio Face and Finger and EAC



1) Basic Access Control

2) Extended Active Control

Security & Biometrics



		Security Level (PKI 1.1)		
		Passive Authentication	Basic Access Control -BAC-	Extended Active Authentication Control -EAC-
Biometric (2.0)	Face		<ul style="list-style-type: none"> •Japan ³⁾ -Q1/2006 - •EU ¹⁾ (1st step) -Q3/2006 - •USA ²⁾ - Q1/2006 - 	
	Face & Finger-Print	<ul style="list-style-type: none"> •Australia -Q1/2006 - 		<ul style="list-style-type: none"> •EU ⁽¹⁾ (2nd step) - Q2/2008 -

+18 months

1) EU Regulation from December 2004

3) Japan Passport Program

2) BAC expected



Overview on National Passport Projects in Japan, Germany, France & USA

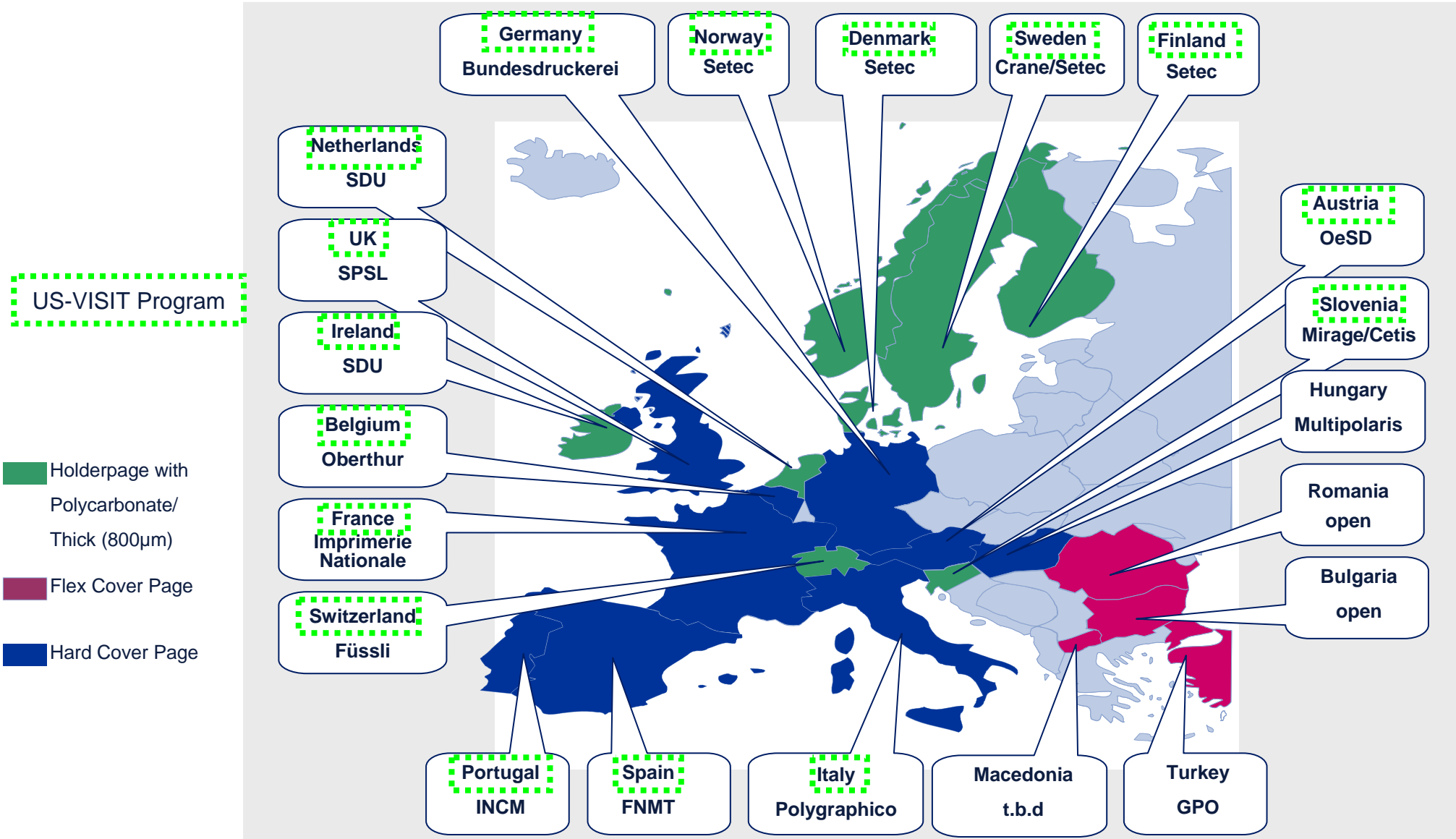
	Japan	Germany	France	USA
Specifications/ Standard	ICAO 9303-1	ICAO 9303-1	ICAO 9303-1	ICAO 9303-1
-Security	BAC	BAC ⁽¹⁾ EAC ⁽²⁾	BAC ⁽¹⁾ EAC ⁽²⁾	BAC ⁽³⁾
-Biometrics	Face	Face ⁽¹⁾ Face & Finger ⁽²⁾	Face ⁽¹⁾ Face & Finger ⁽²⁾	Face
-Inlay Integration	Middle Page	Cover Page	Cover Page	Cover Page
-Memory Size	32k	64k	64k	64k
- Contact less Modulation (Passport)	B	A or B	A or B	A or B

(1) Phase 1

(2) Phase 2 according EU regulation 2252

(3) expected

ePassport projects: Landscape





Europe - Outlook

	ePassport	NeID w/ travel function	eVisa
■ Standard	ICAO 9303 – 1	CEN TC 224 / ICAO 9303-1	ICAO 9303 – 2
■ EU Regulation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
■ Format	ID 3	ID 1	ID 2
■ Implementation	CY 05/06	CY 06 ¹⁾ /07 ²⁾	?
■ Application Area	Worldwide	Schengen	Schengen

1) e.g. in France, Spain and Sweden, published by Mol

2) e.g. in Germany, Bundestagsdrucksache 15/4616, 11th of January 05 published from parliament



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