

Tips to make your ID project successful

Austrian State Printing House

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CEO, OeSD International

Agenda

1. Before the start of your ePassport/eID project

- Create Legal Equilibrium
- Process Planning
- Evidence of Identity

2. Must Haves in your RFP/Tender

- ICAO TRIP
- Doc 9303 & PKD
- Contract

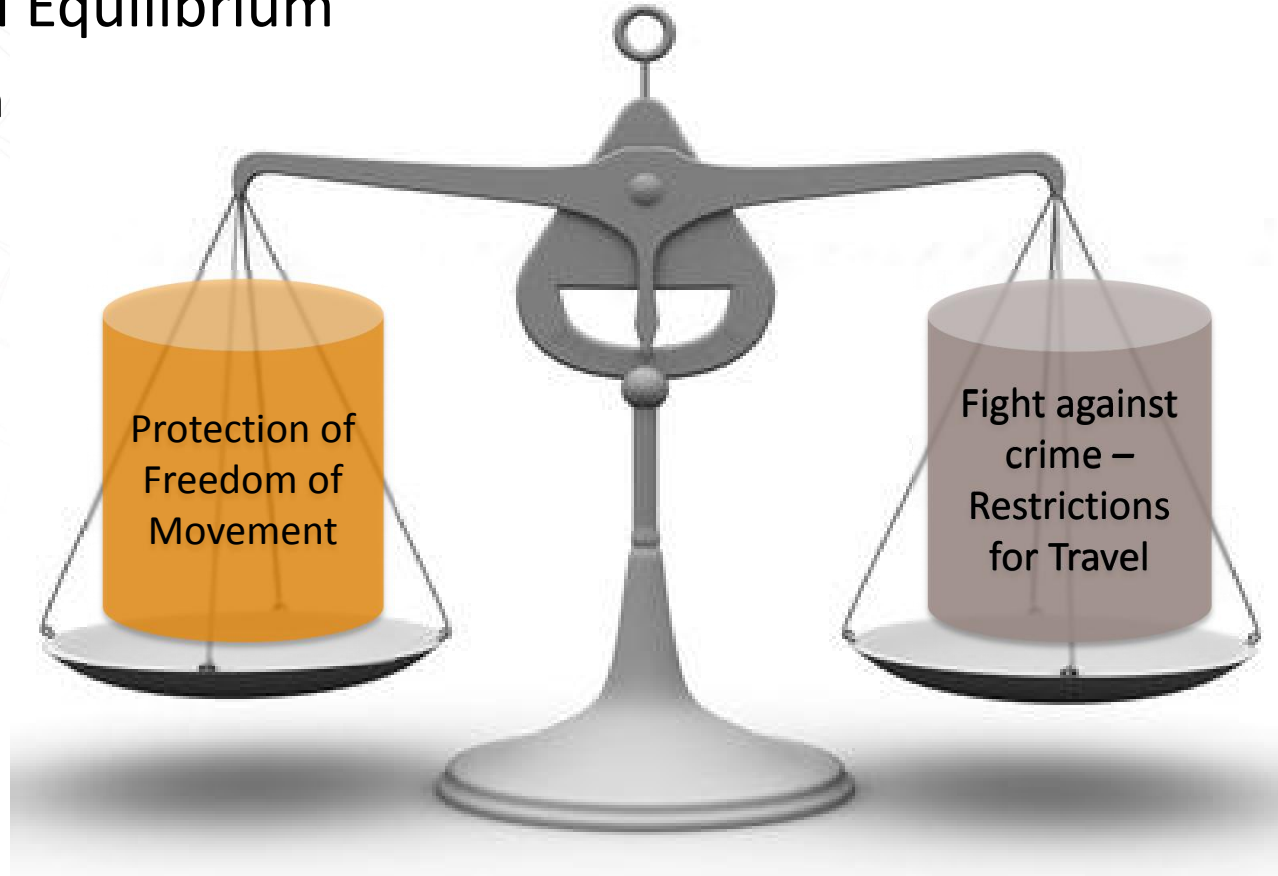
3. Guidance Material

4. The Future



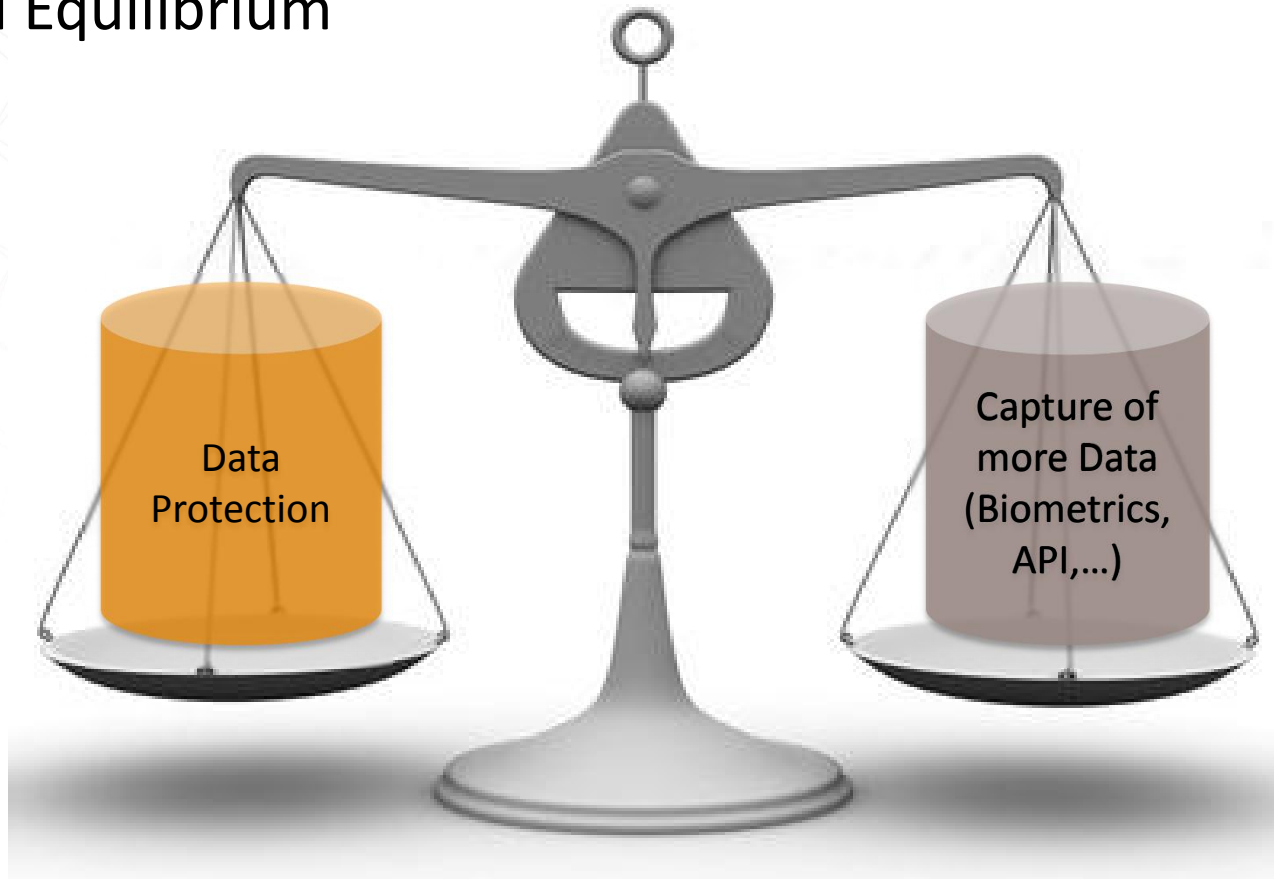
1.a. Legal Equilibrium

Equilibrium



1.a. Legal Equilibrium

Equilibrium



Identity Verification vs. Privacy

Any identification procedure must be proportionale to its intent

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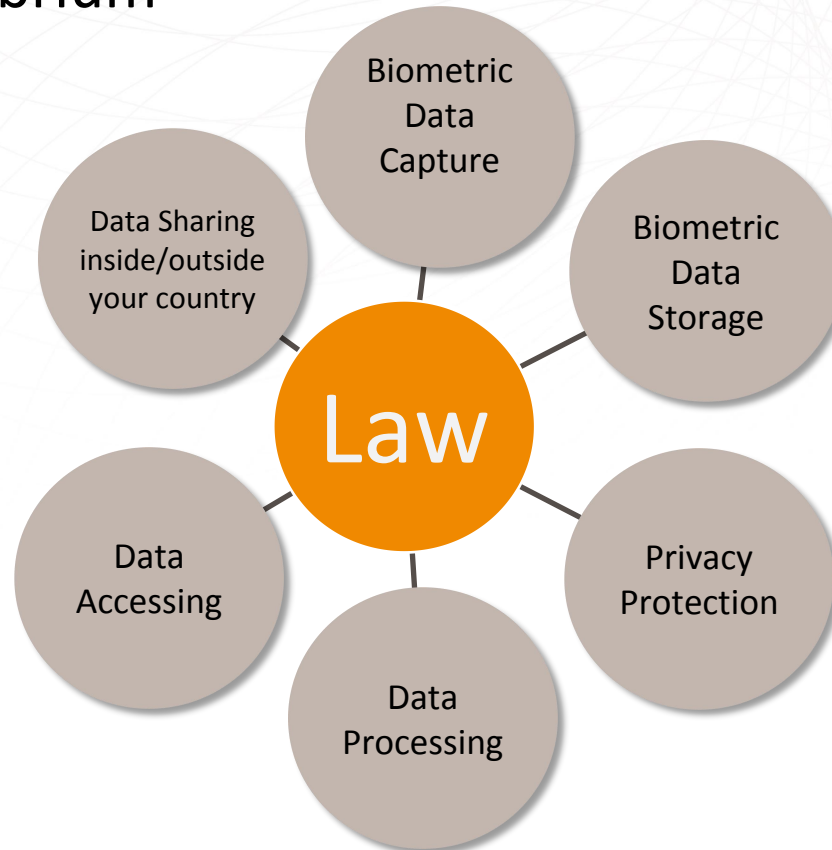
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"May I see some photo ID?"

1.a. Legal Equilibrium

Basic Legal Trends



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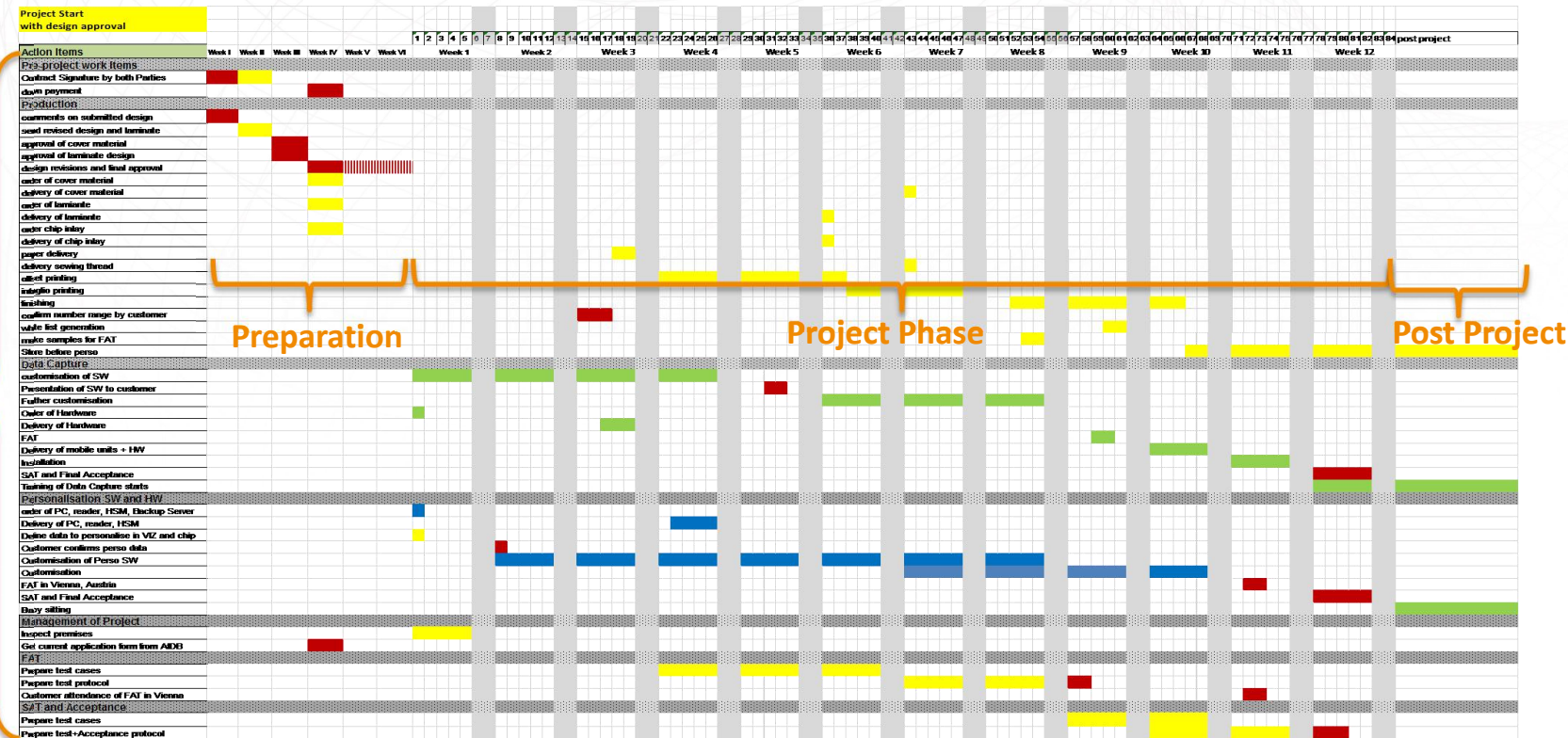
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1.b. Process Planning

Tasks
&
Miles
-stones



1.b. Process Planning

Steps/Milestones that must not miss

- Fix the project start date
- Allow time for internal discussions and decisions
- Allow reasonable time for implementation:
too much time pressure leads to “quick and dirty” implementation,
lacking customization, too little training, no time for proof of concept,....
- Fix the project end-date
- Allow for ‘baby-sitting’ time
- Communicate



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1.c. Identity Management first



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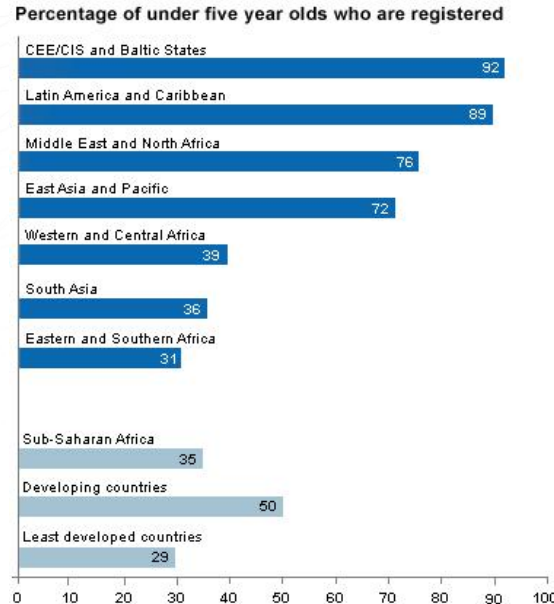
Root of Problems

Today 140.000 babies will be borne and never be registered.

Reasons:

- Expensive
- Far away
- Not regarded as necessary
- Illegal

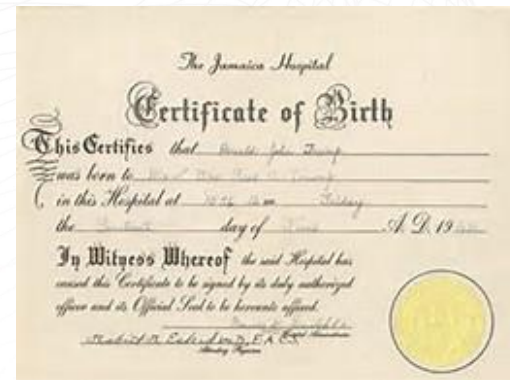
Progress in achieving universal birth registration varies across regions



Source: Demographic and Health Surveys (DHS), Multiple Indicator Cluster Surveys (MICS) and other national surveys, 2000-2008. Data refer to the most recent year available during the referenced period.

1.c. Evidence of Identity

- EOI is growing internationally as a focus area
- Some States already developed national standards and frameworks
- Stress the importance of breeder documents – they are the weakest link
- Breeder documents do not have the same protection level and are typically easy to counterfeit



1.c. Evidence of Identity

Travel Documents



- Doc 9303
- International treaty
- Globally interoperable
- Well organised
- Existing system and guidance
- Security features
- Based on machine readability

Breeder Documents



- No international foundations
- No system, no guidance, no interoperability
- No guardian features or system of security with lifelong life time
- No standards

Body = Identity ?

- Identity increasingly based on the “pure” biological existence.
- Is the body “natural”?
- Body is a construction, it is culturally shaped and socially ordered. The very existence of an entity called “body” is culturally bound
- Exposure and decoration of body is culturally heavily influenced



Tracing Identities

Briefkopf No. Postkarte Nr. Programme Nr.	F 0603103
Pflichtenname Name Vorname	S T A R Y
Vorname Nachname Christenname nach	Claud.
Datum und Ort der Geburt: Date et lieu de naissance Date and place of birth	4. Mai 1970, Wien
Beruf Berufung Profession	Schülerin
Wohnort: Adresse Residence	Wien
Staatsangehörigkeit: Nationalität Nationality	ÖSTERREICH / AUTRICHE / AUSTRIA



PERSONENBESCHREIBUNG SONDALEMENT DESCRIPTION OF BEARER	
Größe Taille Height	170 cm
Farbe des Haares Couleur des cheveux Color of hair	braun
Bezeichnende Merkmale Signes particuliers Distinguishing marks	keine

Candia Perry
Unterschrift des Inhabers

Olvedine

[illegible]

1.c. Evidence of Identity



Principle 1 - Identity Exists

Objective A - To determine if the identity exists (i.e. is not fictitious)

Objective B - To determine that the identity is a living identity

Principle 2 - Applicant links to Identity

Objective C - To determine that the presenting person links to the identity

Objective D - To provide confidence that a unique identity only has one claimant.

Principle 3 - Applicant uses Identity

Objective E - To provide confidence of the presenter's use of the identity in the community

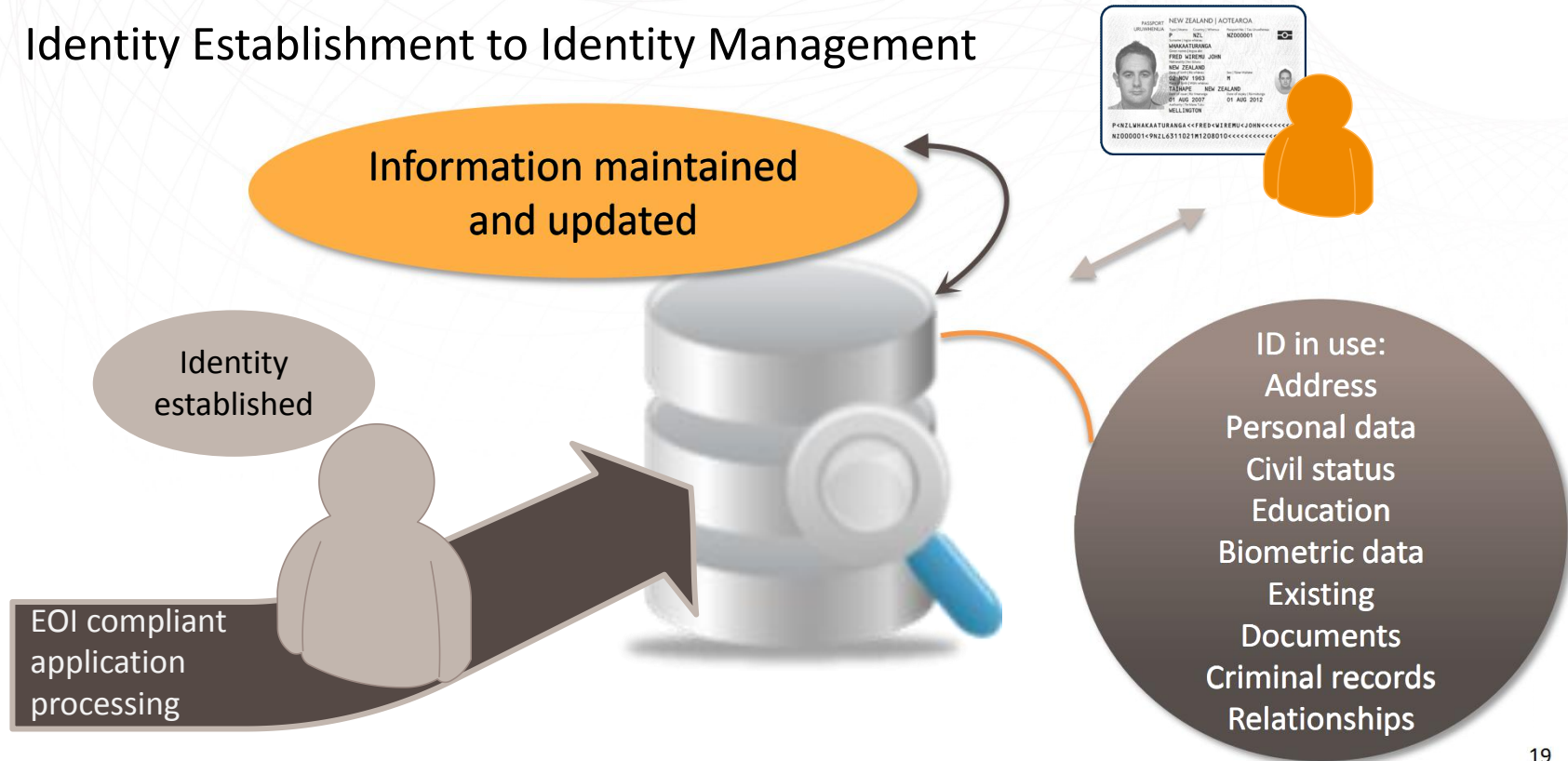
1.c. Evidence of Identity

- What does the person KNOW about the identity (details of personal data)
- Who IS the person (biometrics)
- What does he HAVE to support the identity (documents)



1.c. Evidence of Identity

Identity Establishment to Identity Management



1.c. Evidence of Identity

- Central Population Register as the source for ID documents
 - for all person-related data
 - as web-based solution, accessible with browser technology
 - Internet access via closed government-network or secured and encrypted public internet
 - One-stop-shop at local authorities for applicants



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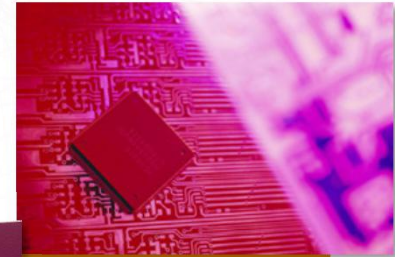
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2. Must Haves in your RFP/Tender

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2.a. ICAO TRIP



2.a. ICAO

Chicago Convention 1944

- All UN-States except Liechtenstein, Tuvalu, Dominica



The Convention is supported by nineteen annexes containing standards and recommendations

- Annex 1 – Personnel Licensing
Licensing of flight crews, air traffic controllers & aircraft maintenance personnel. Includes
- Annex 2 – Rules of the Air
- Annex 3 – Meteorological Service for International Air Navigation
Vol I – Core SARPs
Vol II – Appendices and Attachments
- Annex 4 – Aeronautical Charts
- Annex 5 – Units of Measurement to be used in Air and Ground Operations
- Annex 6 – Operation of Aircraft
Part I – International Commercial Air Transport – Aeroplanes
Part II – International General Aviation – Aeroplanes
Part III – International Operations – Helicopters
- Annex 7 – Aircraft Nationality and Registration Marks
- Annex 8 – Airworthiness of Aircraft
- Annex 9 – Facilitation
- Annex 10 – Communications
Vol I – Radio Navigation Aids
Vol II – Communication Procedures including those with PANS status
Vol III – Communication Systems
Part I – Digital Data Communication Systems
Part II – Voice Communication Systems

2.a. ICAO

What is Facilitation ?

Immigration, Customs, Healt, Quarantine



2.a. ICAO

Annex 9 Content

Ch. 1. Definitions and General Principles

Ch. 2. Entry and departure of aircraft

Ch. 3. Entry and departure of persons and their baggage

Ch. 4. Entry and departure of cargo and other articles

Ch. 5. Inadmissible persons and deportees

Ch. 6. International airports – facilities and services for traffic

Ch. 7. Landing elsewhere than at international airports

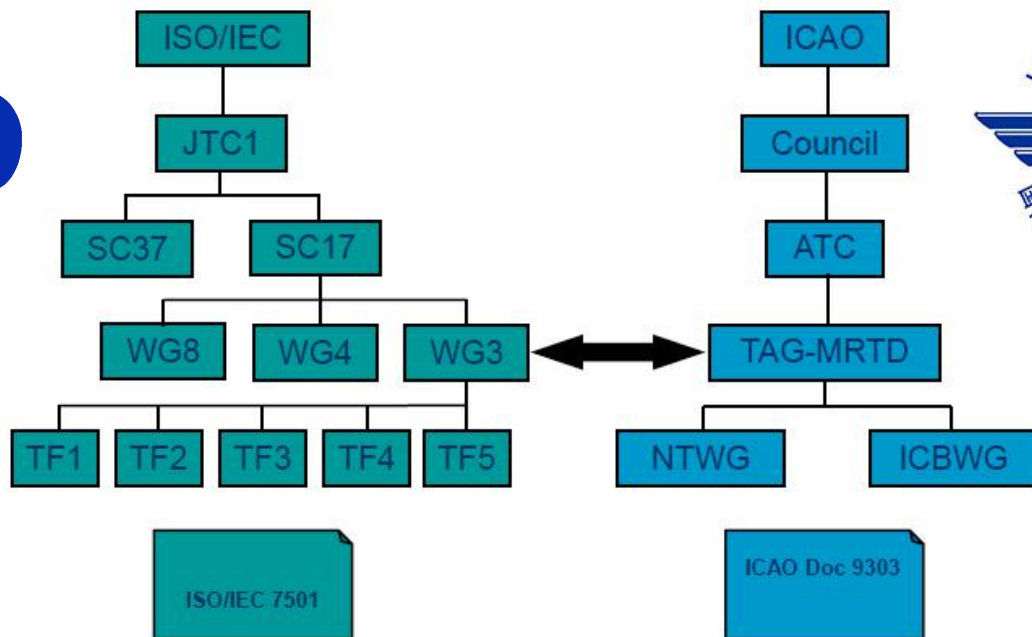
Ch. 8. Other facilitation provisions

Appendix 1-13

Main SARP
related to ICAO
TRIP Strategy

2.a. ICAO & ISO

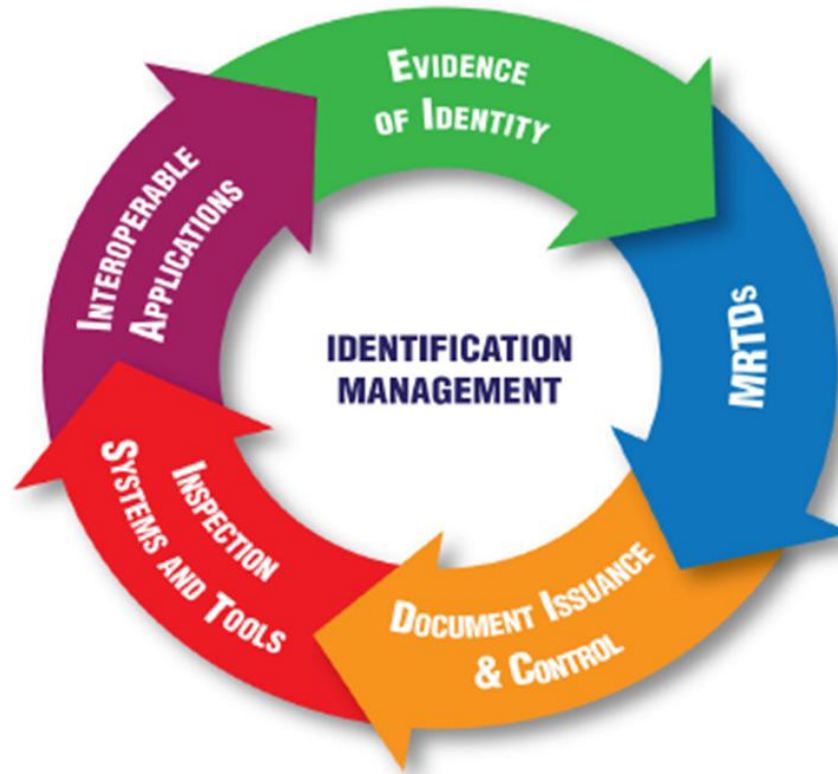
ICAO – ISO Collaboration



2.a. ICAO TRIP

ICAO TRIP Strategy

Five dimensions



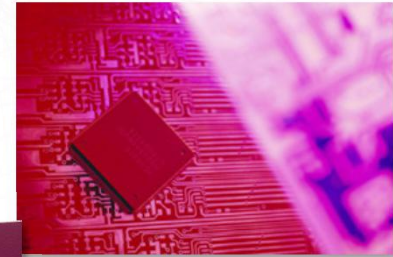
2.a. ICAO TRIP

Example of SARPS supporting TRIP

- **Standards (ex. MRTD) - Shall**
 - All passports issued to be Machine Readable Passports (MRPs) according to Doc 9303 (3.10)
 - All passports in circulations after 24/11/ 2015 to be MRPs (3.10.1)
 - One Person, One Passport (3.15)
- **Recommended Practices (SARPs) - Should**
 - ☐ Incorporation of biometric data and issuance of ePassport (3.9)
 - ☐ Introduction of API systems (3.47)
- **Differences to Standards**
 - Obligation from States to report to ICAO that they cannot implement a

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2.b. Doc 9303



2.b. Doc 9303

New Structure of Doc 9303



2.b. Doc 9303

<http://www.icao.int/publications/pages/publication.aspx?docnum=9303>

Part 1: Introduction

EN FR SP RU AR ZH

Part 2: Specifications for the Security of the Design, Manufacture and Issuance of MRTDs

EN FR SP RU AR ZH

Part 3: Specifications Common to all MRTDs (Amendment for New Part B in Page 28 and Part D in page 29)

EN FR SP RU AR ZH

Part 4: Specifications for Machine Readable Passports (MRPs) and other TD01 Size MRTDs

EN FR SP RU AR ZH

Part 5: Specifications for TD1 Size Machine Readable Official Travel Documents (MROTDs)

EN FR SP RU AR ZH

Part 6: Specifications for TD2 Size Machine Readable Official Travel Documents (MROTDs)

EN FR SP RU AR ZH

Part 7: Machine Readable Visas

EN FR SP RU AR ZH

Part 8: reserved for future use

EN FR SP RU ZH

Part 9: Deployment of Biometric Identification and Electronic Storage of Data in eMRTDs

EN FR SP RU AR ZH

Part 10: Logical Data Structure (LDS) for Storage of Biometrics and Other Data in the Contactless Integrated Circuit (IC)

EN FR SP RU ZH

Part 11: Security Mechanisms for MRTDs

EN FR SP RU ZH

Part 12: Public Key Infrastructure for MRTDs

EN FR SP RU ZH

Correct Reference is:

ICAO Doc 9303 7th edition

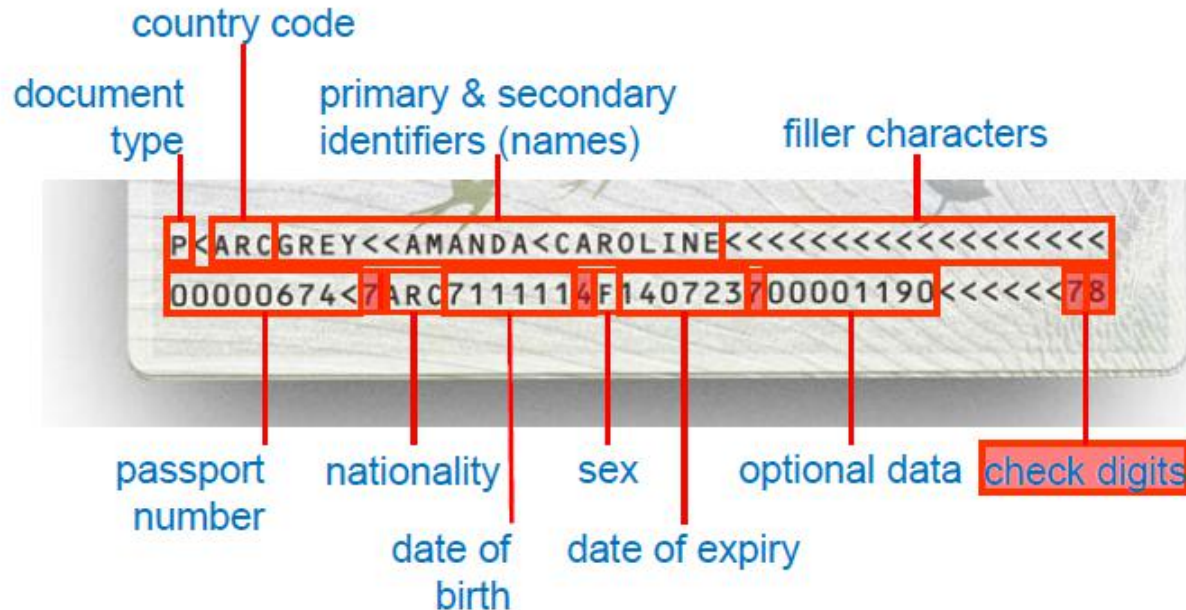
2.b. Doc 9303

Data Page Layout



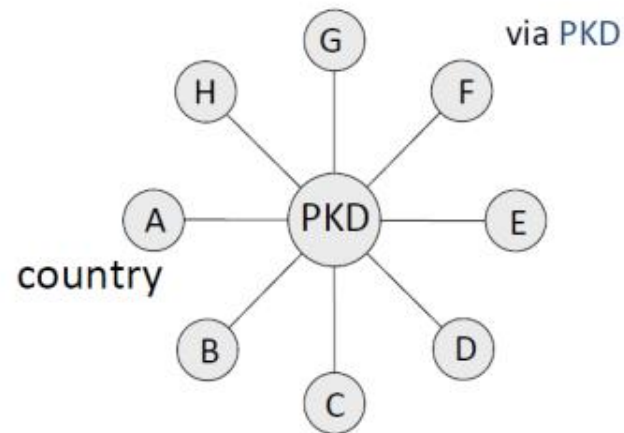
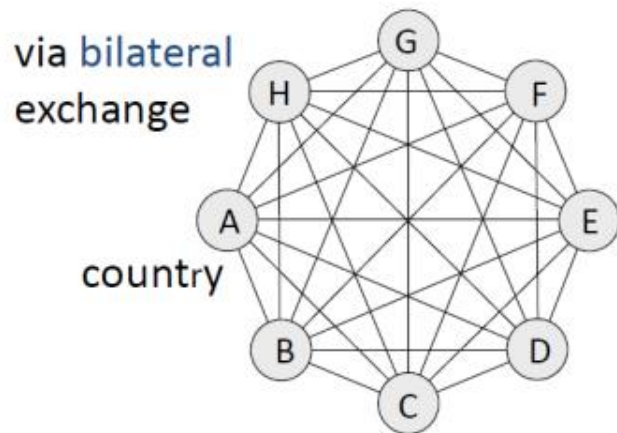
2.b. Doc 9303

Machine Readable Information in MRZ



ICAO PKD

PKD – Authentication and Validation



This example shows 8 States requiring 56 bilateral exchanges (left) or 2 exchanges with the PKD (right) to be up to date with certificates and revocation lists.

In case of 191 ICAO States 35,910 bilateral exchanges would be necessary while there are still 2 exchanges necessary with the PKD.

ICAO PKD

ePP Verification International

- The PKD is
 - a directory of all countries public keys required to validate the electronic signature of the data stored on the chip
- Upload and download facilities
 - DS certificates
 - CSCA Master Lists
 - Certificate Revocation Lists
- The PKD is not
 - A certification authority
 - An inspection system
 - Replacing border control systems and policies
 - Preventing illegal entry
- Proper inspection remains the responsibility of the inspecting authority



ICAO PKD Members



55 Participants

New Participants:

- Romania
- Finland
- Benin
- Botswana
- Iceland
- Kuwait
- Oman
- Turkey

Interoperable Applications for Traveller Identification

- INTERPOL Stolen and Lost Travel Documents (SLTD) Database
- Advanced Passenger Information (API)
- Passenger Name Record (PNR)
- „Watch lists“ Bilateral and multilateral exchanges (e. g. Al-Qaeda, Taliban, etc.)
- Trusted traveller programmes



INTERPOL

Biometrics

Standards are updated and enhanced regularly

- Biometric data interchange standards:
 - ISO/IEC 19794-1 (biometric data interchange format)
 - ISO/IEC 19794-4 (finger image data)
 - ISO/IEC 19794-6 (face image data)
- Electronic standards
 - ISO/IEC 14443, contactless integrated circuit cards

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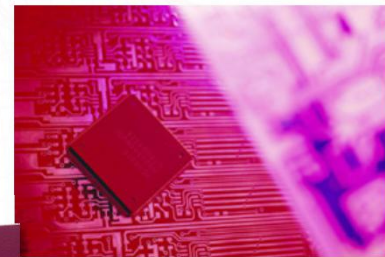
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2. Must Haves in your RFP/Tender

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- Your OWN document

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Design your OWN document

- Which are the biggest threats to my document?
 - > bidder shall answer to these threats
- Do not list security features that might
 - Limit the number of bidders (trademark, patents,...)
 - Not match with each other
 - Not match with the substrate
 - Increase the price overproportionally (not winning enough security)




Define the threats

- A. Counterfeiting of an entire travel document
- B. Substitution of the displayed portrait (photograph)
- C. Alteration or deletion of information of the VIZ or MRZ
- D. Construction of a fraudulent document, or parts thereof, using materials from legitimate documents
- E. Removal or substitution of entire pages or visas
- F. Deletion of entries on visa pages
- G. Theft of genuine blank documents
- H. Impostors
- I. Tampering with RF chip either physically or electronically

Ask for a minimum of 4 features fighting each of the threats

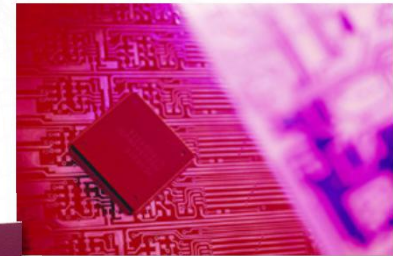
No	Feature	Mode of Integration	Threats
1	UV dull paper	Paper Manufacturer	A C D E F
2	Multi tone watermark	Paper Manufacturer, dandy roller	A C D E F
3	Chemical sensitizers for all pages	Paper Manufacturer	A C D E F
4	Appropriate absorbency and surface characteristics	Paper Manufacturer	A C D E F
5	Fibres, visible, invisible, reactions under different light sources	Paper Manufacturer	A C D E F
6	Two-colour Guilloche background	Security design and offset printing	A B C D E F
7	Rainbow printing	Security design and offset printing	A B C D E F
8	Optical variable colours and devices	OVI® in intaglio printing on end paper and holographic laminate for data page	A B C D E G
9	Offset positive and negative micro printing	Security design and offset printing	A B C D E F
10	UV inks in different wavelengths	Security design and offset printing	A B C D E F G
11	solvent and waterbased inks, IR opaque and transparent inks	Security design and offset printing	A B C D E F G
12	Relief patterns	Security design and offset printing	A B C D E F
13	Page number integrated in security design	Security design and offset printing	A D E
14	Artscreen®	Security design and offset printing	A C D E F
15	Register marks	Security design and offset printing	A D E F

ePassport: The trust imperative

- ePassport must be ICAO compliant
- ePassports are Machine Readable Passports (MRPs) with a chip.
Chip is an additional security feature  does not replace it
- ePassports are issued by entities that assert trust
 Evidence of Identity & reliable Civil Register
- Join and use PKD  Improper validation of ePassports leads to a “false” sense of security

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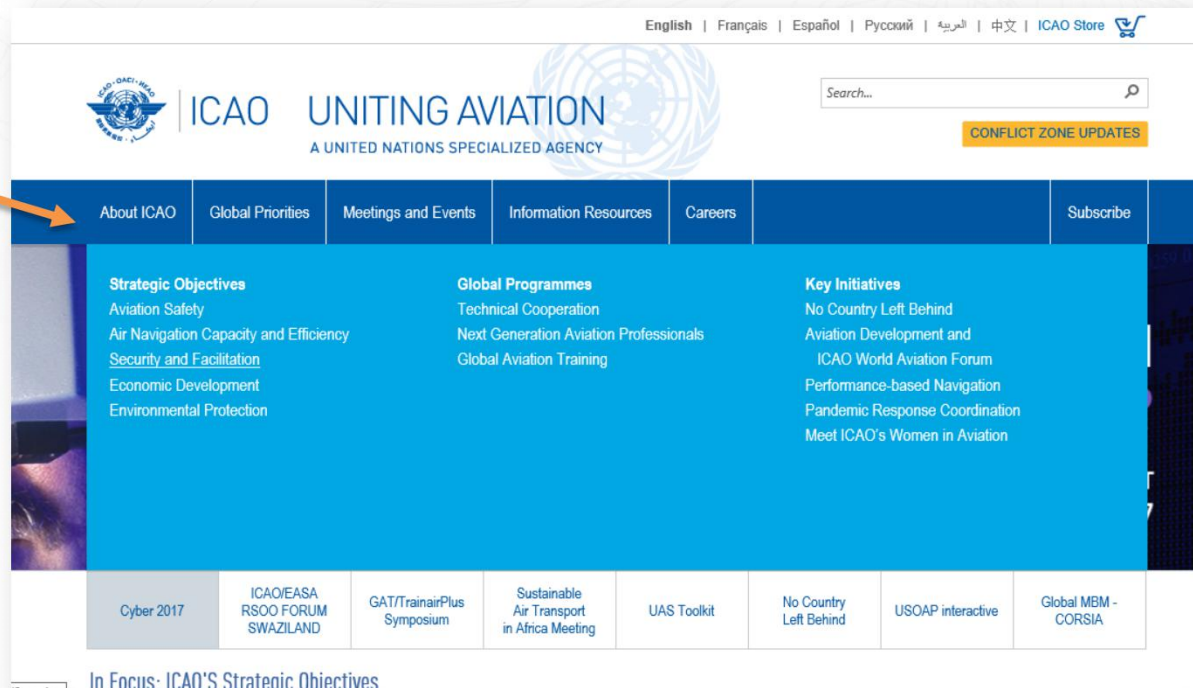
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8. Guidance Material

Where to find information

www.icao.int



8. Guidance Material

Where to find information



Panels/Groups


- Publications**
- Request For Information
- Events
- Resolutions, Declarations and Statements

Publications

Documents

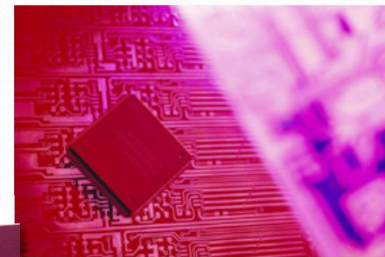
[Doc 9303](#) contains the current ICAO specifications for machine-readable passports, visas and official travel documents used for crossing international borders. Doc 9303, Seventh Edition, is now available for free download in five of the working languages of ICAO with the Arabic language version to follow shortly. The full document consists of twelve parts with Part 8 currently reserved for future use.

Guidance material:

- ICAO-UNHCR Guide for Issuing Machine Readable Convention Travel Documents for Refugees and Stateless Persons --- English --- French --- Spanish --- Russian --- Portuguese
- ICAO Guide Towards Better Practice in National Identification Management V.3
- ICAO Guide for Assessing Security of Handling and Issuance of Travel Documents
 -  English - Executive Overview, Part 1: Best Practices, Part 2: Assessment Guide, Part 3: A Guide for Experts
 -  Français - Résumé, Partie 1: Pratiques exemplaires, Partie 2: Guide d'évaluation
 -  Español - Resumen ejecutivo, Parte 1: Buenas prácticas, Parte 2: Guía para la evaluación
- ICAO Guide for MRTD Photo Guidelines
- ICAO Guide for Collection of Best Practices For Acquisition of MRTD Goods and Services
- ICAO Guide for Circulating Specimen Travel Documents
- ICAO Guide for Best Practice Guidelines for Optical Machine Authentication - Part I
- ICAO Guide for Emergency Travel Documents
- ICAO Guide for Roadmap for Implementation of New Specifications

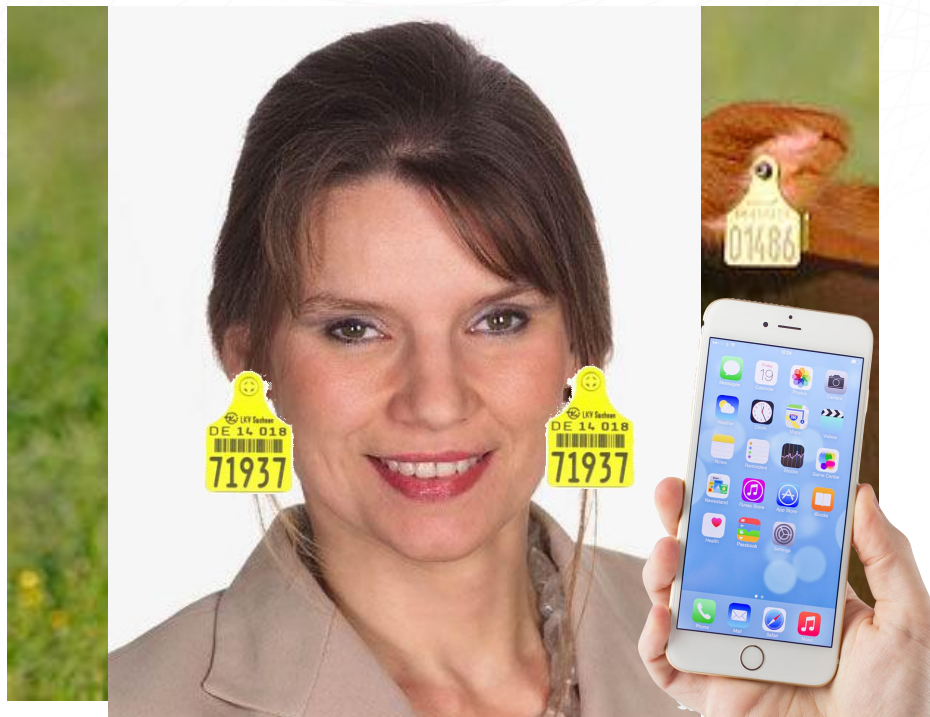
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5. Future of Identification and Verification

Documents as backup only







MY IDENTITY APP

My Identity App – MIA some features

Technology agnostic



Online

- And easy to use

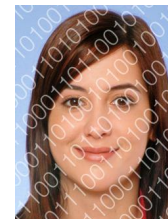


Security

- security concept in the process / not in the HW

Data quality

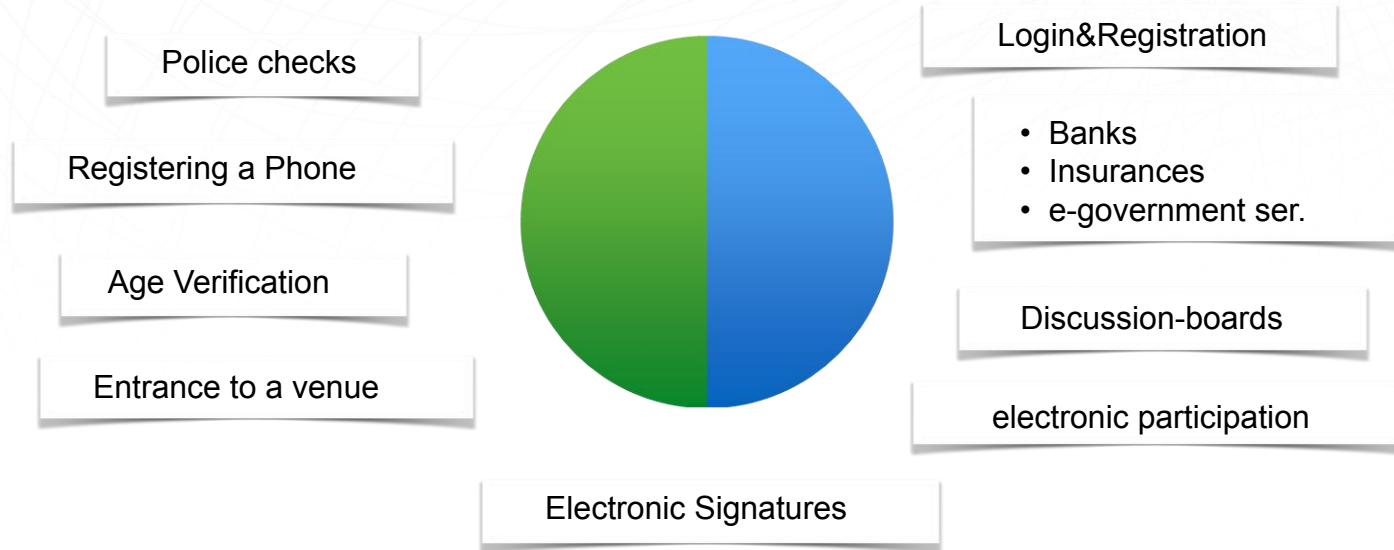
- Solid data foundation
- All ID document data via one system
- Privacy



MIA

Applications in Public Sector – only!

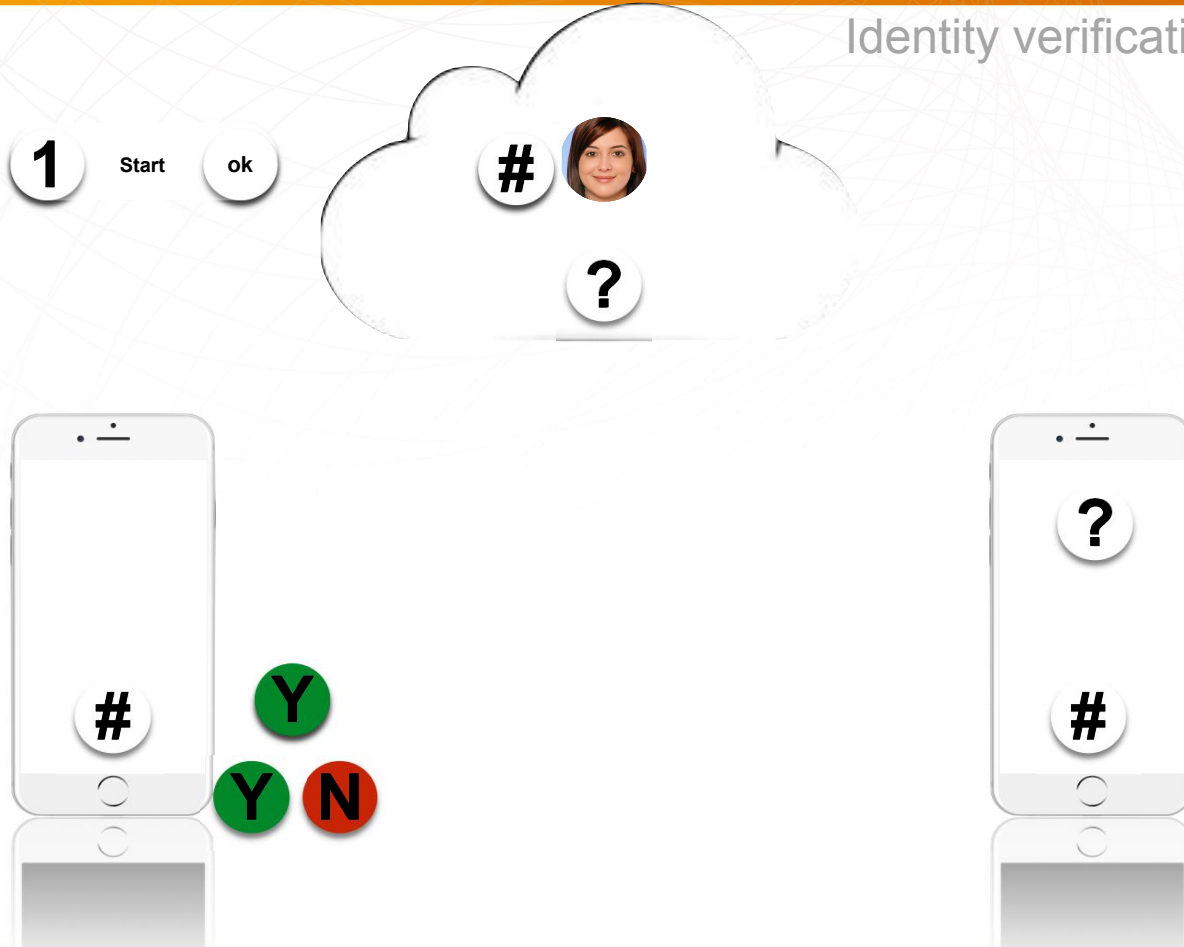
What you can do with it

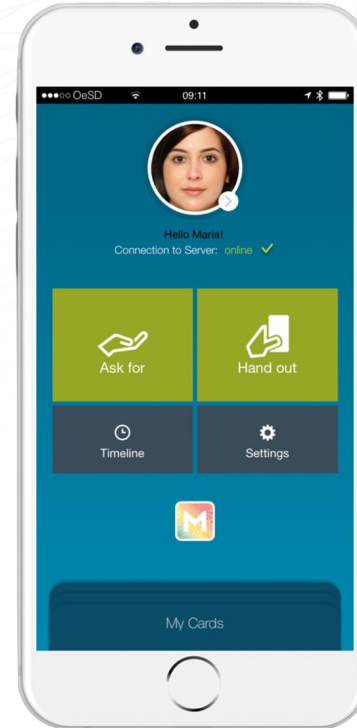


MIA

How does it work?

Identity verification





Outstanding **e**xperience in **S**ecurity **D**ocuments

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