Tips to make your ID project successful

Austrian State Printing House

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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

- Protection of Freedom of Movement
- Fight against crime – Restrictions for Travel
1.a. Legal Equilibrium

Equilibrium

Data Protection

Capture of more Data (Biometrics, API,...)
Identity Verification vs. Privacy

Any identification procedure must be proportionale to its intent
1.a. Legal Equilibrium
Basic Legal Trends

- Biometric Data Capture
- Biometric Data Storage
- Data Accessing
- Data Processing
- Privacy Protection
- Data Sharing inside/outside your country
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### 1.b. Process Planning

#### Action Items

<table>
<thead>
<tr>
<th>Task</th>
<th>Preparation</th>
<th>Project Phase</th>
<th>Post Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Task 1</td>
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<tr>
<td>Task 3</td>
<td>Completed</td>
<td>Completed</td>
<td>Completed</td>
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</tbody>
</table>

#### Milestones

- **Milestone A**: Milestone A declaration
- **Milestone B**: Milestone B declaration
- **Milestone C**: Milestone C declaration

#### Timeline

- Week 1: Task 1
- Week 2: Task 2
- Week 3: Task 3

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**Note**: The timeline and milestones are placeholders and should be replaced with actual project-specific information.
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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3. **Guidance Material**

4. **The Future**
1.c. Identity Management first
1.c. Identity Management first

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

<table>
<thead>
<tr>
<th>Region</th>
<th>Percentage of under five year olds who are registered</th>
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<tbody>
<tr>
<td>CESACIS and Baltic States</td>
<td>82</td>
</tr>
<tr>
<td>Latin America and Caribbean</td>
<td>03</td>
</tr>
<tr>
<td>Middle East and North Africa</td>
<td>75</td>
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<tr>
<td>East Asia and Pacific</td>
<td>72</td>
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<tr>
<td>Western and Central Africa</td>
<td>29</td>
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<td>South Asia</td>
<td>30</td>
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<tr>
<td>Eastern and Southern Africa</td>
<td>31</td>
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<tr>
<td>Sub-Saharan Africa</td>
<td>36</td>
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<tr>
<td>Developing countries</td>
<td>50</td>
</tr>
<tr>
<td>Least-developed countries</td>
<td>20</td>
</tr>
</tbody>
</table>

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
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

Information maintained and updated

Identity established

EOI compliant application processing

ID in use:
- Address
- Personal data
- Civil status
- Education
- Biometric data
- Existing Documents
- Criminal records
- Relationships
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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4. The Future
2.a. ICAO TRIP
2.a. ICAO

Chicago Convention 1944

- All UN-States except Liechtenstein, Tuvalu, Dominica
2.a. ICAO

What is Facilitation?

Immigration, Customs, Health, 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

![Diagram showing ICAO and ISO collaboration with committees and working groups.](image-url)
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


Correct Reference is:

ICAO Doc 9303 7th edition
2.b. Doc 9303

Data Page Layout

Zone I

Zone II

Zone III

Zone IV

Zone V

Photo

VIZ

MRZ

88mm

125mm
2.b. Doc 9303

MachineReadable Information in MRZ

country code

primary & secondary identifiers (names)

filler characters

passport number

nationality
date of birth

sex
date of expiry

optional data

check digits

2b.doc9303.png
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
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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   • 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

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

Where to find information

www.icao.int
8. Guidance Material

Where to find information

Guidance material:

- ICAO Guide for Assessing Security of Handling and Issuance of Travel Documents
  - 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

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.
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5. Future of Identification and Verification

Documents as backup only
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

- Police checks
- Registering a Phone
- Age Verification
- Entrance to a venue
- Electronic Signatures

- Login&Registration
  - Banks
  - Insurances
  - e-government ser.

- Discussion-boards
- electronic participation
MIA

How does it work?
Identity verification

1. Start
2. Link

# Y N

? ?
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