Document Design Best Practices for Secure Documents

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Consular Affairs, Passport Services

Consular Affairs, Passport Services Overview

155 Million passports in circulation as of March 2023

1,301+ **Adjudicators** on board and processing applications

8,000 **Acceptance facility partners** in the United States, including post offices, county clerks, and libraries

29 **Agencies and centers** across 22 states and territories

46.5% **of Americans have a valid passport,** a 1.7% increase from March 2022

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Document Design Role

☑ Design

☑ Printing & Binding

☑ Security Feature Expert

☑ Quality Manager

☑ International Standards

☑ Material Science
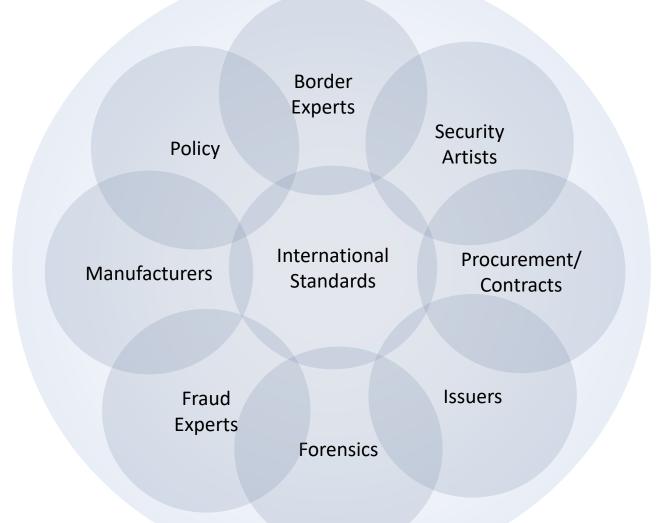
☑ Project Management

☑ Risk management

☑ Problem Solving

☑ Personalization Methods

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Gather Team of Experts

Balancing Act

Materials

Equipment Capability

Contracts/ Procurements

Costs

Security

Supply Chain

Quality

Forensics

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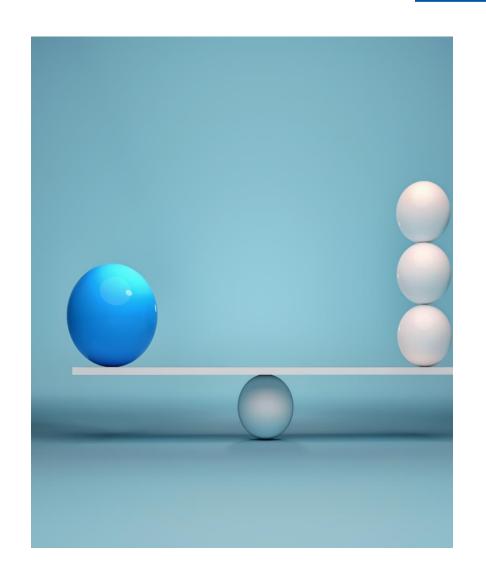ICAO

Strategy for Redesign

Refresh versus Redesign	Structure or matrix to evaluate features	Connect to Agency Strategic Plan
Artwork and Theme	Future Technologies	Environmental Impacts

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What are we protecting against?

ICAO 9303 Part 2 Machine Readable Travel Documents Part 2: Specifications for the Security of the
Design, Eighth Edition, 2021 Manufacture and Issuance of MRTDs

- Counterfeiting a complete travel document

- Photo substitution

- Deletion/alteration of data in the visual or machine-readable zone of the MRP data page

- Construction of a fraudulent document, or parts thereof, using materials from legitimate documents

- Removal and substitution of entire page(s) or visas

- Deletion of entries on visa pages and the observations page

- Theft of genuine document blanks

- Impostors (assumed identity; altered appearance)

- Tampering with the contactless IC (where present) either physically or electronically

Questions to ask when determining Security Features

- How long to redesign and issue?

- What are the impacts or changes to equipment or upgrades needed?

- How is the feature going to be incorporated into the document?

- Who is going to use or authenticate the feature?

- Automated inspection and/or human to verify?

- Central or decentralized issuance?

Determining Security features

First, second and third levels features – but how are you incorporating those into each of the materials, or data, or personalization method:

Level 1 – Cursory examination for rapid inspection at the point of usage (easily identifiable visual or tactile features)

Level 2 – Examination by trained inspectors with simple equipment; and

Level 3 – Inspection by forensic specialists
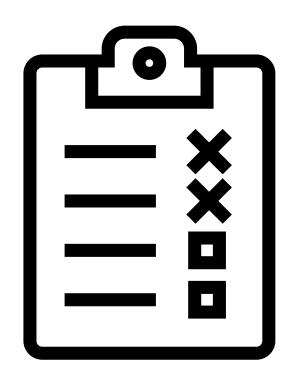
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Material Approach to Documents

- Every material is an opportunity for security

- Material details important for success
  - Paper – grain direction and fiber selection
  - Inks – UV curing or conventional
  - Plastics – surface energy

- Material details ignored or not tested can lead to unintended consequences

- Layering of materials/features and interactions are vital

Testing & Training

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Testing

- Press testing
- Bindery testing
- Material compatibility testing
- Personalization compatibility
- Durability testing – along the way and final product
- Chip Reader testing
- Functional testing in the field

Training

- Internal & External Stakeholders
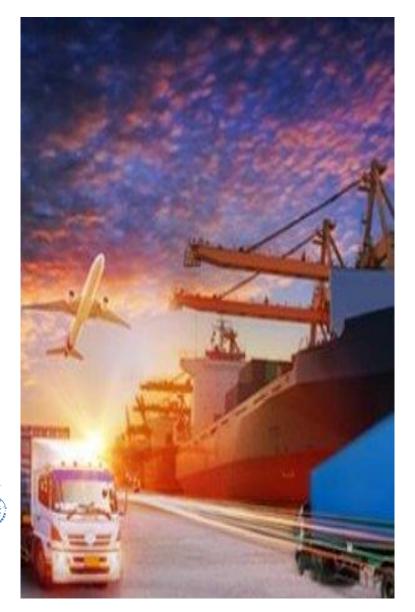- Systems
- Exemplars

Robust Quality Program

Per ICAO 9303 Part 2 Quality Control

- Quality checks and controls at all stages of the production process and from one batch to the next are essential to maintain consistency in the finished travel document.

- This should include quality assurance (QA) checks on all materials used in the manufacture of the documents and the readability of the machine-readable lines.

- The importance of consistency in the finished travel document is paramount because immigration inspectors and border control officers rely upon being able to recognize fake documents from variations in their appearance or characteristics.

- If there are variations in the quality, appearance or characteristics of a State's genuine travel documents, detection of counterfeit or forged documents is made more difficult.

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Considerations

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- Supply chain issues – lead times and end-of-life for materials

- Fluctuations and swings in demand

- COOP disaster recovery approach; holding of raw materials/finished stock

- Shortage of employees and social distancing changes to manufacturing environment

- Consolidation of industries

- Environmental considerations for limiting raw materials

- Transportation Methods
    o Cancellation of flights globally
    o Armored trucks availability

- Pivot and adapt

Thank You

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