Identity Management Infrastructure: What is Evidence of Identity?

Dion Chamberlain

Secretary – ICAO Implementation and Capacity Building Working Group (ICBWG)

ICAO TRIP IRAN SEMINAR – Kish Island

Identity Management

- Managing identity data, documents and security
- Managing identity through 'the ecosystem' – establishment, verification, cessation
- Understanding the various components of identity, and their relevance to the service provided

What is Evidence of Identity (EOI)?

- Information used to establish or verify a unique identity
- Gaining a specific level of confidence
- Balancing risk and facilitation
- Applicable to any identity-based product or service (including travel documents).
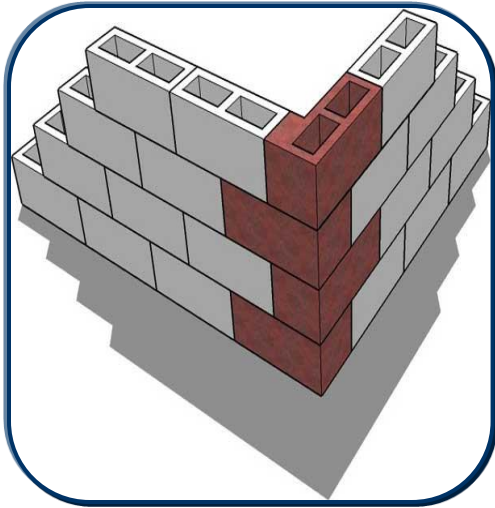
- EOI is growing internationally as an area of focus
- Some States have developed national standards and frameworks
- Other States employ robust EOI processes as part of their issuance process without developing standards at a national level

Focus of presentation case studies

- It is now more difficult than ever to produce counterfeit travel documents due to:
  - Better technical and physical security features
  - Increased validation at Border

- As quality and integrity of physical documents improves, weaknesses in their issuance processes are being targeted

- Poor issuance processes can undermine the integrity of the travel document and the State's investment in secure technology

Using robust processes to establish the identity of an applicant is **THE** cornerstone of secure travel document issuance … *but*
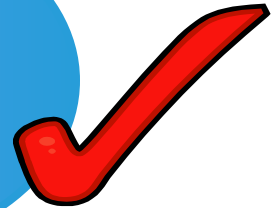
Robust and reliable processes need to be considered carefully and systematically when establishing or validating identity in any context where a high degree of security and confidence is needed

- EOI requirements should be relative to the risks and downstream effects of providing the product or service

High Level of EOI Confidence Required

Risk based EOI

- ## Individual risks
  - Identity theft, terrorism, financial fraud
- ## National reputation
  - Extra scrutiny of documents, undue attention at borders, more difficult for citizens to get visas.

Potential Risk Area	None	Low	Low-Medium	Medium	Medium-High	High	Weight
Finalncial Loss or Liability							High
Inconvienience, distress or damage to existing repuation							Low
Harm to Public Programs or Public Interest							Low
Unauthorised Release of Sensitive Information							High
Domino Effect of an Improper Identity Document							High
Personal or Public Safety							High

	None	Low	Low-Medium	Medium	Medium-High	High	
Overall risk level							

EOI Authentication Principles

Identity Exists and is Living

Applicant Links to Identity and is UNIQUE to the system

Applicant Uses Identity in the Community

- First-time interaction **MUST** be robust so that subsequent contact can leverage off initial EOI
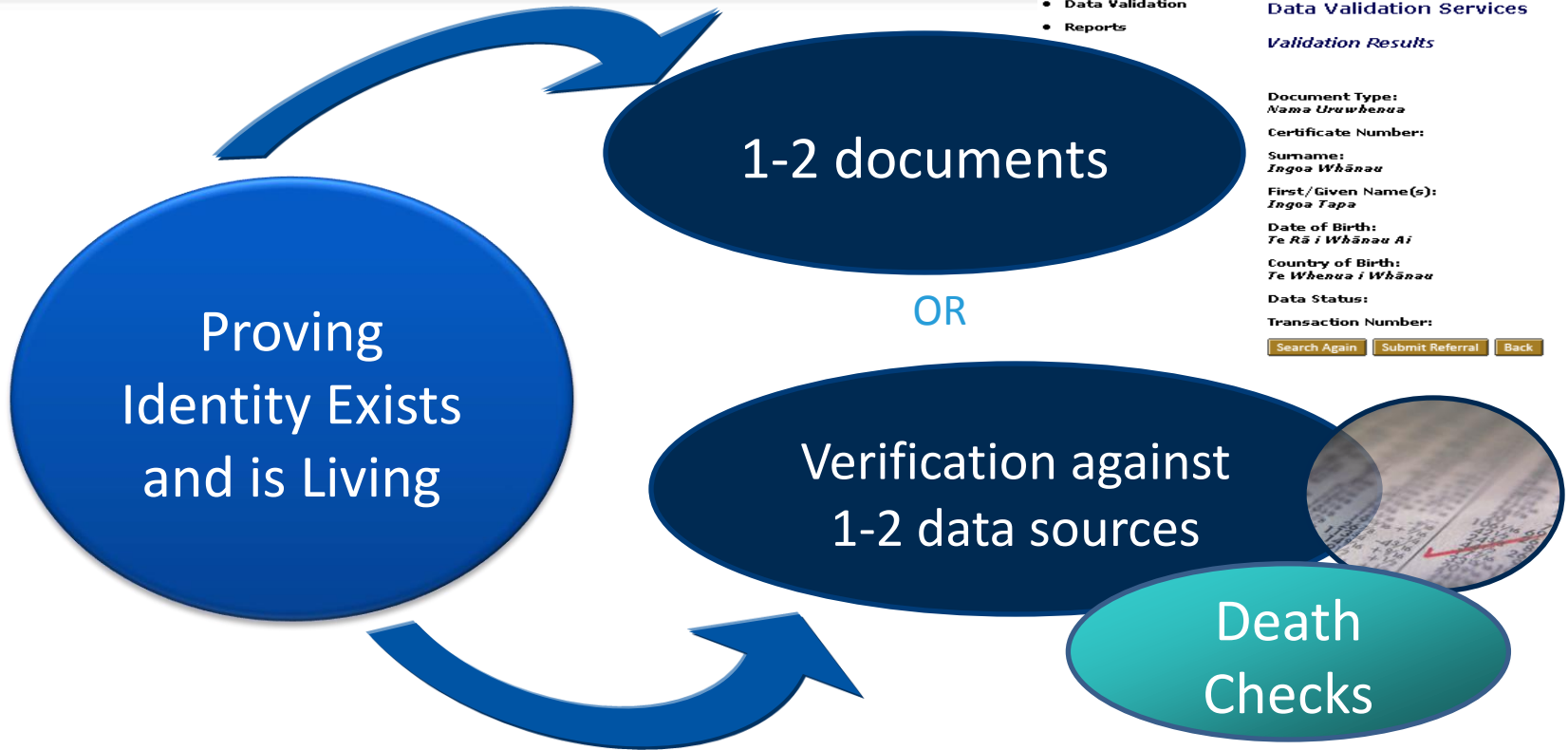
10

- Data Validation
- Reports

Data Validation Services

Validation Results

Document Type: *Nama Uruwhenua*	Citizenship
Certificate Number:	1234567
Surname: *Ingoa Whānau*	SMITH
First/Given Name(s): *Ingoa Tapa*	john
Date of Birth: *Te Rā i Whānau Ai*	06/04/1978
Country of Birth: *Te Whenua i Whānau*	England
Data Status:	Invalid Data
Transaction Number:	C10000181

Search Again Submit Referral Back

Proving Identity Exists and is Living

1-2 documents

OR

Verification against 1-2 data sources

Death Checks

11

Determine if Applicant Links to Identity

Provide confidence of applicant's 'social footprint'

Applicant Uses Identity in the Community

In-person verification, trusted referee, interview

Applicant is the Sole Claimant: the identity is UNIQUE to the system

Check against agency records (use data and/or biometric matching to ensure only one identity exists)
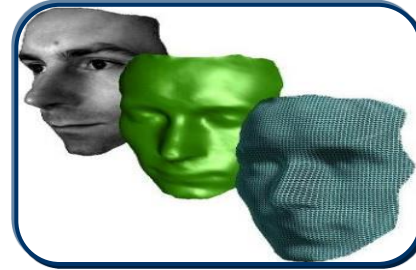
Final Step: Binding

Binding to Biometric

Associating the record/data with one or more biometrics

- Different challenges for different authorities

- Legislative environment can have an impact on information sharing/validation

- No "one-size-fits-all" solution, but EOI is a framework and approach that can be applied to any identity process

EOI Information Stock-take

- Follow EOI principles to systematically document and understand your 'identity ecosystem' and key risks

- Analyse ALL potential document, record or information sources available and its value in an EOI process (a matrix is helpful)

- Understand the security of "foundational" records, data and the issuance process that sits behind them

4/10

8/10

3/10

High degree of identity confidence requires a range of evidence

There are different risks and mitigations depending on the context

Example 1

- Information from village chiefs/elders, educators and employees
- Staff knowledge of local accents, dialects and physical features etc.
- Evidence from other government sources like social services

Example 2

- Electronic access to source data from national civil registries
- Centralised database of applications
- Biometrics of every applicant for 1:1/1:M matching
- Large group of trusted witnesses/referee

Keys to Building EOI Confidence

- Establishing **UNIQUENESS** of an identity in your system is key – without using biometrics (one to many match), this is becoming increasingly challenging

- Confidence that an identity is operating in community is becoming more important to issuing authorities ('social footprint')

- Less confidence in civil registry information may result in need to increase EOI confidence in other areas
  - electoral role
  - school and hospital records
  - driver and firearms license
  - utility bills / bank records

- Longevity of footprint is key (e.g. knowing date of driver license first registered gives confidence)

- **All** physical documents are vulnerable to counterfeit, and making physical documents truly secure involves validation against authoritative databases
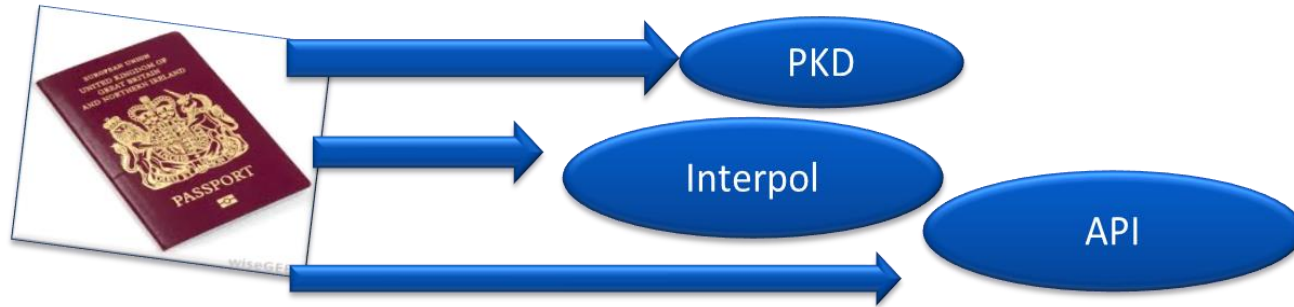
- Yes/No validation of foundational "breeder" records is secure, effective and privacy protective when looking to prove an 'identity exists'

Evolving EOI

- Applying EOI is an evolving process – as technology/environment changes, States need to adjust to new risks and threats

- EOI and technology must move forward together

Summary

- Broad EOI concepts are applicable to any organization with an identity component

- Passport and Border authorities need to develop a framework – approach EOI in a systematic way

- Evaluate and understand EOI environment

Identity Exists and is Living

Applicant Links to Identity and is Unique to system

Applicant Uses Identity in the Community

Evidence of Identity Standard

- EOI Guidance material
  - New Zealand EOI Standard (available at www.dia.govt.nz)
  - Australia Gold Standard Framework

- ICAO ICBWG Guidance on Evidence of Identity

- ICAO Implementation and Capacity Building Working Group can assist with assessments and developing robust EOI processes for TD issuance

Iran ICAO TRIP Seminar (9 to 11 May 2016)

Contact Details

Name: Dion Chamberlain
Email: dion.chamberlain@dia.govt.nz