ICAO 80

2024
ICAO TRIP
SYMPOSIUM

MONTRÉAL , CANADA | NOVEMBER 13-15

Dion Chamberlain

Co-Chair – ICAO Digital Travel Credentials Policy Sub-Group

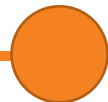Chairperson – ICAO Implementation and Capacity Building Working Group (ICBWG)

Director – International and Product Strategy Department of Internal Affairs, Aotearoa New Zealand
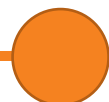
DIGITAL TRAVEL CREDENTIAL

DTC

Passports Timeline: Transformation

1985
Machine-readable

2005
ePassports

2023
Digital Travel
Credentials

And LOTS
of other
credentials

DIGITAL TRAVEL CREDENTIAL

DTC

What is?
What isn't?

VOTE: Is this a travel document?

Or document that can be used for travel in some circumstances?

Digital credential

Verifiable credential

Could be used for travel or in the travel continuum but…


ICAO Digital Travel Credential (DTC)

ICAO DTC Characteristics

- Intended and specified first and foremost for border clearance (ICAO)

- Globally interoperable

- Highest security

- Signed by the country (ePassports PKI)

From ePassport to the ICAO DTC-VC and DTC-PC (Hybrid Model)

- Logical Data Structure;
- Security Object.

- Crypto chip;
- Secure memory;
- AA/CA private key.

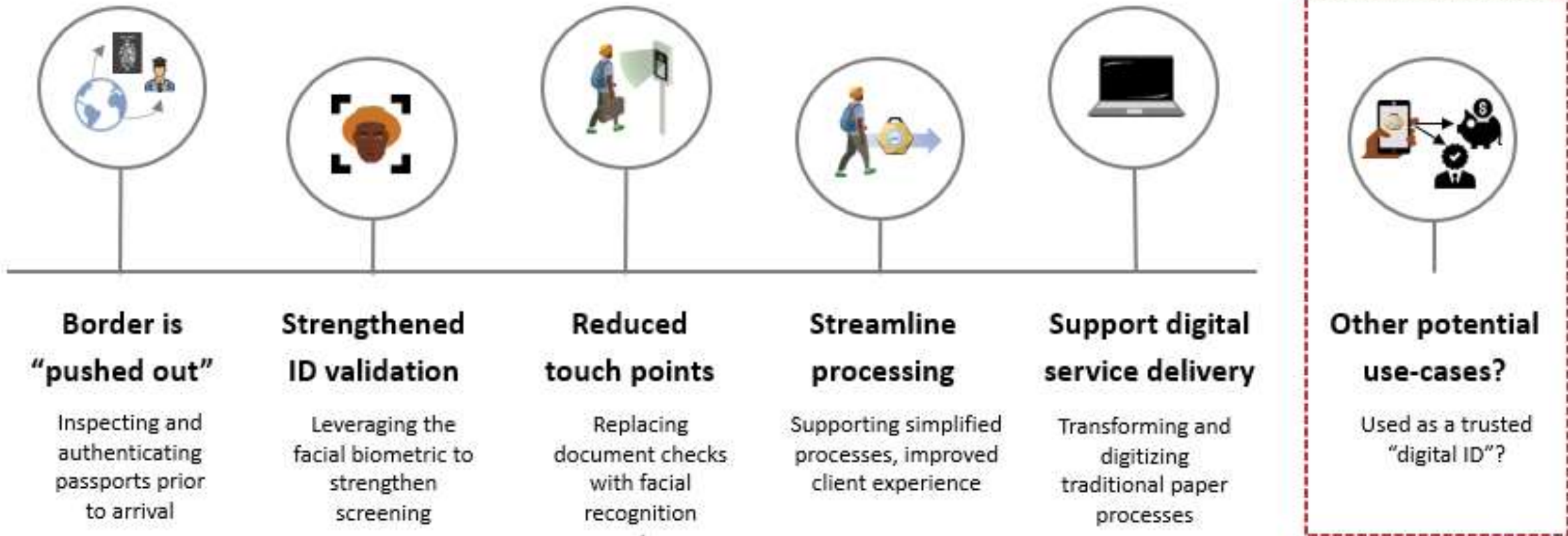An ePassport can be viewed as a combination of:

- A **Virtual Component (VC)** consisting of the data contained in the chip;
- A **Physical Component (PC)** consisting of the booklet and/or cryptographic link between the VC and the PC and acts as an **authenticator** (second factor).

ICAO Digital Travel Credential

DTC-VC
Virtual
Component
(Type 1)

DTC-PC
Physical
Component
(Type 2)

DTC
Unbound
(Type 3)
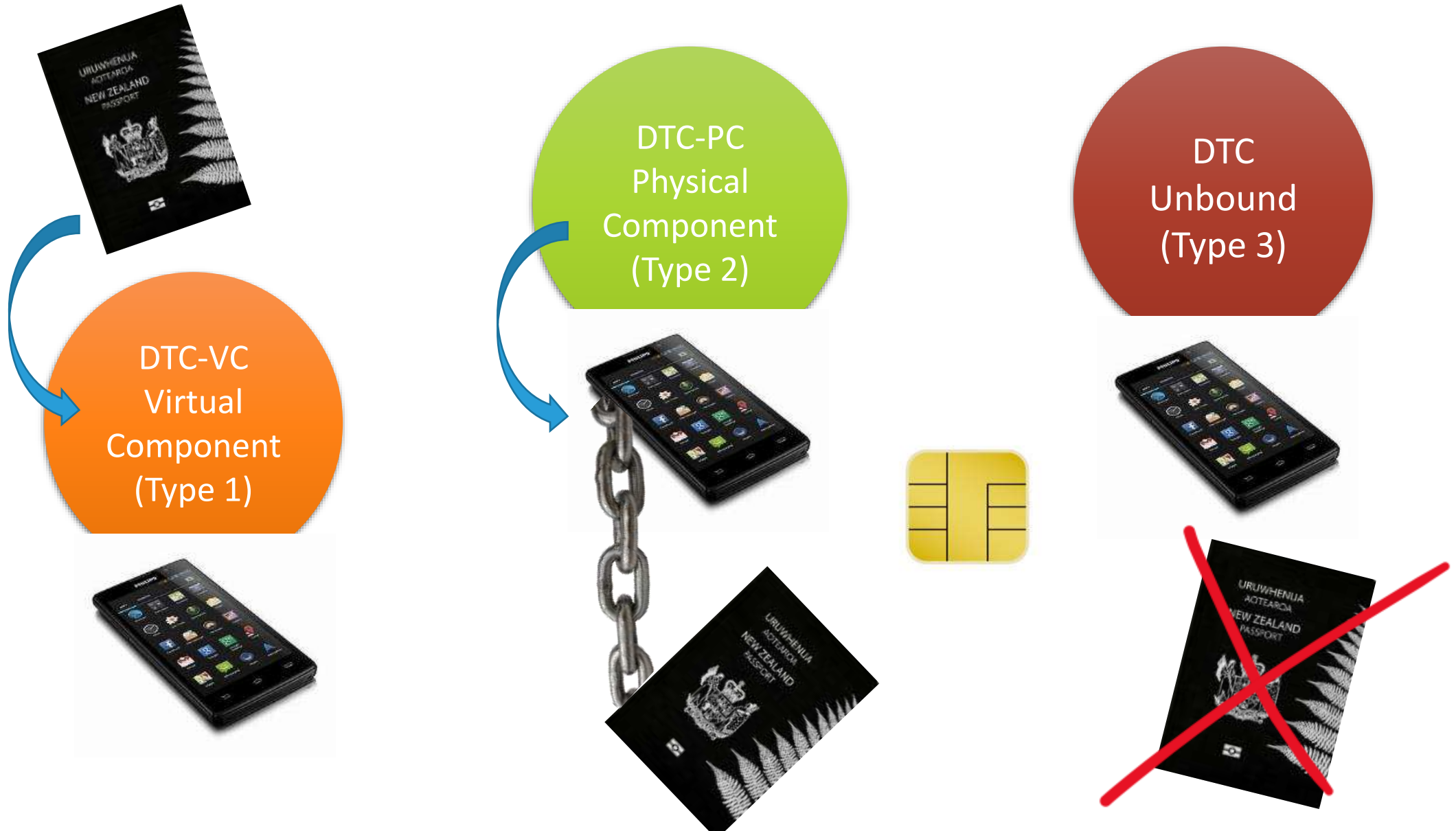
Use Cases :

- Seamless Travel
- Advance Travel Authorization (ETA/DTA/…)
- Improving border processing time
- Emergency Travel Document

Border is "pushed out"	**Strengthened ID validation**	**Reduced touch points**	**Streamline processing**	**Support digital service delivery**	**Other potential use-cases?**
Inspecting and authenticating passports prior to arrival	Leveraging the facial biometric to strengthen screening	Replacing document checks with facial recognition	Supporting simplified processes, improved client experience	Transforming and digitizing traditional paper processes	Used as a trusted "digital ID"?

ICAO DTC Specifications

- ICAO DTC-VC Technical Report approved in 2020

- ICAO DTC-PC specifications divided into phases
  - Phase 1 – maintain backward compatibility (inspection systems) and replicate behavior of eMRTD – The Technical Report approved 2023
  - Phase 2 – investigate other form factors like mobile phones – gap analysis
  - WHAT MIGHT WE HAVE TO TRADE OFF TO MAKE THIS WORK?
  - CAN WE SECURE THE PHONE?
  - ACTIVE AUTHENTICATION/CHIP AUTHENTICATION
  - ePASSPORT ECOSYSTEM AND NON-COMPLIANCE
  - BIOMETRIC QUALITY AND PERFORMANCE?
  - PRIVACY?

ICAO Digital Travel Credential

Unbroken PKI link to issuing authority

PKI available without impediment