

ICAO Facilitation Global Forum

21 to 23 October 2024
Bogotá, Colombia



Hosted by:



The ICAO PKD – The most valuable component of your back-end border infrastructure?

A Tale told in Six Chapters

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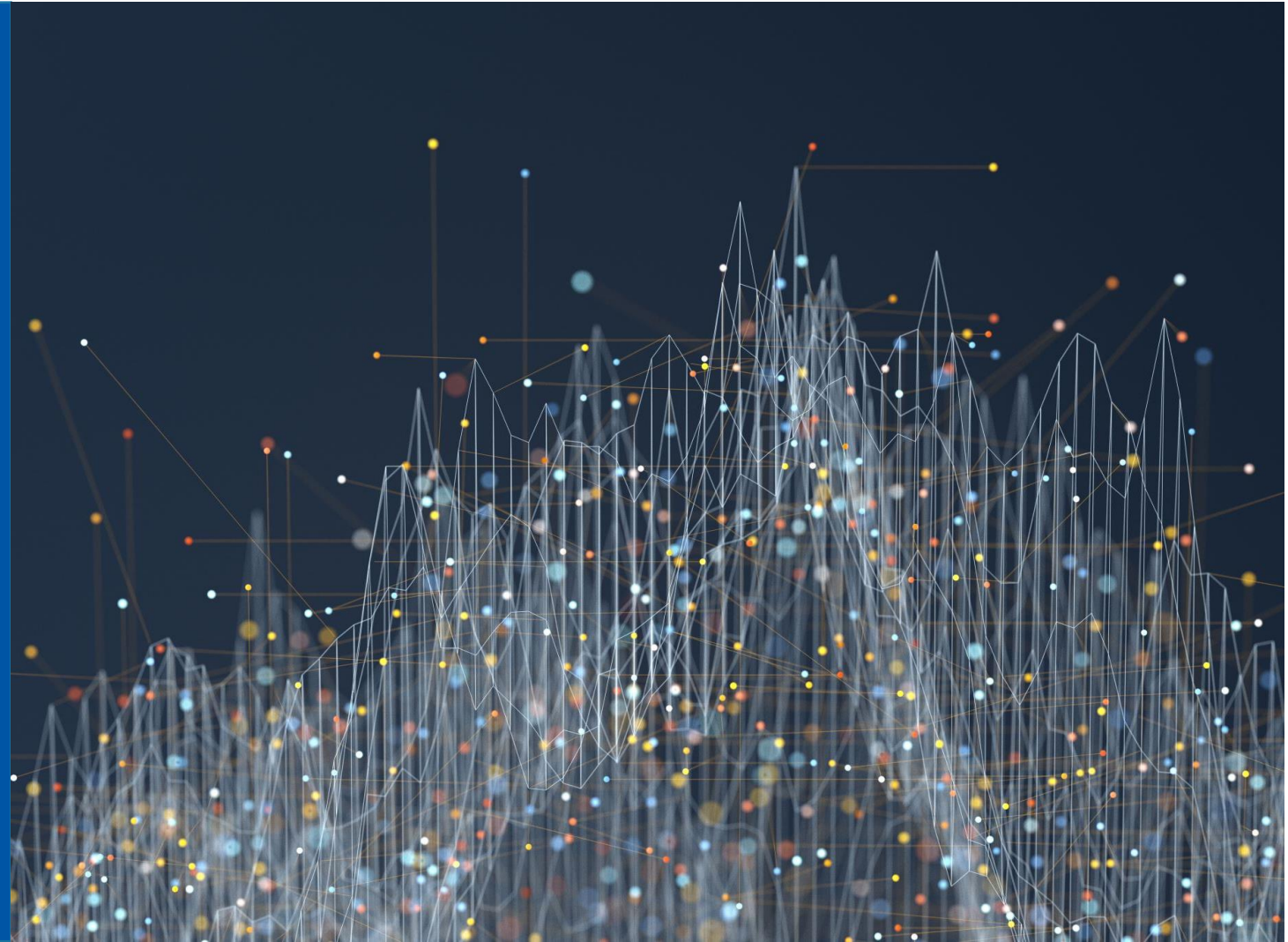
Once Upon a Time

~~Fairy Tales~~

Facts and Insights to
inform your future
strategic planning!

The ICAO PKD

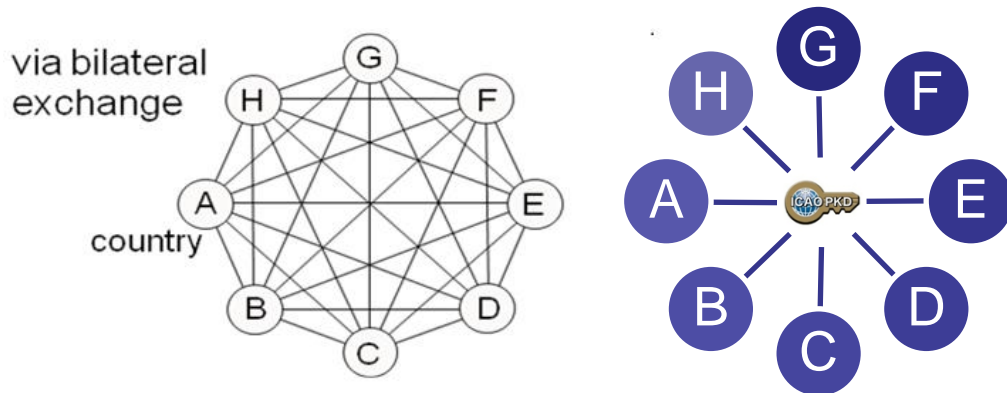
Growth as a data source



The ICAO PKD

A comprehensive and trustworthy resource

The ICAO Public Key Directory is a centralized platform for **sharing public keys** needed to electronically verify travel documents.



The ICAO PKD contains data provided by programme participants.

More participants => More data shared

More data => Improved capacities for document verification

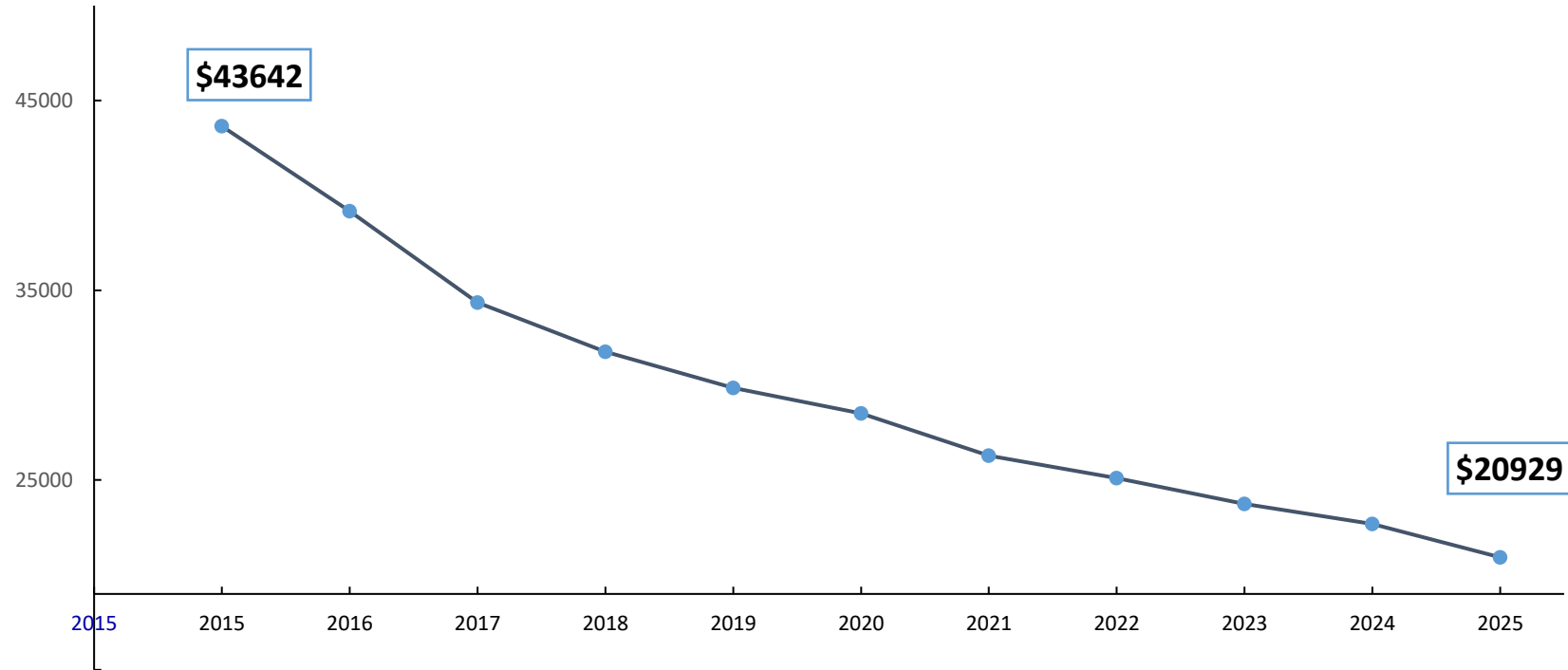
All data in the ICAO PKD is received based on provision of this data in a **diplomatic handover**

=> **Value** to document issuing authorities and border authorities based on **comprehensiveness of trustworthy data**

The ICAO PKD

An Accessible Resource

PKD Annual Fee 2015-2025



02

The ICAO PKD

Growth in the need
to verify ePassports



Once Upon a Time

Few ePassports in circulation

2004 – First ICAO ePassport standard

2007 – ICAO PKD established



Fast Forward to Today

Majority of Passports are ePassports

- >160 States issuing ePassports
- c. 90% of passports in circulation are ePassports



Appropriate use of the ePassport relies on validation of the digital signature using PKI



Authenticity

- Issuance by genuine authority

Integrity

- Data hasn't been changed since issuance **(including the facial image)**

The ICAO PKD

A needed resource

ICAO Annex 9

3.9.3 Recommended Practice.— Contracting States implementing checks on eMRTDs at border controls should join the ICAO PKD and use the information available from the PKD to validate eMRTDs at border controls.

The majority of checks at many borders will be on ePassports (eMRTDs).

=> **Value** to border authorities based on availability of **data needed for the majority of border checks**

03

The ICAO PKD

Growth in services
and context of use



Once Upon a Time

The only eMRTD was an ePassport



Fast Forward to Today



DIGITAL TRAVEL AUTHORIZATION notification of decision

AUTHORIZATION APPROVED	
Name	ANNA MARIA ERIKSSON
Passport Number	L8988901C
Date of Birth	11 March 1952
Nationality	United States of America
Sex	Female
DTA Number	123889546
Issuing Country	Utopia
Place of issue	Peacetown
Valid from (date)	10 December 2020
Valid until (date)	10 December 2025
Duration of Stay	5 years
Number of entries	Multiple
Type/class/category	Tourist
Additional information	Employment Prohibited

You have successfully submitted payment for the application listed above. A request by the cardholder to the bank or your payment service for a refund of fees will result in an automatic denial of the application.

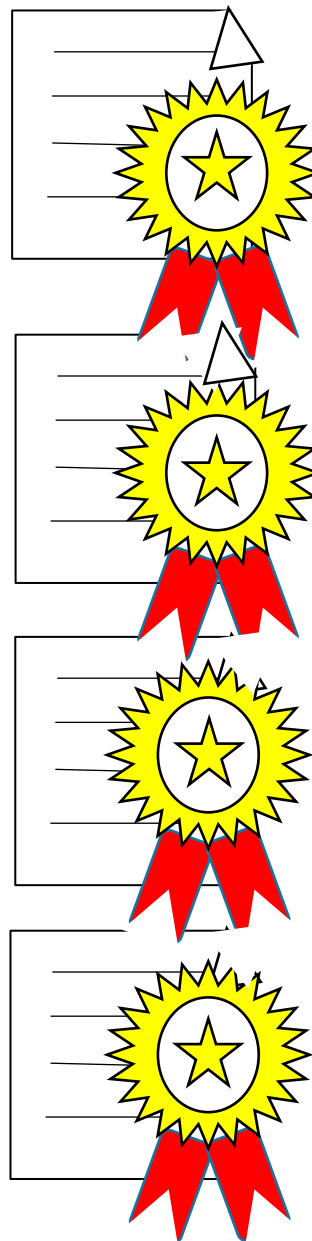
Download and print out this form and retain throughout your travel.



The ICAO PKD

A multi-purpose resource

- **ICAO Master List** introduced in 2020 provides the root of trust CSCA certificate for ALL electronic and digital documents
- **Barcode Signer Certificates** for all Barcode types can be shared since 2023



**CSCA
certificates**

**DS and BCS
certificates**

CRLs

DLs



- ⇒ **Value** to document issuers based on **sharing of data** for a variety of document types
- ⇒ **Value** for border authorities based on **flexibility** to **verify different documents** from international issuers

04 The ICAO PKD

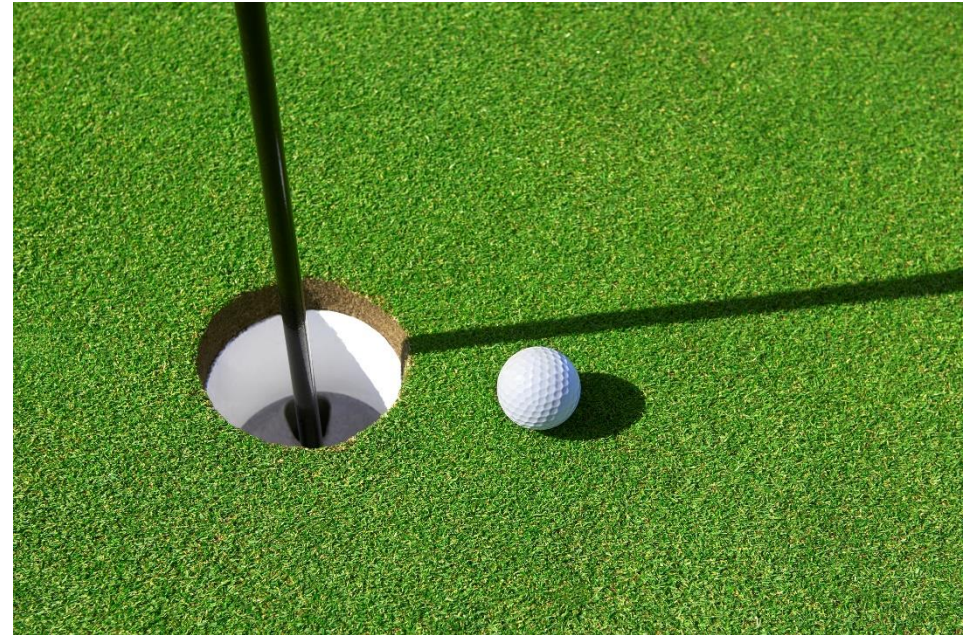
A vibrant
community of
practice



Once Upon a Time

The ICAO PKD was a limited and somewhat exclusive club

- Few participants
- Better resourced States with specialized capabilities



Fast Forward to Today



CERTIFICATE

OF COMPLETION

THIS CERTIFICATE IS AWARDED TO

Ciaran Carolan

Workshop

Electronic Machine Readable Travel Documents, Public Key Infrastructure and the use of the ICAO Public Key Directory (PKD)

Mastering technology and organization to enhance international trust in travel documents

7 November 2023
Willemstad, Curaçao



MARIO WIESEN
Chairperson, ICAO PKD

The ICAO PKD

A community of practice

- **Regular workshops** for all participants
- A formal **coaching programme** where experience members mentor participants, funded by the ICAO PKD
- **Regional and international networks** of support
- **A vibrant community** – support benefits everyone!



⇒ **Value** to national authorities based on **support available to maximise benefits from participating in the PKD programme** and the **insights and expertise available from international exchange**

05

The ICAO PKD

A relevant tool in
the context of the
push for more
seamless travel



Once Upon a Time

49%

ICAO

of Americans had ever flown in
1971



Fast Forward to Today



90%

ICAO

of Americans had ever flown in
2021



The ICAO PKD

A necessary resource for the modern border

Travel demand, infrastructural limitations and pressures on border management require:

- More **efficiency**
- More **flexibility**
- More **consistency** in checks

ICAO Annex 9

3.33.5 Contracting States utilizing ABC systems should, pursuant to 3.9.2 ...use the information available from the PKD to validate eMRTDs....

⇒ **Value** to national border authorities based on **fundamental importance in automating checks** and obtaining associated benefits



See the **ABC Cost-Benefit Analysis tool** at
https://www.icao.int/Security/FAL/PKD/Pages/ABC_CostBenefitAnalysis.aspx

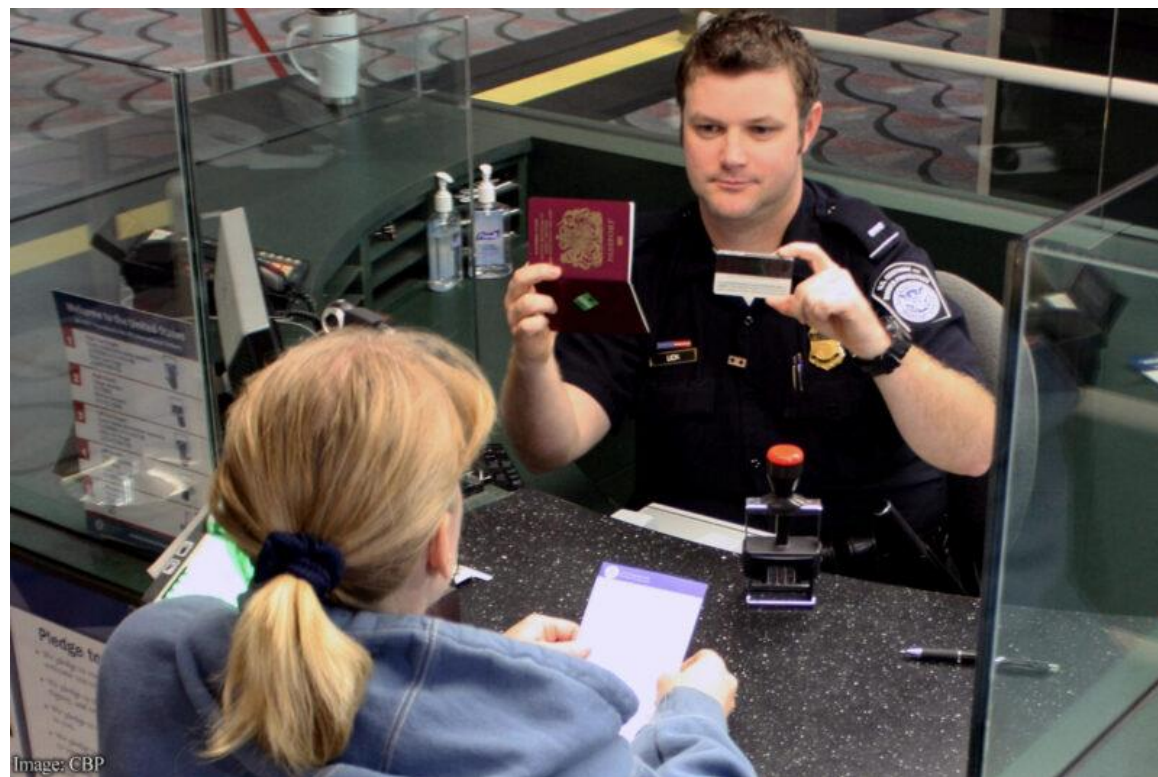


06 The ICAO PKD

A necessary tool for
border resilience



Once Upon a Time



Fast Forward to Today



- More spacious facilities
- More adaptable and flexible processes and tools

- More flexibility in issuance of digital documents
- More readiness to verify different digital documents in travel

The ICAO PKD

A basis for agility in border processes

Pivoting to new digital formats and processes

The ICAO Health Master List was quickly implemented through the ICAO PKD to provide the data needed to verify digital health credentials presented during travel

BUT

Quick and proper use required existing national infrastructure and capabilities

⇒ Connect to and Use the PKD NOW

⇒ Become **resilient** to situations needing updated processes, issuance of or verification of new credentials LATER

- ⇒ **Value** to national authorities that may need an international distribution mechanism for new public keys in crisis situations
- ⇒ **Value** to national border authorities who can quickly **pivot** processes and capabilities to new needs **when the PKD is part of the existing back-end infrastructure**

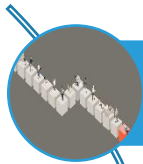
06 The ICAO PKD

Six Tales
One Conclusion



The ICAO PKD

A vital part of your back-end border infrastructure



A comprehensive data source



Capability to electronically verify ePassports that are especially prevalent at borders today



Readiness to move forward with seamless travel initiatives utilizing automation, eIDs, Digital Travel Credentials, Digital Travel Authorizations/eVisas, emergency travel documents etc.



More resilience to usage of new document formats being used in crisis or emergency situations



A community of practice available to leverage to enhance your usage of the ICAO PKD now and moving forward

⇒ **Immense value** for State authorities **when used properly and fully**

Thank You

