



2021
ICAO **TRIP**
VIRTUAL SYMPOSIUM

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The ICAO Public Key Directory: Key to the e-passport

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The e-passport



Facilitates travel



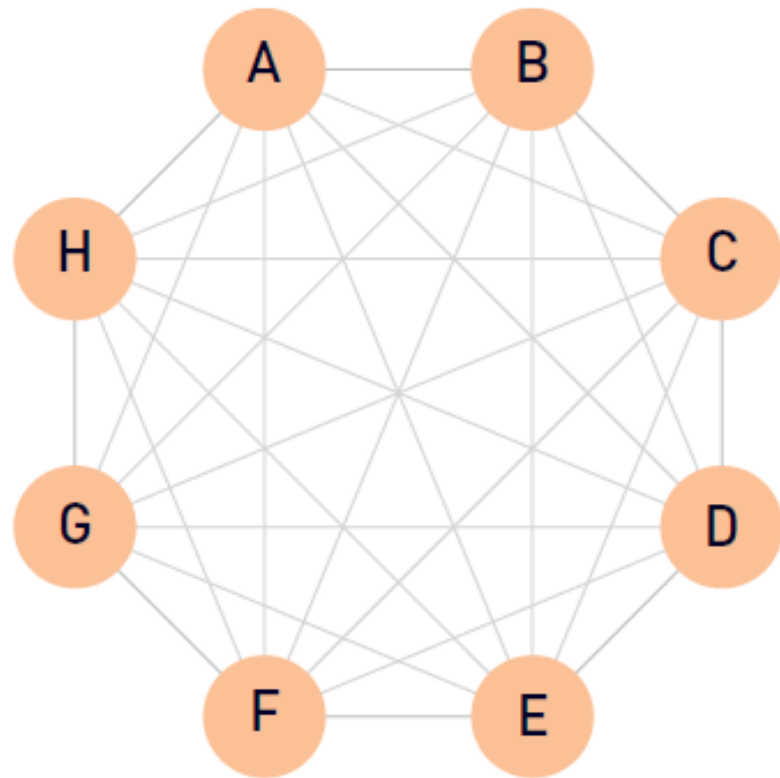
Enables automation



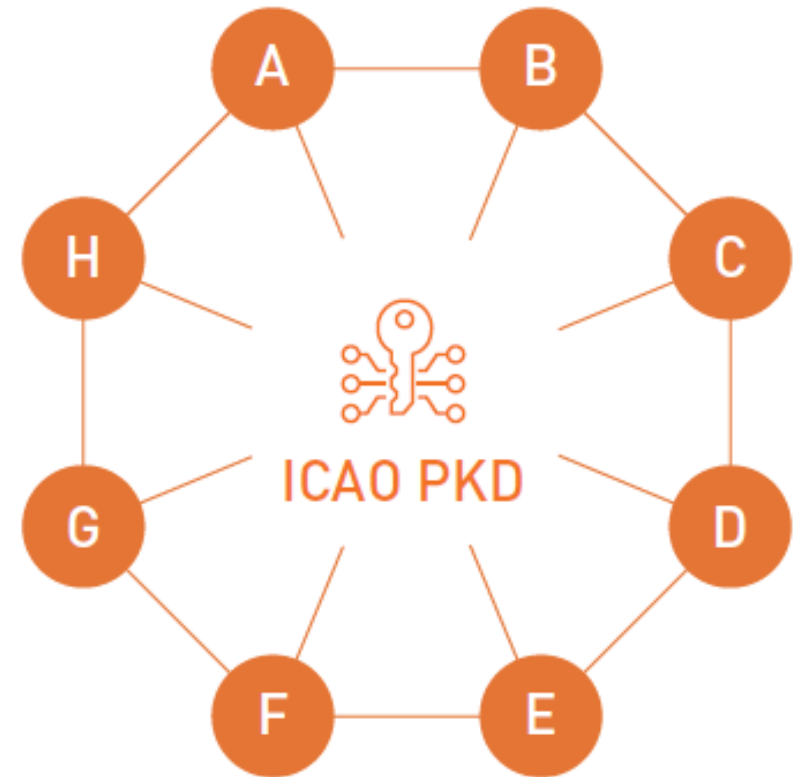
Increases security

But it can only be trusted if you verify
the applied digital signature...

Which requires the
appropriate public keys!

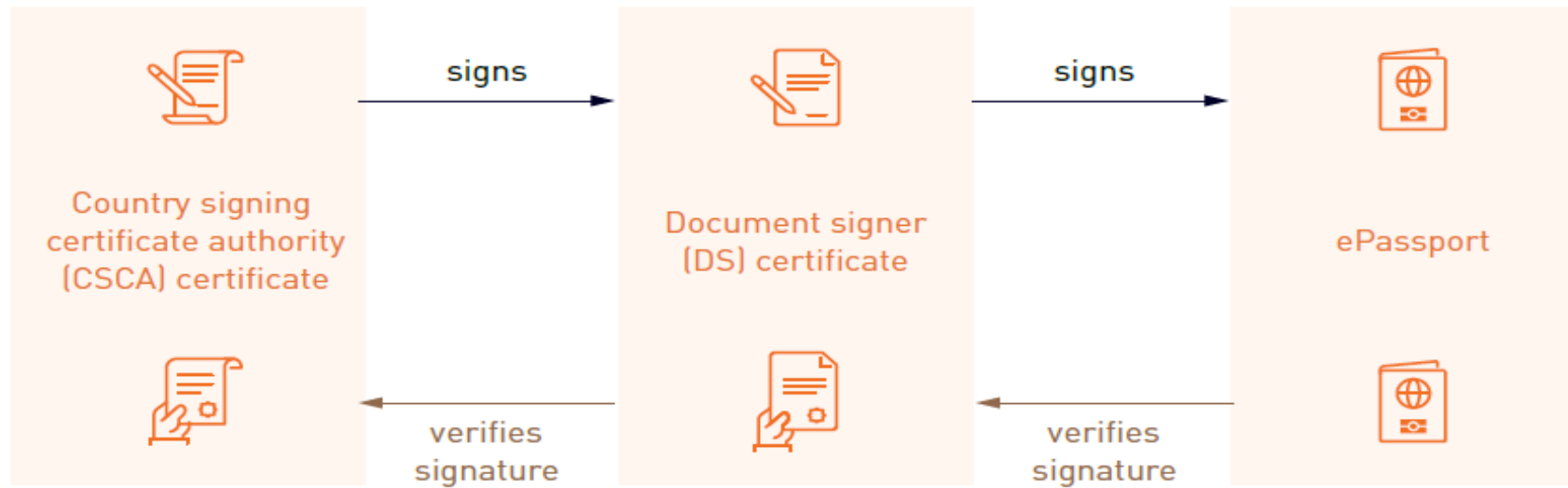


Without the PKD



With the PKD

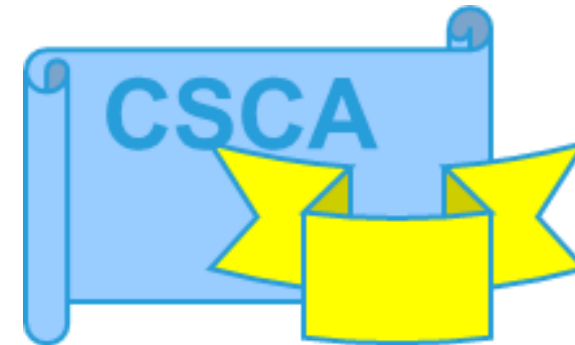
ePassport issuance using private keys



ePassport authentication using public keys



Document signer public key certificates are available from the PKD since launch in 2007



CSCA public key certificates are available from the PKD since March 2020 as part of the ICAO Master List



CSCA public key certificates are **powerful**

- Amongst a range of passports, one might require many DS public keys in order to authenticate all of them, but could use just one CSCA public key

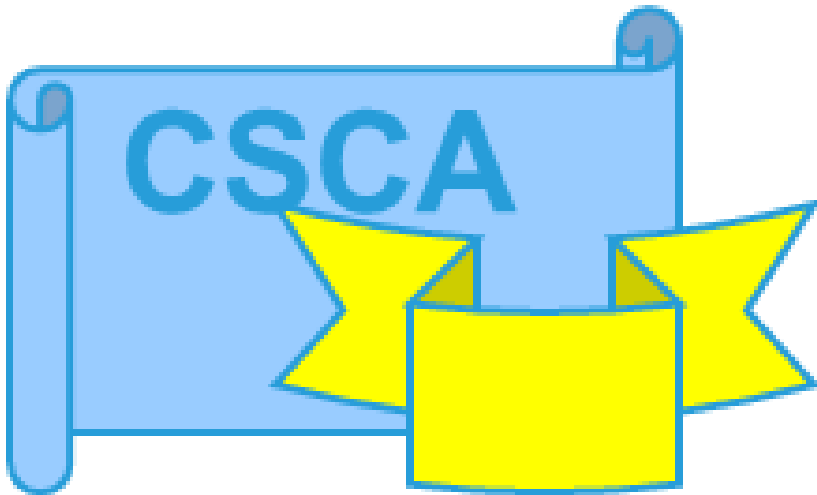
CSCA public key certificates are **— stable**

- Over a period of 2-3 years, receiving States will need to update their DS public key certificate store many times; no new CSCA public keys would typically be needed in this time

The ICAO Master List of CSCA public key certificates is a boon for both issuing and receiving States as it makes available powerful public keys that are easy to use but fundamental to proper usage of ePassports globally

The ICAO Master List

Details



Contains CSCA certificates from PKD participants – current version (April 2021) contains 289 certificates



Available through direct download for PKD participating States, with full support

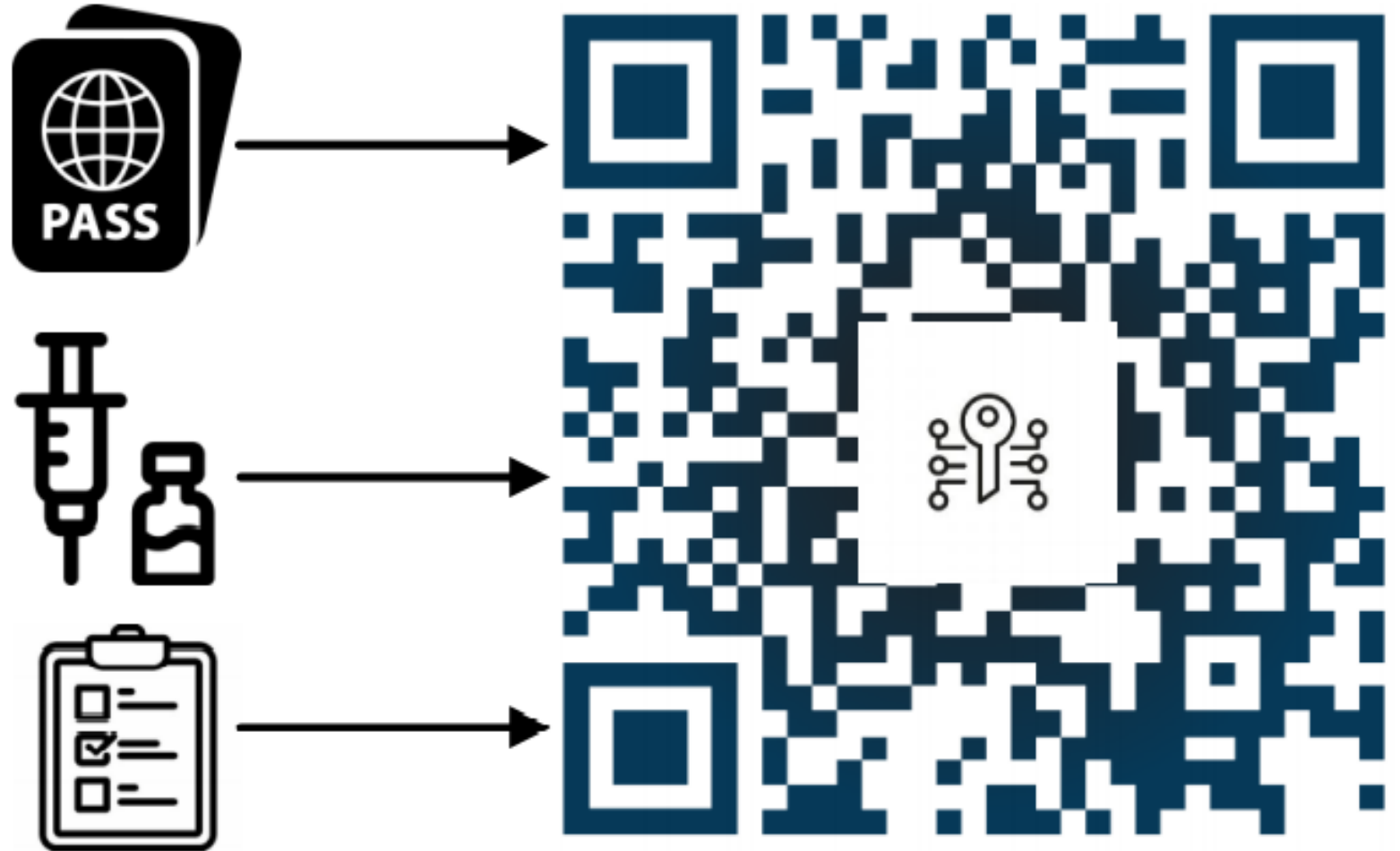


Available for public download, subject to terms and conditions, at the ICAO public website, <https://icao.int/pkd>



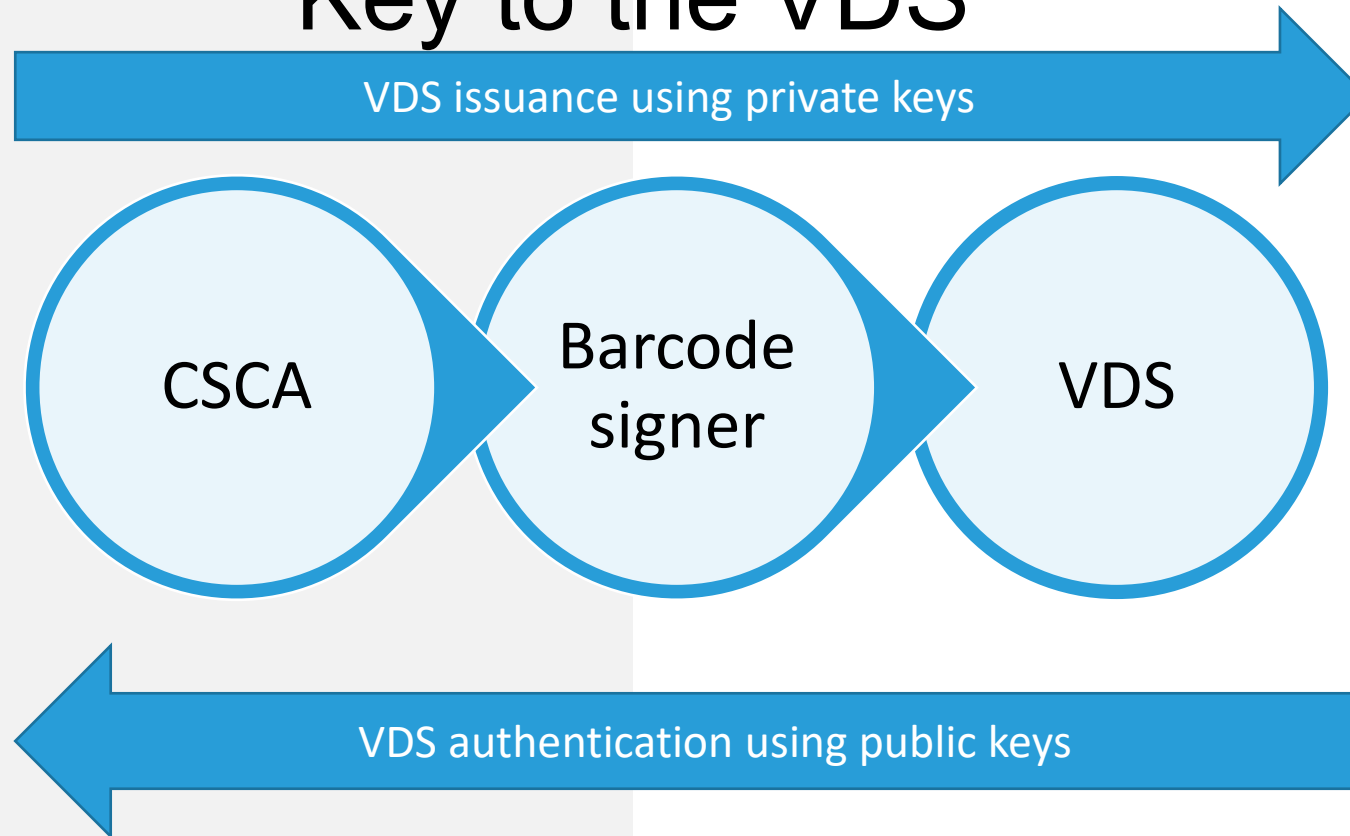
Signed using private keys under the United Nations CSCA certificate (used for Laissez Passer passports), assuring authenticity and integrity and enhancing trust

The PKD and Health Certificates



The ICAO Public Key Directory: Key to the VDS

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CSCA public keys used for authenticating ePassports may be used to authenticate VDS-based health proofs

=> The ICAO Master List is a key resource for authentication of health proofs

ICAO PKD supporting Aviation Recovery from COVID-19

Industry is invited to express interest in participating in a 6-month pilot for use of PKD data in commercial activities related to travel, latest by 31 July 2021

- Requires signature of legal agreement
- No financial costs
- Feedback expected to inform next steps

For further information, see:

<https://www.icao.int/security/fal/pkd/pages/Commercial%20Use%20Pilot.aspx>

The ICAO Public Key Directory

A resource of increasing relevance

Today

- Participation in the PKD is fundamental to assuring proper functioning of the global ePassport framework
- The ICAO Master List is new resource of significant value to PKD participants
- The health proof use case means that participating States obtain more value than ever from joining the PKD

The future

- The ICAO Digital Travel Credential (DTC) represents the next step in electronic travel documents after the ePassport. Participation in the PKD will support roll-out and proper use of the DTC.
- New use cases might appear for VDS or other ICAO electronic travel documents. Participation in the PKD will allow for rapid rollout of new solutions to address such uses. Participation in the PKD is vital, thus, to increase the resilience of the aviation system to future challenges.

Thank You

