



New ICAO Health Master List boosts efficiency and security of health document authentication for travelers and border authorities

For immediate release

Montréal, 31 January 2022 – ICAO has published its first [Health Master List](#), a new data resource for States and aviation stakeholders to aid in the more efficient and secure authentication of traveler health certificates, including vaccination and test result certificates.

In support of WHO recommendations, ICAO has embarked on an innovative Public Key Infrastructure collaboration with the Luxembourg State Agency, [INCERT](#). The aim of the partnership is to address the urgent need for improved trust and processing of health documentation internationally during the COVID-19 pandemic, and beyond.

“The presentation of documentation related to COVID-19 health interventions has become commonplace since the onset of the COVID-19 pandemic, and many States originally issued health proofs appropriate for domestic and/or regional use cases,” commented ICAO Secretary General Juan Carlos Salazar. “The result was a variety of different national or regional formats being deployed, and proliferating travel restrictions due to low levels of confidence among State border, immigration and health authorities in the validity of travelers’ health documents.”

The majority of health proofs issued globally, including the ICAO [Visible Digital Seal for non-constrained environments \(VDS-NC\)](#), include some form of digitally-signed barcode, with verification of the barcode requiring knowledge of the associated public key.

The new ICAO Health Master List is a compilation of public key certificates signed by ICAO, made publicly available through its [website](#) and regularly updated as more health proofs are issued and new public keys are required.

ICAO is welcoming submissions of public key certificates associated with any health proof that may be currently used for international travel from all of its 193 Member States, irrespective of the specific format of the proof or the existing systems used for authentication of the proof.

There is no cost associated with inclusion of a certificate on the Health Master List. All public key certificates submitted will be verified before inclusion in the list, following strict procedures similar to those established for the [ICAO PKD](#), in order to ensure trust in the contents.

“The Health Master List concept is based on the same principles as the generic ICAO Master List now used to verify electronic travel documents,” Secretary General Salazar clarified. “It will complement existing national and/or regional solutions and provide an essential international mechanism for sharing public key certificates in line with [WHO recommendations](#).”



Benoit Poletti, Chief Executive Officer, INCERT Public Agency, of the Grand-Duchy of Luxembourg (left), and ICAO Deputy Director of Aviation Security and Facilitation, Sylvain Lefoyer, on the occasion of the signing of the INCERT-ICAO Health Master List agreement.

Resources for Editors

[Contact the ICAO PKD for further information](#)

[Video discussion with PKD Programme Officer, Ciaran Carolan](#)

Technical details

Technical specifications for electronic travel documents have been included in ICAO's body of specifications on machine readable travel documents ([ICAO Doc9303](#)) since 2006. The specifications outline how to issue digitally-signed documents, with the signature process being based on Public Key Infrastructure (PKI) protocols. These protocols are well established and trusted internationally, such that the majority of formats for health proofs implemented in response to the COVID-19 pandemic include digital signatures based on PKI while WHO recommendations on Digital Documentation of COVID-19 certificates suggest use of PKI for application of digital signatures to health proofs.

PKI involves pairs of public and private keys – each key being a long alphanumeric string. When issuing documents such as health proofs that include a digital signature, a private key is used as part of the signing process. The party that receives the digitally-signed document needs the public key for authentication of the applied signature. The public key is mathematically related to the private key but the private key cannot be derived from it. Hence, while the private key is kept secure in order to assure that issuance is only possible for authorized entities, it is necessary and safe to share the public keys. This is normally accomplished through sharing of public key certificates that include those keys.

The ICAO Public Key Directory (PKD), established in 2007, facilitates the sharing of public key certificates associated with electronic machine readable travel documents. By acting as a central broker for dissemination of certificates, it greatly alleviates the burden associated with bilateral exchanges of certificates. ICAO issues a Master List as part of its PKD operations in order to share certificates associated with travel documents. The ICAO Health Master List makes use of the same well-known and understood Master List format to share certificates associated with health proofs.

About ICAO

A specialized agency of the United Nations, ICAO was created by governments in 1944 to support their diplomacy on international air transport matters. Since that time, countries have adopted over 12,000 standards and practices through ICAO which help to align their national regulations relevant to aviation safety, security, efficiency, capacity and environmental protection, enabling a truly global network to be realized. ICAO forums also provide opportunities for advice and advocacy to be shared with government decision-makers by industry groups, civil society NGOs, and other officially-recognized air transport stakeholders.

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