
PKD Board Annual Report 2020**PKD Board Discussion Paper**

Forwarded by: 2020 Chairperson

Reference Document(s): B-Pub/63 - PKD Board Annual Report 2019 dated 20.02.2020

BACKGROUND

The MoU, Attachment C, paragraph 1.2 states the following:

"1.2 The PKD Board is the standing body responsible for the ICAO PKD. Its duties will include:

...

j) submit to the Participants an Annual Report on its activities and other relevant issues in the preceding year on or before 31 October;"

PURPOSE

This Discussion Paper is intended to fulfil the MoU requirement.

URGENCY

This report should be considered by the Board through written procedure in order to allow for publication on the ICAO public website in a timely manner.

PROPOSAL**PKD Board Annual Report 2020****Purpose**

Based on, and in continuation of the previous PKD Board Annual Reports, the present Annual Report gives an overview of the development of the PKD as well as important activities of the PKD Board in the year 2020.

1. PKD Organization – PKD Board and Executive Body Meetings**a) PKD Board**

The COVID-19 global pandemic resulted in implementation of travel restrictions globally, as well as placement of limitations on physical gatherings in many countries. These measures precluded the organization of a physical meeting of the PKD Board in the third or fourth quarters of 2020 as planned. Instead, a variety of discussion papers were prepared and shared on a dedicated electronic platform to which PKD Board representatives from all PKD participants had access. Through collaborative discussion and (as necessary) refinement of these papers over the course of a four-week period, decisions were approved to advance the work of the Board on matters of most relevance.

The unusual nature of the 2020 Board meeting also meant that organization of elections was not possible given the need for secrecy and transparency in such elections. The Board approved a one-time derogation to normal operating procedures as a result. They agreed that Mr. Mario Wiesen, the PKD Board Member from Luxembourg, be re-

appointed to act as PKD Board Chairperson for the period from October 2020 until the next PKD Board meeting in 2021. They also approved the re-appointment of Ms. Maria-Ester Fernandez Crespo from Spain as the Vice-Chairperson for the same period.

In the same vein, the Board proposed that existing members of the PKD Board have their terms extended by one year. The ICAO Council approved this proposal on 6 November 2020. Representatives of China, France, the Netherlands, Singapore and Spain had their terms extended such that they expire in November 2021. Morocco, Nigeria, and Switzerland had their terms extended to November 2022 and Australia, Canada, Japan, Luxembourg, New Zealand, United Kingdom and the United States had their terms extended to November 2023.

b) Executive Body

Due to the COVID-19 pandemic, the Executive Body (EB) convened a series of virtual focus sessions using online video conferencing rather than meeting in person. The sessions were organized between 23 September and 1 October 2020.

The PKD Board also approved extension of the terms of existing PKD Executive Body participants by one year, just as for PKD Board members. The Netherlands and Switzerland had their terms extended to November 2021. New Zealand had its term extended to November 2022.

2. PKD Administration

a) Membership Fees and Operational Contract

The fees for 2020 were approved by the PKD Board to consist of an ICAO fee of US\$ 6,015.71 and an operator fee of US \$22,500, thus totaling US\$ 28,515.71 (compared to US\$ 29,853.23 in 2019). The ICAO fee decreased in 2020 relative to previous years based on cost sharing of ICAO costs amongst the increased number of members in 2019. As per the PKD operational contract signed in April 2016, the PKD operator fee also decreases as the number of PKD participants increases and such participants become active. The fee structure is highlighted in Table 1 below. The fee for 2020 remained the same as that of 2019 - US\$ 22,500 - but decreased to US\$ 19,250 in 2021 based on newer PKD participants becoming active.

55 Participants	USD 24 500
60 Participants	USD 22 500
65 Participants	USD 20 900
70 Participants	USD 19 250
75 Participants	USD 18 000

Table 1. Operator fees for the ICAO PKD system relative to the number of active PKD participants

Payment for extended operational support delivered by the ICAO PKD operator in 2020 (an amendment to the existing contract with the operator to provide for such extended support, in particular related to the ICAO Master List, extended statistical reporting and

technical advisory work, was signed in December 2019) was facilitated using existing equity in the PKD accounts. Going forward, as per the decision of the Board at its 26th meeting, such payments will be included in the system budget used in the calculation of annual fees.

b) Contract Support Group

The Contract Support Group, consisting of representatives of Canada, Luxembourg, the Netherlands, New Zealand, Nigeria and the United States, worked throughout 2020 in order to examine various options for continuation of activities following expiration of the existing ICAO PKD contract in April 2021 and to provide its consolidated recommendations to the Executive Body and PKD Board. The Group provided a written report as well as an oral debrief to the Executive Body during the 5th meeting of 24 September 2020, suggesting extension of the existing contract for a 5-year period (i.e. to April 2026) as well as inclusion of new provisions necessary for an extension of its duration. The Executive Body agreed with the passing of the recommendations, without change, to the Board for its approval. The Board approved the extension through a written procedure run alongside the 2020 meeting. The final amendment should be signed in early 2021.

c) PKD Standards and Recommended Practices (SARPs)

Amendment 28 to the International Standards and Recommended Practices, Facilitation (Annex 9 to the Convention on International Civil Aviation) was adopted by the Council at the Tenth Meeting of its 220th Session on 23 June 2020. The amendment introduces a new standard 3.9.2 related to the ICAO PKD:

3.9.2. Contracting States that participate in the ICAO PKD shall upload the public key data necessary for authentication of all electronic passports that they issue to the PKD.

Note.—The provision of the Contracting State's Country-Signing Public Key Certificate Authority Certificates (CSCA) at the time of first use is considered the minimum level of data provision sufficient to fulfil this standard. Upload of certificate revocation lists (CRLs) is highly recommended.

The amendment became effective on 30 October 2020 and will be applicable on 28 February 2021. As per State Letter EC 6/3-20/71 dated 17 July 2020 and circulated to all ICAO Member States, all PKD participating states should notify the ICAO Secretary General, before 30 January 2021, of any differences that will exist on 28 February 2021 between its national regulations or practices and this new standard.

3. Technology, System Maintenance and Evolution

The PKD system remained stable and ran without notable issue throughout 2020. It was 100% available for the whole calendar year, with no unplanned downtime in the period. All operations were achieved within Service Level Agreements. A maintenance release was deployed by the operator in August 2020. A configuration audit was completed successfully in November 2020 covering the 2019-2020 period.

Additionally, all technical system documentation and procedural documentation for users was updated during 2020, through the collaborative efforts of the operator and the ICAO secretariat.

a) ICAO CSCA Master List

The first ICAO CSCA Master List was published on 3 March 2020 and has been kept updated thereafter. It is available to PKD participants through the PKD and to the wider public through the ICAO PKD public website. This wide availability is intended to fulfil ICAO's objective to assure proper authentication of eMRTDs to the greatest extent feasible. The Master List contains all technically conformant CSCA certificates that ICAO PKD participants have provided to the organization according to the relevant PKD regulations.

The Master List is signed by the United Nations "Laissez Passe" private key, enhancing trust in the file's authenticity. Productive operational cooperation between ICAO and the UN has continued throughout the year in order to allow for publication of updated Master Lists.

State Letter EC 6/8.3 – 20/68 was disseminated to all ICAO States as well as a variety of international organizations in all ICAO official languages on 19 June 2020. It highlighted the new ICAO Master List and its value to document issuers as well as receiving states and referred to ICAO Assembly Resolution A40-16, which "urges all Member States to join the ICAO PKD and to use the information available from the ICAO PKD to validate eMRTDs at border controls."

b) End user Access to the PKD (Commercial access)

While data from the PKD is currently only accessible to participants and to non-commercial entities (the latter through the public download site), discussions have been on-going since the 2017 meeting of the PKD Board to provide for appropriate commercial access to the PKD data should this be of public benefit. These discussions continue in efforts to refine the concept and put in place appropriate organizational measures for such use.

In May 2020, representatives of the ICAO PKD Board and the ICAO New Technologies Working Group (NTWG) had a virtual meeting to discuss each entity's positions on this item and to consider possible collaboration on implementation moving forward. It was noted that an NTWG subgroup had finalized specifications for the virtual component of the new Digital Travel Credential (these specifications were published by ICAO on the ICAO TRIP webpage in October 2020) and agreed that provision of commercial access to the PKD would be valuable in the context of the future use of the Digital Travel Credential (DTC). In particular, the DTC rollout should involve decreased reliance upon and use of physical travel documents over time, meaning that private sector entities involved in supporting document check processes will require DTC reading capabilities. Proper electronic authentication of the DTC, which requires access to the appropriate public keys, could be facilitated through commercial access to the PKD.

On 9 July 2020, the ICAO PKD Executive Body, following consultations with Board members, requested the secretariat to advance work towards concrete trialing of PKD commercial access with suitable partners. In the letter, they confirmed the Board's positive view towards commercial access and the increasing importance of such commercial access in the context of the DTC, while also noting the potential relevance of PKD data availability to private sector operators supporting aviation's response to COVID-19. The secretariat has engaged private sector entities in the final quarter of 2020 with a view to delineation of a plan for moving forward for PKD Board endorsement.

c) Expanding the use of the PKD

At the 26th meeting of the Board, inclusion of barcode signer certificates associated with Visible Digital Seals (VDS) in the ICAO PKD was approved. The Board provided a mandate to the Executive Body to define further work in order to realize such use.

Discussions in this direction have continued through 2020, albeit slowed somewhat by the restrictions on meeting in place because of the COVID-19 pandemic. In the latter stages of the year, such discussions have been leant impetus by discussions around the use of VDS for COVID-related health certification for travel. ICAO Council's Aviation Recovery Task Force (CART) is considering such health certification in Q1 of 2021 and the PKD community intends to support CART's work to the extent necessary and appropriate.

Technical specifications for VDS will be included in the 8th Edition of ICAO Doc9303, due for publication in 2021. This should provide further impetus to the finalization of efforts to include barcode signer certificates in the PKD in a manner agreeable to the Board.

d) Participation / PKD Usage

In the course of 2020, four new PKD Participants were welcomed. Specifically, Bangladesh, Togo, Ecuador and Rwanda joined the PKD.

Together with Australia, New Zealand, the United States, Canada, the United Kingdom, Japan, Singapore, Germany, Republic of Korea, France, China, Kazakhstan, India, Nigeria, Switzerland, Ukraine, Latvia, the Czech Republic, Macao/China, the United Arab Emirates, Hong Kong/China, Slovakia, the Netherlands, Morocco, Austria, Hungary, Norway, Bulgaria, Luxembourg, Sweden, United Nations, Spain, the Russian Federation, Malaysia, Argentina, Thailand, Ireland, Moldova, Belgium, Brazil, Qatar, Seychelles, Uzbekistan, Philippines, Iran, Colombia, Romania, Finland, Benin, Botswana, Kuwait, Georgia, Turkey, Iceland, Oman, Turkmenistan, Peru, Barbados, Panama, the European Union, Mali, Cote d'Ivoire, Serbia, Belarus, Bosnia and Herzegovina, Croatia, Egypt, Indonesia, Italy, the United Republic of Tanzania and Uganda there were seventy-five PKD Participants at the end of 2020.

The contents of the PKD also continuously grow as participants continue to upload their relevant data. Improvements in usage of the PKD were discussed at the PKD Board meeting. Table 2 shows PKD contents in the final three months of 2020.

	Certificates	CRLs	CSCA Master Lists
October 2020	14 718	42	13
November 2020	15 074	43	14
December 2020	15,132	44	14

Table 2. Contents of the PKD repository at the end of 2020

4. Meetings and Events

The secretariat updated the New Technologies Working Group on developments in the PKD at its online meeting of 12 May 2020. Elements highlighted included the new Master List, commercial access and potential increase in the data incorporated into the PKD.

The Chairperson of the PKD Board led an informal briefing of the ICAO Council on the PKD, highlighting in particular the new ICAO Master list, on 22 September 2020. ICAO Council members took note of the new developments in the PKD and congratulated the PKD community for their success in developing the PKD. The President of the Council indicated his willingness to support further development of the PKD in any way feasible.

The Chairperson and Vice-Chairperson, along with the secretariat, hosted a workshop on the PKD as part of the Identity Week Asia online conference. The workshop, which took place on 14 October 2020, brought together several hundred participants from public and private sectors online for an overview of the electronic passport, public key infrastructure and the role and use of the ICAO PKD therein.

5. Publications

Upon publication of the first ICAO Master List on 3 March 2020, a news release was published on the ICAO public website and shared by various other media outlets. The news raised awareness of the value of this new resource for States and the wider community. It is available at:

<https://www.icao.int/Newsroom/Pages/ICAO-takes-steps-to-strengthen-global-border-management-and-security.aspx>

The PKD, and in particular the new ICAO Master List, is a subject of focus in the new 2020 World Civil Aviation Report (WCAR). The WCAR is ICAO's flagship product, aiming to update States, international organizations and the entire aviation industry on key developments in aviation over the past year as well as future trends and associated initiatives undertaken by ICAO. The WCAR was launched in November 2020 and is available through the ICAO online store.

Conclusion

The ICAO Public Key Directory continued to be a valuable resource for the aviation and border management community in 2020, providing for efficient and effective public key certificate exchange.

Progress through the year was somewhat inhibited due to the COVID-19 pandemic and associated restrictions that meant in-person discussions of the PKD Board and Executive Body were postponed. Nevertheless, significant advancement was made with the publication of the first ICAO Master List, the introduction of the first PKD-related standard in Annex 9 to the Chicago Convention and the furthering of discussions on commercial access and inclusion of new public key certificates relevant to the COVID-19 response.

PKD participation has continued to grow as the value of the system increases based on this work. The Chairperson and the Board look forward to continued enhancement of

service provided to participants through the PKD and further enlargement of the PKD community in the coming years.

Mr. Mario Wiesen
2020 Chairperson
(on behalf of the ICAO PKD Board)

29 January 2021
