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ASSEMBLY — 42ND SESSION

EXECUTIVE COMMITTEE

Agenda Item 12: Facilitation Programmes

THE NATIONAL PUBLIC KEY DIRECTORY (NPKD) GUIDE OF SAUDI ARABIA

(Presented by Saudi Arabia)

EXECUTIVE SUMMARY

The National Public Key Directory (NPKD) is one of Saudi Arabia's critical and sensitive national infrastructure systems, launched by the National Information Center (NIC) under the Saudi Data and Artificial Intelligence Authority (SDAIA). This system aims to enable secure verification of electronic Machine Readable Travel Documents (eMRTDs), such as electronic passports, in accordance with International Civil Aviation Organization (ICAO) specifications (Doc 9303, *Machine Readable Travel Documents*). The initiative aligns with Saudi Arabia's Vision 2030, which seeks to enhance tourism infrastructure and facilitate international access to Saudi Arabia as a global destination.

<i>Strategic Goals:</i>	This paper relates to Strategic Goal <i>Aviation Delivers Seamless, Accessible and Reliable Mobility for All</i> .
<i>Financial implications:</i>	There are no additional financial implications.
<i>References:</i>	Annex 9 — <i>Facilitation</i> Article 22 of Doc 7300, <i>Convention on International Civil Aviation</i> , signed at Chicago on 7 December 1944 and amended by the ICAO Assembly

¹ English and Arabic versions provided by Saudi Arabia.

1. INTRODUCTION

1.1 The National Public Key Directory (NPKD) is one of Saudi Arabia's critical and sensitive national infrastructure components, launched through the National Information Center (NIC) under the Saudi Data and Artificial Intelligence Authority (SDAIA).

1.2 The system is designed to enable the secure verification of electronic Machine Readable Travel Documents (eMRTDs), such as electronic passports, in accordance with the specifications of the International Civil Aviation Organization (ICAO) Doc 9303, *Machine Readable Travel Documents*.

2. PURPOSE OF THE SYSTEM

2.1 Serves as a national foundation for travel facilitation.

2.2 Acts as a centralized database for digital certificates used to securely verify travel documents.

2.3 Supports integration with the ICAO Public Key Directory (ICAO PKD).

3. CORE COMPONENTS

3.1 NPKD Web Service: Provides digital certificates for travel documents through smart electronic gateways.

3.2 NPKD Management Interface: A web-based platform for managing and verifying digital certificates.

3.3 NPKD Integration with ICAO PKD: Enables automatic updates of digital certificates for participating States.

3.4 Technical Integration: Achieved through LDAP, HTTP services and high-availability (HA) environments.

4. STRATEGIC BENEFITS

4.1 Enhanced national security through verification of travel documents and detection of fraudulent documents.

4.2 International recognition, as participating States can validate the authenticity and integrity of Saudi-issued travel documents.

4.3 Support for digital identity, enabling services such as smart visas and digital e-passports.

4.4 Operational efficiency, as digital certificates are managed securely and reliably.

4.5 International integration, facilitating secure and trusted verification of travel documents issued by Saudi Arabia.

5. **GOVERNANCE AND TECHNOLOGIES**

5.1 Operating entity: National Information Center (NIC) under the Saudi Data and Artificial Intelligence Authority (SDAIA).

5.2 Technologies used: Integrated Public Key Infrastructure in accordance with international standards.

5.3 Standards: Compliant with ICAO specifications (for example ECDSA-SHA256, RSA-3072).

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