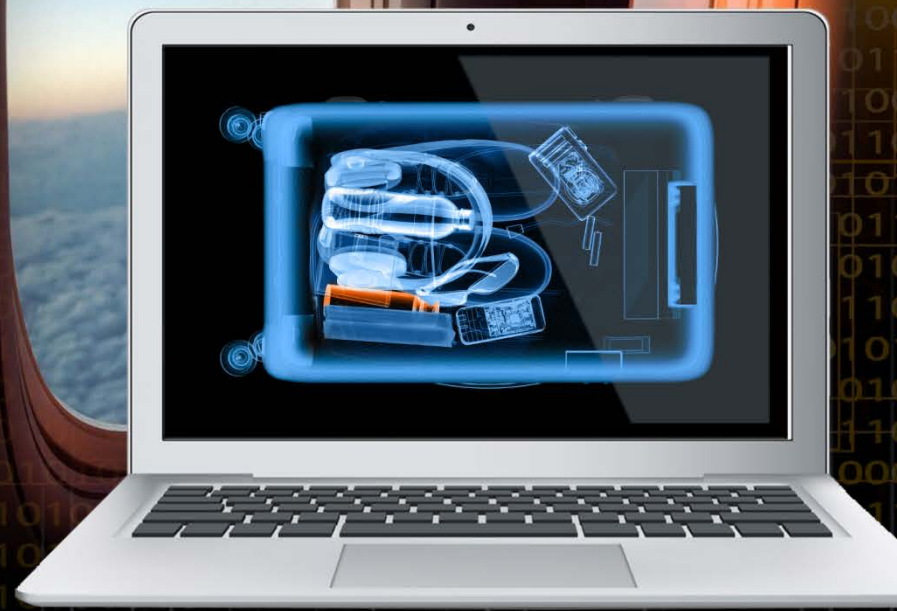
Global Aviation Security Symposium

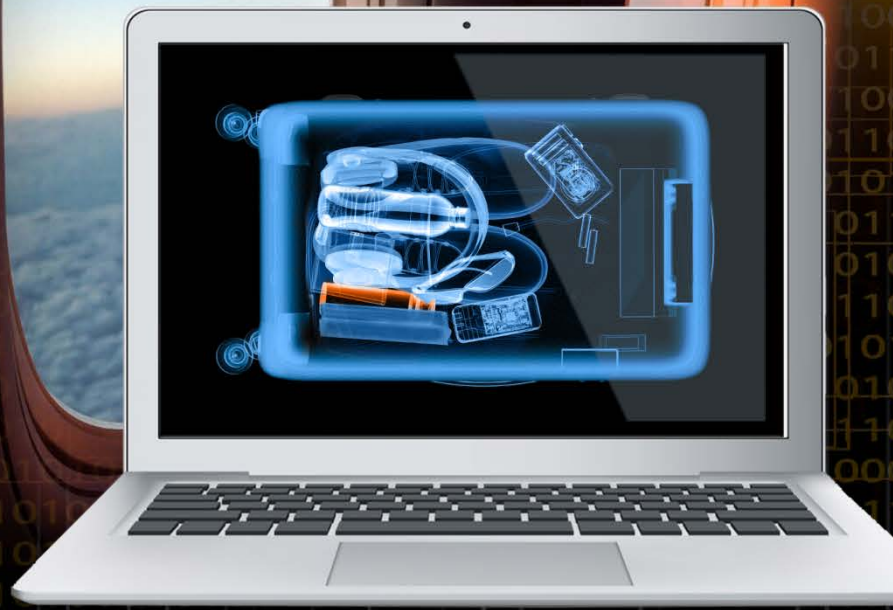


#AVSEC2019

Opening Remarks

Dr. Olumuyiwa Benard Aliu

President of the Council of ICAO



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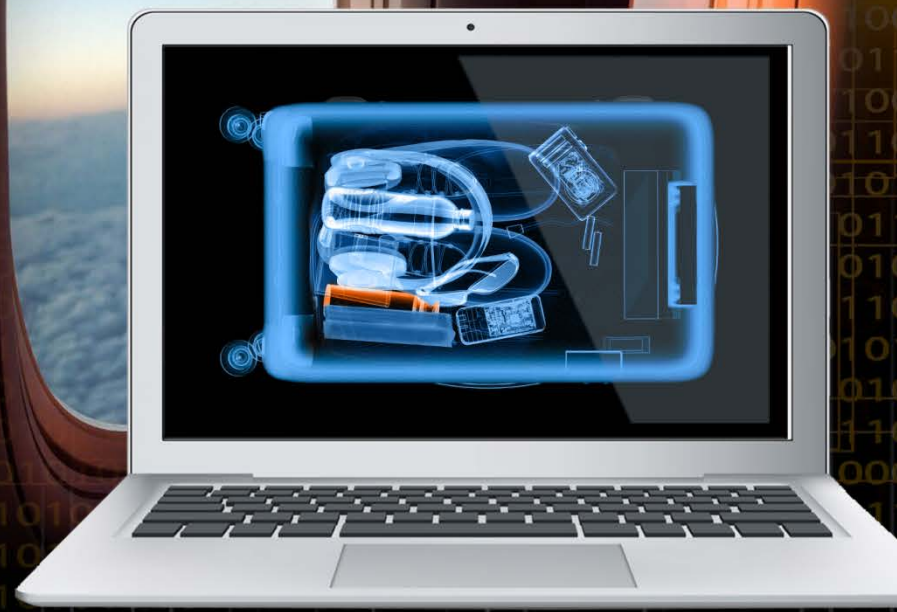
Leaders' Plenary



Dr. Fang Liu

Secretary General ICAO

#AVSEC2019

Panellists

- **Angela Gittens**, Director General ACI World
- **Henrik Hololei**, Director-General Mobility and Transport, European Commission
- **Poppy Khoza**, Director of Civil Aviation, South African Civil Aviation Authority
- **Darby LaJoya**, Executive Assistant Administrator, U.S. Transportation Security Administration
- **Furong Tang**, Deputy Director General, Aviation Security Bureau, Civil Aviation Administration of China

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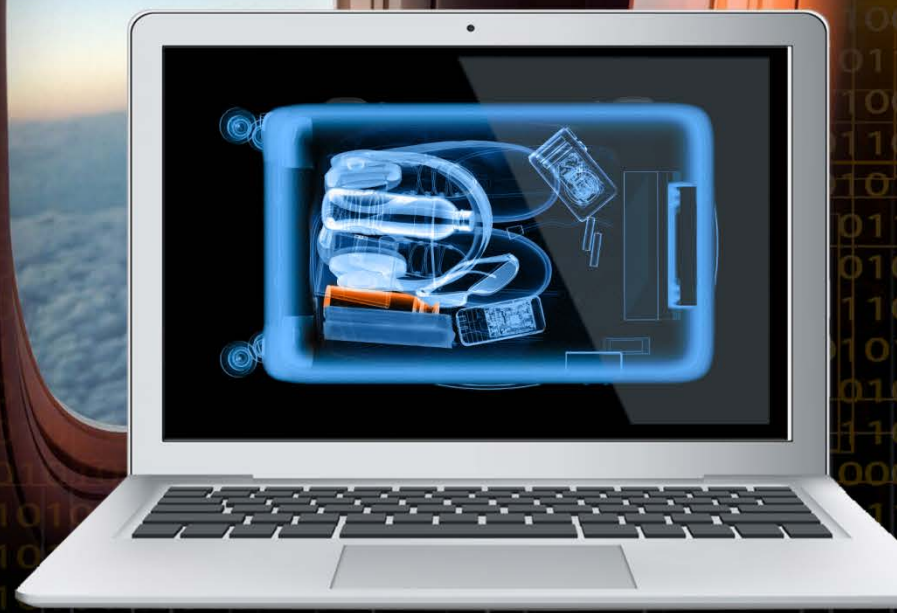
Session 1
Risk Awareness

Steven R. Berti

Chief, Aviation Security Policy Section



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Panellists

- **Peter Abraham**, Oversight Officer, Ministry of Public Utilities, Civil Aviation, Transportation and Energy, Antigua and Barbuda
- **Casie Antalis**, Chief of Staff, National Vetting Center, U.S. Customs and Border Protection
- **Mark Rodmell**, Head of Aviation Security Policy and Regulation, Aviation Directorate, UK Department for Transport
- **Ryu Yonaha**, Section Chief of International Affairs Unit, Aviation Security Office, Civil Aviation Bureau, Ministry of Land, Infrastructure, Transport and Tourism, Japan

Audience Poll

How does your organization define AVSEC threats?

1. Data from intelligence agencies
2. Information from other government entities
3. Use of Risk Context Statement (RCS)
4. Open source reporting (e.g. media)
5. Other
6. No AVSEC threat information is available

Session 1

How to use the ICAO Risk Context Statement?

Audience Poll

How much concern does the insider threat cause?

1. High concern and countermeasures are in place
2. High concern but few effective countermeasures are in place
3. Low concern because countermeasures are in place
4. Low concern and therefore few countermeasures are in place

Session 1

What is key to optimal risk management?

Session 1

How can a State sort through vast amounts of threat information?

Session 1

What is the relationship between security culture and risk awareness?

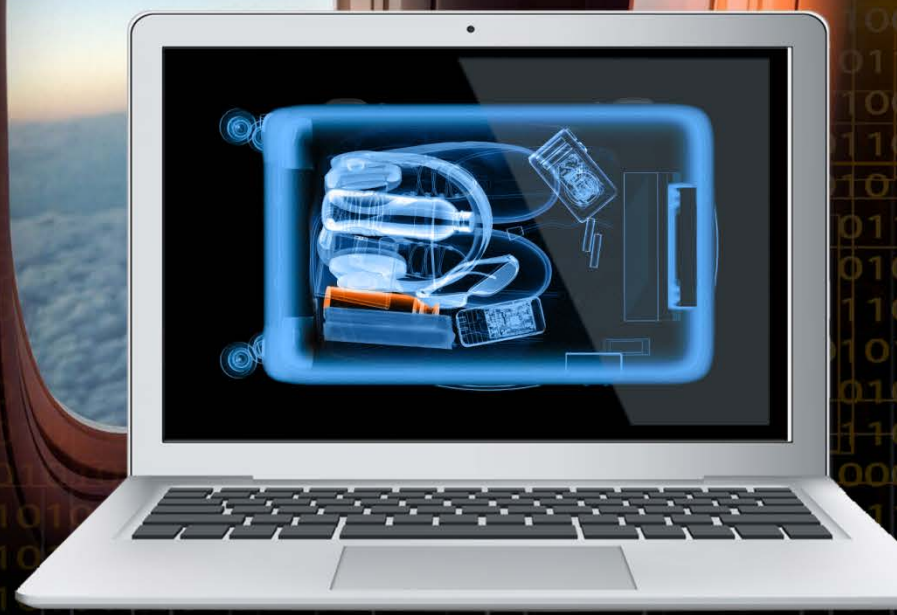
Audience Poll

When you think of risk awareness, what is the one word that comes to mind?

Presentation Nuctech

Amy Huang

Marketing Director



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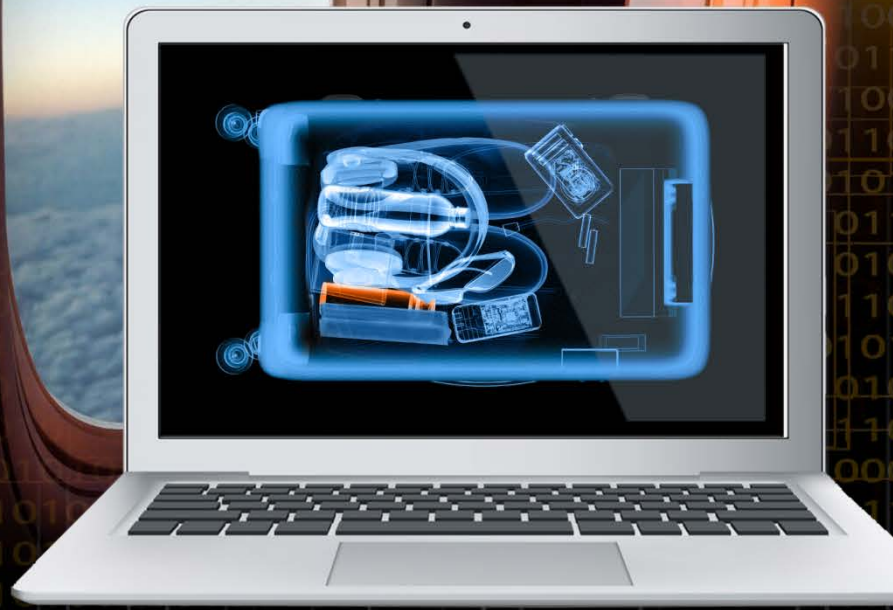
NUCTECH

Session 2 Technology and Innovation

Dr. Narjess Abdennebi

Chief, Facilitation Section



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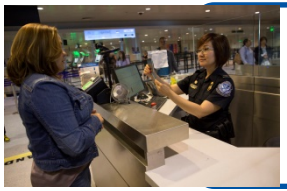
Panellists

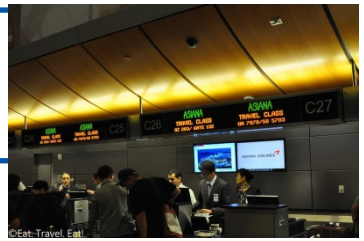
- **David Dodson**, Director, Global Targeting Advisory Division, National Targeting Center, U.S.
- **Jonathan Mineault**, Manager Passenger Protect Program, Transport Canada
- **Simon Watkin**, Border Security, Visa and Identity Policy, Home Office, United Kingdom

Air transport facilitation main actors



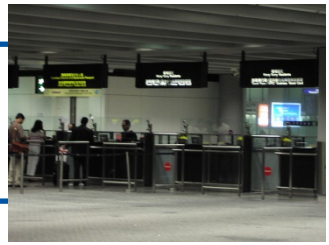
TRAVEL DOCUMENTS

- AIRLINES



HEALTH

IMMIGRATION



- LAW ENFORCEMENT

- CUSTOMS

FACILITATION

Efficient BORDER CONTROL PROCESSES

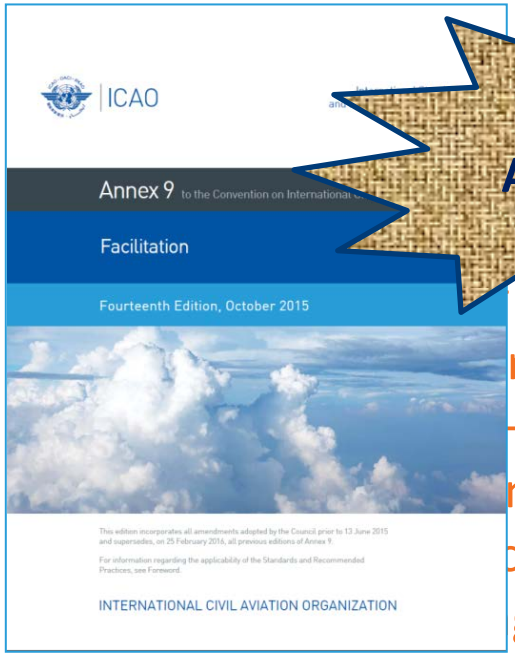
Expedite Clearance of Passengers, ...

TO PREVENT Unnecessary DELAYS

In order to MAINTAIN SECURITY & EFFICIENCY

Annex 9 – *Facilitation:* setting the regulatory framework

Ch. 1.
Ch. 2.
Ch. 3.
Ch. 4.
Ch. 5.
Ch. 6.
Ch. 7.
Ch. 8.
Ch. 9.



70th Anniversary

Standards and Recommended Practices (SARPs)

Passenger Data Exchange Annex 9 Standards and Guidance

Establishing API System: Annex 9-related Standards

9.5 Each Contracting State **shall establish an Advance Passenger Information (API) system**

9.6 The API system […] shall be supported by **appropriate legal authority** […] and be consistent with **internationally recognized standards** for API

Establishing PNR System: Annex 9-related Standards

9.22 Each Contracting State requiring Passenger Name Record (PNR) data shall align its data requirements and its handling of such data with the guidelines contained in ICAO Doc 9944, [….] and in PNRGOV message.. ICAO and IATA.

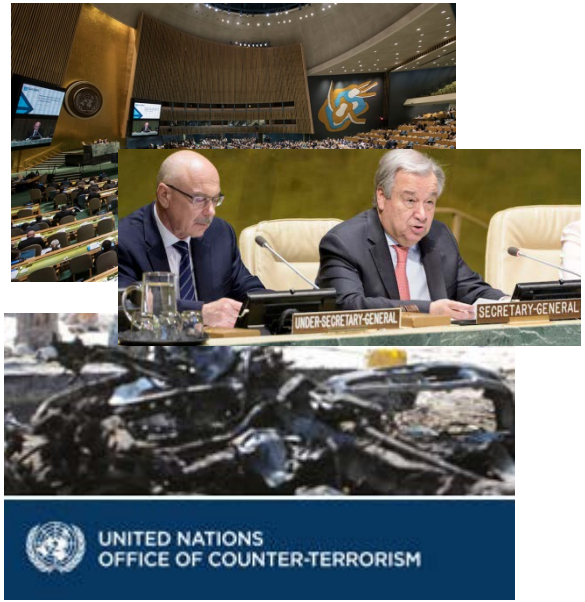
9.22.1 Contracting States requiring the transfer of PNR data shall adopt and implement the EDIFACT-based PNRGOV message as the primary method for airline-to-government PNR data transferal to ensure global interoperability

API Guidelines: https://www.icao.int/Security/FAL/Documents/1.API%20Guidelines%202013%20Main_%20Text_E.pdf

PNR Reporting Standards: https://www.icao.int/Security/FAL/SitePages/API%20Guidelines%20and%20PNR%20Reporting%20Standards.aspx.

Doc 9944: ICAO Guidelines to PNR

ICAO Standards and the UN Agenda for Counter Terrorism



Partners in the UNCT Travel Programme launched on 7 May 2019

ICAO

The UNSC resolutions behind the UNCT Travel Programme:

Resolutions 2178 (2014) for API and 2396 (2017) for PNR data

''Reaffirms that all States **shall prevent the movement of terrorists** or terrorist groups by effective border controls and controls on issuance of identity papers and travel documents, and through measures for preventing counterfeiting, forgery or fraudulent use of identity papers and travel documents,…''

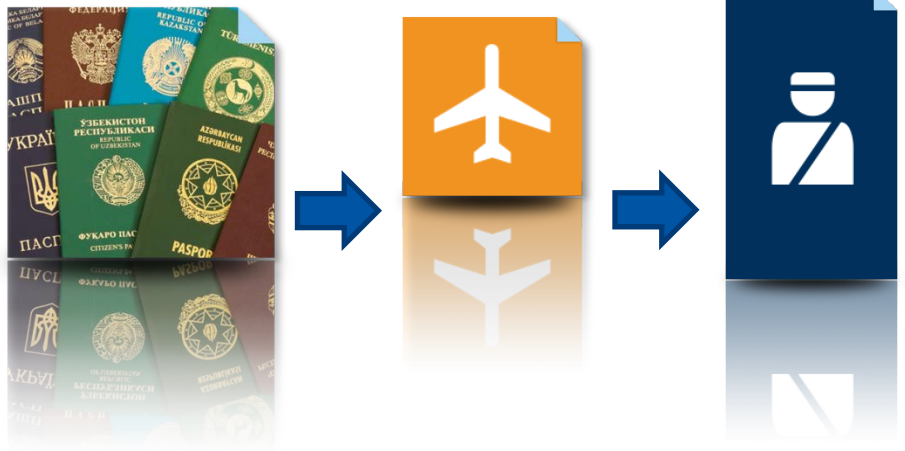
''Calls *upon* Member States **to require** that airlines operating in their territories provide **advance passenger information** to the appropriate national authorities…''

''Decides that Member States **shall develop the capability** to collect, process and analyse, in furtherance of ICAO standards and recommended practices, **passenger name record (PNR) data** and to ensure PNR data is used by and shared with all their competent national authorities, with full respect for human rights and fundamental freedoms for the purpose of preventing, detecting and investigating terrorist offenses and related travel, further…'' *and also*

Urges ICAO to work with its Member States **to establish a standard** for the collection, use, processing and protection **of PNR data**

Evidence of Identity → **MRTDs** → Document Issuance and Control → Inspection Systems and Tools → Interoperable Applications

Machine Readable Zone

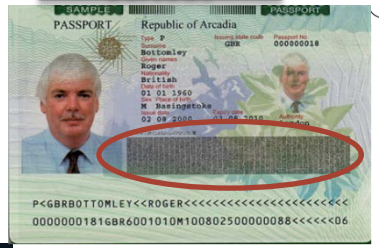


Importance of Doc 9303 ICAO Specifications for Interoperability

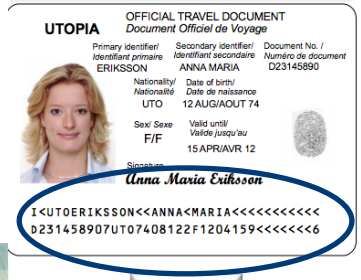
Should be out of circulation since 24 November 2015

Non-MRPs

MRPs with 2D Barcode

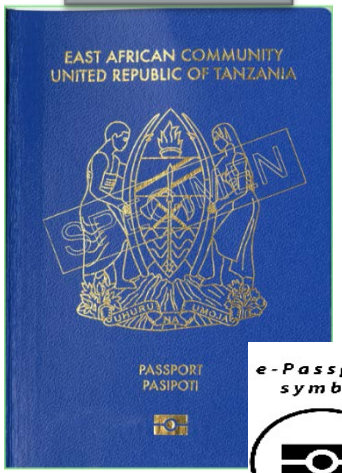


MRPs without 2D Barcode



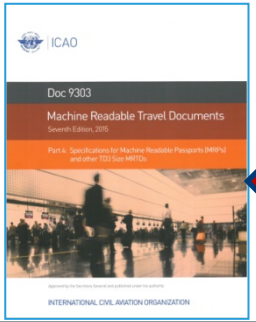
MRZ

ePassports



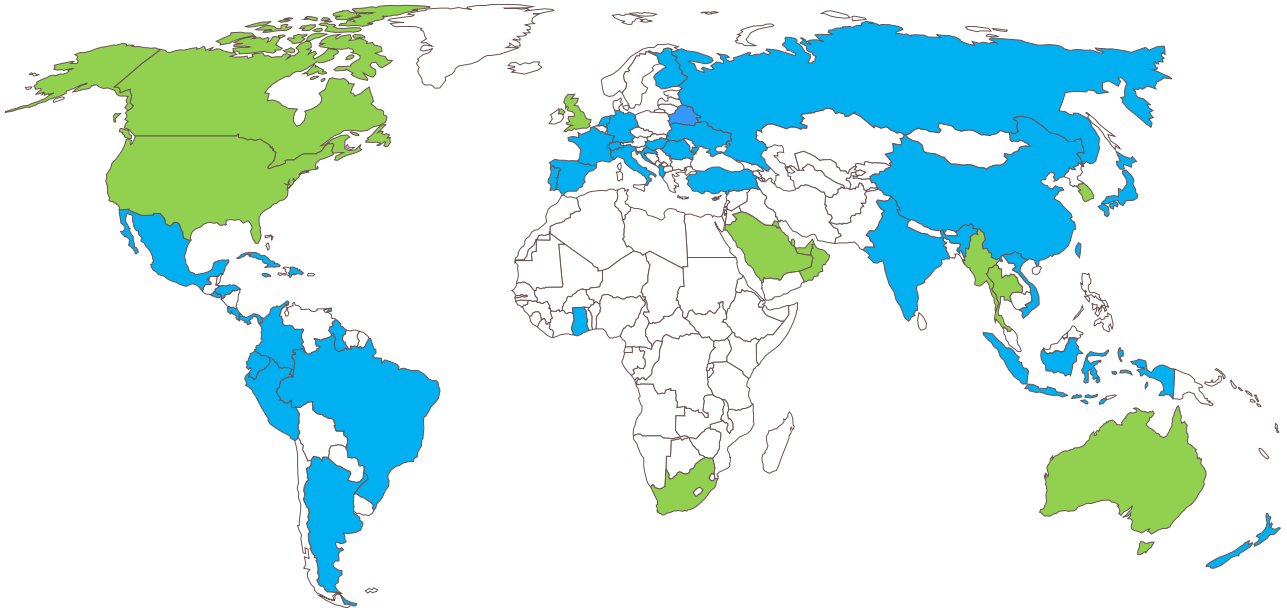
e-Passport symbol

MRTDs: Specifications set up by Doc 9303



Changes endorsed by the TAG/TRIP and developed by TAG/TRIP and ISO experts

Status of API implementation: 70 Member States

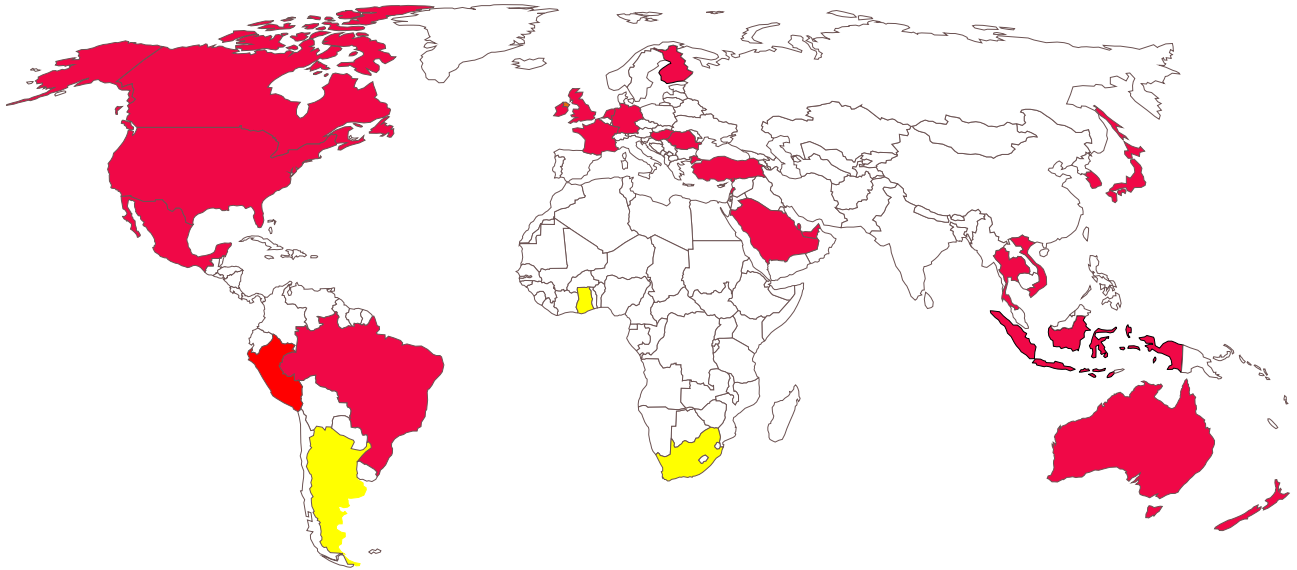


Legend

- iAPI in force (total: 16)
- API in force (total: 54)

Source: IATA

Status of PNR implementation: 27 Member States



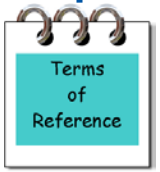
Legend

- PNR in force
- PNR Authorized not in force

Source: IATA

PNR-TF implementation milestones 2019

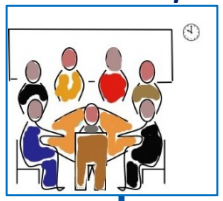
22/03



ToRs circulated to the FALP Members and Observers

01/04

Definition of the PNR-TF membership



02/04

Nomination of A Rapporteur

17/04

1st Conference Call To initiate the work

30/04

Oral Report on the Status to the ICAO Air Transport Committee

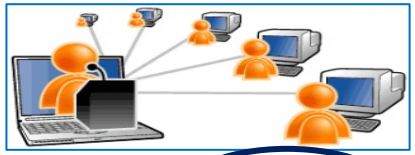
May

June

July

August

Additional Conference Calls and meetings



Face to Face meeting

The PNR-TF work continues

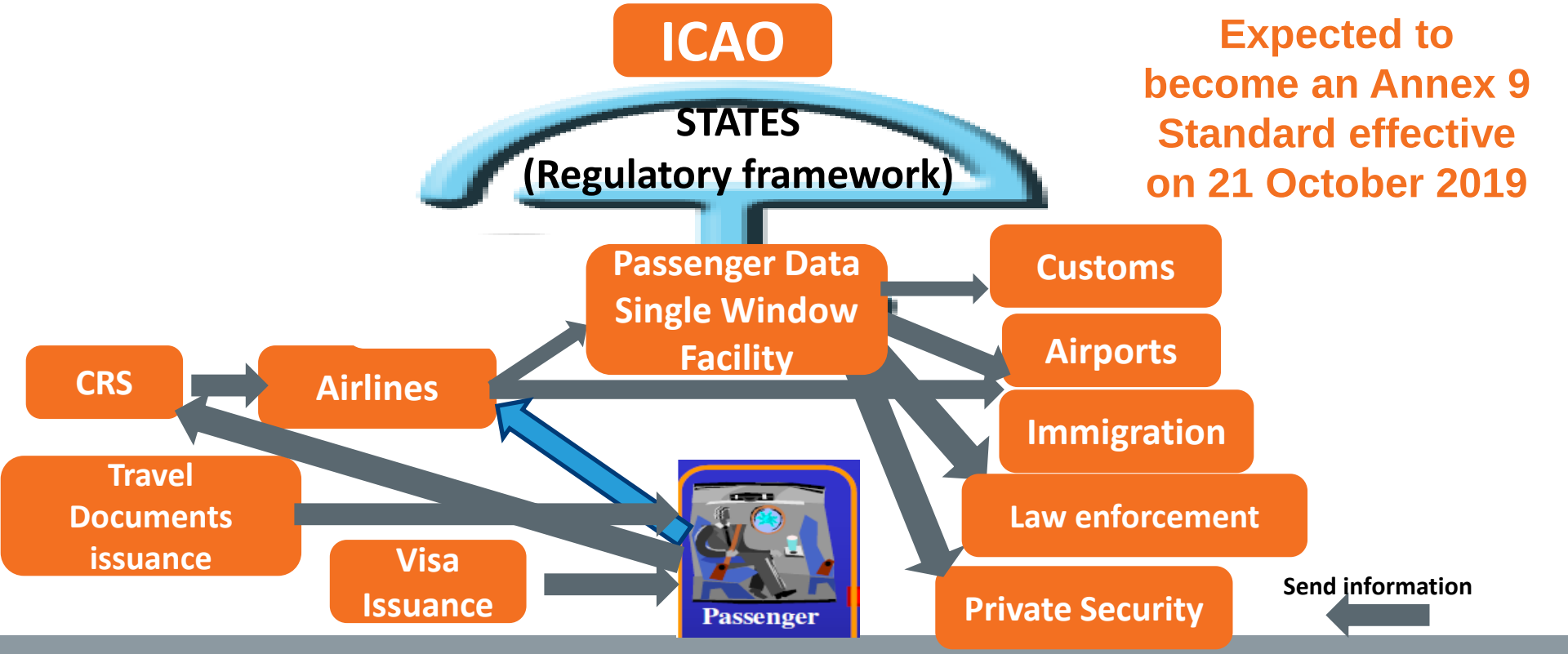
September

Final Report delivered to the Secretariat

October

Final Report presented to the ATC

Passenger Data Single Window Facility



Audience Poll

Where do States need the most support in implementing the use of API and PNR data?

1. Operational
2. Legal
3. Financial
4. Know-how

Session 2

What are the biggest challenges in using API / PNR?

Session 2

How does interagency cooperation work?

Session 2

How do you see the future of API and PNR?

Session 2

How do States ensure data protection?

Take-aways for Part 1 of Session 2

- Passenger data has been an important aspect of the ICAO Traveller Identification Programme (ICAO TRIP) strategy since its inception in 2013
- Various resolutions of the United Nations Security Council have placed a heightened emphasis on API and PNR, both in terms of border security and aviation security
- ICAO is doing its part to assist its Member States in line with the ‘’No Country Left Behind’’ initiative
- Nonetheless there are a number of challenges in order for API and PNR to be implemented smoothly
- Need to implement a Passenger data Single Window Facility for API and PNR transmission for the purpose of an effective interagency cooperation
- Important link between passenger data and aviation security
- PNR data being a business record the format differs from one airline to another
- Data protection: the challenges facing airlines confronted by conflicts of national laws required by laws to disclose data and by other laws to protect the same data

COFFEE BREAK

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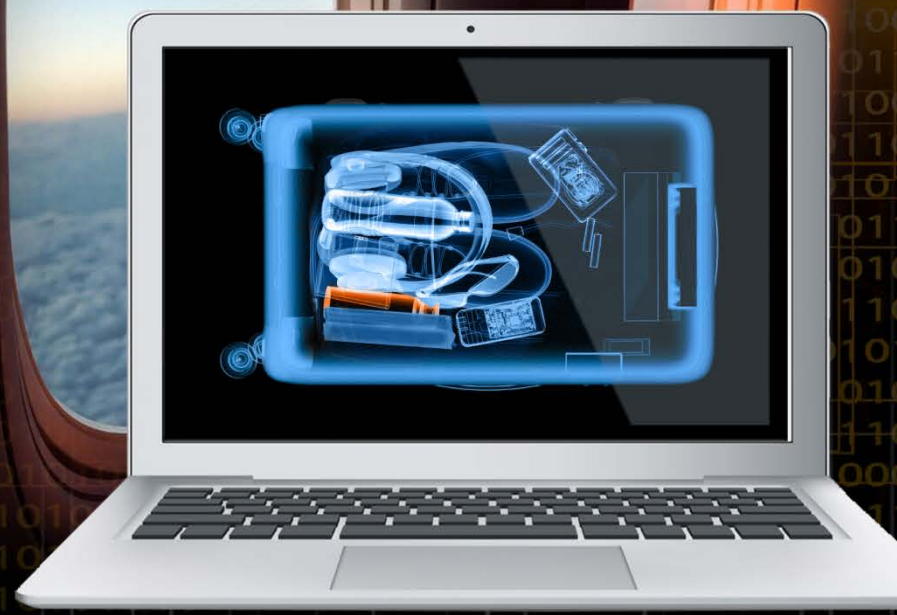
SkyTalk
Smiths Detection

Tony Tielen

Vice President Europe, Africa & Marketing



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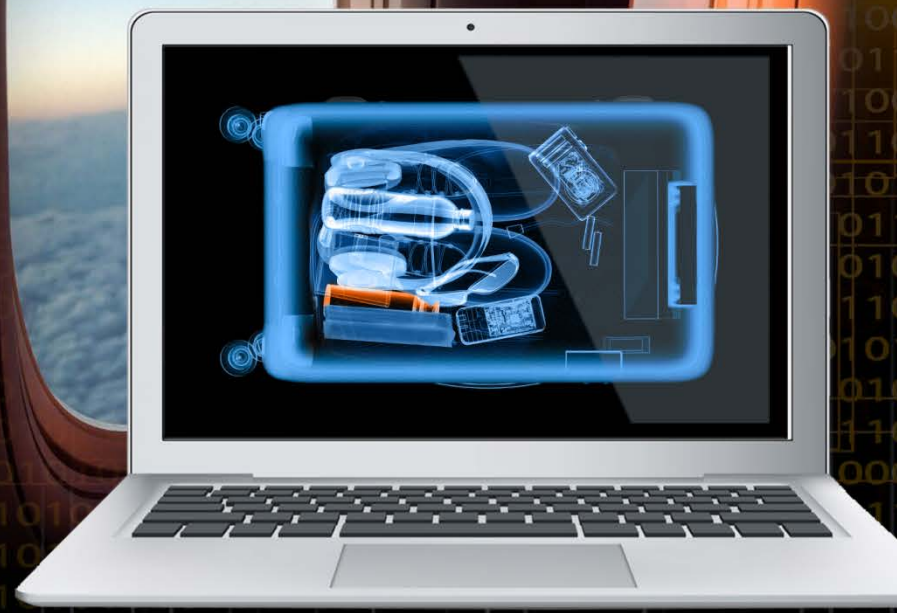
Session 2 Technology and Innovation (continued)

Dr. Narjess Abdennebi

Chief, Facilitation Section



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Panellists

- **Ali Al-athbi**, Facilitation and Security Department, Qatar Civil Aviation Authority
- **Celine Canu**, Head of Aviation Facilitation, IATA
- **Anderson Leme Siqueira**, Customs Officer, São Paulo International Airport, Brazil
- **Sho Kagawa**, Manager Aviation Security, Security Department, Airport Operation Division, Narita International Airport Corporation, Japan

Main challenge for Facilitation

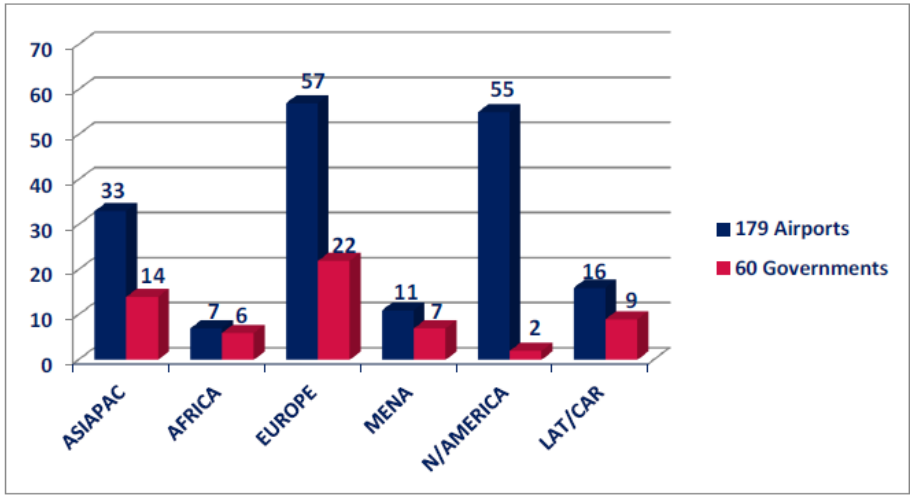
About 2 Billion International passengers per year for whom border clearance need to be expedited

Minimum of 10 seconds are needed by the fist line Officer for each pax clearance

→ **Substantial lack of resources to expedite clearance for all pax**

Use of Automated Border Controls (ABCs) gates

Automated Border Control deployed per Region (Status end of November 2015)



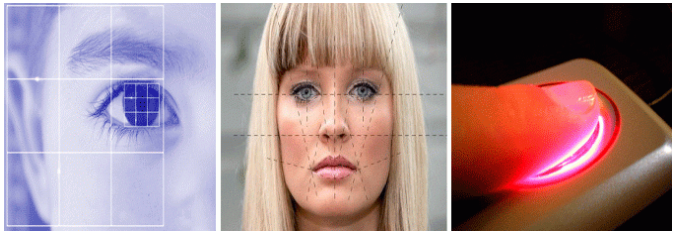
ICAO will continue to encourage the expansion of the use of ABCs, as a means of verifying and authenticating ePassports and enhancing security in cross-border movement and to facilitate the clearance of passengers

According to IATA, availability of ABCs for the inspection of travel documents increased between 2015 and 2019 from **179 airports in 60 States** to **234 airport in 69 States**

Source: IATA

ICAO Public Key Directory (PKD): powerful inspection system

Evidence of Identity → MRTDs → Document Issuance and Control → **Inspection Systems and Tools** → Interoperable Applications



ICAO PKD

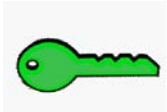
ePassport

Recommended Physical and Digital matching at borders

ePASSPORT

STATE A

ICAO Public Key Directory (PKD)



STATE A

Automated Border Control (ABC) gates

STATE B Border

- *Validation of **ePassports** with **PKD***
- ***Biometric matching** to establish that the passenger is the rightful holder of the document*
- ***Query INTERPOL's** Stolen and Lost Travel Documents (SLTD) database, as well as other border control records, to determine **eligibility for border crossing***

ePassport/Biometric Passport Primer

			DATA ELEMENTS
REQUIRED	ISSUING STATE OR ORGANIZATION DATA	Detail(s) Recorded in MRZ	DG1 Document Type
			Issuing State or organization
			Name (of Holder)
			Document Number
			Check Digit - Doc Number
			Nationality
			Date of Birth
			Check Digit - DOB
			Sex
			Data of Expiry or Valid Until Date
			Check Digit DOE/VUD
			Optional Data
			Check Digit - Optional Data Field
			Composite Check Digit
		Encoded Identification Feature(s)	Global Interchange Feature: DG2 Encoded Face
			Additional Feature(s): DG3 Encoded Finger(s)
			Additional Feature(s): DG4 Encoded Eye(s)
OPTIONAL	ISSUING STATE OR ORGANIZATION DATA	Displayed Identification Feature(s)	DG5 Displayed Portrait
			DG6 Reserved for Future Use
			DG7 Displayed Signature or Usual Mark
		Encoded Security Feature(s)	DG8 Data Feature(s)
			DG9 Structure Feature(s)
			DG10 Substance Feature(s)
			DG11 Additional Personal Detail(s)
			DG12 Additional Document Detail(s)
			DG13 Optional Detail(s)
			DG14 Security Options
			DG15 Active Authentication Public Key Info
			DG16 Person(s) to Notify

Data Group 1 (DG1)

- Issuing Organization
- Name of Holder
- Document Number
- Nationality
- Date of Birth
- Sex
- Date of Expiry…

Data Group 2 (DG2)

- Face

Data is added and encrypted at the time of issuance

- Approximately 135 ICAO Member States issue ePassports; 65 States participate in the ICAO Public Key Directory
- The ePassport contains digitized identity information, including two mandatory elements (i.e. DG1 and DG2)
- Data can be authenticated and used to support passenger (e.g. facial matching, watchlist checking, etc.)

Why a Digital Travel Credentials (DTC) model?

- The ICAO Traveler Identification Program (TRIP) recognizes and is continually working to address the following pressures:
  - Growing passenger numbers
  - Limited physical infrastructure
  - Enhanced security requirements
  - Aging/legacy processes and systems

- These pressures have generated incredible innovation from government and industry; however, these responses lack consistency, and can create unpredictability across the traveler's experience

- As a result, an ICAO Working Group is working to define international policy and to develop technical specifications with the support of the international standardization organization (ISO) for the issuance of virtual forms of traveler identification

What did we effectively want to achieve and why?

- Passport data is used by a range of actors in the travel continuum:
  - **Immigration authorities** to issue travel authorizations (e.g. electronic authorities, visas, etc.)
  - **Transport Ministries or agencies** to support identity management and aviation security
  - **Air industry** to fulfill transporter obligations and manage travelers
  - **Border control** to pre-screen travelers, identify lost/stolen books and identify travelers

The principle objective of the DTC is to make this data accessible without physical presentation of the passport

High-Level Explanation

- a DTC could be created in two ways: as a derivative of the ePassport (i.e. extracted data); and/or issued in parallel to or in replacement of a physical ePassport
- The DTC would contain the facial image, the holder's personal details, and the security features to support authentication
- All generations of the DTC will be backwards compatible

Key Parameters of the DTC development

- Creating a globally-interoperable solution
- Drawing from the security principles of the ePassport; any solution had to be at least as secure as the ePassport
- Maintaining compatibility with document control/inspection systems (i.e. Public Key Director and INTERPOL Stolen and Lost Travel Document Database)
- Effectively responding to the needs of States and aviation stakeholders to reduce “friction”/traveler pain-points in the system
- Building on the momentum and global deployment of ePassport issuance

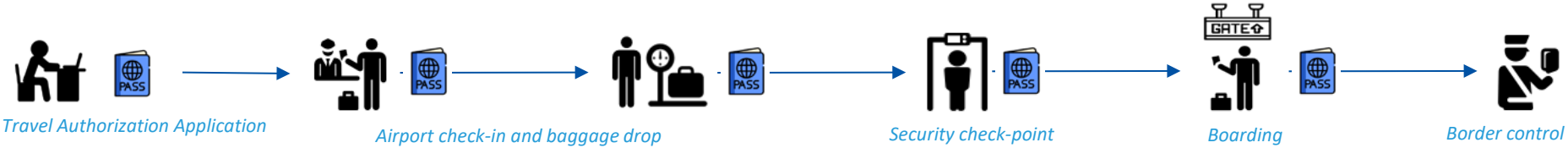
Technologies Explored: Assessment Lens

Hybrid

A travel credential that has both a virtual and physical component; Combined these elements minimize the integrity/ operational risks of creating a purely virtual token, e.g. can fall back on the physical token when required , puts control in hands of user consistent with current ICAO model, etc…

How Could a DTC Be Used?

Status Quo: Passport required at multiple stages of travel continuum



Travel Authorization Application | *Airport check-in and baggage drop* | *Security check-point* | *Boarding* | *Border control*

DTC Implementation: Passport information submitted once and available in advance of arrival

Airline | **Airport expect traveller movement** | **Destination country**

Travel Authorization Application | *Biometric airport check-in* | *Biometric baggage drop* | *Biometric security check-point* | *Biometric boarding* | *Biometric border control*

What Considerations may limit DTC Use?

- Current passenger data exchange systems are limited to biographic data
  - DTCs would have to flow from State to State
- State privacy frameworks are built around existing passenger data exchange
- Access to the ICAO PKD is limited to States
  - Industry cannot confidently use the DTC without authentication
- DTC will only include the traveler's identity information
  - Other pertinent data (e.g. visas) are not included in the DTC

Audience Poll

Which airport process could benefit the most from the use of API and PNR data?

1. Check-in / baggage drop-off
2. Security check
3. Border control
4. Boarding

Session 2

How can API and PNR processing feed into risk assessment?

Session 2

How can AVSEC benefit from API and PNR?

Session 2

How can biometrics be integrated into passenger data?

Session 2

What benefits can API and PNR have for the passenger flow?

Take-aways for Part 2 of Session 2

- Compliance with ICAO Doc 9303 specifications for MRTDs is an important aspect of the ICAO TRIP Strategy notably for interoperable applications
- Importance of passenger data quality and accuracy for API transmission
- The Machine Readable Zone (MRZ) of travel documents is meant to enhance passport data quality, both for border control and airline processes
- MRZ is one of the drivers for the development of specifications for the Digital Travel Credential (DTC) concept
- The ICAO DTC model will ensure both global interoperability and data quality allowing for the inclusion of mobile solutions for passport and ID control at various passenger touch points
- The deployment of the IATA One ID solutions in airports to facilitate passenger processes, using facial recognition, is in line with the ICAO DTC model
- This flagship initiative led by IATA is already implemented at Narita airport.
- PNR data is analyzed using the newest technologies such as Artificial Intelligence to conduct risk assessment
- API and PNR data quality can be leveraged to enhance aviation security
- Biometrics are and will be integrated into passenger processing linked to the role of API and PNR in this regard

Presentation OARO

Daniel Faria

Chief Security Officer

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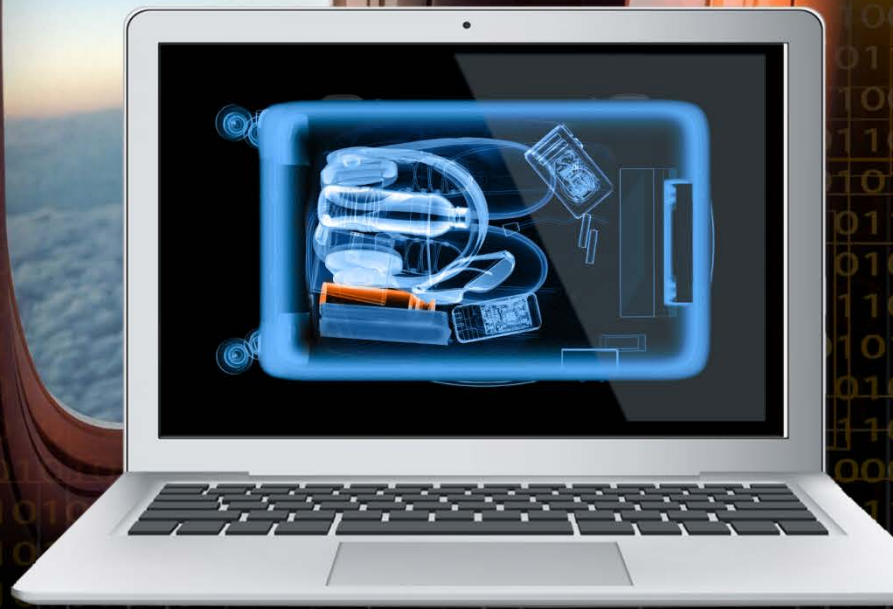

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