



Guidelines on Advance Passenger Information (API)

June 2022



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I Introduction

I.A Preamble - Joint Statement by WCO/IATA/ICAO:

The World Customs Organization (WCO), the International Air Transport Association (IATA), and the International Civil Aviation Organization (ICAO) are pleased to present Guidelines on Advance Passenger Information (API) 2022.

The Guidelines have been jointly drafted and reviewed under the auspices of the WCO-IATA-ICAO API/Passenger Name Record (PNR) Contact Committee (“the Contact Committee”). They update and replace the Guidelines published in 2014.

The Guidelines establish a best practice to which Border Control Agencies, aircraft operators, and other passenger service operators implementing and operating API systems should adhere to the greatest extent practicable.¹ With these Guidelines, the WCO, IATA, and ICAO envision API systems and practices that are developed in a consistent and orderly manner, based on jointly agreed standards and principles to facilitate the development of API programmes around the globe.

Although these Guidelines focus on the acquisition of API from aircraft operators, they may also be considered in relation to passenger data for other transportation modes, such as cruise ships or international rail services. This document does not cover the collection and use of PNR data by Border Control Agencies. PNR is explored in other WCO/IATA/ICAO instruments.

Please do not hesitate to contact the Secretariat of either the WCO, IATA, or ICAO should you have any questions.

I.B High-level Description of API, the Benefits of API Systems, and the Distinction between API and iAPI:

API involves the capture of a traveller’s² biographic data and their flight details by the aircraft operator prior to departure and the transmission of that information by electronic means to the Border Control Agency in the departing and (or) destination country. API can be a necessary decision-support tool that Border Control Agencies use to detect a person of interest or person requiring examination in advance of the intended travel, departure, arrival, or transit. Before passengers are cleared for boarding or processed for entry/transit in a destination country, API is sent to the Border Control Agency (or Agencies) for screening against the relevant databases to identify passengers and crew of interest, including those subject to UN Security Council sanctions lists and travel bans, and to identify stolen or lost travel documents, including those listed on the INTERPOL SLTD.³

The processing and analysis of API has the potential to reduce inconvenience and delays that may be experienced by passengers as a result of the necessary processing of passengers at

¹ References to Border Control Agencies also include Transport Security Agencies and other partner agencies that use API.

² The term “traveller” is used to mean both passengers and crew members. The term “passenger” refers to an individual who is not a crew member. While these Guidelines attempt to be precise throughout, this particular interchange of terms can be inherently ambiguous since “advance passenger information” applies to both passengers and crew.

³ INTERPOL SLTD is a database of identity and travel documents reported as lost, revoked, invalid, stolen, or stolen as blank documents.

borders. It also provides a system which Border Control Agencies can use to operate “no fly” schemes and implement travel bans against those on UN Security Council sanctions lists. In this context, it is important to note that API, by itself, is not sufficiently comprehensive as a decision-making tool. API must be used with other information – such as a watch list.

While the processing and analysis of API is being conducted by more and more Border Control Agencies around the world, it has been used by a number of countries for some time.

Interactive Advance Passenger Information (iAPI) is a type of API that interacts with the Border Control Agencies in real time. iAPI allows for an immediate response to be provided to a check-in agent with a boarding directive, creating greater control for Border Control Agencies and aircraft operators, as a person known or believed to pose a risk can be identified prior to boarding a flight.

API and iAPI will be elaborated upon in more detail in subsequent sections of these Guidelines.

I.C Impact on Customs and Border Control Agencies:⁴

Notification of API to Border Control Agencies by aircraft operators using electronic data interchange (EDI) is essential for effective border enforcement. Ultimately, API and iAPI capabilities enable Border Control Agencies to plan and make earlier interventions and to have a direct and positive impact on national and border security. The advance receipt and analysis of API increases the level of security for aircraft operators and national security in general. Border Control Agencies use the data to perform enforcement and security queries against various multi-agency law enforcement and intelligence databases in connection with, as appropriate, international commercial flights to, from, continuing within, and in some cases, overflying the country.

The deployment of information technology systems (i.e., computerized passenger screening/clearance systems) to support the “flow” of advance information that incorporates passenger selection criteria on the basis of high-quality intelligence has a positive effect on border enforcement and facilitation activities. Ensuring details of passengers are received in advance of arrival allows Border Control Agencies adequate time to utilize their resources more efficiently. More compellingly, receiving API before departure enables the identification of persons who may be on a “no fly” list and the enforcement of travel-related sanctions and travel bans.

⁴ Throughout the world, there are varying competent authorities (Customs, police, immigration authorities, etc.) who have the lead role for a government’s API programme. This document uses the terms “Border Control Agency” and “Border Control Agencies” to refer to the relevant competent authorities.

II Additional Developments Leading to the Revised API Guidelines

There have been a number of policy and technical developments that have contributed to the Contact Committee's impetus to update these Guidelines. Extensive work and engagements have resulted in the development and adoption of UN Security Council Resolutions (UNSCRs) and ICAO Standards and Recommended Practices (SARPs) relating to the importance of API. These are explained in this section.

II.A UNSCR 2178 and Amendment 26 to ICAO Annex 9 to the Convention on International Civil Aviation – Facilitation Mandating States to Establish API Systems:

In September 2014, the UNSCR adopted Resolution 2178 (2014)⁵ expressing grave concern about the threat posed by foreign terrorist fighters travelling to other States to perpetrate, plan, prepare, or participate in acts of terrorism including armed conflict, and about individuals attempting to travel to become terrorist fighters. UN Member States were urged to “intensify and accelerate the exchange of operational information regarding actions or movements of terrorists ..., including foreign terrorist fighters ...”

UNSCR 2178 (2014) called upon UN Member States “to require that airlines operating in their territories provide advance passenger information to the appropriate national authorities in order to detect the departure from their territories, or attempted entry into or transit through their territories, by means of civil aircraft, of individuals [associated with Al-Qaida] ...”

In June 2017, as a direct consequence of UNSCR 2178 (2014), the ICAO Council adopted Amendment 26 to ICAO Annex 9. Amendment 26, which became effective in October 2017 and applicable from 23 February 2018, contained as new standards:

“Each Contracting State shall establish an Advance Passenger Information (API) system.”⁶

“The API system of each Contracting State shall be supported by appropriate legal authority (such as, inter alia, legislation, regulation or decree) and be consistent with internationally recognized standards for API.”⁷

Reflecting emerging technical developments and complexities, Amendment 26 also introduced new recommended practices:

“Each Contracting State should consider the introduction of an interactive Advance Passenger Information (iAPI) system.”⁸

A Recommended Practice for the Passenger Data Single Window to encourage efficiencies in passenger data processing.

⁵ <http://unscr.com/en/resolutions/doc/2178>

⁶ Standard 9.7, Amendment 28 to ICAO Annex 9. Standard 9.7 is subject to the ICAO Universal Security Audit Programme (USAP).

⁷ Standard 9.8, Amendment 28 to ICAO Annex 9. Standard 9.8 is subject to the ICAO Universal Security Audit Programme (USAP).

⁸ ICAO Annex 9, Recommended Practice 9.16.

As a result of Amendment 26, each ICAO Contracting State was obliged to establish an API system and to operate that system in line with international data standards. The amendment also recommended the system operate a Passenger Data Single Window (PDSW) facility to receive passenger data.

II.B Amendment 27 to ICAO Annex 9 and PDSW Becoming a Standard:

After the implementation of API systems became mandatory for States and aircraft operators, there was consensus that the PDSW principle be elevated to a Standard in ICAO Annex 9. The PDSW is a facility that allows parties involved in passenger transport to lodge standardized passenger information (i.e., API, iAPI, and/or PNR) through a single data entry point to fulfil all regulatory requirements relating to the entry and/or exit of passengers that may be imposed by the various agencies of the Contracting State. Efficient use of a PDSW facility allows Border Control Agencies to process data more efficiently, in terms of maximizing both facilitation benefits and border integrity.

With Amendment 27, the PDSW principle became a standard:

“Contracting States requiring the exchange of Advance Passenger Information (API)/interactive API (iAPI) and/or Passenger Name Record (PNR) data from aircraft operators shall create a Passenger Data Single Window facility for each data category, or both data categories combined, that allows parties involved to lodge standardized information with a common data transmission entry point to fulfil all related passenger and crew data requirements for that jurisdiction.”⁹

The PDSW standard requires that Border Control Agencies shall establish a single entry point for the respective API/iAPI and PNR messages. This would mean, for example, that API/iAPI messages could be sent to one PDSW facility managed by one agency, while PNR data could be sent to a separately managed single window facility.

Additionally, a new Recommended Practice, that States implement a single window for both API and PNR data, was adopted:

“Contracting States requiring the exchange of passenger and crew data from aircraft operators should consider creating a Passenger Data Single Window facility for both data categories combined.”¹⁰

Some Border Control Agencies have chosen to process both API/iAPI and PNR messages in one PDSW facility, to capitalize on facilitation and border integrity benefits derived from processing both passenger data sets in one facility. This fulfils both the PDSW Standard 9.1, as well as the accompanying Recommended Practice 9.1.1 of Amendment 27 to ICAO Annex 9.

Since the development of API systems involves multiple stakeholders, States are encouraged to also employ the National Air Transport Facilitation Programme (NATFP) and the National Air Transport Facilitation Committee (NATFC) as coordination mechanisms when developing API requirements. These mechanisms are better described in ICAO Annex 9, Chapter 8, Section G, Establishment of national facilitation programmes, further supported by the guidance

⁹ Standard 9.1, Amendment 28 to ICAO Annex 9. Standard 9.1 is subject to the ICAO Universal Security Audit Programme (USAP).

¹⁰ Recommended Practice 9.1.1, Amendment 28 to ICAO Annex 9.

materials outlined in Appendix 12 to ICAO Annex 9 and ICAO Doc 10042, Model National Air Transport Facilitation Programme.¹¹

API is of benefit to multiple agencies. Accordingly, States should share API within their national border management framework with all public authorities with a legal remit that makes use of the necessary data. From a border integrity perspective, the PDSW can lead to significant improvements in collaboration and cooperation among State agencies. The overarching principle of the PDSW is to create efficiencies in data transmission and avoid duplication of costs and resources for both aircraft operators and Border Control Agencies.

II.C Amendment 28 to ICAO Annex 9 and Not Requiring Non-standard Data Elements:

Amendment 28 to ICAO Annex 9 further strengthens the need for Border Control Agencies to adhere to the standardized data elements found in the API Guidelines as a key principle when implementing national passenger data programmes. This includes:

- The introduction of a new standard that specifies that Border Control Agencies shall not require aircraft operators to provide non-standard data elements as part of API, iAPI, and/or PNR provisions;¹² and
- The strengthening of an existing standard on the WCO's Data Maintenance Request (DMR) process, which notes that States shall, when considering requiring elements that deviate from the standardized data elements, submit a request to the Contact Committee in conjunction with a review and endorsement process for inclusion of the data element in the Guidelines. Therefore, for any deviation from the standardized data elements, States shall follow the WCO's DMR process.¹³

II.D Data Maintenance Request:

The Contact Committee has established a DMR process for API message standards to ensure that any modification to the standards, including addition, deletion, or update to any data element in the standards, is appropriately undertaken. Any modifications would need to be based on a sufficient business need noting the objective to maintain the simplicity of the standards and the efficiency of the transmission of API. The data maintenance procedure for API messages applies for PAXLST (Business to Government) and CUSRES (Government to Business/Response) messages. See Appendix IV for a template/example of a DMR.

The API DMR process requires a DMR to be submitted by a member of the Contact Committee through the WCO Secretariat, taking into account its role as the Secretariat of the Contact Committee, for consideration by the Contact Committee. Parties who wish to submit a DMR should work with the current members of the Contact Committee. Following the submission of the DMR, the WCO Secretariat will publish all submitted DMRs as an Annex to the Contact Committee meeting document. Considering the time limit for the publication of the meeting documents, parties should submit the DMR to the WCO (email:

¹¹ Standards 8.17, 8.19, Amendment 28 to ICAO Annex 9. Both standards are subject to the ICAO USAP.

¹² Standard 9.5, Amendment 28 to ICAO Annex 9. "Contracting States shall not require aircraft operators to provide non-standard data elements as part of API, iAPI and / or PNR provisions."

¹³ Standard 9.6, Amendment 28 to ICAO Annex 9. "Contracting States shall, when considering requiring elements that deviate from the standard, submit a request to the WCO/IATA/ICAO Contact Committee in conjunction with the WCO's Data Maintenance Request (DMR) process via a review and endorsement process for inclusion of the data element in the Guidelines."

apipnr@wcoomd.org) no less than five weeks prior to the scheduled date of a Contact Committee Meeting.

The PAXLST Working Group, an IATA working body, is a technical working body that continuously examines API standards. The PAXLST Working Group may propose a DMR to the Contact Committee if the working group identifies business requirements involving a change in the messages. In this case, IATA, with its full membership status, will submit the DMR to the Contact Committee on behalf of the PAXLST Working Group.

The Contact Committee will discuss the submitted DMRs in its meeting and make necessary decisions as to their approval or otherwise. When necessary, for instance if the changes to the API standards require another formal change procedure by another organization governing the technical standards used by the API, the WCO Secretariat will submit the change request to that organization accordingly.

An EDIFACT DMR would, for instance, be submitted to the UN Centre for Trade Facilitation and Electronic Business (UN/CEFACT), as the international organization responsible for maintaining EDIFACT messages. In addition, with a view to maintaining alignment of the API standards to the WCO Data Model, another set of DMRs will also be submitted to the Data Model Projects Team (DMPT), the WCO technical working bodies responsible for maintaining the WCO Data Model. In accordance with relevant governance structures, the WCO, IATA, and ICAO will report the approved changes to the standards to the relevant working bodies.

II.E Public Health Applications:

In the midst of the COVID-19 pandemic, which has significantly disrupted the global travel ecosystem, public health authorities in multiple States are considering making use of passenger data to fulfil national public health requirements related to admissibility (e.g., contact information, travel history, itinerary information, etc.). When public health authorities request and process passenger data, ICAO Annex 9 Standard 9.1 on the Passenger Data Single Window applies.

In some countries, Border Control Agencies and aircraft operators are collaborating to develop pilot programmes for more efficient processing, or to create travel corridors that meet specific requirements, such as health standards. The 2021 API Guidelines are not intended to support the use of API to fulfil public health requirements for contact-tracing purposes and other public health applications.

III What is API?

III.A Data to be Collected:

Generally speaking, API is flight information combined with a passenger's biographical and document information as shown in their government-issued travel document, at times complemented by additional check-in details and personal information on the traveller. API has routinely been collected by Border Control Agencies when passengers seek entry into a State and are required to present government-issued travel documents containing that information. API may be required and collected for both passengers and crew.

III.B Difference Between API and iAPI:

Traditional API (non-interactive "batch-style" API) is collected and transmitted in a batch-style system, which enables the recording of the identity and travel document information of all passengers and crew on board a specific flight. It is collected during the check-in process and is then transmitted to the requesting government in advance of the flight's arrival (or

departure), allowing the required checks to be performed for all inbound (and outbound) passengers and crew.

As an alternative to the batch-style approach, iAPI enables two-way communication in near real time between the aircraft operators and government. Some Border Control Agencies use this more sophisticated form of API processing to help address increasing risks posed by passengers, especially in regard to aviation security, immigration requirements, drug trafficking, and other threats to national security.

iAPI provides a real-time, interactive interchange of electronic messaging between the aircraft operator and the Border Control Agency in the country of departure or destination for each passenger. At the moment a passenger checks in for a flight, passenger information flows from the aircraft operator's departure control system to the Border Control Agency, which then transmits (in real time) an electronic message response to the aircraft operator permitting or preventing boarding of the passenger.¹⁴ This type of system is referred to as "Board/No Board"¹⁵, "Red Light/Green Light System," and "Authority to Carry." The aircraft operator does not issue a boarding pass until a response is received from the government.

Upon receipt of passenger information, the receiving Border Control Agency can perform the necessary checks and return a response to the aircraft operator to indicate whether the passenger is eligible to travel. iAPI is usually transmitted for each passenger, ensuring that the risk can be assessed at the individual level.

Timely responses are vital to iAPI messages to allow for a smooth check-in process, ensuring that aircraft operators and passengers are not negatively impacted. iAPI has greater and immediate benefits to both Border Control Agencies and aircraft operators.

Case Study: The Australian Experience

Australia has an iAPI process in place backed by legislation. This legislation requires aircraft operators to provide this information on all passengers and crew prior to arriving or departing Australia. This serves as an important step to Australia's layered approach to border management, and this layered approach helps Australia to detect and stop people who pose a threat to the community. There are four important layers:

1. Visa Issuance

Australia has a universal visa requirement. Travellers must hold a valid visa or an Australian or New Zealand travel document or have some other authority to travel to Australia. The visa application process allows for security checks on every individual intending to come to Australia. Character and health concerns are addressed before visas are approved.

2. Check-in

Travellers present themselves to the check-in counter and show their passport to the aircraft operator check-in agents. The aircraft operator uses the traveller's passport to record information from the Machine-Readable Zone (MRZ); API is captured during this process. Occasionally, data must be entered manually. The minimum data required is:

- Traveller document type and number
- Nationality code on the passport

¹⁴ Some Border Control Agencies provide these messages as directives and others as guidance.

¹⁵ Some Border Control Agencies may use alternative terms such as "Cleared" and "Not Cleared" or "Board" and "Do Not Board."

- First four letters of the family name

Aircraft operators receive a boarding directive that will advise whether the traveller is known to Australia, whether they have a visa, and whether it is “OK TO BOARD” the traveller. There can also be a negative boarding directive (“DO NOT BOARD”) when the traveller is not known to Australia or the information has been incorrectly entered by the check-in agent. As necessary, the check-in agent can correct the data and, if the traveller is eligible, issue the boarding pass to complete the check-in process. Another possibility is the receipt of the boarding directive, “CONTACT BOC”. Australia has a 24/7 helpdesk known as the Border Operations Centre (BOC) for aircraft operators to contact to resolve boarding concerns. Once the data has been processed, an Expected Movement Record (EMR) is created for the traveller.

3. En Route to Australia

Having the information allows Australia to check additional systems while the traveller is en route. It gives the authorities time to contact the necessary agencies, such as the Australian Border Force (ABF) or Australian Federal Police (AFP), if necessary, in preparation for a traveller’s arrival.

4. Arrivals in Australia

This process generates an EMR which can be used to clear travellers with e-passports from eligible countries through Australia’s automated SmartGates across major airports. SmartGate is an automated border process system that allows eligible travellers the option to self-process through passport control. It checks whether the traveller has an EMR recorded on their file and, if so, allows for faster processing times whilst avoiding the need for manual checking by a border clearance officer, thus allowing for a more streamlined traveller clearance process that reduces airport congestion. SmartGate uses data in ePassports and facial recognition technology to perform the checks usually performed at the primary line by an ABF Officer.

Australia’s reporting requirements are backed by infringements for non-reporting where each missed report is an offence under legislation. The ABF may prosecute the offence or, in lieu of prosecution, issue an infringement fine to aircraft operators for each offence. The aircraft operator has the right to request a withdrawal of an infringement notice and clear guidelines have been established around withdrawals. Australia relies on this process to address the risk that a traveller may pose offshore and then uses the data to facilitate efficient clearance for low-risk travellers. Australia’s 100% compliance regime is vital to ensure that Australia’s border management is effective and efficient.

Responsibilities for Border Control Agencies and aircraft operators in this regard are summarized as follows:

Border Control Agencies:

- Manage pre-border (or pre-arrival or pre-travel) clearance, which enables the government to work ahead of the passenger’s journey to or arrival at the physical border.
- Validate the passenger’s identity to facilitate legitimate travel.
- Prevent unauthorized and un-documented passengers.
- Reduce the costs associated with unauthorized passengers, both for industry and the government.
- Enable the government to receive early notification of high-risk passengers and keep risks offshore.

- Provide information to better target interventions at the border through early risk assessments, which ensures that primary line officers can be better deployed to address areas of higher risk rather than fixing data discrepancies.
- Provide an opportunity to collect new data not otherwise detected through an immigration clearance line, such as new passports or alternate nationality travel documents for dual citizens.

Aircraft operators:

- Provide a highly effective “real-time” immigration review at the check-in counter overseas.
- Help manage increasing volumes of passengers each year with faster check-in times.
- Help to reduce aircraft operator infringements for improperly documented passengers, as well as reducing staff workload.

III.C Data to Be Captured and Transmitted:

For API to be successfully transmitted, processed and used on a wide basis, and for aircraft operators to capture and transmit passenger data on a large scale to the Border Control Agencies of multiple States, it is essential that there be a limitation and a very high degree of uniformity of the data required by the Border Control Agencies which receive and process it.

The WCO, IATA, and ICAO have jointly agreed on the maximum set of API that should be incorporated in the PAXLST message to be used for the transmission of such data by aircraft operators to the Border Control Agencies. On a more technical level, specific versions of the PAXLST message exist (see Appendix IIA). States should request these message versions, as opposed to sub-sets thereof or additions thereto.

In determining the data to be captured and transmitted it is important to review ICAO Annex 9 Standard 9.10:

“When specifying the identifying information on passengers to be transmitted, Contracting States shall require only data elements that are available in machine readable form in travel documents conforming to the specifications contained in Doc 9303. All information required shall conform to specifications for UN/EDIFACT PAXLST messages found in the WCO/IATA/ICAO API Guidelines.”¹⁶

Standard 9.10 limits the identifying information on passengers to the data contained in the Machine-Readable Zone (MRZ) of a Machine-Readable Travel Document (MRTD). At the same time, all other requested data must be spelled out in these Guidelines.

It is important to note that countries should limit their data requirements to the minimum necessary under national legislation. From the point of view of promoting the use of API, extending the required data element set beyond that limit would hinder aircraft operators’ operations and could potentially impact airport throughput and passenger capacity.

This data can be divided into two distinct categories:

- First: Data relating to the flight (service information)

¹⁶ Standard 9.10, Amendment 28 to ICAO Annex 9. This standard is subject to the ICAO Universal Security Audit Programme (USAP).

- Second: Data relating to each individual passenger or crew member:
 - Core Data Elements as may be found in the MRZ of the Official Travel Document.
 - Additional data as available in aircraft operator systems.
 - Additional data not normally found in aircraft operator systems and which needs to be collected by, or on behalf of, the aircraft operator.

Details of the individual data points for each of these two categories are given below. It should be noted that the flight data should already be available to aircraft operators from their own automated systems, whereas the data relating to each individual passenger or crew member is amalgamated during check-in. The core data elements that may be found in the MRZ of a travel document are collected during check-in. The additional data that is available in aircraft operator systems is systems-based and may be available in the transporting aircraft operator's departure control and/or reservation system. If required, additional data not normally found in aircraft operator systems requires further data collection during check-in or at the time of boarding, impacting the processing time of passengers and increasing the operational burden on aircraft operators.

The WCO, IATA, and ICAO strongly advocate to their members that the API must not exceed the recommendations in these Guidelines, thereby also keeping in mind Annex 9 Standard 9.10 which states that "All information required shall conform to the specifications for UN/EDIFACT PAXLST messages found in the WCO/IATA/ICAO API Guidelines." It is further recommended that submission of the data elements listed below (see paragraphs b) and c)) should only be requested as "conditional" elements.

Technical specifications for the data elements listed in this section can be found within the PAXLST/CUSRES Message Implementation Guides included as Appendices to these Guidelines.

III.C.1 API Relating to the Flight (Service Information):

- **Flight Identification** (IATA Airline code and flight number¹⁷)
- **Scheduled Departure Date** (Date of scheduled departure of aircraft based on local time of departure)
- **Scheduled Departure Time** (Time of scheduled departure of aircraft based on local time of departure)
- **Scheduled Arrival Date** (Date of scheduled arrival of aircraft based local time of arrival)
- **Scheduled Arrival Time** (Time of scheduled arrival of aircraft based on local time of arrival)
- **Last Place/Port of Call of Aircraft** (Aircraft departed from this last foreign place/port of call to go to the "place/port of aircraft initial arrival")
- **Place/Port of Aircraft Initial Arrival** (Place/port in the country of destination where the aircraft arrives from the "last place/port of call of aircraft")

¹⁷ Where the aircraft operation is not represented by an IATA airline code (such as a private aircraft movement), then the information to be provided for this element will be determined by the implementing authority.

- **Subsequent Place/Port of Call Within the Country** (Subsequent place/port of call within the country)
- **Number of Passengers** (Total number of passengers on the flight)

III.C.2 API relating to Each Individual Passenger or Crew Member:

Data relating to a passenger or crew member based on the following list of elements will not be available from a single source, and may instead require collection from several sources as detailed below:

a. **Core Data Elements that May Be Found in the MRZ of the Official Travel Document:**

Data elements listed in this paragraph may be required by Border Control Agencies, provided there is a legal basis for the aircraft operators to collect and transfer the information:

- **Travel Document Number** (Passport number or other travel document number)
- **Issuing State or Organization of the Official Travel Document** (Name of the State or Organization responsible for the issuance of the official travel document)
- **Official Travel Document Type** (Indicator to identify the type of official travel document)
- **Expiration Date of Official Travel Document** (Expiration date of the official travel document)¹⁸
- **Surname/Given Name(s)** (Family name and given name(s) of the holder as they appear on the official travel document)
- **Nationality** (Nationality of the holder)
- **Date of Birth** (Date of birth of the holder)
- **Sex** (Sex of the holder)

It is essential that Border Control Agencies limit the identifying information on passengers required by their API programme to those elements that can be captured by automated means from the MRTD. Additional data elements not contained in the MRZ should normally be limited to data which the issuing authority has included in the MRTD's visible zone.

Complete specifications of these data items are contained in ICAO Doc 9303, Machine Readable Travel Documents. Diagrams of the MRZs of such documents are found in Appendix I to these Guidelines.

b. **Additional API: Data Relating to Each Individual Passenger or Crew Member Normally Found in the Aircraft Operators' Systems**

Information listed in this section may only be provided in cases where there is a legal basis permitting collection of this information, and the aircraft operator has the information in its Departure Control or Reservation Systems.

¹⁸ For other documents used for travel, the relevant data element is the "Date of Issuance for Documents That Do Not Include a Date of Expiration".

- **Seating Information** (Specific seat assigned to the passenger for this flight)
- **Baggage Information** (Number of checked bags and, where required, the baggage tag numbers associated with each)
- **Traveller's Status** (Passenger, Crew, In transit)
- **Place/Port of Original Embarkation** (Place/port where the traveller started their foreign travel)
- **Place/Port of Clearance** (Place/port where the traveller is cleared by the Border Control Agencies)
- **Place/Port of Onward Foreign Destination** (Foreign place/port where the traveller is transiting to)
- **Passenger Name Record Locator Number** (or Unique Identifier) (As available in the traveller's Passenger Name Record in the aircraft operator's reservation system)

Some of these data elements, such as baggage information, are conditional in the sense that they are available only when baggage is checked for the passenger.

It should be noted that API transmissions will only contain information about the port of original embarkation subject to information held in the operating carrier's system. For example, if a passenger travels from Amsterdam (AMS) to Montreal (YUL), transferring to another aircraft operator for travel to Boston (BOS), the operating carrier to Boston may only have access to data concerning the Montreal to Boston segment when generating the API transmission. When there is a transfer passenger to another aircraft operator, the information contained in the transporting carrier's reservation or departure control system may also include information on passengers collected at the originating foreign port of embarkation. This information is available depending on cooperation arrangements (such as interline agreements) between aircraft operators.

c. **Additional Data Not Normally Found in the Aircraft Operators' System, and Which May Be Required to Be Collected by, or on Behalf of, the Aircraft Operator**

This category of API is not normally contained in aircraft operator systems and would only be collected when specifically required to by a particular State. This could only be provided by the aircraft operator if their system has the ability to capture and transmit the information. It should be remembered that requiring an aircraft operator to collect this additional data will impose an additional burden on the operator, and may adversely impact passenger processing times and negate any facilitation benefits derived from the processing of API. According to ICAO Annex 9 Standard 9.13, States "shall seek, to the greatest extent possible, to limit the operational and administrative burdens on aircraft operators, while enhancing passenger facilitation." Except where specified by the national legislation, Border Control Agencies should normally avoid data elements that require aircraft operator personnel to question passengers and record their verbal responses.

- **Visa Number** (Number of the Visa issued)
- **Issue Date of the Visa** (Date of issue of the Visa)
- **Place of Issuance of the Visa** (Name of the place where the Visa was issued)¹⁹

¹⁹ Neither the issue date nor the place of the issuance of the visa are part of the MRZ.

- **Other Document Number Used for Travel** (The number of the other document used for travel when the official travel document is not required)²⁰
- **Type of Other Document Used for Travel** (Indicator to identify the type of document used for travel)
- **Passenger Contact Information** (Telephone number, emergency contact or passenger contact phone number)
- **Fax Number** (Fax number)
- **Email Address** (Email address)
- **Primary Residence**
 - **Country of Primary Residence** (Country where the traveller resides for most of the year)
 - **Address** (Location identification, such as street name and number)
 - **City** (City)
 - **State/Province/County** (Name of the state, province, county, as appropriate)
 - **Postal Code** (Postal code)
- **Residence or Destination Address**
 - **Address** (Location identification such as street name and number)
 - **City** (City)
 - **State/Province/County** (Name of the state, province, county, as appropriate)
 - **Postal Code** (Postal code)
- **Place of Birth** (Place of birth, such as city and country)²¹

As an example, a visa is a travel document issued by the receiving State. The visa information is recorded in that State's database (e.g., consular network or visa information system) and is already accessible to that State. Requesting that the aircraft operator collect and transmit the same visa information, which the State itself issued, via an API message, is increasingly considered to be unnecessary duplication. The passport information in the API message should be used as a pointer to the visa record. A notable exception could be in the case of a valid visa issued in a now expired passport.

III.D Message Formats:

Standard message formats such as UN/EDIFACT PAXLST and CUSRES should be used to avoid difficulties and the significant additional costs that would be caused by the introduction and use of bespoke national standards.

The UN/EDIFACT PAXLST message has been adopted specifically to handle aircraft operator passenger manifest transmissions to governments. Additionally, the UN/EDIFACT CUSRES message has been adopted to facilitate the Border Control Agency response. Implementation guides for both messages are included as appendices to these Guidelines. These appendices

²⁰ This can be helpful in the case of dual nationals who may legitimately use two national documents as part of their journey. This may include resident cards, entry permits, etc.

²¹ The place of birth of the document bearer is not part of the MRZ.

will be amended regularly in accordance with the DMR process to reflect the latest developments. Administrations and aircraft operators should contact the WCO, IATA, or ICAO to ensure they obtain the most up-to-date version of the API Message Implementation Guide (MIG).

However, recognizing that all aircraft operators regulated to provide API may not have the technical capacity to generate PAXLST messages, Border Control Agencies may also consider providing other options.

III.E Data Capture Methods:

Perhaps the most critical aspect of API is the means by which the data to be transmitted to the Border Control Agencies is captured. Manual data capture can be costly, time consuming, labour-intensive, and error prone. The capture of data concerning passengers at the airport of departure introduces a delay in the check-in process that could, if not managed properly, offset the potential advantage to passengers provided by efficient API applications. If the check-in process is unduly prolonged, API will simply shift much of the delay and congestion away from the arrival area to the departure area.

MRTD and Document Readers are an important component in API. The use of this technology for data capture at the airport can greatly reduce delays – such as document swipes at the check-in counter and the increasing use of self-service check-in kiosks. It is estimated that manual keying of API from an official travel document takes approximately 45 seconds per passenger. On a flight of 200 people, the total additional time for check-in formalities is estimated to be 150 minutes. Assuming that there are 5 check-in counters dedicated to that flight, it would take approximately 30 minutes longer overall to check in all passengers. This means passengers reporting at the airport 30 minutes earlier than normal or the flight being delayed by 30 minutes. Manually entered data is also more prone to data entry errors.

Issues such as non-compliant passports, dual nationals, and dual/multiple citizenship are growing and can create difficulties for both aircraft operators collecting the data and Border Control Agencies processing the data. Travel document issuing agencies and Border Control Agencies are taking measures to ensure that, in the case of a passport, the data in the MRZ conforms to ICAO Doc 9303, Part 4, Specifications for Machine Readable Passports (MRPs) and other TD3 Size MRTDs.²²

Using an MRTD document reader, either at immigration or integrated with the airport check-in process, minimizes disruption and the time required for data capture. Capture of data elements in Machine Readable Form is both quick and avoids manual input errors. Travel documents which do not conform to the ICAO specifications cannot be read by the document reading devices which are programmed to read MRTDs. (Note: additional procedures will be required to ensure data collection and its accuracy when check-in is performed outside of the airport facility itself e.g., web check-in and tele-check-in.) Some specific areas where MRTDs have shown to be non-compliant in terms of machine readability include missing primary identifiers (representation of the last name) and incorrect inclusion of the code for sex in the MRZ.

“Upstream” data capture is another mechanism which might be useful in reducing time spent on data capture at check-in. By way of illustration, if a passenger begins their journey at

²² Standard 3.11, Amendment 28 to ICAO Annex 9. This standard is subject to the ICAO Universal Security Audit Programme (USAP). “All passports issued by Contracting States shall be machine readable in accordance with the specifications of Doc 9303, Part 4.” ICAO Doc 9303 is published here: <https://www.icao.int/publications/pages/publication.aspx?docnum=9303>.

Johannesburg (JNB) for a flight to Doha (DOH), and then connects to a different flight to Dallas (DFW), they may be able to check in for the entire journey at the “upstream” location JNB and print boarding passes for both flights (JNB to DOH and DOH to DFW). This “upstream” data capture can allow for more streamlined processing for the passenger, the aircraft operator, and the Border Control Agency. Also, if there is an issue whereby the passenger does not meet the entry requirements for DFW, this issue may be identified before boarding at the upstream location. The InterAirline Through Check-In (IATCI) process was set up to enable the transfer of data from one aircraft operator to another, which can help to ensure the upstream data collection meets API requirements. Aircraft operators generally work through the best approach for upstream data collection based on their operations, since the aircraft operator with the flight from DOH to DFW is responsible for ensuring the data is correct for that flight.

Therefore, it should be noted that Border Control Agencies requiring API hold the aircraft operator responsible for the accuracy of the API transmitted and may impose significant financial penalties for inaccuracies or omissions. It should also be noted that, at the time of check-in, aircraft operators may not have access to data captured at the time of reservation or to data captured by another aircraft operator at the point of origin.

III.F Data Quality:

Border Control Agencies have adopted a variety of ways of measuring and assessing the data in terms of its quality, requiring that the data be accurate, timely, and complete. For example, the API must accurately reflect the data in the passenger’s official travel document. The API must be provided within the required timeframe to the Border Control Agency. In addition, the data elements should appear in accordance with the PAXLST specifications. Legislation and guidance should be in place for clarity of understanding between the Border Control Agency and aircraft operators.

Constructive engagement with industry is essential. There should be a common understanding between stakeholders regarding the definition of API, the list of expected data elements, transmission frequency, timeliness, and penalties. States should seek to minimize the number of times API data is transmitted for a specific flight²³. States also should refrain from imposing fines and penalties on aircraft operators for unavoidable errors caused by system failures.²⁴

Initiatives are being explored to increase the accuracy of API through the use of MRZ or Radio Frequency Identification (RFID) chip readers within smartphone applications, digital travel credentials, and other uses of biometrics and verified identities. Flight schedule information can be compared against API received in order to identify flights for which no API has been received, either because of cancellations or because of transmission or receipt errors.

There is also the challenge of a multi-passport holder who presents one passport to the aircraft operator but a different passport to the Border Control Agencies on departure and/or on arrival at the destination. In addition, the following issues may also be experienced:

- Mismatch between the State’s internal entry-exit records and the travel document data received in the API as compared to what is presented on crossing the border.
- Inaccurate vetting result in the case of iAPI.

²³ Recommended Practice 9.12, Amendment 28 to ICAO Annex 9.

²⁴ Recommended Practice 9.14, Amendment 28 to ICAO Annex 9.

- The Departure Control System (DCS) does not have the capability to collect and transmit information from more than one travel document per passenger.
- The need for State systems to be able to link multiple travel documents to a single passenger.

It should be emphasized that Border Control Agencies shall not penalize an aircraft operator where the aircraft operator has collected and provided accurate API based on a valid travel document presented to the operator where a second travel document which is valid for the journey is presented on arrival.

Case Study: Data Quality Best Practices

There are a number of data quality-related best practices for Border Control Agencies to follow when developing their API capability.

As Border Control Agencies build their API capability, it is important to include a capability to monitor: 1) data receipt – that the API they expect to receive is actually being received; 2) data timeliness – that the API is being received when it was expected; and 3) flight status – that the scheduled flights expected to operate took place, were de-layed, or cancelled.

The second aspect is to build the capacity, at the outset, to assess the quality of the data being received. Border Control Agencies should not presume that the API will all be perfectly accurate and transmitted in full and on time just because they made those aspects legal requirements to be imposed on aircraft operators. The reality in practice can be very different – and it takes analysis and focus to ensure data quality requirements are being met and maintained.

Border Control Agencies with significant experience of operating API systems have experienced numerous instances where inaccurate, incomplete, late or missing data has resulted in the arrival of individuals (usually criminal offenders previously deported from the country) who would otherwise have been identified pre-departure and prohibited from boarding.

III.G Impact of Non-standard Requirements:

From a technical standpoint, an API programme is set up based on the international UN/EDIFACT PAXLST technical message standard, which has tags for data elements that can be included in the messages. Identifying information on travellers can be obtained from the MRZ of a travel document and can be easily processed. There are standard API data elements that aircraft operators will collect to meet government requirements for security and more efficient international travel. In practice, the data elements collected can go beyond the information found in the MRZ of the travel document and provide benefits to the passenger, the aircraft operator, and the government. Border Control Agencies should not mandate non-standard data elements. The DMR process should be used to consider new requirements.

Non-standard API programme implementation may lead to operational and financial challenges for both governments and aircraft operators. ICAO Annex 9 Standard 9.5 states that “Contracting States shall not require aircraft operators to provide non-standard data elements as part of API, iAPI, and/or PNR provisions.” To this end, it should be noted that processes are moving away from airport-based face-to-face transactions with passengers to automated border controls, self-service applications, kiosk check-in, online applications and mobile applications. Manual check-in transactions are not aligned with current design and capacity of airport terminals. In addition, the existence of “front of house” security threats which target high-visibility locations with large crowds, like airport check-in halls, should be considered.

III.H Data Transmission:

Since API uses EDI techniques, participating aircraft operators and Border Control Agencies need to have their automated systems connected to one or more data transmission networks so that passenger details can be transmitted and received electronically. While alternative transmission methods (such as web-based applications) are being developed, many aircraft operators are currently unable to support this mode of transmission.

API can be sent or received using organizations (such as service providers) capable of providing reliable and secure data transmission services. The choice of the data network will ultimately be determined by cost and other considerations, such as existing business relationships with a data network provider. In addition to automated systems, alternative methods such as these may be considered if the Border Control Agencies work with smaller commercial air carriers to facilitate API transmission.

Border Control Agencies should consider establishing secondary alternative systems that are capable of receiving secure API transmissions, as a means of reducing data transmission costs for aircraft operators that do not operate with traditional reservation and/or departure control systems.

With regard to timing, API is available when check-in is opened. Several aircraft operators use web check-in facilities, and so the API could be made available earlier. In order to ensure ample time for conducting data processing, Border Control Agencies may require several API transmissions, such as 24 hours prior to departure, 2 hours prior to departure, after check-in has commenced, and/or at the time of departure (wheels up/closing of the flight). Border Control Agencies should be aware that any API remains declarative/unverified until the travel document is presented and swiped or otherwise verified, up until the time of boarding.

With regard to message format, the standard format is PAXLST for API and iAPI submission from the aircraft operator and CUSRES for the response to the aircraft operator. Note that an email CUSRES response from the State to the aircraft operator is also not aligned with the API Guidelines and message specifications, is operationally unmanageable and causes significant issues for aircraft operators, particularly on data security and privacy. There are also requirements for aircraft operators to engage third-party service providers to reformat global-standard compliant data into proprietary formats at the aircraft operator's expense.

IV Setting Up an API Processing Capability

IV.A Overview of the Five Essential Components:

Establishing a national programme to develop the capability to process API should have five distinct components or projects. Starting as projects in support of the programme, these will become part of the "business as usual" of maintaining and operating the capability to process API. They are:

- Legal
- Operational
- Technical
- Aircraft operator engagement
- Programme and Policy Management

Legal: The establishment and operation of national API systems require a basis in law which should be transparent and accessible to all individuals who are, or may be, affected by the establishment and operation of the system. ICAO Annex 9 includes as a standard requirement:

“The API system of each Contracting State shall be supported by appropriate legal authority (such as, inter alia, legislation, regulation or decree) and be consistent with internationally recognized standards for API.” (Standard 9.8²⁵)

The legal project supporting the national programme will need to undertake an assessment of current law, including laws and regulations conceived for the disclosure of passenger manifests manually and on paper. This assessment can provide an indication of the extent to which new laws, or amendments to existing laws, will be required.

Once the necessary legislation is implemented, there remains a need for a process to maintain the legislation and make any necessary changes as international standards develop.

Operational: Before any API is processed, Border Control Agencies should take forward a project to establish a multi-agency Passenger Information Unit (PIU) that will receive API transmitted through the PDSW and will operate its watchlisting and targeting capabilities. Several States globally have established PIUs (or “targeting centres”) to collect, process, and analyse API and PNR data to enable the prevention, detection, investigation, and prosecution of terrorism and serious crime. PIUs often host several agencies that have border security, Customs, immigration, and national security responsibilities. This multi-agency collaboration enhances coordination of the passenger clearance process and targeting, and reduces duplication and unnecessary delays to travellers.

The operational project should establish terms of reference for the PIU, which clarifies the roles and responsibilities of the PIU, and sets out its standard operating processes and its relationships with the national, regional, and local competent authorities. This will include agencies responsible for Customs, immigration, policing, and public health – agencies responsible for operations at the border and in-country. Once the vision for the PIU is established, there is a need to determine the size of the PIU and which authorities will provide staff to it. As members of the PIU are recruited and onboarded there is a need for training and mentoring on the skills and expertise they require.

Technical: Processing of API requires secure connections to aircraft operators, a capability to process API against watch lists, especially in the case of iAPI, in real time in advance of the operation of services, and the capability to store and retain API, to maintain data protection safeguards and to disclose API to the competent authorities when necessary and appropriate to the conduct of their legal responsibilities. These capabilities can be obtained from a single technical provider or as integrated components from a number of suppliers. Using a number of suppliers can mean more competitive tendering for system changes. Safeguards and well-defined backup procedures are essential, especially in the case of iAPI, where a system outage effectively halts the check-in operation altogether. States and aircraft operators should ensure that technical support contacts are available to handle outage procedures and queries, where practicable, on a 24/7 basis.²⁶

Aircraft operator engagement: An effective API programme is dependent on collaboration and engagement with aircraft operators. Development of the programme in compliance with international standards, including technical standards, provides clarity to aircraft operators and their technical suppliers about technical and data requirements. Many aircraft operators and their suppliers will have experience from other jurisdictions where API have previously been required or which have supported the implementation of standard API requirements.

²⁵ Standard 9.8, Amendment 28 to ICAO Annex 9. Standard 9.8 is subject to the ICAO Universal Security Audit Programme (USAP).

²⁶ Recommended Practice 9.4, Amendment 28 to ICAO Annex 9

The IATA has significant experience concerning the establishment of API programmes and can assist Border Control Agencies through its worldwide network of regional offices. Regional trade associations and Boards of Airline Representatives can be valuable partners through which to engage aircraft operators in participation with new API programmes. The airline industry will have its unique perspective on the national programme, including the legal, administrative, and technical aspects. Industry engagement can extend to airport operators and ground handling agents, where they provide passenger processing services to aircraft operators and can support the operation of API capabilities.

Programme and policy management: Ensuring any new API or iAPI capability is effectively implemented and monitored are important activities that should not be overlooked. Programme and Policy Management are essential for ensuring that there is a central node able to coordinate the different technical areas and to provide guidance to stakeholders. The Programme and Policy area should be responsible for developing and managing national API and iAPI programmes and the related legislation, regulations and policies that govern them. This includes providing programme strategy and policy direction, as well as coordinating communications, developing training materials, and producing implementation and guidance. It would also take the lead in identifying programme integrity challenges²⁷ as well as exploring opportunities for any proposed or existing programme and operational changes..

IV.B Assistance to Border Control Agencies Implementing API Systems:

When Implementing an API system, Border Control Agencies should consider all of the resources and technical assistance available to aid them.

In 2019, the United Nations Office of Counter Terrorism (UNOCT) partnered with the UN Counter-Terrorism Committee Executive Directorate (CTED), ICAO, the Office of Information Communication Technology (OICT) and the United Nations Office on Drugs and Crime (UNODC) to launch the UN Countering Terrorist Travel (CTT) programme. The objective of the CTT programme is to assist Member States in building their capacities to prevent, detect, investigate and prosecute terrorist offences and other serious crimes, including their related travel, by collecting and analysing passenger data, both API and PNR, in accordance with UNSCR 2396, ICAO Annex 9 Standards and Recommended Practices (SARPs), as well as other international law obligations.

The WCO offers its Global Travel Assessment System (GTAS) and has published guidance on how to build an API/PNR programme. The United States, through U.S. Customs and Border Protection, shares its comprehensive API and PNR system and technology – the Automated Targeting System-Global (ATS-G) – and its expertise to authorities seeking to implement API and PNR systems. The International Organization for Migration (IOM) Immigration and Border Management (IBM) Division also provides States with technical assistance and capacity-building support to strengthen their traveller identification management capacities and API/PNR implementation.

²⁷ Some programme integrity challenges include ensuring compliance, verifying that stakeholders meet participation requirements, as well as other issues that may impact the ability of the programme to deliver its stated objectives.

IV.C Additional Information on the Need for a Clear Legal Basis for API Collection and Processing:

API provides Border Control Agencies with data that was traditionally acquired upon the passenger's physical arrival and presentation at an immigration control point. API in the context of these Guidelines enables the transmission of the data to Border Control Agencies earlier in time and through electronic means with the aim of identifying passengers who may pose a risk. Border Control Agencies use this information for screening and targeting purposes to identify inbound and outbound passengers who may warrant additional scrutiny (i.e., travellers who present the highest risk to border, aviation, or public safety). At the same time, API allows for improving facilitation and the traveller experience based on the faster clearance of low-risk passengers, improved compliance, reduced inspection times – and most importantly, the safety and security of the aircraft and its passengers.

As aircraft operators collect, store, and transmit API to Border Control Agencies, they must do so in accordance with applicable national legislation. As API is not required for aircraft operators' business purposes, legislation drives the collection, storage, and sharing of this data with governments. Therefore, the obligation for aircraft operators to provide passenger-related information must be based on legal provisions, which should include rules for its collection, use and storage, along with measures to protect the information and safeguard privacy. To ensure clarity, legislation should focus on a Border Control Agency's authority to require the receipt of this information in advance, noting that this is information that authorities would receive later in the travel continuum.

As the central principle of international guidance for API programmes is to enable the development of technical standards that can readily be implemented by Border Control Agencies and industry, sufficient legal authority needs to be established at the national level. In addition, overarching guidance provided by international standards and recommended practices are also highly useful in this space. For example, on the international level, basic rules for the use of API, iAPI, and PNR are developed in ICAO Annex 9 – Facilitation to the Convention on International Civil Aviation (Chicago Convention, 1944) and the Revised Kyoto Convention of the WCO.

Each Border Control Agency may have different processes for establishing their respective national legal authority for API, but it is common for a government to approve legislation that is signed into law. While national legislation varies from country to country, there is a significant degree of commonality within the provisions of such legislation.

An effective approach is to pass a law that, by regulation or decree, requires a Border Control Agency to impose obligations on aircraft operators to provide conveyance and traveller information for all travellers on a flight (API). This could also include an interactive component to provide aircraft operators with boarding instructions.

IV.D Data Protection and Privacy Considerations:

Privacy and data protection legislation has been enacted in many countries in recent years in order to protect individual rights to privacy and to allow individuals to exercise their rights relating to the use of their personal data. Globally, extensive discussions have been conducted between Border Control Agencies and aircraft operators to identify best practices, ensure both carrier and government systems are communicating properly, and ensure the highest level of privacy protection.

The nature of API (basic personal information that appears in an official document) and the use to which it is put should conform to the national law of most countries.

Border Control Agencies should also establish and update privacy documents to reflect changes in data collection, whether mandatory or voluntary submissions of data. These

documents are decision tools to identify and mitigate privacy risks that notify the public of: 1) what Personally Identifiable Information (PII) is being collected; 2) why the PII is being collected; and 3) how the PII will be collected, used, accessed, shared, safeguarded and stored.

More broadly, privacy and data protection legislation typically requires that personal data that is subject to automated (computer) processing have the following attributes – the data should be:

- Obtained and processed fairly and lawfully;
- Stored for legitimate purposes and not used in any way incompatible with those purposes;
- Adequate, relevant, and not excessive in relation to the purposes for which they are stored;
- Accurate and, where necessary, kept up to date;
- Preserved in a form which permits its identification for no longer than is required for the purposes for which the data is stored.

V Costs and Benefits to Industry and Border Control Agencies

These Guidelines also identify the potential benefits and costs of API. Some of the benefits include increased safety and security which underscore this work. Secondly, through efficient and automated tools and practices, border processing can be streamlined and wait times reduced.

The costs, which are incurred by both aircraft operators and Border Control Agencies, can be measured with some confidence. The benefits which API can bring are more difficult to quantify. This section of the Guidelines seeks to identify areas where costs will likely be incurred by both industry and Border Control Agencies so that potential API users are aware of the cost implications and can measure these in their own company or administration.

While considering an API system, potential providers of the passenger data (the aircraft operators) and potential users of the data (the Border Control Agencies), will need to examine and become informed of the costs and the benefits. The goal is to ensure that all of the benefits can be realized amid the financial outlays from both a start-up viewpoint and for ongoing operations.

V.A Industry Costs:

The principal costs for aircraft operators are associated with system development/integration and capture of passenger details for transmission to the origin and/or destination country of a flight. Costs may be incurred in other areas as well, such as additional check-in staff to cope with the extended period of time required to complete check-in formalities, additional check-in desks, hardware acquisition and maintenance, etc. Various techniques can be used to offset these costs to some degree, such as agreements with governments, machine-readable passports, “upstream” capture of passenger data at the time of booking, etc.

The adaptation of aircraft operators’ automated reservation systems and/or DCS to collect, convert, and transmit API, and to respond to expanding data requirements, may also give rise to significant cost.

Since some Border Control Agencies already have arrival and departure API requirements based on the international PAXLST message standard, many aircraft operators have already implemented changes to process API. The costs to add requirements from additional Border

Control Agencies are reduced for these aircraft operators. The adaptation of aircraft operators' automated reservation systems and/or DCS to collect, convert, and transmit API, and to respond to expanding data requirements, will also give rise to significant costs.

iAPI systems are more complex than non-interactive batch-style systems. Costs associated with their development, implementation, and ongoing maintenance/operations can be significant for both governments and aircraft operators. Many aircraft operators have already established iAPI capabilities to meet current active iAPI systems. The implementation of iAPI systems may require a significant amount of time.

Generally speaking, ongoing maintenance costs may also be incurred in respect of the above-mentioned systems. Finally, there will be the recurring cost of data transmission in respect of the passenger data for each API flight.

V.B Industry Benefits:

The passenger data captured at the time of check-in (primarily through automated scanning of the passenger's travel document) could, in some instances, enhance aircraft operator's security and help to ensure that all passengers carry the valid official travel documents required for admission to the destination country. This has the potential of reducing aircraft operator exposure to penalties for transporting passengers that are not properly documented – as well as not carrying persons onboard who will be refused admission in the destination country.

Where Border Control Agencies have implemented iAPI programmes and are able to provide real-time "Board/Do Not Board" responses at the time of check-in, aircraft operators may be more readily able to avoid costs associated with the detention and/or removal of persons who might otherwise be determined, based on specific factors available to the Border Control Agencies, to be inadmissible upon arrival at the final destination.

iAPI systems that check documents can also reduce aircraft operator costs by adding efficiency to the check-in processes. iAPI systems can check electronic travel authorizations, visas, and passports that allow aircraft operators to more readily identify travellers who can use phone, internet, or kiosk check-in processes to obtain boarding passes. The process also can assist in identifying travellers who do not have current valid documents, reducing the number of potential penalties for transporting improperly documented individuals.

V.C Border Control Agency Costs:

Without the existence of a national, integrated Border Control database, there can be notable costs involved in developing a unified system. Ideally, establishing a single inter-agency database for passenger clearance would be most desirable. This is not only a more efficient means of processing passenger list data received by API, but also more economical, since the development cost would be spread over a number of Border Control Agencies which could contribute based upon their projected use of the system.

Where a Border Control database already exists yet is only available to a single agency, costs may be incurred if the decision is made to share information with or between multiple agencies. It is technically feasible to have API feeding one or more Border Control Agency systems independently. However, it seems prudent and cost-efficient to adopt a coordinated approach to API amongst the Border Control Agencies, having the API processed by one single system rather than simultaneously by several different systems.

Apart from costs involving the development of new systems or the merging of existing systems, there will be costs incurred on the system development side associated with the secure electronic receipt of passenger data. Incoming data will need to be converted to a format that is compatible with the receiving system. There will be a cost involved in enhancing existing systems to perform this function. The system may also need to produce certain additional

outputs associated with the processing of API passengers, such as lists of passengers for closer investigation, statistical reports, performance evaluations, etc.

Depending on decisions made by Border Control Agencies, there may be some costs incurred when connecting their system to one or more selected data networks used to receive passenger data electronically. As with most systems, costs will be incurred related to ongoing maintenance and upgrading.

V.D Border Control Agency Benefits:

One of the major benefits of API for the Border Control Agencies is the enhanced enforcement capability realized through advance notification of the arrival and departure of potential or known offenders or inadmissible persons. API permits a thorough and rigorous screening of inbound and outbound passengers to be carried out before their arrival or departure, identifying passengers that present the highest risk, and allowing for the faster throughput of low-risk passengers. Ultimately, early transmission and screening of passenger API facilitates and enhances the effectiveness of the border security/border management process and can complement aviation security processes. Some Border Control Agencies have found that pre-departure transmission of traveller data provides an additional layer of protection against high-risk travellers while facilitating legitimate travel. Analysis of the API before either the departure or the arrival of passengers against databases results in faster clearance of low-risk passengers, improved compliance, and reduced inspection times.

The matching of the API against alert lists is particularly effective in identifying documents on the INTERPOL SLTD and Travel Documents Associated with Notices (TDAWN) databases, and in taking preventive measures in case of travel by individuals against whom there are legally sanctioned INTERPOL and/or UN travel restrictions or prohibitions. Border Control Agencies and aircraft operators may use publicly available lists of individuals who are subject to travel bans, wanted individuals, or those with a criminal history.

Since passenger data is provided in an electronic, readily processed format, there should be data capture savings, as Border Control officials will not be required to perform traditional data entry operation when the passenger arrives at the entry or departure point. The accuracy of the data captured should also improve given the lack of opportunity for human interventions. In essence, API provides for the more effective allocation of border control and law enforcement resources, and the increased automation of passenger processing can result in reduced staffing costs.

An effective API programme can be the foundation for secure travel and an efficient border. iAPI programmes can run checks to ensure travel documents are valid before boarding and that the passenger fulfils admissibility requirements (e.g., visa and travel authorization, non-admissibility on grounds other than improper documents). This can result in fewer numbers of inadmissible travellers who need to be returned. Electronic submission of API can reduce the need for some paper-based entry documents, such as visa waiver forms, that are carried on board aircraft, filled out by travellers during flights, and collected by Border Control Agencies upon arrival. The process can also reduce the resources needed to process legitimate travellers upon arrival, where more travellers can readily use kiosks or their biometrics for part of the arrival processing. This allows for increased throughput of legitimate travellers with touchless processes and can result in fewer missed flight connections.

VI Operational Issues Processing Activities

VI.A Setting Up an Operational Capability:

The key to effective API programmes is the configuration of business processes, systems architecture, identification of roles/responsibilities, and the supporting legal framework that creates an optimal operational environment along the travel continuum. The collection and verification of data will occur at different stages of the travel continuum. Alignment of national government requirements based on existing international operations can create a streamlined process that enhances security for governments, industry, and the travelling public, while improving facilitation and the traveller experience.

As an initial implementation, Border Control Agencies can require the submission of a batch API message which can be used to conduct pre-arrival checks for more efficient arrival processing. To further supplement pre-arrival checks, PNR data can be used since additional data may be available in the reservation. For the most efficient processing of travellers iAPI is also utilized. This allows for the identification of travellers who pose a threat to a flight and pre-departure document checks, provides automated boarding instructions to aircraft operators, and can be used for automated arrival processing, including touchless biometric processing.

VI.B The Applicability of the “Single Window” Concept:

The “single window” concept has considerable relevance in the context of an API system. The obligation to implement a PDSW is found in ICAO Annex 9 Standard 9.1, as referenced previously in the Guidelines.

Given the variety of Border Control Agencies operating at international airports (e.g., Customs, immigration, police, quarantine, health and safety, agriculture, etc.) as well as the varied level of inter-agency cooperation, duplication and other inefficiencies can result. Different agencies frequently have their own automated systems for passenger processing without information sharing or linkages to other governmental systems. The strict division of responsibilities between the agencies and a lack of systems integration means that passenger processing can be unnecessarily prolonged.

While the single window has commonly been known as a trade facilitation mechanism, the concept also applies to passenger processing. This has been seen in practice by the adoption of ICAO standards, as set out earlier in these Guidelines.²⁸ In this context, the single window would permit the transporter (i.e., the aircraft operator) to transmit traveller information in a standardized format only one time to the Border Control Agencies of the State via a single portal. The single window concept places the onus on the authorities to manage the single window and to ensure that the participating authorities or agencies are either given access to the information or actually given the information by the managing authority. It eliminates the need for the traveller or transporter to submit the same data to several different Border Control Agencies within the same State.²⁹

²⁸ Through Amendment 26, each ICAO Contracting State became obliged to establish an API system and to operate that system in line with international data standards. With Amendment 27 each Contracting State became obliged to operate a Passenger Data Single Window facility to receive passenger data.

²⁹ Derived from the WCO’s Single Window Concept publication, <http://www.wcoomd.org/~media/wco/public/global/pdf/topics/facilitation/activities-and-programmes/tf-negotiations/wco-docs/info-sheets-on-tf-measures/single-window-concept.pdf> [accessed 16 April 2021].

VI.C Inter-agency Cooperation in the Context of API:

In the development of API systems, inter-agency cooperation at the national level and broader cooperation with foreign Border Control Agencies, industry, and international organizations should be pursued. This applies to the development phase, during implementation, and during operations.

Generally speaking, inter-agency cooperation remains a key principle of effective border operations. Although the level of cooperation between the various Border Control Agencies varies across the world, there are concrete examples of cooperative efforts that rationalize procedures, reduce personnel and other resources, facilitate passenger processing, and enhance overall security. With regard to the larger inspection processes that take place within the framework of border control (e.g., Customs, immigration, agriculture, etc.), adopting “whole of government” processes is an important undertaking. Government policy-setting and reinforcement of inter-agency collaboration has become a vital and well-known good practice, particularly in the field of coordinated border management.

Given that the scope of these Guidelines is specific to API, the most important and relevant concept in this context is having a PDSW capability to enable a coordinated border experience for the travelling public. With increasing inter-agency cooperation, the case for the development of inter-agency automated systems serving the needs of two or more agencies becomes more compelling. This has a direct impact on the “on-the-ground” procedures, with a single Border Control Officer conducting all initial and simple controls. Increasing inter-agency cooperation has been a major passenger facilitation improvement, avoiding the complexity of a passenger queuing separately to pass multiple border inspections.

VI.D Watch listing:

The overall goal of watch listing efforts is to ensure that potential threats, particularly threats of terrorism or serious crime, are identified prior to the departure of the aircraft. Supporting legislation can enable Border Control Agencies to issue procedures for the collection of passenger information on international flights, and the comparison of such information using watch lists before the departure of the aircraft. Border Control Agencies (or their respective competent authorities) use the watch list(s) of known and suspected terrorists to screen passengers and crew members travelling on flights to and from the subject country. The automated comparison of API against watch lists is particularly effective in taking preventive measures in the event of travel by individuals with documents on the INTERPOL SLTD or TDAWN, and against whom there are legally sanctioned UN and/or INTERPOL travel restrictions or prohibitions.

Example: Watch-list Match – Denied Boarding Foreign

Upon performing database research, Border Control Agency Officers at the Passenger Information Unit (PIU)/targeting centre identified a person attempting to travel who was a possible match to a record on the watch list. The PIU coordinated with the agency that owns the watch list information to validate that the traveller was a positive match. The PIU also found that the same traveller had been refused entry on two other occasions in the previous three months. Based on the PIU's coordination with the foreign airport, the traveller was prevented from boarding the aircraft.

VI.E Pre-departure Interventions:

Border Control Agencies recognize the need to screen manifest information prior to the departure of commercial aircraft travelling to or from, or transiting through, their territory. Governments have therefore enacted legislation and established procedures to allow for pre-departure screening of passengers. Whether the API is received or analysed before the departure of the aircraft, it is important for Border Control Agencies to receive manifest information in sufficient time to be able to perform security analysis and take appropriate action. Several Border Control Agencies have determined that the best practice is to receive and analyse the information prior to the departure of aircraft. To meet this requirement, Border Control Agencies can receive and screen required API before passengers board aircraft bound for or departing from the country. These requirements serve as a layer of protection against high-risk travellers while facilitating legitimate travel.

For international travel, one State's departure is another State's arrival. Some Border Control Agencies have implemented modern API programmes that take into consideration the impacts pre-departure interventions can have on each leg of the journey. For example, some Border Control Agencies and aircraft operators can implement iAPI to provide "Board/No-Board" messages at the point of origin for through check-in passengers. This can streamline processes for cleared passengers and reduce the cases where a traveller is not cleared at a mid-point during the journey. The process can involve initial, automated vetting of the data against watch lists by the system, and a quick response, sending the initial result for each passenger to the aircraft operator as either a "cleared" ("board"), "not-cleared" ("do not board"), or "other" advisory message. Passenger data that matches or possibly matches data on the watch list will generate a "not-cleared" response from the system. An inadequate passenger record of transmitted API that cannot be properly vetted will also generate a "not-cleared" response.

The message returned to the aircraft operator by the system upon completion of the initial vetting determines what action they will take with respect to each passenger: the aircraft operator will not issue a boarding pass to, or board, any passenger generating a "not-cleared" instruction. The Border Control Agency (or competent authority) will then conduct further analysis of the information related to a passenger generating a "not-cleared" response to confirm matches and resolve false positives. At the same time, the aircraft operator may liaise with designated authorities to seek resolution of the "not-cleared" message by providing additional information, if necessary.

This advance notification to the Border Control Agencies by aircraft operators (or other parties) using EDI is the essence of how API information flows and its inherent value in being received at the earliest practicable point in time. There are a number of benefits that can be realized from the efficient use of Information Technology (i.e., computerized passenger screening/clearance systems). The deployment of such systems, incorporating passenger selection criteria developed on the basis of high-quality intelligence, has a positive impact on enforcement activities. Information Technology can be further harnessed to ensure that details of arriving and departing passengers are received in advance - thus allowing the Border Control Agencies adequate time to prevent possible threats from boarding aircraft.

Example: Visa Revocation – Denied Boarding Foreign

Upon performing database research, Border Control Agency Officers at the Passenger Information Unit (PIU)/targeting centre identified a person attempting to travel who was a possible match to a visa revocation record indicating likely involvement in terrorist activities. The PIU coordinated with the agency that owns the visa information to determine that the traveller was a positive match to the record and confirmed that the traveller's visa had been revoked. The aircraft operator security office in the foreign airport was advised, and the aircraft operator subsequently denied the traveller's boarding.

VI.F Interaction With PNR Requirements:

API has been characterized as identity data that is generally known about a person. In comparison, PNR data, which is a variety of unstructured information about a person's travel reservation, can help to reveal what is not readily known about a person (such as travel trends, patterns, etc.). PNR data is collected through the aircraft operator travel reservation process, and subject to national legislation transmitted to Border Control Agencies prior to the departure of the aircraft. PNR data may contain information such as dates of travel, travel itinerary, ticket information, contact details, travel agent, means of payment, seat number, and baggage information. Aircraft operators provide PNR data to government border and security services so they can screen passengers for links to illegal activity, particularly terrorism and serious crime. The transmission of API, coupled with PNR data, provides Border Control Agencies with the ability to identify potentially high-risk travellers who may require further examination.

Example: Threat Identification Linking API and PNR

A radicalized individual received explosives training from individuals affiliated with a terrorist group. He later travelled internationally. Immediately following a failed detonation of a vehicle-borne improvised explosive device in a large city, API was used together with PNR to link the individual to information uncovered in the time-sensitive investigation of the failed detonation. The Border Control Agency also quickly discovered that the person had just booked an international departure. The Border Control Agency apprehended him before he boarded the aircraft.

API and PNR analysed together can provide authorities with a consolidated view of data about a person entering or departing so an accurate decision about passenger admissibility and risk can be rendered. PNR complements API and other information such as visa application information and biometrics to provide a complete picture of the traveller's identity and means of travel as relevant for border enforcement purposes. This is done by comparing API and PNR data with the relevant databases and on the basis of targeting rules that are derived from investigations and intelligence that indicate how terrorists and criminals use travel. The goal is to identify travellers who may need additional scrutiny.

Case Study: Dynamic Network Analysis at Korea Customs Service

The Korea Customs Service (KCS) has recognized that increasingly sophisticated fraud actors can evade traditional fraud detection approaches. KCS has observed that having the capability to dynamically analyse all available data from a variety of sources is necessary to identify key relationships that are consolidated in a knowledge-based system. The use of Dynamic Network Analysis (DNA) to combat fraud is gaining acceptance, enabling investigators to uncover and prevent increasingly sophisticated fraud schemes.

To uncover the relationships among organized smuggling groups in the high-risk passenger selectivity context, KCS has designed a knowledge model with the use of past and current flight passenger information (API/PNR and the historical investigation results), generating real-time passenger association networks indicating travel patterns throughout the years.

This is the next generation of air passenger intelligence system that identifies the hidden relationships between known organized criminal group members and upcoming flight passengers in real time (instead of many hours of manually drawn networks). This has the potential to uncover tangible criminal relationships and networks.

As with the need for national legislation to collect and process API, legislation is also needed to collect and process PNR. Similarly, measures must be undertaken to ensure proper privacy and data protection protocols are maintained. This is of greater relevance with PNR data, as it is information collected from passengers by the aircraft operator for their own business use and subsequently transmitted to Border Control Agencies for law enforcement use; a different purpose to that for which it was originally processed. Officials with access to PNR data should undergo initial and periodic training on privacy, policy, and system requirements related to the data to access and maintain access to the requisite systems. Users with access to this data may be required to certify on a periodic basis that they have read and understand the conditions and requirements associated with the data.

VII WCO, IATA, and ICAO Policy Points

VII.A WCO Detailed Policy Outline:

As the international organization responsible for Customs matters, the WCO has, as its goals, the simplification/ harmonization of Customs formalities and the promotion of efficient means of Customs control. This covers passenger movements as well as movements of commercial cargo across international boundaries.

Due to the increased risk, such as transnational organized crime and international terrorism, Customs have had to enhance their controls on passengers in order to apprehend offenders and to minimize the risk posed on global security.

The combined effect of the need to enhance controls together with the growth in passenger traffic has placed a severe strain on the resources of Customs and other Border Control Agencies. The result has been delays and increased pressure on airport facilities, many of which were designed to cater to much lower passenger volumes.

The interest of the WCO in API stems mainly from its responsibility to help its Members target their scarce resources, and at the same time, improve their service to the travelling public. The WCO sees its role as:

- Providing its Members with information concerning API programme development, and the benefits it can bring;

- Providing a forum in which the constraints on API can be discussed and hopefully resolved;
- Seeking to jointly agree standards with the aircraft operator industry so that API does not develop and proliferate in an inconsistent or unstructured way.

The WCO sees API as a very useful technique to enhance border integrity while maintaining facilitation for low-risk passengers, which benefits Customs and other Border Control Agencies, aircraft operators, airport authorities, and passengers themselves. The revised Kyoto Convention took this into account and API is now included in the Specific Annex J1 (Travelers) of the Convention as “Recommended Practice”. The technique has already been used with great success and is likely to expand in the future.

VII.B IATA Detailed Policy Outline:

As the globally recognized representative of more than 290 aircraft operators accounting for approximately 82% of passengers transported by air worldwide, IATA’s interest in API essentially focuses on enhancing and streamlining the control processes applied in respect of arriving and departing international passengers as they pass through Customs, immigration, and other border controls.

Like the WCO and ICAO, IATA has constantly sought to eliminate unnecessary forms and procedures in international air transport. Additionally, IATA – in cooperation with other interested stakeholders – has continued to look toward globally aligned processes which can assist in mitigating the impact that enhanced security requirements adopted in response to emerging threats can have on passenger processing at the border. As more Border Control Agencies seek to automate border control processes, the concept of API and its potential to facilitate efficient border clearance processing remains a primary focus.

Collection of passenger details at the time the passenger checks in for the flight in question presents a problem of additional workload for aircraft operators at a point in the system where staff and facilities are frequently already stretched to maximum capacity. Consequently, aircraft operator support for API depends heavily on there being truly realizable benefits for aircraft operators and for passengers who are departing the State, or upon arrival at the final destination, or both depending upon regulations in effect.

Furthermore, given the practical constraints and financial ramifications associated with data capture and transmission, IATA strongly supports the standard that required information should be limited to that which can be captured by automated means from an official travel document and, where required under national legislation, from the transporting aircraft operator’s own reservation and/or departure control systems. This passenger-specific information can then be augmented by basic flight details, also retrieved from the aircraft operator’s systems by automated means. With this in mind, IATA sees particular benefit in co-operating with the WCO and ICAO to define the data and message sets for API systems under UN/EDIFACT PAXLST message standards that have been internationally agreed and widely adopted by participating countries. IATA, through its Passenger Experience and Facilitation team and its Passenger Experience activities, is also committed to establishing mutually agreed principles, which can expand the benefits of automating and integrating all elements of the passenger process from origin to destination.

IATA believes the true value of these Guidelines is derived from its focus on a harmonized approach to data collection and transmission to all interested Border Control Agencies via globally interoperable message structures and formats. In today’s environment, public authorities in the country of origin, in transit countries, and at the final destination may individually mandate provision of advance passenger information for a given flight. Failure to adopt a common globally recognized approach will result in unnecessary complexity for systems needed to support multiple data exchange process requirements. The costs associated with

developing and managing multiple applications may be unsustainable for many stakeholders involved in the process.

The majority of proprietary systems developed by international airlines providing scheduled service continue to rely upon the use of UN/EDIFACT PAXLST messaging transmitted via existing airline communication networks to comply with API data provision requirements. Other entities, such as charter aircraft operators, air taxi operators, and executive aircraft operators operate using a differing business model and may not have the technical infrastructure in place to support PAXLST message generation.

IATA fully endorses Border Control Agencies' adoption of these Guidelines, including the use of the UN/EDIFACT PAXLST message format and transmission via existing airline communication networks, to support a common and globally aligned approach to national API data provision requirements. At the same time, IATA also urges Border Control Agencies to recognize that, in addition to UN/EDIFACT PAXLST messaging, alternative methods and formats for transmitting required passenger data will need to be considered as part of any national programme implementation.

Ultimately, it is IATA's view that to achieve the greatest possible efficiency, passenger data exchange processes must evolve to the point where a common and globally agreed data set is collected once only from each person for whom it is required, transmitted once to all those having the legal authority to request and view that data, and then used in the most efficient way possible based on clearly established risk analysis criteria and consistent with acceptable data privacy norms.

VII.C [ICAO Detailed Policy Outline:](#)

The International Civil Aviation Organization (ICAO) is an intergovernmental organization established by the Convention on International Civil Aviation (Chicago Convention) in 1944. A specialized agency of the UN, ICAO serves as the medium for the establishment of standards and recommended practices by its 193 Contracting States, in the fields of safety, security, aviation environment protection, and facilitation.

ICAO's interest in API systems stems from the Chicago Convention's mandates for Contracting States to prevent unnecessary delays by facilitating border clearance formalities, and to adopt internationally standard Customs and immigration procedures. Moreover, national programmes of travel document issuance and security, and the efficacy of inspection systems in controlling smuggling and illegal migration, can have a significant effect on the security of civil aviation.

Equally, the application of technology and modern management science to control systems in order to facilitate international traffic flow is increasingly important in the present climate of intensified security controls. Increased congestion and lengthened processing times caused by the sudden imposition of unfamiliar procedures can be counterproductive to security, as the confusion and disorder that result can be exploited by those seeking to evade inspection.

VIII Conclusion

As stipulated in these Guidelines, the cost-effective and efficient use of API depends on a common understanding by aircraft operators and Border Control Agencies to adopt and implement harmonized data standards, formats, and transmission processes. The implementation of API systems has the capability of bringing substantial advantages to all involved in the movement of passengers. The WCO, IATA, and ICAO fully support the effectiveness of API data exchange processes, where adopted in accordance with these Guidelines.

To facilitate this objective, Appendices to this paper contain jointly agreed data and messaging standards that are recommended by the WCO, IATA and ICAO, as well as detailed policy outlines related to the API of respective organizations.

To take full advantage of the benefits from API, including enhancement of safety and security, reduction of the labour costs and waiting time at the border, it is important for all concerned, aircraft operators, and Border Control Agencies, to recognize API's characteristics outlined in these Guidelines and further promote development of an API system that enables accurate and efficient collection, smooth transmission, and sufficient use of API.

The WCO, IATA, and ICAO highlight the importance of building consensus on API systems and their operation among all concerned and promoting smooth implementation under a common understanding, and expect these Guidelines to be the instrument which serves this objective.

Appendix I: DIAGRAMS ON MACHINE READABLE ZONES OF MACHINE READABLE TRAVEL DOCUMENTS

THESE DIAGRAMS ARE REPRODUCED WITH THE PERMISSION OF ICAO. PLEASE REFER TO ICAO DOCUMENT 9303 (7th Edition, 2015):

- Construction of the Machine Readable Zone of the Passport Data Page , Appendix B to Part 4
- Construction of the MRZ (of a machine readable Visa), Appendix B to Part 7
- Construction of the Machine Readable Zone of a TD1 size MROTD, Appendix B to Part 5
- Construction of the Machine Readable Zone of a TD2 size MROTD, Appendix B to Part 6

Appendix B to Part 6

CONSTRUCTION OF THE MACHINE READABLE ZONE OF A TD2 SIZE MROTD (INFORMATIVE)

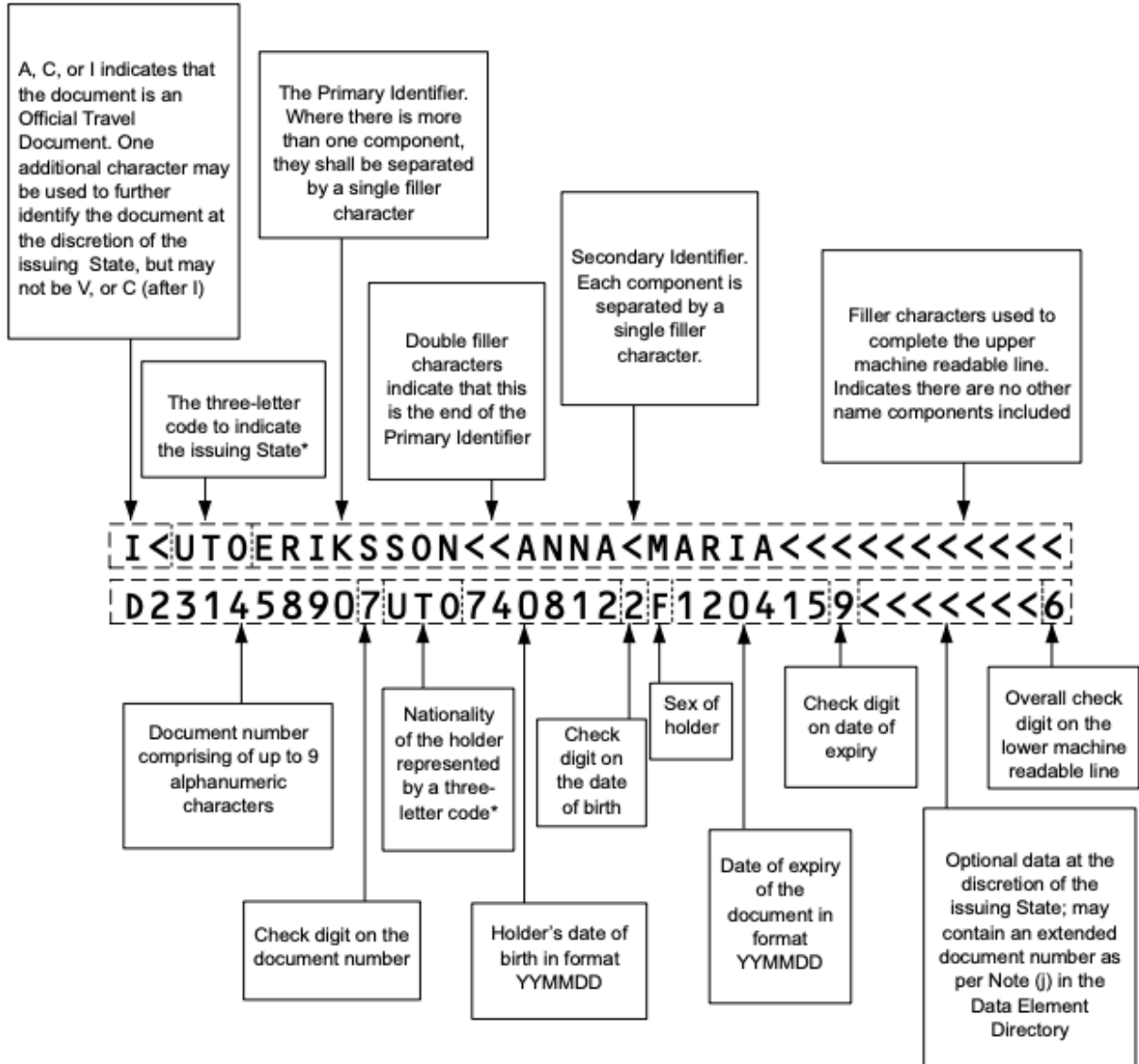


Figure 13. Construction of the MRZ data on a TD2 Size MROTD

* Three-letter codes are given in Doc 9303-3.

Appendix II: MESSAGE IMPLEMENTATION GUIDES

Published separately on the WCO Website:

<http://www.wcoomd.org/en/topics/facilitation/instrument-and-tools/tools/api-pnr.aspx>

[Appendix IIA PAXLST Message Implementation Guide \[version 2016\]](#)

[Appendix IIB - CUSRES Message Implementation Guide \[version : 2016\]](#)

Appendix III: INSTRUMENTS OF THE WCO AND ICAO ON API

1. WCO instruments

(1) The Revised Kyoto Convention, Specific Annex J1

8. Recommended Practice

The Customs, in co-operation with other agencies and the trade, should seek to use internationally standardized advance passenger information, where available, in order to facilitate the Customs control of travellers and the clearance of goods carried by them.

(2) Recommendations

**RECOMMENDATION OF THE CUSTOMS CO-OPERATION COUNCIL
CONCERNING ADHERENCE TO STANDARDS IN
RELATION TO DATA REQUIREMENTS FOR ADVANCE
PASSENGER INFORMATION (API)
(6 July 1993)**

THE CUSTOMS CO-OPERATION COUNCIL,

NOTING the compliance risk posed by airline passengers especially with regard to drug trafficking and international terrorism,

NOTING the use of Electronic Data Interchange (EDI) by both carriers and Customs authorities and the potential benefits that use of this technology can bring,

RECOGNISING that the electronic transmission of passenger-related data can result in the more rapid clearance of passengers and can have important control benefits for Customs authorities,

HAVING REGARD to Annex J.1. of the Kyoto Convention which requires, inter alia, computer applications implemented by Customs authorities to use internationally accepted standards,

DESIRING specifically to simplify and harmonise interface arrangements between (air) carriers and Customs authorities particularly as regards the use of standard data elements, codes and message syntax,

RECOMMENDS that Members of the Council and members of the United Nations Organisation or its specialised agencies, and Customs or Economic Unions, should adhere to the standards set out in the Joint CCC/IATA Guideline on Advance Passenger Information, and any future updated or revised versions of these standards, for the electronic exchange of passenger data,

REQUESTS Members of the Council and members of the United Nations Organisation or its specialised agencies, and Customs or Economic Unions which accept this Recommendation to notify the Secretary General of the Council of the date from which they will apply the

Recommendation and of the conditions of its application. The Secretary General will transmit this information to the Customs administrations of all Members of the Council. He will also transmit it to the Customs administrations of the members of the United Nations Organisation or its specialised agencies and to Customs or Economic Unions which have accepted this Recommendation.

**RECOMMENDATION OF THE CUSTOMS CO-OPERATION COUNCIL³⁰
CONCERNING THE USE OF ADVANCE PASSENGER INFORMATION (API)
AND PASSENGER NAME RECORD (PNR)
FOR EFFICIENT AND EFFECTIVE CUSTOMS CONTROL
(June 2015)**

THE CUSTOMS CO-OPERATION COUNCIL,

NOTING the continued and growing threat posed by serious transnational crime, inter alia illicit trafficking in drugs and other contraband, which are of serious concern to social well-being and safety and to the prosperity of nations around the world,

NOTING the continuing growth in the volume of cross-border travel movements and the challenges this creates for the facilitation of legitimate travellers,

HAVING REGARD to provisions of the revised Kyoto Convention³¹, specifically Chapter 6 of the General Annex on Customs Control and Chapter 1 of the Specific Annex J on Travellers,

RECOGNIZING that Customs administrations have the prime responsibility for controlling cross-border movements of goods, means of transport and people, and thus they are best placed to prevent, detect and suppress illicit trafficking in drugs and other contraband at the border before they disperse into the territories,

NOTING the incidents of close linkages between serious transnational crime and terrorism, and the need to mitigate perceived risks posed by travellers,

RECOGNIZING that the proper balance between the needs of Customs enforcement and the facilitation of legitimate travel can best be achieved if Customs enforcement is intelligence-based, and that the use of API and/or PNR for risk assessment would greatly assist Customs administrations in developing and exploiting the best possible intelligence for the control of travellers,

DESIRING to harmonize the interface arrangements between Customs administrations and business, particularly as regards the electronic transmission of API and/or PNR data in line with internationally standardized data elements and messaging formats,

BELIEVING that effective border control against serious transnational crime, inter alia illicit trafficking in drugs and other contraband and implementation of UN travel restrictions against sanctioned individuals, can be greatly assisted by co-operation between Customs administrations and other competent border control agencies at the national and international

³⁰ Customs Co-operation Council is the official name of the World Customs Organization (WCO)

³¹ International Convention on Simplification and Harmonization of Customs Procedures (as amended)

levels, and that exchange of information can significantly aid risk assessment and targeting and, as a consequence, improve the facilitation of legitimate travel,

RECOMMENDS that Members of the Council and Customs or Economic Unions should:

1. ensure that prevention, detection and suppression of serious transnational crime, inter alia illicit trafficking in drugs and other contraband, be promoted and remain as one of the priorities of the Customs authority's enforcement strategy and programmes;
2. seek the fullest co-operation of airlines and the other international passenger transport businesses to assist the Customs in fulfilling its mission;
3. utilize advance information, namely API and/or PNR, for the risk assessment of travellers and :
 - establish legal authority to acquire access to, or require to transfer, use and store API and /or PNR data along with the conditions thereof and scope of data required to this end, and put in place mechanisms for the protection of the pertinent data,
 - adhere to the technical standards, formats and procedures set out in the internationally recognized guidelines, and
 - to the extent possible, take part in the work for devising or updating international technical standards, formats and procedures as well as best practices in the application thereof;
4. promote co-operation with, and extend support to other Customs administrations, within the national legal framework, including the exchange of intelligence and experience in the use of API and/or PNR with a view to further efficient and effective identification of potentially high-risk travellers.
5. effectively support the implementation of UN travel bans against sanctioned individuals.

REQUESTS Members of the Council and Customs or Economic Unions which accept this Recommendation to notify the Secretary General of the Council of the date from which they will apply the Recommendation and of the conditions of its application.

2. ICAO instruments

The Chicago Convention, Annex 9—*Facilitation* (16th Edition, July 2022, up to and including Amendment 29 (2022))

A. General

9.1 Contracting States requiring the exchange of Advance Passenger Information (API)/interactive API (iAPI) and/or Passenger Name Record (PNR) data from aircraft operators shall create a Passenger Data Single Window facility for each data category, or both data categories combined, that allows parties involved to lodge standardized information with a common data transmission entry point to fulfil all related passenger and crew data requirements for that jurisdiction.

9.1.1 **Recommended Practice.**— Contracting States requiring the exchange of passenger and crew data from aircraft operators should consider creating a Passenger Data Single Window facility for both data categories combined.

9.2 **Recommended Practice.**— Contracting States and aircraft operators should provide the appropriate level, on a 24/7 (continuous) basis, of operational and technical support to analyse and respond to any system outage or failure in order to return to standard operations as soon as practicable.

9.3 **Recommended Practice.**— Contracting States and aircraft operators should establish and implement appropriate notification and recovery procedures for both scheduled maintenance of information systems and non-scheduled system outages or failures.

9.4 **Recommended Practice.**— Contracting States and aircraft operators should provide the appropriate level (where practicable, a 24/7 arrangement) of contact support.

9.5 Contracting States shall not require aircraft operators to provide non-standard data elements as part of API, iAPI and/or PNR provisions.

9.6 Contracting States shall, when considering requiring elements that deviate from the standard, submit a request to the WCO/IATA/ICAO Contact Committee in conjunction with the WCO's Data Maintenance Request (DMR) process via a review and endorsement process for inclusion of the data element in the guidelines.

B. Advance Passenger Information (API)

9.7 Each Contracting State shall establish an Advance Passenger Information (API) system.

Note.— The UN Security Council, in Resolution 2178 (2014), at paragraph 9, “[c]alls upon Member States to require that airlines operating in their territories provide advance passenger information to the appropriate national authorities in order to detect the departure from their territories, or attempted entry into or transit through their territories, by means of civil aircraft, of individuals designated by the Committee established pursuant to resolutions 1267 (1999) and 1989 (2011) (“the Committee”), and further calls upon

Member States to report any such departure from their territories, or such attempted entry into or transit through their territories, of such individuals to the Committee, as well as sharing this information with the State of residence or nationality, as appropriate and in accordance with domestic law and international obligations”.

9.8 The API system of each Contracting State shall be supported by appropriate legal authority (such as, inter alia, legislation, regulation or decree) and be consistent with internationally recognized standards for API.

Note 1.— API involves the capture of a passenger’s or crew member’s biographic data and flight details by the aircraft operator prior to departure. This information is electronically transmitted to the border control agencies in the destination or departure country. Thus, passenger and/or crew details are received in advance of the departure or arrival of the flight.

Note 2.— The UN/EDIFACT PAXLST message is a standard electronic message developed specifically, as a subset of UN/EDIFACT, to handle passenger manifest (electronic) transmissions. UN/EDIFACT stands for “United Nations rules for Electronic Data Interchange For Administration, Commerce and Transport.” The rules comprise a set of internationally agreed standards, directories and guidelines for the electronic interchange of structured data, and in particular that related to trade in goods and services between independent, computerized information systems. The WCO, IATA and ICAO have jointly agreed on the maximum set of API data that should be incorporated in the PAXLST message to be used for the transmission of such data by aircraft operators to the border control agencies in the destination or departure country. It is to be expected that the UN/EDIFACT standard may be supplemented by modern message techniques, such as international XML standards or web-based applications.

Note 3.— Under its current format structure the UN/EDIFACT PAXLST message will not accommodate general aviation usage.

Note 4.— The UN/EDIFACT PAXLST message is currently defined by the internationally recognized WCO/IATA/ICAO guidelines.

9.9 **Recommended Practice.**— Each Contracting State developing legislation for the purpose of implementing an API system should consider developing aligned regulations that meet the needs of all involved agencies, define a common set of API data elements required for that jurisdiction in accordance with message construction standards and appoint one government agency to receive API data on behalf of all other agencies.

9.10 When specifying the identifying information on passengers to be transmitted, Contracting States shall require only data elements that are available in machine readable form in travel documents conforming to the specifications contained in Doc 9303. All information required shall conform to specifications for UN/EDIFACT PAXLST messages found in the WCO/IATA/ICAO API Guidelines.

9.11 Contracting States shall not penalize, or otherwise hold an aircraft operator responsible, for inconsistencies in passenger data exchanges when the aircraft operator has collected and provided accurate advance passenger information data based on a travel

document presented, which is valid for the journey and the passenger presents a second travel document which is valid for the journey on arrival..

9.12 **Recommended Practice.**— Contracting States should seek to minimize the number of times API data is transmitted for a specific flight.

9.13 If a Contracting State requires API data interchange, then it shall seek, to the greatest extent possible, to limit the operational and administrative burdens on aircraft operators, while enhancing passenger facilitation.

9.14 **Recommended Practice.**— Contracting States should refrain from imposing fines and penalties on aircraft operators for any errors caused by a systems failure which may have resulted in the transmission of no, or corrupted, data to the public authorities in accordance with API systems.

9.15 Contracting States requiring that passenger data be transmitted electronically through an API system shall not also require a passenger manifest in paper form.

9.16 **Recommended Practice.**— Each Contracting State should consider the introduction of an interactive Advance Passenger Information (iAPI) system.

9.17 **Recommended Practice.**— Contracting States seeking to implement an iAPI system should:

- a) seek to minimize the impact on existing aircraft operator systems and technical infrastructure by consulting aircraft operators before development and implementation of an iAPI system;
- b) work together with aircraft operators to develop iAPI systems that integrate into the aircraft operator's departure control interfaces; and
- c) conform to the Guidelines on Advance Passenger Information (API) adopted by WCO/ICAO/IATA when requiring iAPI.

9.18 **Recommended Practice.**— Contracting States' and aircraft operators' API systems, including iAPI, should be capable of 24/7 operation, with procedures in place to minimize disruption in the event of a system outage or failure.

Appendix IV: DATA MAINTENANCE REQUEST (DMR) FORM

WCO/IATA/ICAO API PNR Contact Committee
Advance Passenger Information
Data Maintenance Request

| | |
|-----------|---------------|
| WCO LOG | |
| DATE | |
| User ref | RoFA2021.001 |
| User date | 15-March-2022 |

| | |
|-------------------------------|--------------------------|
| Originator | The Republic of Far Away |
| Contact Person | John Doe |
| Email | John.Doe@mail.com |
| Phone | (000) 0001000 |
| Attached documentation | none |
| Business need / Justification | Elaboration goes here |

| | |
|---------|------------------------|
| Purpose | Description of purpose |
| Example | |

| | |
|-----------------------|-------------|
| WCO id | 00A |
| WCO name | Declaration |
| WCO definition | XYZ |
| Format Representation | AN..23 |

| | |
|----------------|--|
| Code Name (*): | |
| Code TAG (*): | |

| | |
|------------------------|--|
| Code definition (*): | |
| Code Note: | |
| Based on data element: | |
| Based on composite: | |
| Based on segment: | |

| | |
|---------------------------|--|
| Composite TAG (*): | |
| Composite Name (*): | |
| Action (*): | |
| Composite Definition (*): | |
| Composite Note: | |
| Based on Segment (*): | |

| | |
|-------------------------|--|
| Segment TAG (*): | |
| Segment Name (*): | |
| Action (*): | |
| Segment Definition (*): | |
| Segment Note (*): | |

| Position | Data Element Tag | Data Element Name | M/C |
|----------|------------------|-------------------|-----|
| | | | |
| | | | |

| | |
|--------------|---|
| Request | Add new data element "Number of wheels" of the aircraft |
| Status | Accepted / Withdrawn / Was not supported |
| Supported by | |

Contact us:

apipnr@wcoomd.org | facilitation@iata.org | fa@icao.int

Visit our websites:

www.wcoomd.org | www.iata.org | www.icao.int

