



Implementation of API, iAPI and PNR programs - Key Considerations for Governments

1. Introduction

Purpose

This document¹ outlines key considerations for developing, expanding, modernizing, or reviewing Advance Passenger Information (API), Interactive API (iAPI), and Passenger Name Record (PNR) programs. It is intended to promote passenger data systems that are legally robust, secure, efficient, interoperable, and aligned with international standards and best practices.

For the purposes of this document, API refers to the electronic transmission of passenger and crew biographic, travel document, and flight information collected by aircraft operators and provided to border control authorities prior to departure and/or arrival.

iAPI builds upon API by enabling real-time communication between aircraft operators and border control authorities during check-in. This allows authorities to assess each passenger prior to departure and provide board/no-board or advisory responses to aircraft operators.

PNR consists of reservation data held within airline reservation systems, including information such as itinerary, contact details, ticketing information, baggage data, and other reservation-related elements. PNR supports risk assessment, targeting, and border management functions.

Together, API/iAPI and PNR provide governments with complementary capabilities to strengthen border management and aviation security while facilitating legitimate travel.

International obligations and standards

States should develop and operate API, iAPI, and PNR programs in accordance with applicable international obligations, standards, guidance material, and recognized best practices.

Relevant references include:

- [ICAO Annex 9 - Facilitation Standards and Recommended Practices \(SARPs\)](#)
- [WCO/IATA/ICAO Guidelines on Advance Passenger Information \(API\)](#)
- [WCO/IATA/ICAO Interactive Advance Passenger Information \(iAPI\) Best Practice](#)
- [ICAO Doc 9944 - Guidelines on Passenger Name Record \(PNR\) Data](#)
- United Nations Security Council Resolutions [2178](#) (2014), [2396](#) (2017), and [2482](#) (2019)

¹ This IATA document provides general guidance and recommended practices and does not constitute legal advice. States and aircraft operators remain responsible for complying with applicable international obligations and national laws. Where this document refers to international Standards, Recommended Practices, or guidance, the applicable source instrument should be consulted for its authoritative text. Unless otherwise indicated by reference to an applicable legal requirement or international Standard, the term "should" in this document describes recommended practice rather than an independent legal obligation.

Principles for successful implementation

Successful passenger data programs are characterized by:

- Clear legal basis, governance framework and clearly defined responsibilities and powers of competent authorities
- Alignment with international standards
- Proportionate and risk-based requirements
- Strong privacy, data protection, and cybersecurity safeguards
- Operational feasibility for aircraft operators
- Early and continuous consultation with industry stakeholders
- Interoperability and harmonization across jurisdictions

These principles should guide the design, implementation, and operationalization of all API, iAPI, and PNR initiatives.

2. Legal and Regulatory Framework

States should establish a clear legal and regulatory framework governing the collection, transmission, processing, storage, sharing, retention, protection, and deletion of API, iAPI, and PNR data.

The framework should:

- Establish a clear legal basis for the collection and use of passenger data;
- Define the responsibilities of aircraft operators and government authorities;
- Ensure compliance with applicable international obligations and standards;
- Designate a Passenger Data Single Window (PDSW) as the mechanism for receiving passenger data from aircraft operators and distributing it among government authorities with the legal remit to handle such data;
- Ensure that regulatory requirements are necessary and proportionate to their objectives and, consistent with applicable international standards and recommended practices, seek to minimize unnecessary operational and administrative burdens on aircraft operators;
- Establish appropriate privacy, redress, and dispute resolution mechanisms;
- Define oversight, accountability, compliance, and enforcement arrangements; and
- Where API data is collected, remove redundant requirements for passenger manifests, consistent with annex 9 Standard 9.15.

Consistent with ICAO Annex 9 Standard 9.9, passenger data systems should be supported by legislation, regulation, or another appropriate legal authority.

3. Scope of Application

The scope of any API, iAPI, or PNR program should be clearly defined and proportionate to its intended border management, aviation security, and facilitation objectives.

States should clearly identify:

- The flights and operators subject to transmission obligations;
- The circumstances under which API, iAPI, and PNR data are required, including frequency and timings of submissions, as well as data elements; and
- Any exemptions, alternative procedures, or contingency arrangements applicable in specific circumstances, including irregular operations;
- The competent authorities mandated to receive, process and use the data.

Given that crew members do not make reservations and are not subject to passenger check-in processes, PNR and iAPI transmission requirements should apply only to passengers.

4. Data Requirements and Technical Standards

States should require only those API and PNR data elements recognized in internationally agreed standards, technical specifications and best practices.

Limiting requirements to standardized data elements ensures data quality, reduces implementation costs, facilitates compliance, and promotes international interoperability. Specifically:

- API requirements should be limited to data contained in the [WCO/IATA/ICAO Guidelines on Advance Passenger information \(API\)](#) and transmitted using UN/EDIFACT PAXLST messages.
- PNR requirements should align with [ICAO Doc 9944](#) and utilize the PNRGOV messaging standard.

Passenger data programs should be designed and operated using internationally recognized technical standards to ensure consistency, interoperability, and efficient exchange of information between governments and aircraft operators.

Technical requirements should be achievable within existing airline reservation, departure control, and messaging systems, and should take into consideration industry development cycles, system dependencies, operational constraints and testing periods.

Any State considering requesting the transmission of data elements that are not part of internationally recognized API or PNR standards should submit a request through the World Customs Organization (WCO) Data Maintenance Request (DMR) process. Such changes should, consistent with the applicable international standards and processes, be subject to review and endorsement through the appropriate international governance process before implementation.

5. Passenger Data Single Window and Governance

States requiring API, iAPI, and/or PNR data should establish a Passenger Data Single Window (PDSW), defined as a facility that enables parties involved in air passenger transport to submit standardized passenger information through a single entry point to meet all regulatory requirements imposed by the different national authorities.

Consistent with ICAO Annex 9 Standard 9.1, aircraft operators should be able to fulfil all passenger and crew data reporting obligations through this single channel. States should avoid requiring operators to submit the same information through parallel or separate mechanisms outside the PDSW framework. This approach streamlines compliance, reduces duplication, and facilitates efficient coordination among government agencies.

States should establish appropriate governance arrangements for the operation of the PDSW, including role and responsibilities for participating agencies, rules governing access to and use of passenger data, oversight mechanisms, and information-sharing procedures.

A properly governed PDSW reduces duplicate transmission requirements, lowers implementation costs, supports coordinated border management, and promotes efficient and secure information exchange among national agencies. The PDSW should also avoid duplicative requirements for aircraft operators to provide a passenger manifest, consistent with the applicable provisions of ICAO Annex 9 Standard 9.15.

6. Airline Consultation, Operational Readiness and Phased Implementation

Successful implementation requires early and continuous engagement with aircraft operators, industry service providers, and relevant industry organizations. Authorities in charge of implementing passenger data programs may consider creating a Stakeholder Consultation Group to coordinate stakeholder engagement and ensure all parties are kept informed.

States should engage stakeholders during the design, development, testing, implementation, and post-implementation phases of passenger data programs.

To support operational readiness, States should:

- Publish final legal, business, and technical requirements well in advance of implementation;
- Establish realistic implementation timelines, allowing sufficient time for development, testing, certification, and deployment activities;
- Conduct end-to-end testing before production implementation;
- Establish operational support and escalation processes;
- Ensure that implementation plans account for airline operational and technology constraints;
- Establish formal change-control procedures, including clearly defined communication channels, stakeholder notification, testing and approval processes, and rollback procedures;
- Communicate material changes sufficiently in advance of implementation and consult affected stakeholders, as appropriate; and
- Where practicable, schedule significant production changes with due regard to periods of peak airline operations and other operational constraints.

Once legislation is in place, it should be complemented by final technical specifications issued sufficiently in advance of implementation and, as a recommended implementation practice, ordinarily at least six months prior to the passenger data transmission requirement's entry into force, or earlier where the scale or complexity of implementation requires.

Compliance and enforcement frameworks should provide transparent procedures for identifying and addressing alleged non-compliance, including appropriate mechanisms for review, dispute resolution, and redress in accordance with applicable law.

During initial deployment, priority should be placed on achieving compliance, resolving operational issues, and stabilizing system performance.

7. Data Protection, Privacy, Security and Passenger Rights

States should ensure that API, iAPI, and PNR programs operate within a comprehensive legal and governance framework that protects passenger rights, promotes transparency, and provides legal certainty.

Passenger data should be:

- Collected for specified and legitimate purposes;
- Processed lawfully, fairly, and transparently according to such purposes;
- Limited to what is necessary and proportionate;
- Protected against unauthorized access, disclosure, alteration, or misuse;
- Retained only for as long as necessary to achieve legitimate objectives; and
- Accessed, used, and disclosed only by appropriately authorized authorities and personnel for legally authorized purposes.

States should establish appropriate safeguards concerning sensitive personal data that may be contained in PNR, including measures to prevent its use where such processing is not authorized, necessary, and proportionate. Any decision that could have significant consequences for an individual should not be based solely on automated analysis of PNR data.

Retention policies should clearly define conditions and periods for:

- Operational use;
- Archived storage; and
- Final deletion, anonymization, or other legally appropriate treatment.

Retention periods should be established in accordance with applicable law and should be necessary and proportionate to the specified purposes.

States should provide appropriate mechanisms for individuals to seek access to, correction of, and redress concerning the processing of their data.

All agencies receiving passenger data should implement appropriate technical, organizational, security and cybersecurity safeguards.

8. Practical Implementation Checklist

Successful implementation is characterized by a phased approach that combines legal readiness, stakeholder engagement, technical development, testing, and operational preparation to ensure a smooth and sustainable implementation of API, iAPI, and PNR capabilities.

Phase	Indicative Timeline	Checklist
1. Legal and Institutional Readiness	State-led planning phase	☐ Establish the legal and regulatory framework ☐ Designate the competent authority responsible for collecting, storing, and analyzing passenger data ☐ Define governance and data-sharing arrangements ☐ Conduct initial stakeholder consultation
2. Stakeholder Engagement and Planning	As agreed with stakeholders	☐ Notify airlines and relevant stakeholders of the intention to introduce an API/iAPI/PNR system ☐ Designate the entity responsible for developing, operating, and maintaining the API/iAPI/PNR system, whether through an internal government capability or an external technical system provider

		☐ Establish an API/PNR industry consultation mechanism such as a Stakeholder Consultation Group ☐ Define scope, timelines, and requirements
3. System Development and Implementation	As agreed with technical partners	☐ Develop the Passenger Data Single Window (PDSW) ☐ Develop technical specifications and business requirements together with the designated system provider, in consultation with the industry ☐ Ensure alignment with international standards
4. Testing, Validation and Readiness	Minimum 6 months	☐ Publish final technical specifications and operational requirements ☐ Allow sufficient time for airline system development and integration ☐ Conduct end-to-end testing with airlines and relevant stakeholders (at least six months) ☐ Perform pilot operations and validate operational readiness ☐ Confirm readiness of all participating agencies and industry participants
5. Go-Live and Continuous Improvement	Following implementation	☐ Implement a phased go-live approach ☐ Monitor system performance and data quality ☐ Address operational issues and stakeholder feedback ☐ Review compliance and operational effectiveness ☐ Refine processes and requirements as needed

9. Key Takeaways

Successful API, iAPI, and PNR programs are built on a clear legal basis, alignment with international standards, strong data protection safeguards, operational feasibility, and sustained collaboration between governments, airlines, and other stakeholders.

IATA may support governments throughout the development and implementation lifecycle of passenger data programs through guidance, technical expertise, industry consultation, and the sharing of international best practices, as appropriate. States may also leverage the following mechanisms to support implementation:

- [IATA API/PNR Toolkit](#)
- Participation in the [ICAO Facilitation Panel](#), the [WCO/IATA/ICAO Contact Committee](#) and/or the [IATA Facilitation Working Group](#)
- Establishment and use of a National Air Transport Facilitation Program (NATFP), in accordance with the provisions of ICAO Annex 9; and
- Early and continuous engagement with airlines, system providers, and relevant government authorities to support planning, testing, operational readiness, and long-term program sustainability.

Ultimately, effective implementation enables States to maximize the security, border management, and facilitation benefits of API, iAPI, and PNR programs while ensuring operationally sustainable outcomes for all stakeholders.