SITA API PNR GATEWAY FOR GOVERNMENTS

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Protecting national borders from the threat of terrorism, biosecurity threats and organized crime is a non-negotiable priority for governments. Data holds the key. Access to quality passenger information in a visual, single-window format enables governments to proactively protect their borders while streamlining the traveler experience.

Overview

Governments are legally mandated to ensure safe and orderly borders that actively combat threats like terrorism and organized crime. Access to complete, correct, on-time and semantically accurate data enables governments to pre-screen passengers ahead of departure and weed out potentially high-risk travelers. This means more secure national borders and an improved travel experience for low-risk citizens, tourists, and business travelers.

At SITA, we provide the data that enables governments to keep those potential threats away from their physical border, and we help to manage data quality. We do this through our SITA API PNR Gateway solution, which packages quality data into a usable platform that gives governments a clear, real-time snapshot of exactly who is entering, departing or transiting through their country.

Our advanced visualization tool delivers data from several sources to a central government data access point. This data can then be distributed to relevant government departments in order to facilitate border management.

Developed in line with the single-window concept recommended by the International Air Transport Association (IATA) and International Civil Aviation Organization (ICAO), our data delivery solution was initially created to address the needs of the aviation industry by facilitating the transmission of data in the form of Advance Passenger Information (API) and Passenger Name Record (PNR) information.

Today the SITA API PNR Gateway provides a central connection point for multiple modes of transport, from airlines to cruise ships and charter flights. With plans to include additional modes in the future, such as for trains. By delivering traveler information to governments in a single stream, and in the required format, governments can reduce complexity, ensure data quality, and cut out costly manual processing and data-quality checks.

While SITA API PNR Gateway has been carefully designed to work with the advanced risk assessment, identification and threat management solution offered by SITA Intelligence and Targeting, our single-window data-delivery solution also interfaces seamlessly with other programs and tools.

"SITA API PNR Gateway offers a unified interface for governments to collect data from carriers which can be analyzed further. It helps governments fulfil their international obligations under United Nations Security Council Resolutions (UNSCR) pertaining to counter-terrorism. It also allows carriers to seamlessly fulfill all government data obligations reliably in a single feed at the right time in the right format."

-Keith Surridge, Product Manager: SITA API PNR Gateway
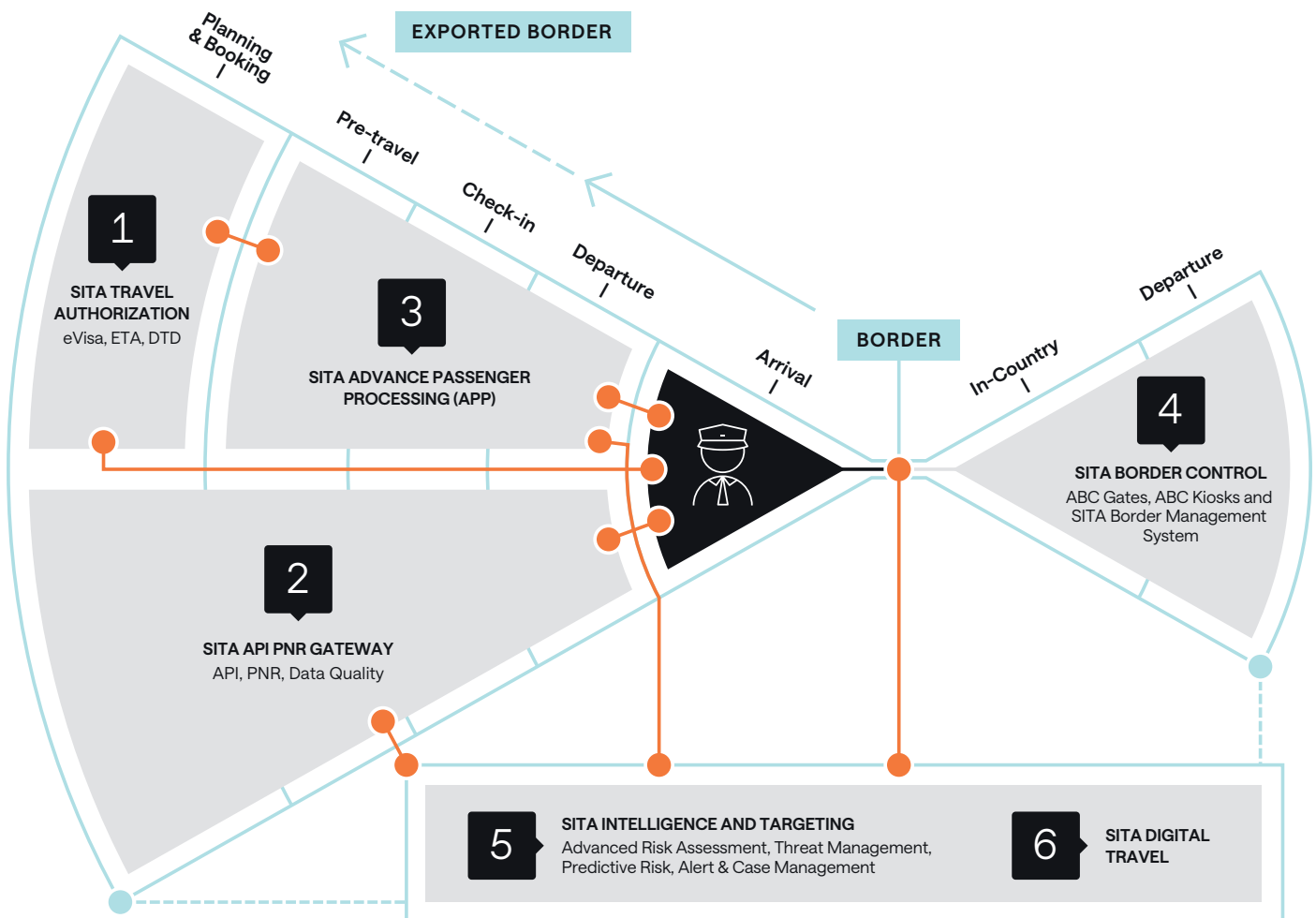
Our solution

THE SITA API PNR GATEWAY IS:

- A single-window view of all travelers entering, departing or transiting through your country
- Compliant with United Nations Security Council, ICAO, and the European Union guidelines for the collection of API and PNR passenger data
- A consolidated overview of passenger data acquired across the individual's travel journey - from booking to check-in - which facilitates onward watchlist matching and risk analysis
- Flexible and able to integrate with government back-end systems
- A fully managed end-to-end service

UNIQUE SERVICE FEATURES OF THE SITA API PNR GATEWAY:

- High performance, availability, and data quality
- Data visualization per message, journey, or traveler
- Online manual submission
- Statistical reports
- User audit
- Data distribution to different agencies within one jurisdiction
- Supported by cloud security measures, offsite backups and backup protection, application security measures, access control and authentication
- Built-in disaster recovery
- Personal information is encrypted, and privacy and access controls are in place
- Enhanced options and upgradeable will in future include multiple transport modes
- Multi-language user interface available if needed

Understanding the effectiveness of the SITA API PNR Gateway solution starts by taking a peek at the critical traveler and flight information that governments need:

- Advance Passenger Information (API) – The API includes all the information about a traveler that is contained in the machine-readable zone of their travel document, with some details about their flight. API-defined fields include name, gender, date of birth and nationality. The API may also include baggage and seat details and, if the booking includes a connecting flight, it could include all legs of that travel history.

- Passenger Name Record (PNR) – The PNR contains all the available information about the passenger's entire journey on this specific booking, including name, address, payment method, booking details, contact details, flight details and final destination.

EXPORTED BORDER

Planning & Booking

Pre-travel

Check-in

Departure

Arrival

BORDER

In-Country

Departure

1
SITA TRAVEL AUTHORIZATION
eVisa, ETA, DTD

3
SITA ADVANCE PASSENGER PROCESSING (APP)

2
SITA API PNR GATEWAY
API, PNR, Data Quality

4
SITA BORDER CONTROL
ABC Gates, ABC Kiosks and SITA Border Management System

5 SITA INTELLIGENCE AND TARGETING
Advanced Risk Assessment, Threat Management, Predictive Risk, Alert & Case Management

6 SITA DIGITAL TRAVEL

Together, the API and PNR give governments essential insights into the individual traveler. When used as part of an ongoing border risk assessment process, these data insights can act as an early warning system for governments by red-flagging potential risks. This enables governments and border officials to focus their resources on vetting high-risk concerns, while streamlining the journey for low-risk travelers.

Technical ins and outs

Governments using the SITA API PNR Gateway single-window solution will have a visual overview of all travelers entering the country, as well as those exiting and transiting. Behind the scenes, the single-window approach is constantly being fed information from a variety of sources, including airlines.

Here's a snapshot of how our data-delivery approach works:
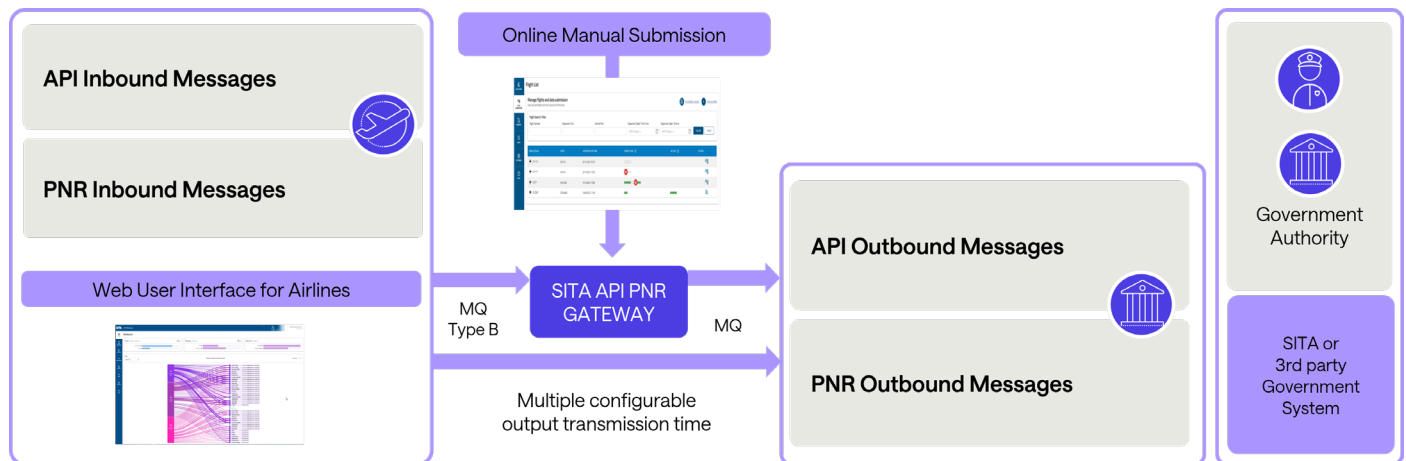
- The SITA API PNR Gateway platform automatically receives encrypted information from the airline's depart and control system. This applies to both passenger and crew information.

- Carriers can use a manual data submission portal to report ad hoc flights, charters, and general aviation movements.

- Data is validated, converted into a bespoke government format, and sent to the government in question.

- Using this data, governments can determine high-risk and low-risk travelers and perform accurate risk assessments where needed.

"Advancements in technology are assisting in the battle to maintain safe and secure international travel. The border security professional still remains the front line against these threats."

- World Border Security Congress 2024

Threats and challenges to border control

Governments and border security officials face multiple, interlinked global threats. In addition to international crime syndicates and terrorism concerns, rising tourist numbers put pressure on governments and carriers to improve operational efficiencies and invest in infrastructure capacity. While governments are eager to capitalize on the global tourism boom as a booster for economic prosperity, they must balance this with the need to protect their borders while still delivering a more streamlined travel experience for leisure and business travelers.

The SITA API PNR Gateway delivers the data governments need to make proactive decisions that protect their borders, while keeping people on the move and enhancing the global travel experience.

The four major challenges currently facing governments and border officials are:

Global security challenges

Governments work tirelessly to defend and protect their national borders, tackling challenges from human trafficking and criminal activity. These challenges are not static, they evolve constantly and differ from country to country and region to region. This puts substantial pressure on border officials. To do their jobs effectively, these experts need swift access to quality data that lets them make informed decisions.

Operational complexities and efficiencies

Governments walk a fine line when it comes to balancing the need for a secure border with the demands from travelers for a smooth entry-and-exit experience. Tourists don't want to kickstart a much-anticipated holiday by spending hours in a passport queue, while today's frequent business flyers expect a slick border experience. Yet, any government that doesn't put safety first is neglecting its duties

Rising costs

The current pace of technological change is staggering. Introduce a new system, software, or IT solution and immediately an existing platform needs upgrading or tweaking to remain relevant.

Outsourcing IT requirements to specialist companies that build in automation, the latest technologies and data quality checks, is less costly for governments than creating their own in-house systems. These solutions must, however, comply with global standards and regulations and require ongoing improvement and development.

Concerns about data quality and integrity

Governments need access to quality data at the right time and in the right format to enable effective and proactive decision-making that protects national borders. Without reliable and accurate data about who is entering, departing, or transiting, governments don't have the insights they need to identify and assess high-risk travelers.

To meet these challenges head-on, governments and their border teams need very specific tools and information that enable them to do their jobs effectively. These requirements include:

- Timely information about flights coming in and who is on board

- A direct line to API data that cuts out time delays and updates changes in present time

- A system that offers administrative control to the customer
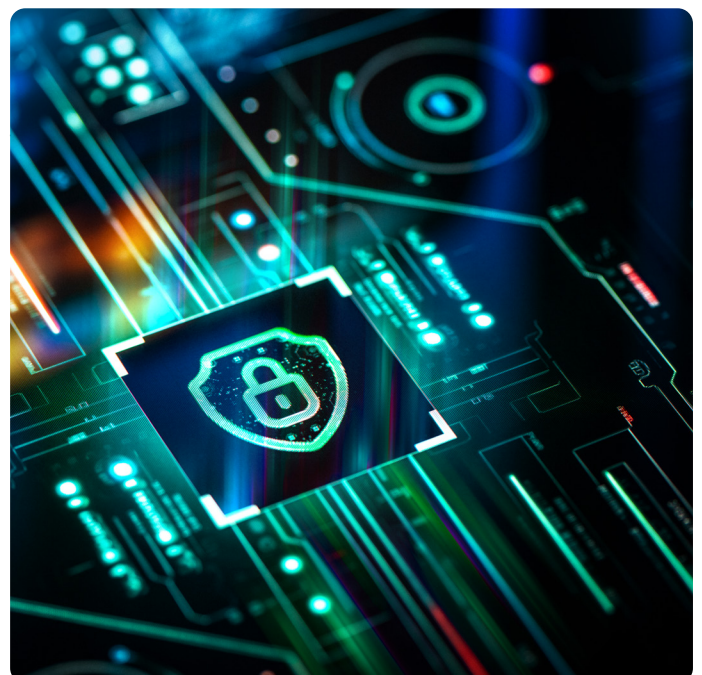
Solving the major challenges

The SITA API PNR Gateway answers the specific challenges of governments by creating a unified interface for messages, flight (journey) data and traveler information. Operating in present time, our solution plugs border experts directly into the data that reflects the current and unfolding situation on their borders.

How do we do this?

Your dilemma: global security challenges

Our solution: Maintaining a robust and secure border means global travelers are often greeted by long delays at border control. Citizens expect to enter their home countries without the inconvenience of long delays, while delays and frustrations at the border can taint the experience of tourists and business travelers. This puts governments in a bind. They must protect their borders in compliance with international law and regulations while providing safe and seamless travel for legitimate business and leisure travelers. The SITA API PNR Gateway delivers data directly to governments, giving them the information they need to make proactive decisions.

The outcome: For low-risk travelers, the end result is a slicker and more enjoyable experience at border control. For border agencies, access to relevant data at the right time allows them to take a more proactive approach and focus their resources on persons who may be of interest.

Your dilemma: operational complexities and efficiencies

Our solution: With SITA API PNR Gateway, governments receive information about travelers before they embark on their journey. This effectively moves the border back and into the digital space, giving governments time to properly pre-screen high-risk travelers before they arrive at the physical border. The SITA API PNR Gateway single-window view can be used by governments to access traveler information across various transport modes, from air and sea to land travel.

The outcome: In practice, this means governments can better balance the need for robust border security with a pleasant and smooth travel experience for citizens, holidaymakers, and business passengers.

Your dilemma: rising costs

Our solution: Given the cost and expertise required, opting for an off-the-shelf solution makes sense for governments. So too does working with a technology provider capable of offering support as part of a multi-faceted ecosystem. The SITA API PNR Gateway has been designed to work with the SITA Intelligence and Targeting data analysis solution, but also works effectively with other programs and suppliers.

The outcome: This means that for an agreed fee, governments have access to the very best IT solutions on the market, and the constant support needed to run these systems efficiently and effectively.

Your dilemma: concerns about data quality and integrity

Our solution: The SITA API PNR Gateway is a single-window data delivery solution with data quality check capabilities. Our advanced visualization tool not only delivers data from various sources to a single government data access point, it also ensures data quality by focusing on four core pillars: timeliness, completeness, correctness and semantics.

The outcome: At SITA, ensuring data quality is the jewel in our crown which means governments can be assured they have the best information at their disposal, at the right time and in the right format.
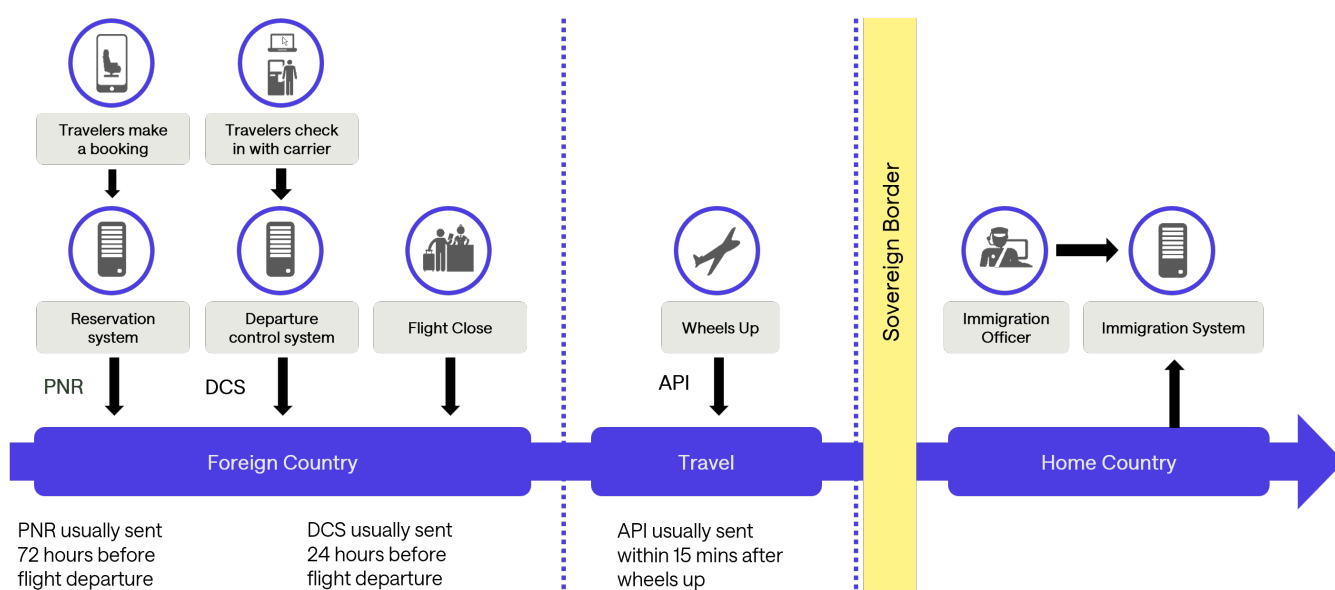
Addressing specific border control needs

To address the needs of border management experts, our API PNR Gateway specifically addresses the following solutions:

Timely information about flights coming in and who is on board

The SITA API PNR Gateway combines API and PNR passenger information. These strands of information are packaged as a data message output that is sent directly to the government in question. This ensures a richer traveler data set, while cross-comparison helps to improve data quality. Below is a visual overview of SITA's Advance Passenger Information process.

API, PNR and DCS Timeline

Proactive border control

PNR usually sent 72 hours before flight departure

DCS usually sent 24 hours before flight departure

API usually sent within 15 mins after wheels up

A direct line to API data that cuts out time delays and updates changes in present time

A variety of government agencies need access to Advance Passenger Information. They want to receive this information directly rather than via another department, and without time delays or data changes. The SITA API PNR Gateway supplies information to a central data access point but also supports the direct transmission of data for up to five different government agencies, from border police to customers, the tourism ministry or tax authority.
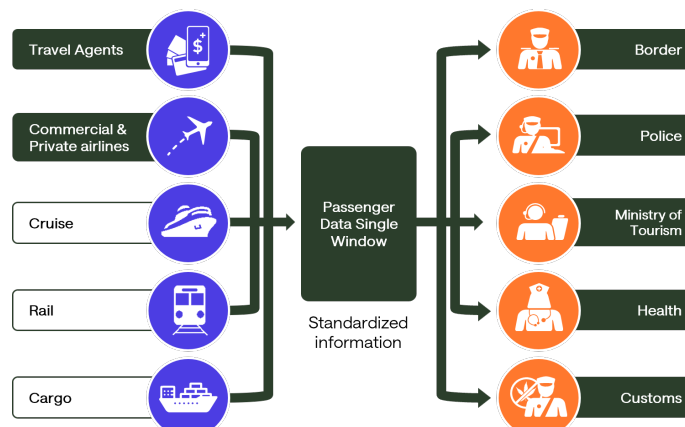
Currently in development

By end-2025 the SITA API PNR Gateway platform will include a new notification screen that highlights potential issues. This feature will make it faster to spot and respond to red flags. For picking up border control issues rapidly on short-haul flights, this innovation will be a gamechanger.

A system that offers administrative control to the customer

The SITA API PNR Gateway offers a unified interface which let governments set up the system to their exact requirements. This enables countries and their border teams to administer the portal themselves, without the direct involvement of the third party. Not only does this give governments full control over the system and its designated users, they can produce optional statistical reports at will and have access to full system audit data.

Manual access to input ad-hoc flight data

One of the challenges for governments and border officials is ensuring they are aware of one-off ad-hoc flights, private jet flights or those run by charter airlines. These flights do not follow the usual schedules of big carriers, and their flight data must be handled manually. Using the SITA API PNR Gateway, governments can take information sent via email or on a spreadsheet and capture these details to ensure a full system overview.

Added functionality

For an additional license fee, governments can opt-in to add flight tracking. This functionality tracks on-time flights, cancelled and suspended flights, and rescheduled or late arrivals. All of this information then populates a detailed flight status screen on the SITA API PNR Gateway.

The sample Message View screen below shows the status of each flight based on timeliness status check. Our timeliness check indicates if messages have been received on time and according to your government requirements, and in line with SITA's data quality checks.

Message View

Displaying message(s) for country code **ISR** for de ... View more
Displaying **50** of **2000** matching records

| MESSAGE RECEIVED DATE/TIME @ SITA (UTC)	GOVERNMENT DETAILS	INPUT TRANSMISSION TIME (HOURS)	SERVICE DETAILS	JOURNEY LEG	DEPARTURE DATE/TIME	ARRIVAL DATE/TIME	FORMAT	DECLARED RECORDS	CORRECTNESS CHECK	TIMELINESS CHECK	PREPARATION DATE/TIME	NO OF PARTS	ACTION
12-06-2024 19:20	ISR (ISR.1)	T-48.5	DL 0234	JFK - TLV	14-06-2024 15:35	15-06-2024 09:35	PNRGOV EDIFACT 11.1	164	✓	*Early* for T-48	12-06-2024 19:19	1	
12-06-2024 19:10	ISR (ISR.1)	T-48.5	PC 0779	SAW - TLV	14-06-2024 22:15	15-06-2024 00:15	PNRGOV EDIFACT 11.1	1	✓	*Timely* for T-48	12-06-2024 19:10	1	
12-06-2024 17:25	ISR (ISR.1)	T-0.5	PC 0785	SAW - TLV	12-06-2024 20:30	12-06-2024 22:30	PNRGOV EDIFACT 11.1	2	✓	*Late* for T-48	12-06-2024 17:25	1	
12-06-2024 17:25	ISR (ISR.1)	T-48.5	PC 0785	SAW - TLV	14-06-2024 20:30	14-06-2024 22:30	PNRGOV EDIFACT 11.1	1	✓	*Timely* for T-48	12-06-2024 17:25	1	
12-06-2024 17:21	ISR (ISR.1)	T-2.5	DL 0234	JFK - TLV	12-06-2024 15:35	13-06-2024 09:35	PNRGOV EDIFACT 11.1	3	⚠	*Late* for T-48	12-06-2024 17:20	1	
12-06-2024 15:23	ISR (ISR.1)	T-0.5	TO 3459	TLV - ORY	12-06-2024 18:25	12-06-2024 22:35	PNRGOV EDIFACT 11.1	-	✓	*Late* for T-48	12-06-2024 15:23	1	
12-06-2024 14:00	ISR (ISR.1)	T-48	TO 3459	TLV - ORY	14-06-2024 17:00	14-06-2024 21:10	PNRGOV EDIFACT 11.1	-	✓	*Timely* for T-48	12-06-2024 14:00	1	

Data quality assurance: the jewel in our crown

If data is the key to protecting national borders, then the lynchpin supporting the entire process is data quality.

At SITA, our approach to ensuring data quality rests on four pillars: Timeliness, Completeness, Correctness, Semantics

For governments to make decisions based on reliable information, they need access to timely flight information. They require a mechanism to ensure carriers provide complete and correct data. They also need an additional semantics check driven by machine learning that picks up credibility issues like a passenger called Mickey Mouse, one flying on an invalid passport, or a traveler aged 160. By addressing the issues of timeliness, completeness, correctness and semantics, the SITA API PNR Gateway gives governments the confidence to make accurate risk assessments using our data.

The screenshot below reflects the completeness of data collected for a flight from London Heathrow (LHR) to Heydar Aliyev International Airport (GYD) in Azerbaijan. Correctness, completeness, and timeliness can each be filtered using the Message View on the SITA API PNR Gateway.
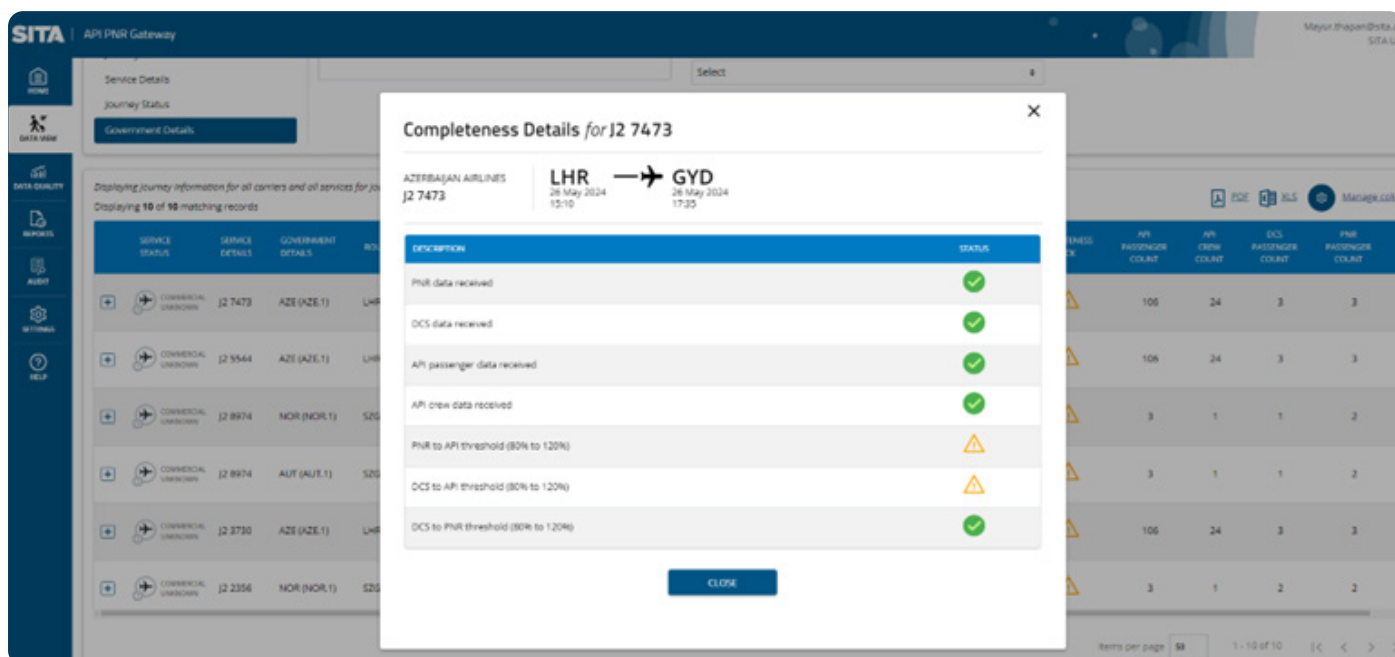
The Data Quality dashboard (pictured) offers users a full overview of the four data quality pillars.
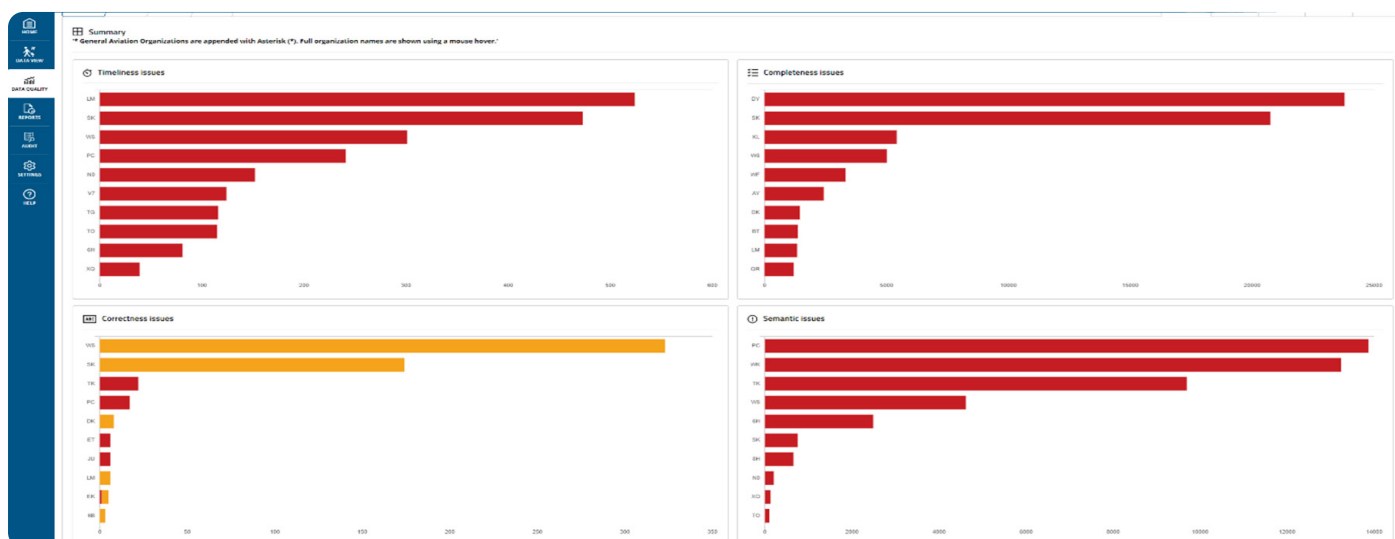
In the Works

A new SITA API PNR Gateway feature is in development. This will enhance the current functionality by adding a notification alert when data is missing. This automated function will alert governments and carriers about missing or delayed data, giving them time to take follow-up action. Notifications will be sent via email and can be filtered according to carrier and data type (API or PNR).

A multi-modal future

Today's traveler is motivated by experiences. They demand convenience, efficiency and – above all – choice. Instead of flying directly to Bangkok, tourists might prefer to take an airplane to Singapore and train through Kuala Lumpur and Penang into Thailand. Or how about taking a cruise to the vibrant and diverse South American nation of Belize before flying on to Rio de Janeiro for Brazil's legendary carnival?

Governments and border management agents must be alert to new trends and consumer tastes for multimodal travel experiences. The world of travel is no longer just a straight line. This has implications for governments and border agencies that must invest across the entire border ecosystem, not only in high-volume airport hubs.

For an additional fee, governments can add our maritime cruise ship functionality (pictured below).

In the Works

The first step towards unveiling a full multi-modal borders system, our designers are currently working to add other types of maritime modules, like ferries, as well as transport modes like road and rail to the SITA API PNR Gateway.

SITA at a glance

After more than 25 years in this business we have proved our worth as a capable and innovative borders technology partner. Not only do we help governments enhance national security, we have agility to keep improving and adapting as global threats and risks change.

We do this by working closely with governments to process billions of travelers each and every year, from those transiting through, entering the country or exiting the border. We listen, we track the trends, and we continuously bring solutions to the table.

We are trusted by more than 70 governments around the world and over 600 airlines. Each year, we process more than 100 million travelers using our SITA API and PNR solutions. This is because our solutions work. Numerous governments have tried and tested them, and they all give SITA the thumbs up when it comes to delivering an efficient and effective borders solution.

How do we do this?

- We use information and communications technology to make travel easier and safer.
- Almost every airline and airport in the world does business with SITA.
- Nearly every passenger trip relies on SITA's advanced technology.
- Our solutions span pre-travel touchpoints, check-in and baggage processing, boarding, border control and inflight connectivity.
- Founded in 1949 by 11 pioneering airlines, today we boast an extensive community. We have more than 400 air transport industry members and 2,500 customers in over 200 countries and territories rely on our services.
- Our customers include airlines, airports, ground handlers, aircraft, air navigation service providers, and governments.
- Our solutions drive operational efficiencies at more than 1,000 airports, while delivering the promise of the connected aircraft to customers of 17,000 aircraft globally.
- We help more than 70 governments balance the need for secure borders and seamless travel.
- We continually invest in our business, innovating and working in collaboration with our air transport customers, industry bodies and partners.
- We provide services over the world's most extensive communications network. This vital asset keeps the global air transport industry connected and bridges 45% of the air transport community's data exchange.
- Our customers enjoy 24/7 integrated local and global support from our customer service team of more than 1,700 people around the world.
- We develop solutions to help the aviation industry meet its carbon reduction objectives, including reduced fuel burn and greater operational efficiencies.
- We are a certified CarbonNeutral® company, reducing greenhouse gas emissions for all our operations through our United Nations-recognized Planet+ program. In 2023, our near- and long-term emission reduction targets were validated by the Science Based Targets initiative (SBTi) Net-Zero Standard.

Keen to know more?

Check out this link for more info and to get in touch: https://www.sita.aero/solutions/sita-at-borders/border-management/sita-api-pnr-gateway/

The SITA API PNR Gateway works with analytics and intelligence systems including SITA's highly capable and advanced SITA Intelligence and Targeting. For more information, visit: https://www.sita.aero/solutions/sita-at-borders/border-management/sita-intelligence-and-targeting/

For further information about SITA, please visit www.sita.aero

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