



Better Borders

Enhance Security, Boost Tourism, Facilitate Seamless Travel & Drive Economic Growth



In partnership with

SITA

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FOREWORD

Borders are more than lines on a map – they are the window to a country.

They are the first impression a traveller has of a country and can communicate a nation's culture, identity and values. They are therefore **assets of strategic national importance**, with the power to strengthen national security, drive economic growth and elevate a country's international reputation.

By 2035, aviation is projected to carry **14 billion passengers** annually, with Travel & Tourism forecast to support **462 million jobs** and contribute **US\$16.5 trillion** to global GDP, representing **11.5% of the world's economy**.

This potential is enormous, but could be magnified even further with 'Better Borders'. By transforming how we conceive, design, and manage these critical crossing points countries could unlock an additional **US\$401 billion in GDP** and create **14 million new tourism related jobs** across the G20, EU, and African Union nations.

This 'Better Borders' report, developed by the **World Travel & Tourism Council (WTTC)** and **SITA** aims to help governments capture this huge economic potential and boost tourism growth, whilst also helping Border Agencies to strengthen security and enable more seamless travel.

Achieving this will require reimagining how borders function. Innovative digital solutions can ease congestion in space constrained immigration halls and reduce the reliance on manual staffing by streamlining processes. This can help Border Agencies manage rising traveller volumes.

Digital solutions are within reach and travellers are ready. **75% of travellers prefer biometric identification** over manual processes and **85% are willing to share data in advance of travel** if it means a faster, more efficient border experience.

With strategic investment in digital infrastructure and visa technology, borders can be transformed into gateways of innovation that enhance security and streamline travel.

Leading destinations are already embracing this future. Their success stories are featured in this report and demonstrate how positive border management can also fuel tourism growth, job creation, and national prosperity.

This report is therefore for government officials from **Border Agencies** as well as officials from **Ministries of Tourism, Home Affairs, Foreign Affairs, National Security, Finance, Transport** and more, to reflect the views and voices of all stakeholders in successfully shaping the future of borders.

'Better Borders' is more than a vision. It is a blueprint for progress and we stand ready to help all governments as **the future of travel, tourism, and a nations competitiveness begins at the border**.



Gloria Guevara
Interim CEO, World Travel & Tourism Council



David Lavorel
CEO, SITA

EXECUTIVE SUMMARY

By 2035, aviation is expected to transport **14 billion passengers annually**¹ and WTTC forecasts that Travel & Tourism will contribute **US\$16.5 trillion to global GDP** (11.5% of the world economy) and support **462 million jobs** (12.5% of the total workforce)² demonstrating the strategic importance of the Travel & Tourism sector to the world's economy.

With 'Better Borders' this could be supercharged.

WTTC analysis finds that an extra **US\$401 billion could be added to GDP** and an additional **14 million new jobs** created above and beyond the already forecasted growth from tourism by implementing optimised border policies, technologies and operations in the G20, European Union (EU), and African Union (AU) countries over the next 10 years (2025-2035).

**+\$401
BILLION**

Increases to real GDP by 2035, as a result of the policy package specified.

**+14m
JOBS**

Generated by travel and tourism by 2035. This represents a 4.3% uplift.

Economic Opportunity with 'Better Borders'

To unlock these transformative economic gains, whilst also strengthening security and enabling seamless travel, **Six Principles for Better Borders** are recommended.

These are applied across **Visas & Travel Authorisations** and **Digital Border Technologies** with **18 specific actions**. These include the acceleration of visa digitalisation and implementation of modern border technologies to strengthen border security, enhance seamless travel and boost tourism.

Visa & Travel Authorisation Principles

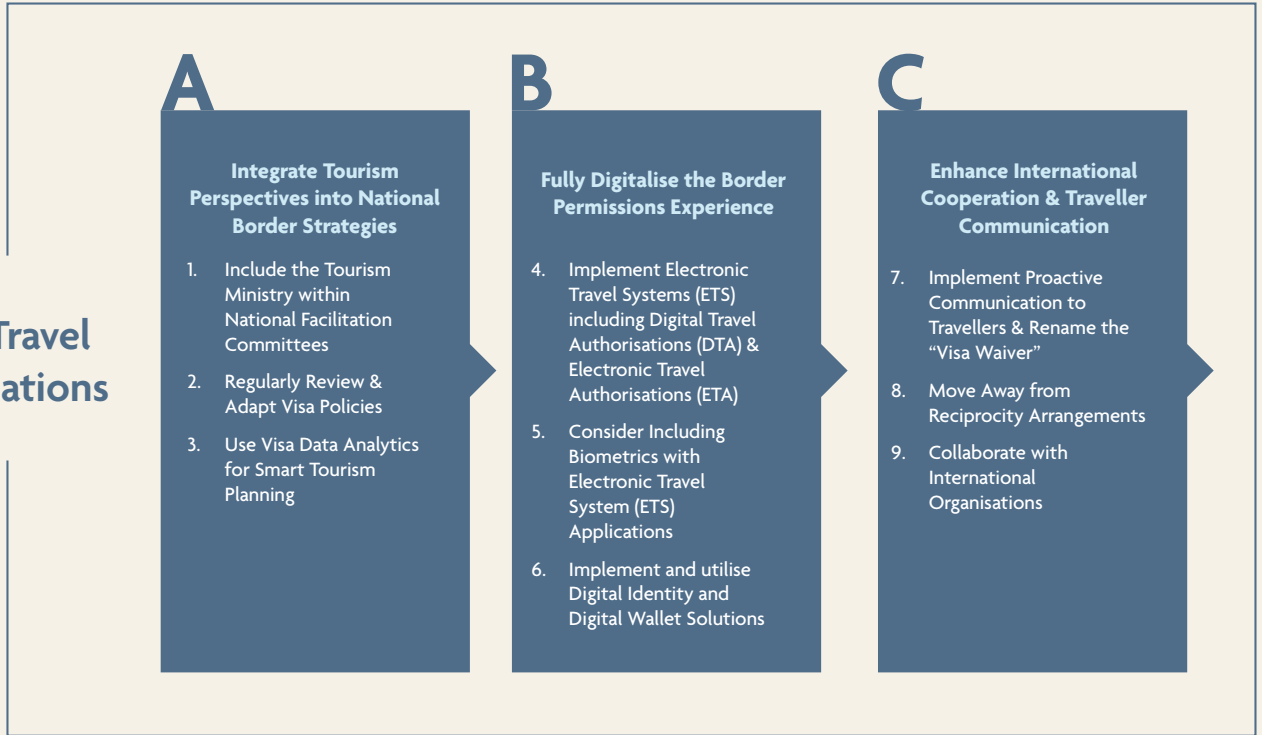
- A) Integrate Tourism Perspectives into National Border Strategies:** Countries should establish a 'National Facilitation Committee' to collaborate on seamless travel initiatives. They should include representatives from the Travel & Tourism industry and across government departments including the Border Agency and Ministries of Tourism, Transport, Home Affairs, Foreign Affairs and Finance.
- B) Fully Digitalise the Border Permissions Experience:** Move from paper-based processes to end-to-end electronic systems for applications, issuance, and verification.
- C) Enhance International Cooperation & Traveller Communication:** Harmonise policies across countries

to the greatest extent possible and provide clear, accessible information to travellers.

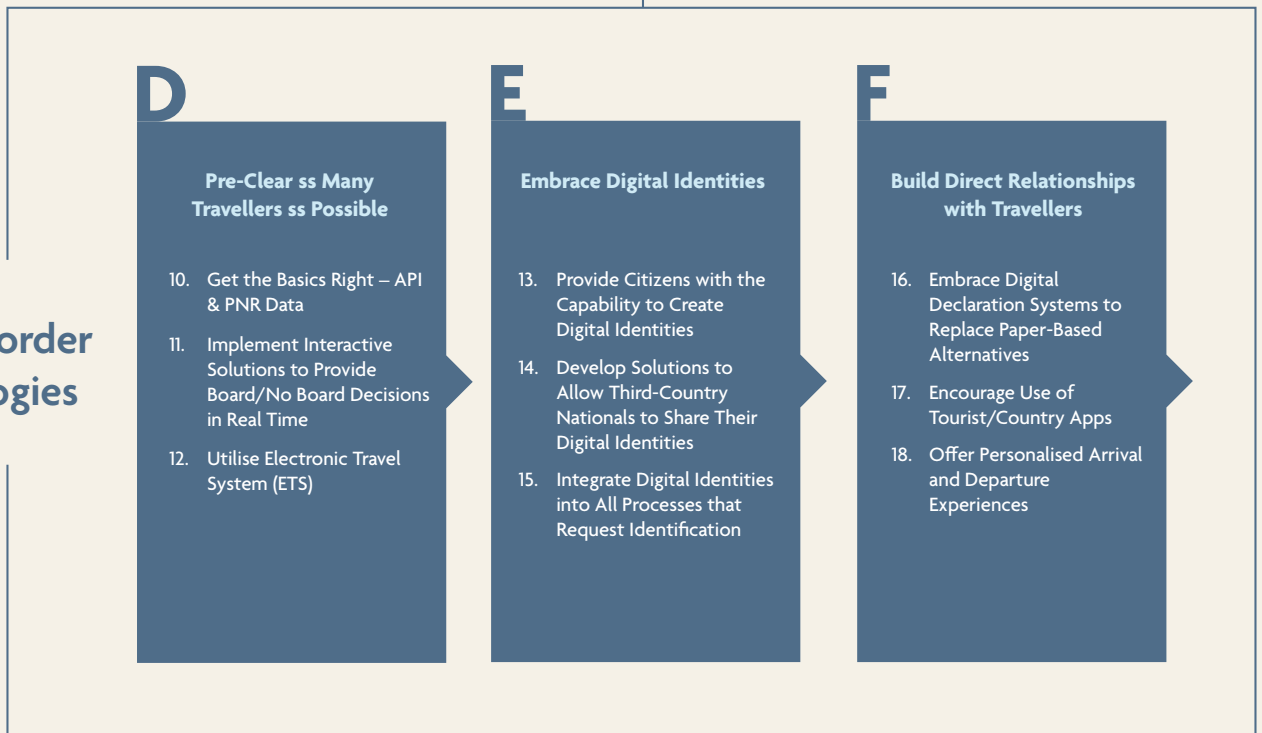
Digital Border Technology Principles

- D) Pre-Clear as Many Travellers as Possible:** Use traveller data to conduct risk assessments long before arrival.
- E) Embrace Digital Identities:** Leverage secure, verifiable digital credentials to streamline identity checks.
- F) Build Direct Relationships with Travellers:** Use digital platforms to communicate, gather necessary information, and offer personalised services to travellers.

Visa's & Travel Authorisations



Digital Border Technologies





INTRODUCTION

In a highly interconnected and digitally enhanced world, borders must be recognised as strategic assets of national importance that are dynamic gateways to a nation's culture, brand, and international reputation.

They are important enablers of national security, but can also be economic drivers of national growth and facilitators of tourism.

Digital border systems, biometrics and enhanced visa technology offers secure, streamlined, and traveller-friendly experiences that showcase a country at its very best.

An example of an organisation fully embracing border innovation is the United States Customs & Border Protection (CBP) agency.

U.S. Customs & Border Protection (CBP)

In 2025, U.S. CBP used biometric facial comparison technology to process travellers entering the United States at 238 airports, including all 14 CBP Preclearance locations and 57 locations for international air departures³.

Global Entry

Global Entry is a Trusted Traveler Program managed by US CBP which enables US citizens, residents and low-risk international travellers from over 20 countries to get their entry to the U.S. pre-approved⁴. There are approximately 13 million Global Entry members⁵ and these trusted travellers are then fast-tracked through the border on arrival in the U.S. using touchless facial recognition portals providing a secure and rapid border experience.

Global Entry members can submit their travel document and photo through a free, secure app on their smartphone or other mobile device. This is now accepted at 80 airports which carry out Global Entry processing, including all major U.S. airports and multiple CBP Preclearance airports abroad such as in Canada, Ireland and Abu Dhabi⁶. Global Entry membership lasts for five years and costs \$120⁷.



Global Entry Kiosk⁸



Seamless Border Entry at Miami International Airport⁹

Seamless Border Entry (SBE)

International visitors to the U.S. may also use Seamless Border Entry (SBE) for a secure, seamless, and touchless experience⁵. SBE uses "On the Move" biometric technology and allows Global Entry members to move through the inspection process seamlessly at walking pace and with minimal interaction with a CBP officer. In 2025, SBE is available at select airports, including Los Angeles International Airport (LAX), Miami International Airport (MIA), Washington Dulles International Airport (IAD), Chicago O'Hare International Airport (ORD), Newark Liberty International Airport (EWR), George Bush Continental Airport (IAH), and Toronto Pierson International Airport (YYZ).

Mobile Apps

CBP also provides a suite of mobile applications to help travellers streamline their entry into the U.S. These include:

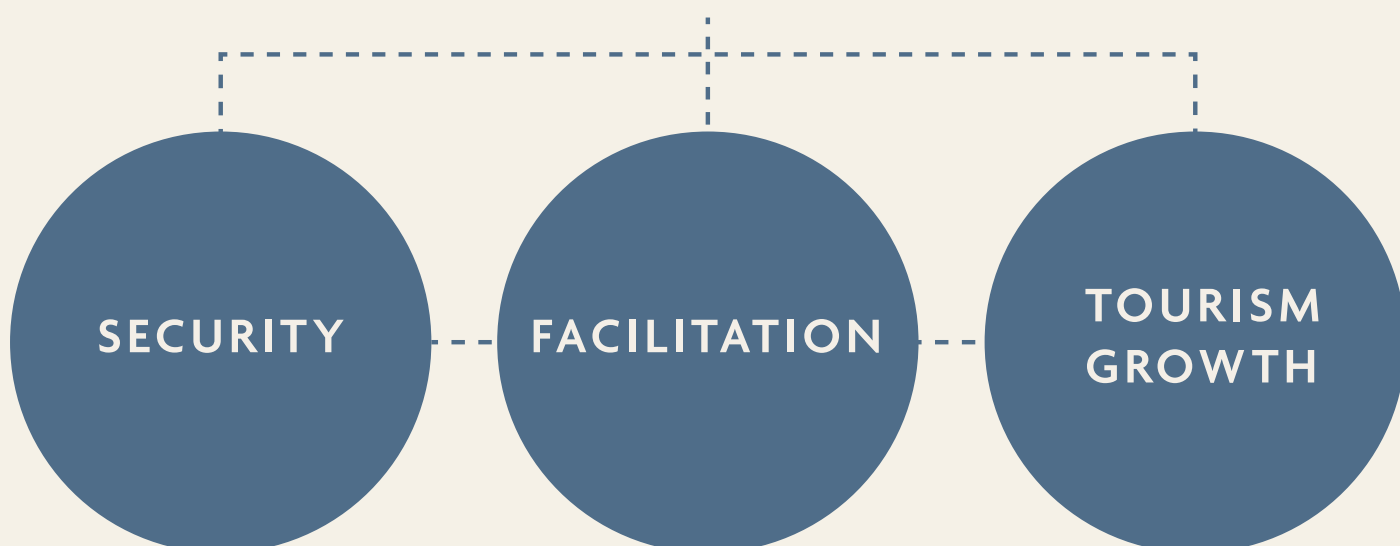
- **Global Entry Mobile App:** This enables active Global Entry members to report their arrival at any supported airport in the place of a stationary Global Entry kiosk. Travellers simply choose their arrival airport from list of supported airports and submit a photo for CBP verification. If successful, the traveller will receive a receipt to present to a Global Entry officer upon arrival.
- **Mobile Passport Control (MPC):** The MPC application streamlines the processing of eligible travellers entering the United States. Travellers do not need to be a member of Global Entry and it is available to all U.S. citizens, residents, Canadian B1/B2 visitors and returning Visa Waiver Program travellers with an approved ESTA. MPC enables travellers to take a self-photo and answer a few questions about their arrival and complete a 'Customs Declaration' ahead of travel. In 2025, the use of MPC is available at 51 sites, including 33 U.S. International Airports, 14 Preclearance locations, and 4 seaports.
- **CBP Border Wait Times:** This app provides estimated wait times when crossing the U.S./Canada and U.S./Mexico land borders. Each border location updates its estimated wait times hourly.

As illustrated by U.S. CBP, to achieve 'Better Borders', nations should focus on two key areas, which are covered in the following chapters of this report:

- **Visas & Travel Authorisations**
- **Digital Border Technologies**

By integrating the digital solutions and forward-thinking policies outlined in this report, countries can simultaneously enhance security, facilitate seamless travel, boost their economic growth and elevate their global standing as a secure, welcoming, and world-class destination.

Better Borders Deliver



Travellers want speed and efficiency when they travel and many are now accustomed to sharing their information and confirming their identity using biometrics, with the 2024 Global Passenger Survey from the International Air Transport Association (IATA) finding that:

- **75% of aviation travellers prefer biometrics over traditional methods of identification**
- **85% of travellers are willing to share their immigration data with government authorities in advance of their trip if they can experience a more efficient process at the border.**

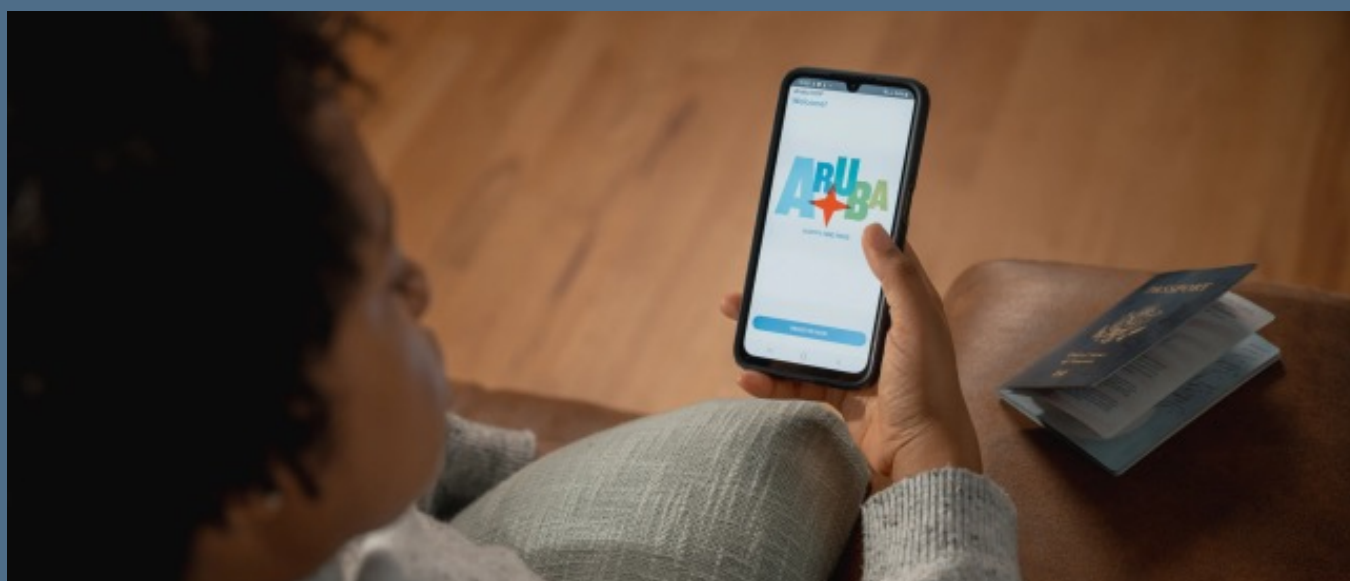
Many travellers also prefer checking in for a trip online, and passing through a border by presenting themselves to a machine – rather than to a person.

Another country embracing digital border transformation with great success is the Caribbean Island of Aruba.

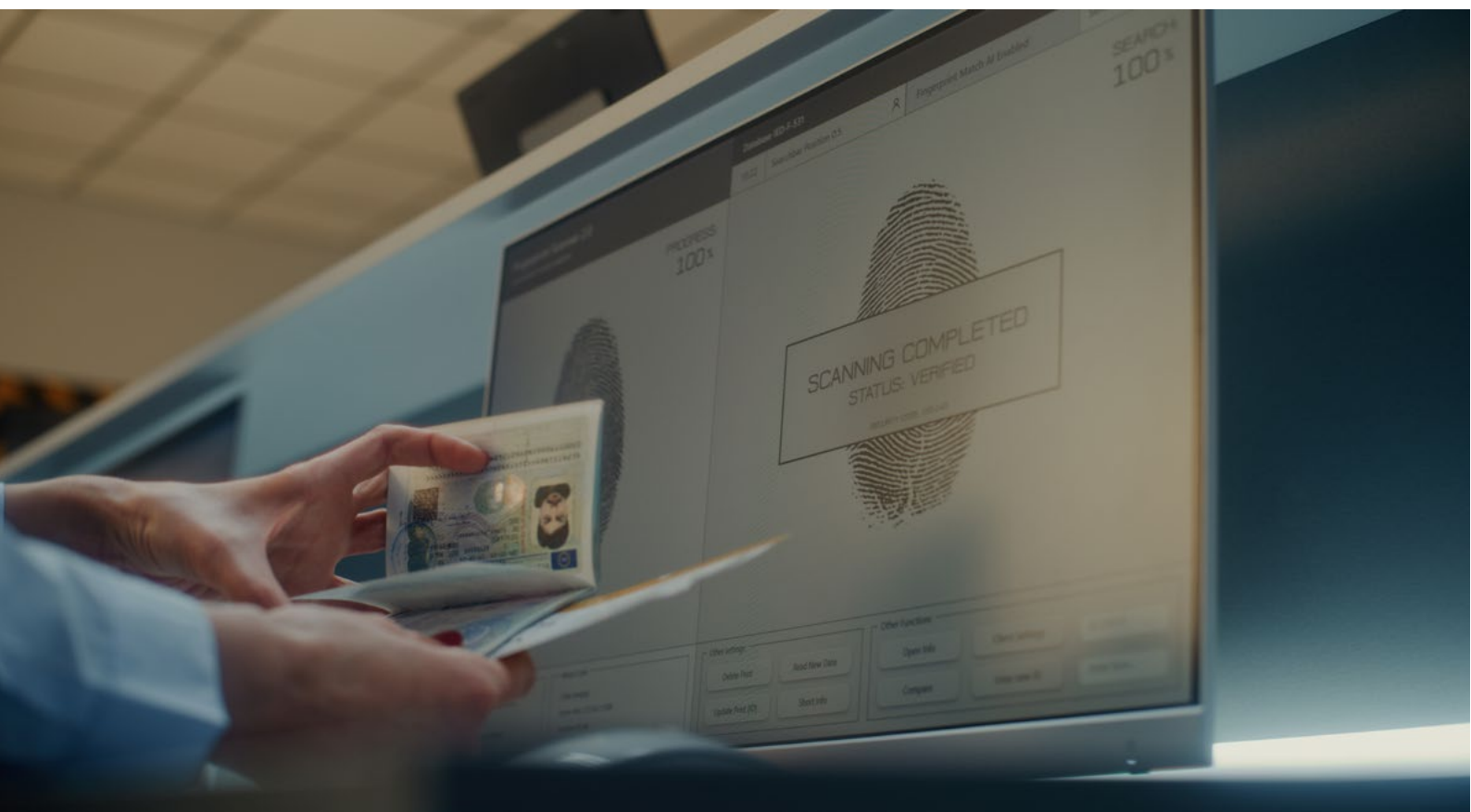
Aruba

The Aruba Happy One Pass (AHOP) app is a mobile application that converts a physical passport into a digital credential that can be electronically shared with the border agency and travel stakeholders, such as an airline. It allows travellers to move through checkpoints at the airport without needing to present their physical passport. The system uses facial recognition and other technologies to verify a traveller's identity against their digital credential for a streamlined travel process.

Ronella Croes, CEO of the Aruba Tourism Authority said: “As a Caribbean destination with one of the highest return rates, Aruba continually strives to implement innovative technology to deliver an exceptional travel experience from the moment travellers leave their homes. Through the Aruba Happy One Pass programme, travelling to and from Aruba has never been easier. We are thrilled to offer our guests a more streamlined border process, showcasing Aruba's innovation in the tourism industry¹⁰.



Aruba 'Happy One Pass' Border Control App



VISAS & TRAVEL AUTHORISATIONS

In an interconnected world, the efficient and secure movement of people across borders is a fundamental enabler of global tourism, business, cultural exchange and economic development.

Border agencies have the important responsibility and right to decide who requires a visa, but with the adoption of modern visa technology they can enhance security, improve efficiency and unlock tourism growth with significant economic advantages. Through collaboration between governments and the Travel & Tourism sector, strong border security and seamless travel can be achieved.

This chapter outlines the current landscape of visas and travel authorisations, analyses their economic and security impacts and recommends actions to create 'Better Borders'.

With innovative digital technologies, data analytics, and international cooperation, governments can implement visa systems that strengthen border security, create a smoother travel experience and enhance tourism with greater economic prosperity.

Economic & Security Implications of Visa Policies

Visa policies are more than just administrative procedures. They are powerful government instruments with profound economic and security implications for nations. The choices governments make regarding visa requirements directly influence a country's attractiveness as a destination for tourism and business, while also serving as a critical defender of national security.



Economic Impact

The economic impact of visa policies is substantial.

Overly restrictive visa regimes can significantly deter international travel, leading to substantial economic losses from missed tourism revenue, lack of job creation and reduced foreign investment.

A 2024 study by the University of the Balearic Islands, meticulously quantified the effect of different visa types on international tourism¹¹. They concluded that imposing strict visa requirements decreased international tourism movements. The study also revealed that while revenues from visas can increase public finances, the overall economic cost of lost tourism due to restrictive visa policies far outweighs any visa fee financial gains.

Historical data also provides stark examples of the negative economic consequences of restrictive visa policies.

Following the 9/11 terrorist attacks in 2001, the US implemented stricter visa requirements. The University of the Balearic Islands study found that the associated decline in foreign visitors over the subsequent decade cost American businesses and workers an estimated US\$859 billion in lost revenue and prevented the creation of at least 500,000 potential jobs¹¹.

Conversely, 'smarter' visa policies have been shown to stimulate economic growth, while improving security.

WTTC data for 2024 shows that Travel & Tourism contributed US\$10.9 trillion to global GDP, supported 357 million jobs worldwide and generated US\$1.9 trillion in international visitor spend¹². These figures underscore the immense economic potential and positive impact that can be unlocked with a balanced approach to visa policy making.

Security Impact

While the economic benefits of visa facilitation are clear, visas are also of critical importance to national security and controlling who enters a country.

'Better Borders' offer an opportunity to implement security measures that are effective, without being unduly burdensome, or discriminatory. Traditional visa processes can involve in-person interviews and extensive documentation, both of which are designed to identify high-risk individuals. However, these processes can be slow, cumbersome and resource intensive. Large, manual systems may also no longer prove the most efficient means of threat detection in a rapidly evolving global security landscape.

Governments must therefore be equipped with the best technology to effectively vet travellers and mitigate potential threats. This is crucial in reducing the bottleneck in visa processing. In some countries travellers can wait extremely long periods of time - many months to years - for a visa, but with innovation and modern visa technology the processing time can be significantly reduced, whilst maintaining high levels of security.



United Arab Emirates (UAE)

The UAE is an example of a country with a highly digitalised visa system that is powered by AI, automated document scanning, and online portals. These digital innovations have dramatically reduced visa processing times, with tourist visas approved in a few days and an express service that can deliver tourist visa approvals in just 4–6 hours, even during periods of high demand.

This is partly achieved through AI which enhances every stage of the visa journey¹³:

- **Smart Assistance:** AI helps users accurately complete visa application forms. The AI automatically flags errors and ensures all documents are correctly submitted. This has eliminated significant periods of delay caused by minor mistakes.
- **Automated Document Verification:** Users can upload passports, photos, and other supporting files which are instantly scanned. AI checks for missing information, or blurred items and alerts users for corrections, reducing the need for manual immigration officer review of application accuracy and wait times.
- **24/7 Conversational Support:** AI chat assistants guide users at every stage, including answering questions on visa types, required documents, or expected timelines. The AI escalates complex queries to human immigration officers with the full chat history, making the resolution faster and more accurate.
- **Predictive Analytics & Risk Assessment:** AI forecasts application demand surges by analysing historical data, travel trends, and upcoming events. This allows immigration authorities to allocate sufficient staff and resources proactively ensuring there is no backlog during periods of high activity.

Together, these technologies make the UAE's digital visa system one of the most effective and efficient in the world.

Governments are therefore increasingly adopting digital solutions, which require a greater focus on data-driven decision making, with AI and data analytics to assess security risks. Some governments also require traveller biometric data to be supplied during the visa application phase to enable more robust identity vetting. This can also enable an expedited and seamless arrival experience by matching the visa application biometric with the traveller at the arrival border. Ultimately, this more sophisticated and data-driven filter allows for a more targeted approach to border security that appropriately focuses on high-risk threats while facilitating most of the low-risk travel.

By embracing technological advancements and international collaboration, governments can move towards ‘Better Borders’ where security, seamless travel and economic prosperity can all be achieved.

Visa Types & Policy Trends

Obtaining a visa or travel authorisation can be a complex procedure, but the end-to-end process can be simplified into three key stages: application, issuance, and verification.



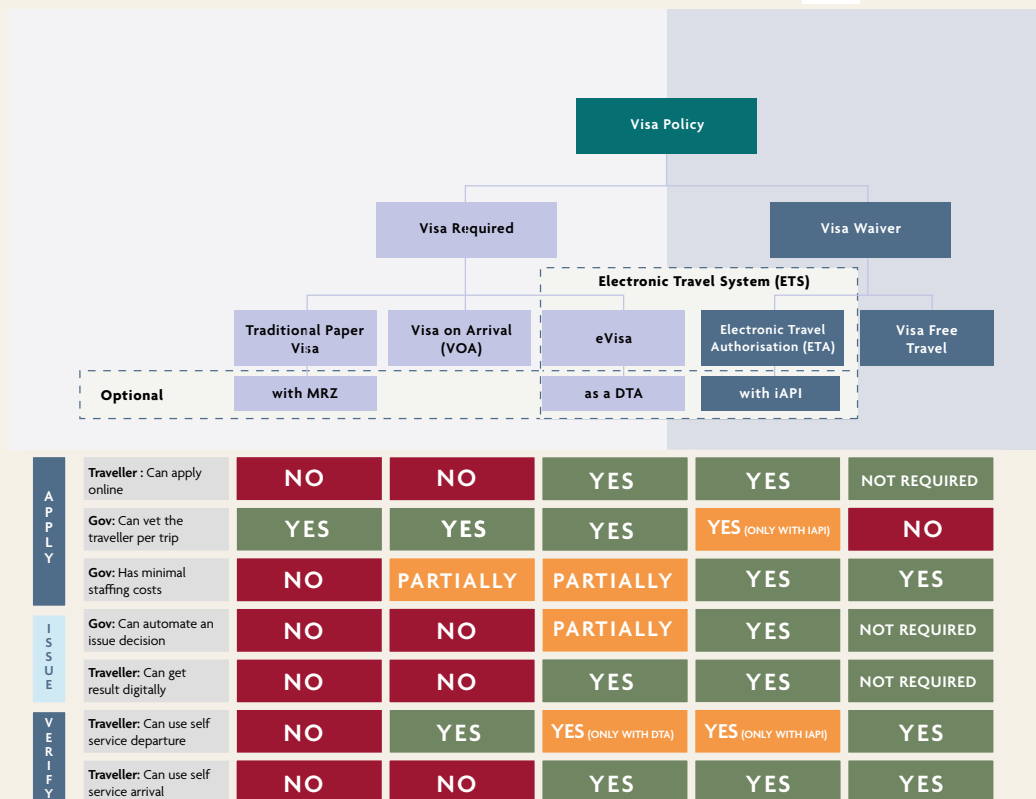
- In the **application** phase, travellers apply for a visa, or travel authorisation, and submit any required documentation. This could be through a digital platform, or at an embassy/consulate. This stage may also include biometric data collection.
- During the **issuance** phase, governments will review the application to assess it for risks and compliance with the entry requirements. If approved, the government will issue a visa, or travel authorisation to the traveller, either as a physical item or as a digital authorisation linked to the traveller's passport.
- At the **verification** phase, border authorities and travel operators will confirm the visas authenticity and validity at the point of departure (for travel operators) and point of entry (for border authorities). This may involve automated systems, or biometric checks to streamline processing and enhance security.

Visas can have many different purposes, such as to grant access to a country for work, study or tourism. These can have different application requirements and various levels of scrutiny during the assessment and issuance phase.

This report focusses on travel for tourism, with the following section summarising the primary types of tourism visas and travel authorisations mapped to the opportunities they present for stronger security and better travel facilitation, with enhanced tourism and economic growth. These include:

- **Traditional Paper Visa**
- **Visa on Arrival (VOA)**
- **eVisa**
- **Electronic Travel Authorisation (ETA)**
- **Visa Free Travel**

The following diagram maps the above five visa and travel authorisation types to the three process stages of application, issuance and verification and illustrates how efficient and effective they are via the red, amber and green boxes.



eVisa & ETA

It is important to note that whilst an eVisa and Electronic Travel Authorisation (ETA) are similar, as they are both online systems that process similar traveller data, they have very different functions.

An eVisa is a permit to enter, stay or transit through a country, while an ETA is a traveller pre-screening mechanism only. An ETA does not meet the legal threshold of a visa and does not automatically allow a traveller entry into a country.

	eVisa	ETA
Common Legal Basis	Immigration law	Border security or airspace regulations
Entry Rights	Permission to enter, stay or transit through a country	Permission to travel to a country and seek entry at the border
Duration	Usually valid for short stays (typically up to 90 days), with single or multiple entries	Usually valid for any number of short trips for between one to five years

A traditional paper visa is often a physical sticker, or stamp, which is fixed to a traveller's passport and issued by the consulate, or embassy, of a destination country. These visa applications can be lengthy and often require the submission of numerous documents and an in-person interview.

Traditional visas can therefore be cumbersome for travellers, governments and travel operators. The time, cost and effort involved can also prove a significant deterrent for travellers who wish to visit specific countries that require traditional visas.

Prior to travel, traditional paper visas must be visually inspected and verified by a travel operator (such as airline check-in staff). While some visas contain a Machine Readable Zone which semi-automates this in-person verification, manual checks by travel operators can only be basic. This can interrupt the traveller flow and prevent the use of self-service applications.

UTOPIA		VISA
Place of Issue/Lieu de délivrance ZENITH	Valid from/Valeur à partir du 10 DEC/DÉC 91	Valid until/Valeur jusqu'au 10 DEC/DÉC 96
No. of Entries/Nombre d'entrées MULTIPLE	Document No./N° de document M123889546	
Type Type BUSINESS MULTIPLE		
Surname, Given names/Nom, Prénoms ERIKSSON ANNA MARIA		
Passport Number/n° de passeport L8988901C	Sex/Sexe F/F	Date of Birth/ Date de naissance 12 AUG/AOÛT 74
		Nationality/ Nationalité XXX
		
Machine Readable Zone (MRZ)		
V<UTOERIKSSON<<ANNA<MARIA<<<<<<<<<<<<<<<<<<< L8988901C4XXX7408122F96121096ZE184226B<<<<<		

Despite these challenges, traditional paper visas are still the most common form of entry requirement around the world. In 2023, traditional visa policies affected almost half of the world's population (47%), significantly impacting global mobility, tourism economic potential and business opportunities.

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Visa on Arrival (VOA)

Visa on arrival (VOA) policies are a powerful catalyst for tourism. They offer convenience by reducing the need for travellers to visit an embassy or consulate before a trip and are particularly beneficial for those who thrive on spontaneous travel, or for business travellers who may need to travel at short notice.

When implemented with strategic safeguards, such as granting a visa on arrival to travellers already vetted by trusted partner nations, this visa policy can unlock significant economic benefits.



Saudi Arabia

Saudi Arabia grants a visa on arrival to travellers from eligible countries and travellers who already possess a valid US, UK, or Schengen visa. This leverages existing vetting systems to fast-track entry for low-risk tourists while maintaining border integrity. Holders of a tourist visa from the UK, US, or Schengen area must have used it at least once to enter the country (or region) that issued it, to be granted a visa on arrival in Saudi Arabia.

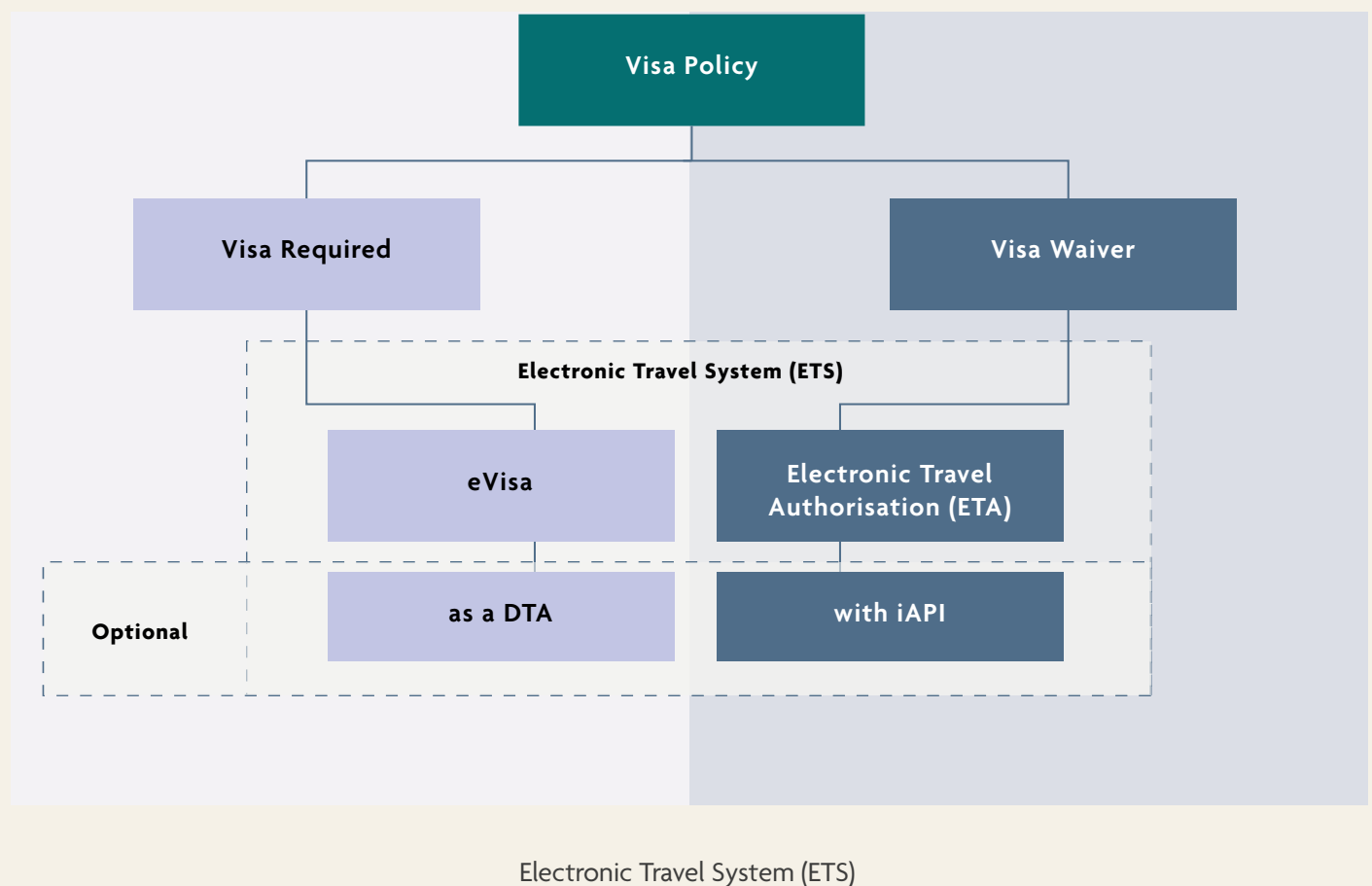
This approach not only boosts confidence among travellers but also encourages multi-destination trips, where visitors can explore more than one country with a visa. For tourists, it means less pre-travel paperwork, fewer delays, and more freedom to explore. For governments it is a smart way to enhance global tourism flows and attract high-value visitors without compromising security.

However, it is important to recognise that visa on arrival processes can be more complex for travellers who haven't been pre-vetted by another nation. In such cases, border authorities may require additional documentation or conduct more thorough checks at an immigration desk, which can slow the arrivals process. While this ensures security, it highlights the value of trust between nations and the importance of clear, transparent entry guidelines for travellers.

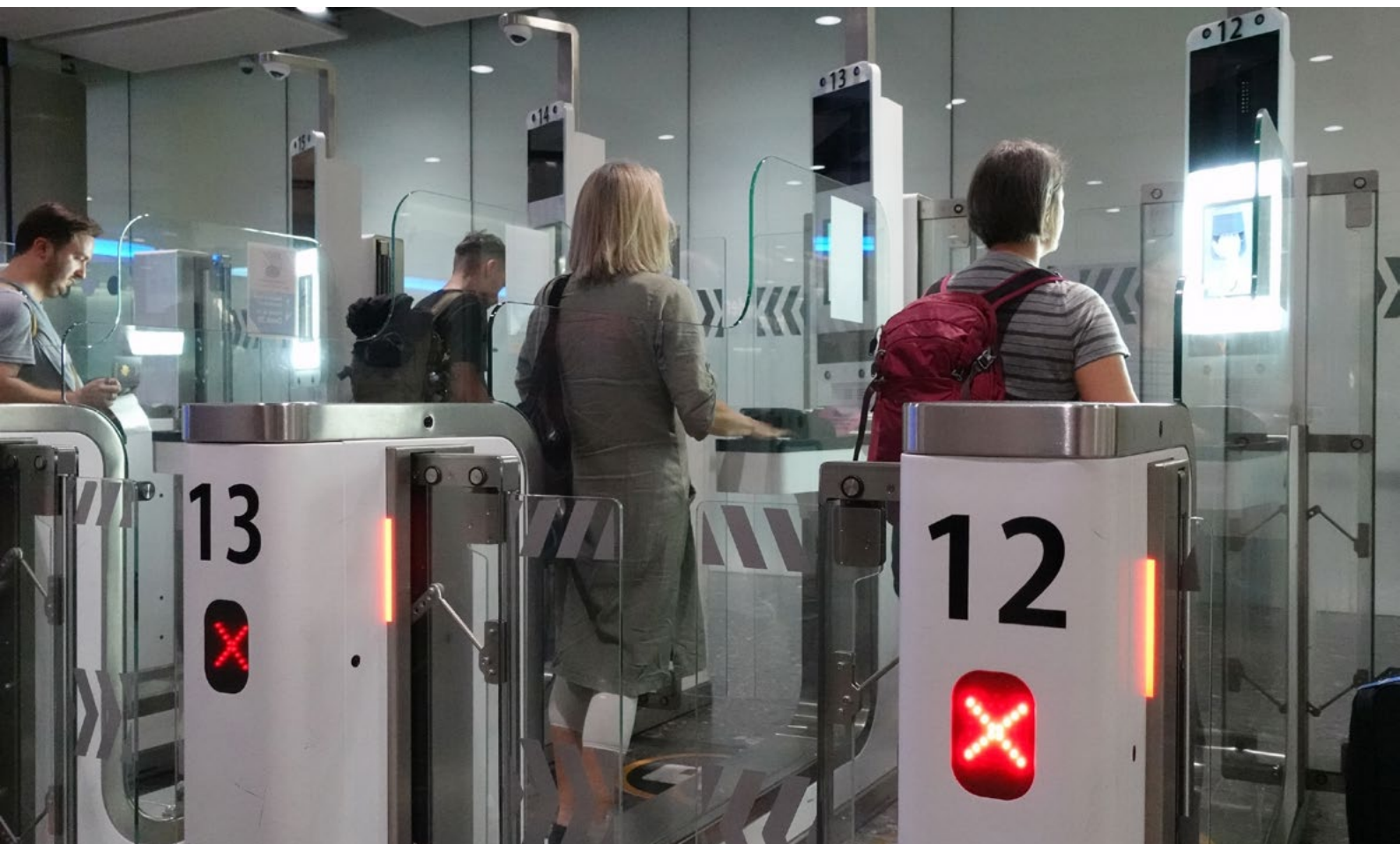
Electronic Travel System (ETS)

An Electronic Travel System (ETS) is an umbrella term for a digital traveller vetting system that can either be an eVisa, or an Electronic Travel Authorisation (ETA).

- eVisa's apply only to travellers who REQUIRE a visa
- ETA's apply only to travellers who do NOT REQUIRE a visa



As noted earlier in this section even though the form of an eVisa and ETA are similar (they are both online systems that process traveller data) they have very different functions. An **eVisa is a permit to enter, stay or transit through a country, whilst at ETA is a traveller pre-screening mechanism.**



Electronic Travel Authorisation (ETA)

Electronic Travel Authorisations (ETAs) are designed to pre-vet travellers who do not require a visa to travel to a specific destination. Once issued, ETAs are usually valid for between one to five years. The most widely known ETAs in the world today are the US Electronic System for Travel Authorisation (ESTA) which has been active since 2009 and the EU European Travel Information & Authorisation System (ETIAS), which will be introduced in 2026.

ETAs are digital vetting systems that process traveller data electronically. In most cases approval does not require the involvement of a government official, since the vetting is performed automatically in accordance with a set of pre-determined assessment criteria and watchlist rules. This means that a response can be delivered rapidly to a traveller, often in less than a few minutes after their ETA application. This makes ETAs a highly efficient means of assessing travellers for security and immigration risks prior to their journey.

ETAs typically require similar data to eVisas, making them a viable alternative for vetting tourists who only stay for a short period of time. For travellers who wish to stay longer, such as for work or to study, an eVisa may offer the chance to obtain more detailed information about the traveller, but for tourism an ETA may be sufficient.

Governments are encouraged to regularly review which nationalities and types of traveller (e.g. tourist, student or worker) are required to apply for a visa and consider if it could be replaced with an ETA. This switch would significantly streamline travel, while maintaining robust border security.

The following table illustrates the traveller data types typically collected and analysed with an eVisa and ETA illustrating their similarity.

Data Required	eVisa	Electronic Travel Authorisation (ETA)
Personal Information		
- Full Name	Yes	Yes
- Date of Birth	Yes	Yes
- Gender	Yes	Yes
- Nationality	Yes	Yes
Passport Information		
- Passport Number	Yes	Yes
- Passport Issue Date	Yes	Yes
- Passport Expiry Date	Yes	Yes
- Country of Issue	Yes	Yes
Travel Information		
- Purpose of Visit	Yes	No (as not issued per trip)
- Intended Date of Arrival	Yes	No (as not issued per trip)
- Intended Date of Departure	Yes	No (as not issued per trip)
- Address during Stay	Sometimes	No (as not issued per trip)
Employment Information		
- Current Employer	Sometimes	Sometimes
- Job Title	Sometimes	Sometimes
- Work Address	Sometimes	Sometimes
Contact Information		
- Email Address	Yes	Yes
- Phone Number	Yes	Yes
Additional Information		
- Travel History	Sometimes	Sometimes
- Criminal Record	Sometimes	Sometimes
- Health Information	Sometimes	Sometimes
- Financial Means	Sometimes	No (as valid for 1 to 5 years)
Photograph	Sometimes	Sometimes
Supporting Documents	Sometimes	No (to automate the process)
Application Fee	Yes	Yes

eVisa & Digital Travel Authorisation (DTA)

An eVisa is a digital version of a traditional visa, where the three key stages of the visa process (application, issuance and verification) can all be managed electronically. However, not all governments implementing eVisas have modernised the entire end-to-end process.

For example, several countries have implemented an eVisa system where the 'application' and 'issuance' phases are online, but travellers are still required to carry a physical printout of the eVisa for manual 'verification' by the travel operator (such as the airline or cruise line) prior to departure. This regresses the eVisa back to a paper visa, which requires manual inspection. This can be difficult for a travel operator who must decide if a paper eVisa is genuine, or if it has been forged or tampered with. It also means travellers cannot use self-service kiosks, or online check-in options, as a visual check of the eVisa is still required.

Going half-way with eVisa implementation and not digitalising all three stages (application, issuance and verification) does not integrate well with modern travel processes which are increasingly moving to traveller self-service check-in facilities.

To address this issue, a specific type of eVisa, called a Digital Travel Authorisation (DTA) follows an ICAO standard that ensures an eVisa is globally interoperable and digitally verifiable through a specially encoded QR code on the eVisa. This special QR code is called a 'Visible Digital Seal (VDS)' and can be digitally and securely verified using the same Public/Private Key Infrastructure and scanners already used to verify ePassport's.

Digital Travel Authorization	Issued by UTO	Version 1	DTA Number: N156702B
PERSONAL INFORMATION			
Name of the Holder: Anna Maria Eriksson	Date of Birth: 1952-03-11	Nationality: USA	Sex: F
Passport Number: L8988901C			
DIGITAL TRAVEL AUTHORIZATION			
Place of Issue: Peacetown	Valid From: 2021-06-06	Valid Until: 2026-06-06	
Duration of Stay: 5 years, 0 months, 0 days	Number of Entries: Multiple	Type/Class/Category: Tourist	
Additional Information: Employment Prohibited			
			

Example of a Digital Travel Authorisation (DTA) with a special 'Visible Digital Seal' (VDS) QR code¹⁵

DTAs support all three core functions of the visa process (application, issuance and verification), allowing each to be managed electronically and online, which streamlines visa operations.

		Visa Required	
		eVisa	DTA
Stage 1	Digital Application	YES	YES
Stage 2	Digital Issurance	YES	YES
	- With automated Gov decision making	POSSIBLE	POSSIBLE
Stage 3	Digital Verification	NO	YES

eVisa vs Digital Travel Authorisation (DTA)

DTA's also offer additional benefits, including:

- **Traveller Cost Savings:** DTAs can reduce visa application costs for travellers and streamline procedures. For example, when a passport is lost or stolen, a DTA can be quickly re-issued and digitally linked to a new passport. This cannot be done with a traditional paper visa system, which would require both a new visa and new passport to be issued.
- **Government Cost Savings:** While governments will incur upfront IT costs to implement electronic travel systems, such as DTAs and ETAs, they reduce the volume of dedicated visa processing consular staff required at embassies around the world, which brings down the long term visa operating costs for governments.
- **Reduced Inadmissible Entries:** Electronic systems dramatically reduce the chance of inadmissible travellers as they are risk assessed prior to travel.
- **Biometric Integration:** DTAs can be further enhanced by incorporating digital biometric data. For example, the facial image of a traveller can be captured via a smartphone 'selfie' and submitted during the visa application phase. Governments can cross-check this biometric data against criminal and terrorist databases and pick up instances of identity fraud. For low-risk travellers, they can use biometric e-gates on arrival, which enables rapid identity verification and a smooth border clearance process.

Due to the many benefits of a DTA, it is recommended that where governments issue eVisas, they should take the form of a DTA following the ICAO standard.

Currently only government border agencies have access to the ICAO Public Key Directory (PKD) to electronically verify a DTA. ICAO is therefore encouraged to enable the full private sector rollout of the ICAO PKD – in the pilot stage in 2025 - to allow approved private sector travel operators the ability to also electronically verify DTAs during the departure process. This would allow travellers with a DTA to use self-service check in options.



Visa Free Travel

The best way to facilitate travel and reduce visa related administration, is to remove all visa requirements and have visa-free entry. Many governments already allow visa free entry for tourists, with visa exemptions the most prominent in the Caribbean region, where 45% of the world's population can enter without a visa¹⁶.

In 1963, at the UN Conference on International Travel & Tourism in Rome, delegates from 87 States agreed that “Governments should extend to the maximum number of countries the practice of abolishing, through bilateral agreements or by unilateral decision, the requirement of entry visas for temporary visitors”.

Increased visa openness is a vital step forward towards a more integrated world and there can be huge gains for countries that embrace more visa free travel. For example it can lead to increased tourism with increased economic benefits, it can improve worker mobility to address skills gaps in a national labour market and there is a higher likelihood that more open countries will attract entrepreneurs and investment that can boost national competitiveness and GDP.

A 2015 study by the Partnership for a New American Economy (a group of more than 500 U.S politicians, city mayors and U.S business leaders) found that by expanding the U.S. Visa Waiver Programme for visa free travel to the U.S to just six additional countries (Brazil, Hong Kong, Israel, Poland, South Africa and Turkey) it could generate an estimated US\$7.66 billion in additional tourist spending and create 50,000 American jobs within five years¹⁷. This highlights the considerable economic benefits that can be unlocked through targeted visa openness.

In 2025 (10 years after the study) only two of the six countries (Israel & Poland) have been added to the U.S. Visa Waiver Programme, resulting in significant lost tourism and economic opportunity for the United States.

However the term ‘visa waiver’ has now become confusing for travellers. Historically a traveller from a visa waiver country did not require any further permission, or documentation, to travel to a country. But the rise of Electronic Travel Authorisations (ETA), which is a traveller pre-screening mechanism that applies to travellers who do not require a visa, means travellers from ‘visa waiver’ countries may now need to submit an electronic permission to travel to a specific country.

For example, a UK national does not require a visa to travel to the USA, but they are required to have an ESTA which is valid for two years (this is the US version of an Electronic Travel Authorisation).

Most travellers do not understand the legal difference between a visa (a permit to enter, stay or transit through a country) and an electronic travel authorisation (a traveller pre-screening mechanism) which can cause considerable traveller confusion.

It is therefore recommended that the term ‘visa waiver’ is phased out and that travellers are advised if they can enjoy visa free travel to a country, or if they require permission to enter, or travel to a country.



Exit Immigration Controls

Exit immigration controls, also known as embarkation checks or exit checks, appear to offer a layer of security, but their implementation is often misaligned with their strategic objective. They are often e-gates, or manned desks in the departure journey.

As exit checks they monitor departures and do not prevent illegal immigration and when used to identify visa overstayers, or persons of interest, this is often impacted by a delayed response. Real-time enforcement is rare, and the information collected during exit checks is often only used for retrospective analysis, rather than proactive, or real time, intervention.

In effect, embarkation checks often function more as a data collection tool, than robust control point and in practice, most of the same data can be obtained through Advance Passenger Information (API) systems – discussed in the next chapter - which is less intrusive and more scalable.

The implementation of embarkation checks can also be logistically challenging. Airports and transport hubs must allocate space to support these checks within already strained infrastructure, and they can generate significant queues of travellers. This added friction can be particularly problematic in high-volume transit hubs where efficiency is critical.

While physical embarkation checks can offer some benefits in intelligence gathering, they often fall short of delivering meaningful security or immigration control. A more effective use of resources would be to invest in a digital Advance Passenger Information (API) system (discussed in the next chapter) to capture data on travellers leaving the country. This offers a more impactful approach to managing immigration outcomes and travellers compliance with visa durations.

Recommendations for Visas & Travel Authorisations

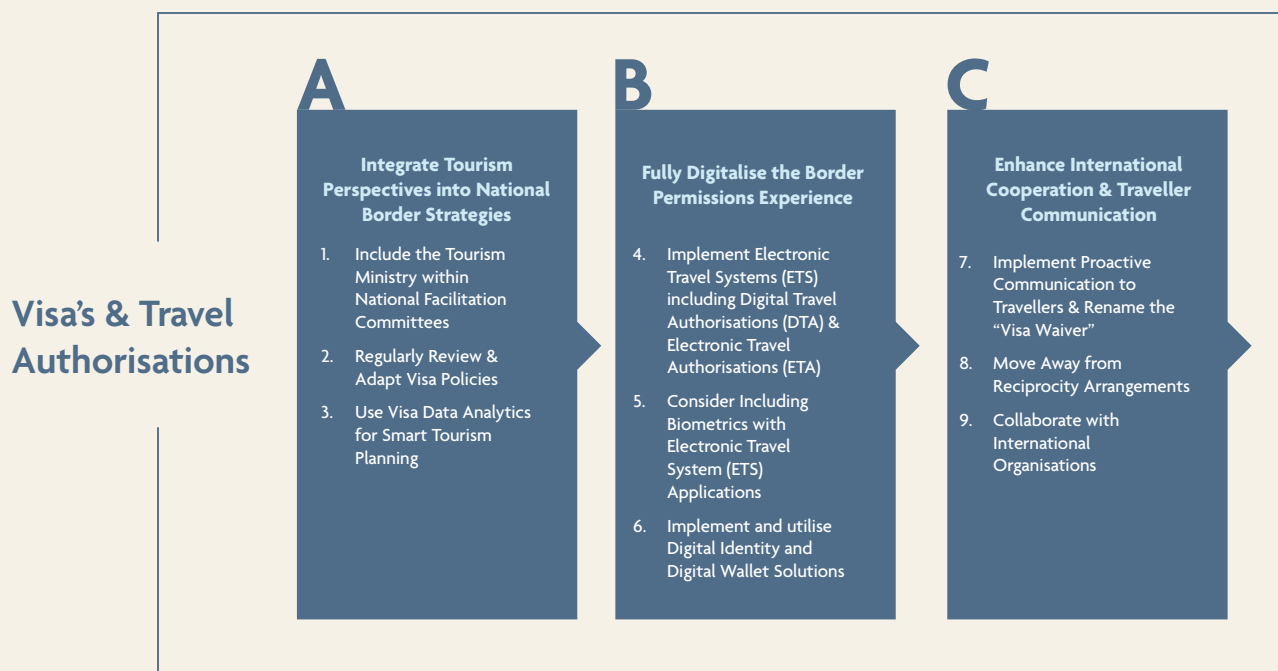
By modernising and digitalising visas, governments can transform their borders from traditional entry points into strategic assets that enhance national security, boost the economy, and improve the visitor experience.

Three principles and nine actions are recommended.

Principles

- A) Integrate Tourism Perspectives into National Border Strategies
- B) Fully Digitalise the Border Experience
- C) Enhance International Cooperation & Traveller Communication

Actions



By implementing these recommendations, governments can move towards a future where travel authorisations and visa policies become a strategic tool that strengthens security and contributes to national economic prosperity.

(A) Integrate Tourism Perspectives into National Border Strategies

Visa policy can be a powerful tool for tourism growth and national economic development.

1. Include the Tourism Ministry within National Facilitation Committees

Governments should establish a National Facilitation Committee (as recommended by ICAO) to collaborate on seamless travel initiatives. This committee should include representatives from all relevant government departments, including the border agency, national security, tourism and the foreign affairs ministries to help develop safe, seamless and secure travel initiatives. For example, the Facilitation Committee could explore increased ‘transit visa exemptions’ for specific nationalities (to encourage short-term stopovers) and the implementation of specialised visas (such as those for digital nomads), to attract high-value, temporary visitors who can invest in the local economy.



China

In 2024 China introduced a visa-free transit policy for travellers from 55 countries. This allows transiting travellers to stay for 240 hours (10 days) in specific cities and regions. To qualify, travellers must hold valid international travel documents, with confirmed onward tickets and be travelling through one of 60 eligible ports of entry and exit. The policy is designed to facilitate tourism, while also enhancing international trade and cultural exchange¹⁸.

In 2025, China also began a trial (until May 2026) granting visitors from five Latin American countries (Brazil, Argentina, Chile, Peru and Uruguay) visa-free entry for up to 30 days¹⁹ and in July 2025, China and Malaysia agreed a bilateral deal where Chinese and Malaysian citizens can enter, exit or transit through each other's country without a visa²⁰.

Since the introduction of these visa measures China has seen visa-free entries by foreign nationals surge 52% year-on-year²¹. From July to September 2025, foreign nationals made 7.2 million visits to China under its visa-free policies providing an increase in national prosperity. The China National Immigration Administration said that visa-free arrivals accounted for 72.2% of all entries made by foreign nationals during this period²².

2. Regularly Review & Adapt Visa Policies

Tourism Ministries should undertake an inventory of their priority source markets and which locations require a visa to visit their country, along with the level of traveller information required. This should be reviewed in collaboration with government border and national security agencies to consider if all the information requested is necessary, or whether some of it could be reduced for tourists to increase efficiency and improve the traveller's experience. For example the requirement for a tourist to obtain an eVisa, could be replaced with a quicker and more efficient Electronic Travel Authorisation (ETA), while an eVisa could be maintained for longer stay visitors, such as those going to work or study in a country.

This approach also allows for more targeted visa facilitation measures, and includes expanding visa-free travel to low-risk countries. This approach can boost visitor numbers and enhance a country's tourism competitiveness.

3. Use Visa Data Analytics for Smarter Tourism Planning

Traditionally analysis of visa data has only been used for security purposes, but by analysing visa data that has been stripped of specific identity information, governments can achieve valuable insights into travel patterns and visitor demographics. This could inform decisions around tourism facility development and national infrastructure requirements. This strategic approach to tourism planning can ensure that tourism growth is managed sustainably, while also reducing the likelihood of future destination overcrowding.

(B) Fully Digitalise the Border Permissions Experience

Governments should move away from paper processes and embrace a fully digital ecosystem.

4. Implement Electronic Travel Systems (ETS) including Digital Travel Authorisations (DTA) & Electronic Travel Authorisations (ETA)

Adopting an end-to-end ‘application, issuance and verification’ electronic system for visas and travel authorisations improves border efficiencies and security, while simplifying the process for travellers. It also provides transport operators the ability to digitally confirm whether a traveller has the correct documentation for travel and is approved for entry at their destination. In addition to streamlining procedures, this convenience also meets modern traveller expectations for digital processes and eliminates significant deterrents to travel, such as the need to visit an embassy, or consulate, in person

With an Electronic Travel System (ETS), travellers can complete an application and upload any supporting documentation (if required) through a user-friendly digital portal. They could also enable secure online payments, and the traveller would receive an electronic decision confirming if an authorisation to travel to their desired destination has been granted. This authorisation should also be digitally accessible to travel operators (such as airlines and cruise lines) at the point of departure. This enables operators to digitally verify, in real time, that the traveller is permitted to board.

5. Consider Including Biometrics with Electronic Travel System (ETS) Applications

Governments should consider requesting traveller biometric data (such as a facial image) during the ETS application process to create a more secure and verifiable identity for each applicant. Some governments are already implementing this biometric step to minimise identify fraud. It also allows for effective biographic and biometric identity cross-referencing with security databases, which strengthens border security.

Modern digital infrastructure at ports of entry such as biometric e-gates should also be installed to quickly verify travellers against the biometric data captured during the ETS application phase. This streamlines entry for legitimate travellers, creates a positive first impression of a country and enhances the overall visitor experience. This is discussed in more detail in the next chapter.



Australia

Australia was one of the first countries to introduce an ETA and the Australian ETA app requires applicants to take a 'live photo' which can be used to confirm their identity against their passport at the border.

In Australian airports, SmartGates, use facial recognition technology to process arrivals and departures. Travellers insert their ePassport at a SmartGate Kiosk, have their photograph taken and respond to on-screen prompts, before proceeding through a portal, which uses biometrics to verify their identity. By June 2025, 79% of all arrivals were eligible to use the SmartGate technology and of those, 77% did use it, helping to significantly reduce border clearance times²³.

In 2025, Sydney Airport added eight SmartGate kiosks in Terminal 1, which it projects will boost inbound international passenger processing capacity by 640 travellers per hour, with a further 32 SmartGate kiosks due to be deployed by early 2026²⁴.



SmartGate at Sydney Airport²⁴.

6. Implement and Utilise the Emerging Digital Identity and Digital Wallet Solutions

Governments should review the opportunities for improved data quality and biometrically enabled services that are offered by digital identity solutions and digital wallets. Some governments are already using digital wallets to allow the secure storage of digital identities, such as Mobile Drivers Licences or ICAO's Digital Travel Credential (DTC). These digital identities and wallets can be used as part of an ETS described in points 4 and 5 above, or as an independent service offering, such as remote, biometric check-in at hotels and other venues.

Digitalisation and digital identities can also be used to remove paper-based processes such as landing cards and customs declaration. They can also be used very effectively as part of a national tourism app, allowing visitors to create a secure, high-quality digital identity that can be shared with any authorised tourism stakeholder.

(C) Enhance International Cooperation & Traveller Communication

Border management and visa policies are global issues that cannot be addressed in isolation. They require international cooperation, with clear and consistent communication to travellers.

7. Implement Proactive Communications to Travellers & Rename the ‘Visa Waiver’

Clear communications regarding visa requirements and processes are vital for both travellers and the Travel & Tourism sector. Governments should therefore ensure that visa information is easily accessible, accurate, and available in multiple languages.

Simplifying application guidelines and providing clear timelines for processing can also benefit travellers. This transparency builds trust with travellers and contributes to a more positive image of a destination country.

Currently, a common source of confusion for travellers is the ‘visa waiver’ status. Many tourists believe that they do not require any form of documentation or pre-travel authorisation if their country enjoys visa-free entry. Historically this was correct, but is now this not always true since the traveller may still be required to complete a pre-screening travel authorisation in the form of an Electronic Travel Authorisation (ETA).

Considering this frequent misunderstanding, it is recommended that countries adopting Electronic Travel Systems (recommendation 4 above) rebrand their entry requirements and remove the term ‘visa waiver’ from their communications. This will help to better manage traveller expectations and make entry requirements clearer.

8. Move Away from Reciprocity Arrangements

Governments should move away from visa reciprocity arrangements. While reciprocal visa policies are often used to foster equitable international relations, they can also lead to tit-for-tat escalations where countries may impose visa restrictions on travellers not for security reasons, but as a response to the actions of another country. The Travel & Tourism sector is often caught in the crosshairs of this action, resulting in lost economic potential and disadvantaged travellers.

Therefore non-reciprocal visa policies are preferred. This empowers countries to prioritise their own economic interests. By opening their doors to markets on their own terms, nations can strategically attract international travellers, boost tourism, and stimulate spending within their own national economy. At the same time, a non-reciprocal policy enhances travel convenience for a country’s own citizens, enabling their greater mobility and global engagement.

9. Collaborate with other Nations & International Organisations

Effective visa policies and border security processes are global challenges that require international cooperation. Governments should therefore engage in bilateral and multilateral discussions that enable intelligence sharing, best practice exchange, and the harmonisation of visa and travel authorisation policies.

Collaboration with global organisations such as the International Civil Aviation Organization (ICAO) can facilitate the adoption of global standards and best practices for border management, while partnerships with law enforcement agencies, such as INTERPOL, can strengthen border security.

Countries should also consider collaborating to mutually recognise and accept visas from trusted partner nations, as this can streamline visa processes while maintaining security. Countries with advanced vetting systems can offer valuable support to other countries. If one country has already conducted thorough background checks on a traveller and issued them a visa, this could be accepted by another nation as suitable permission to also visit their country. For example Mexico will accept travellers who hold a valid visa from select other countries. This collaborative approach to visa management reduces duplication of effort, speeds up processing times, and strengthens global border control efforts.

Governments could also collaborate with the Travel & Tourism sector and relevant external bodies when large volumes of visitors are expected over a very short period of time to provide a safe and secure, seamless travel experience. For example, this could apply if a country is hosting a major summit like the COP Climate Conference, or major sporting events such as the FIFA Soccer World Cup, or Olympic Games.

Example initiatives could include the introduction of a special visa, or travel authorisation system. During large events, some countries have linked these visas and travel authorisations with event ticket accreditation schemes to provide an expedited experience for visitors, while at the same time using the system to mitigate security risks and prevent known troublemakers from entering a country and disrupting the event.

Qatar : FIFA World Cup

To enable a smooth experience for fans visiting Qatar for the 2022 FIFA Soccer World Cup the country introduced the Hayya card. This multi-use Fan ID acted as a 'special travel authorisation' and allowed event ticket holders entry into Qatar and the stadiums, along with free access to the metro and bus transport on match days.

International visitors travelling to Qatar for the FIFA World Cup did not need a visa to enter the country, as long as they had a valid Hayya card. The card also added an enticement for visitors to stay and explore Qatar once the tournament concluded in December 2022, by allowing travellers to stay in the country until the end of January 2023.

Hayya card applications could be made through the FIFA World Cup ticket website, or via a dedicated Hayya smart phone app. Fans were required to provide their match ticket number, passport details, home address, accommodation details, an emergency contact number and a facial photo.



Hayya Card Smart Phone App²⁵

Qatar also partnered with other Gulf Cooperation Council (GCC) countries enabling Hayya card holders to visit Saudi Arabia, the United Arab Emirates (UAE) and Oman

- Saudi Arabia: Hayya card holders could use their card as a multiple entry visa to Saudi Arabia for up to 60 days. It also permitted entry into Saudi Arabia 10 days prior to the beginning of the tournament.
- UAE: Hayya card holders could visit the UAE for a duration of 90 days, using their card as a multi entry visa.
- Oman: Hayya card holders could enter Oman for up to 60 days.



DIGITAL BORDER TECHNOLOGIES

The border is the first point of contact for visitors to a country, and first impressions matter to a nation's global reputation.

Today, the border must function as both a secure and trusted entry point, as well as a warm and welcoming ambassador.

Aviation traveller numbers are forecast to reach at least 14 billion annually by 2035 and more than 20 billion by 2050¹, which will apply huge pressure on border agencies and space constrained immigration halls.

Without the assistance of technology, this would require significant recruitment of new border control officials and increase the workload on border officers, who must focus on their core missions of protecting national security, preventing transnational crime and enforcing immigration policies.

Fortunately, digital technology can reduce the recruitment requirements and support border officials by automating certain processes such as identity confirmation with biometrics and enhance decision-making through data analytics and intelligence sharing. Harnessing digital technology will help border agencies fulfil their very important mission, while remaining adaptable as traveller numbers increase and the future of technology continues to evolve.

The following examples highlight technological approaches only, as WTTC is supplier agnostic. Governments are encouraged to independently evaluate and select the most appropriate solution providers that are best suited to their specific use cases and unique operating environments.



The Future of Digital Travel

One of the first digital advances a border authority can make to process travellers faster and more securely is with the introduction of Automated Border Control (ABC) e-gates.

This technology allows suitable passports to be scanned, and a biometric image of a traveller to be captured and compared with the photo in the passport and the image stored in the passport electronic chip. The travellers details could also be matched to the information gathered via an ETA (such as the US ESTA), eVisa or Digital Travel Authorisation (DTA) application. These were discussed in the previous chapter. In some cases, if required by a destination country, this could also include matching with the information from a Digital Travel Declaration, with more information on these declarations discussed later in this chapter.

Once the identity of the traveller is confirmed and their details electronically verified to confirm they are eligible to enter the country, a traveller can simply pass through the e-gate and across the border, often in as little as 20-30 seconds and without having to queue to see a human border official, reducing the workload on border officers and allowing them to focus on the most high risk travellers. Several countries have adopted this technology for smarter and faster borders and it is especially popular in Europe.



Automated Border Control (ABC) e-gates in Spain²⁶

Europe

Most European airports are using Automated Border Control (ABC) e-gates to expedite passenger processing through the border.

Spain is reported to have the largest deployment of Automated Border Control (e-gates) in the world (both inside and outside of Europe), with more than 600 units installed across the country's airports.

Automated Border Control (ABC) e-gates expedite the border clearance process primarily through self-service automation, faster identity verification using biometrics, and optimised staffing and passenger flow. The benefits of Europe's e-gates include:

- **Parallel Processing:** Instead of a single border officer processing one traveller at a time, multiple e-gates allow several travellers to be processed simultaneously. This dramatically increases the overall throughput levels.
- **Reduced Manual Checks:** The system automates routine checks that would otherwise require a border officer's manual input and verification, such as checking passport authenticity and passenger eligibility.
- **High Accuracy & Speed:** E-gates use biometric technology (usually facial recognition) to compare the traveller's live biometric data with the traveller's photo stored on the chip of their electronic passport (e-passport). Advanced algorithms can complete this 1:1 match and cross-reference against national and international security databases in as little as 10 seconds, which is significantly faster than a manual inspection process.
- **Fraud Detection:** E-gates are highly effective at detecting fraudulent documents or impostors, as spoofing biometric systems is extremely challenging. This provides strong security while expediting the flow of legitimate travellers.
- **Efficient Staffing:** E-gates allow border authorities to reduce the number of officers required for routine checks. One officer can supervise several e-gates and only intervene when a problem or "match not found" event occurs (e.g. if a passenger is ineligible, or the e-gate experiences a system failure).
- **Focus on High-Risk Cases:** By automating the processing of low-risk, eligible travellers, border officers can dedicate more time and resources to higher-priority cases that require further questioning, or detailed inspection.
- **Reduced Congestion:** The overall increase in processing speed and the ability to handle a higher volume of travellers prevent queues from building up, especially during peak travel times.

Europe has fully embraced ABC e-gates at the border to replace time-consuming manual checks with a self-service automated process that enables a quick and secure experience for travellers.

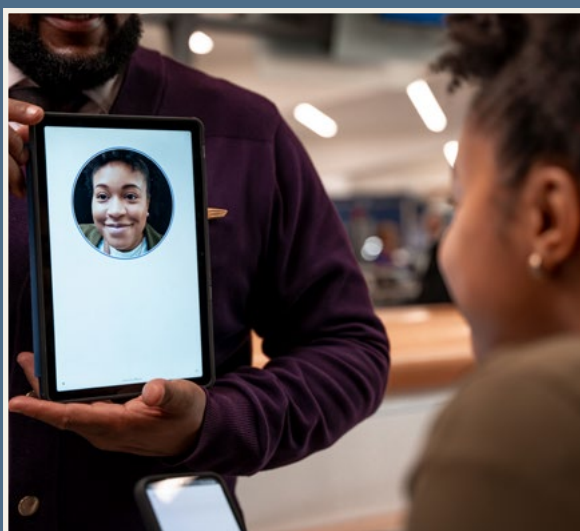
The Caribbean Island of Aruba has taken this a stage further and partnered with US carrier Delta Air Lines and SITA to integrate ABC e-gates and the Aruba travel ecosystem with a digital passport on a travellers smart phone (a digital passport is formally called a Digital Travel Credential [DTC])²⁷.

This significant pilot project aims to facilitate seamless airline bookings, hotel check-ins, and car rentals in Aruba while enhancing security across the entire journey. It is a powerful step forward in achieving a truly seamless traveller process in which a variety of systems and programmes work in tandem to facilitate easier, faster and more secure travel.

Aruba

Aruba has been progressively embraced digital border processes, such as eVisas, ETAs, DTCs and biometrics to create a smarter, faster, and more secure border. Statistics from the Aruba Tourism Authority (June 2024 to June 2025) and the Centrale Bank van Aruba show that Aruba's use of digital border technologies is paying off with²⁸:

- 3.3% increase in tourist arrivals by air
- 12.3% increase in average tourist spend
- 10.5% growth in the 80+ age market, with 6% increase in the Generation Z cohort



Singapore

Since 2024, all travellers leaving Singapore via Changi Airport and all Singaporean residents returning home can clear immigration simply by using facial and iris biometrics, without the need to physically present a passport.

As part of its New Clearance Concept (NCC) vision, the Singapore Immigration & Checkpoints Authority (ICA) rolled out automated gates across all four terminals, leveraging data and technology to move the traveller risk assessment from “on-arrival” to “pre-arrival”. This enables the authority to identify higher risk travellers in advance, for more thorough checks on arrival.

Their Multi-Modal Biometrics System (MMBS) was upgraded in August 2024 to increase facial and iris matching speeds by 20 times, with improved accuracy and efficiency²⁹. After this system was finalised, the average departure clearance time for each traveller was reduced by 60%, from 25 seconds to 10 seconds³⁰.

A ‘digital passport’ (or officially a Digital Travel Credential [DTC]) can be used across a spectrum of technologies from ABC e-gates and biometric-enabled self-service kiosks to the Mobile Travel Authorisation smart phone apps that travellers use to upload their biometrics. Together with pre-clearance benefits, these digital solutions give border officials an unparalleled overview of movements into and out of their country while, at the same time, ensuring the steady flow of visitors. Countries like Singapore and the United Arab Emirates (UAE) are pioneering this digital ecosystem approach.



Border Technologies

While paper-based notices flagging “persons of interest” are still used in some country’s immigration halls, border authorities can now use a wealth of technologies to support their role.

Of specific importance is knowing as much about visitors before they present themselves at an immigration desk.

This advanced warning hinges on harvesting quality data in the form of reliable passenger information, as well as the exploitation of digital forms of identity and biometrics, plus the utilisation of artificial intelligence (AI) and machine learning.

The use of border control automation, such as kiosks and e-gates, has proved a game-changer for processing legitimate travellers, and a source of reputational benefit for those countries presenting a welcoming face to travellers. By streamlining the process for lower-risk visitors, border officers can focus their skills and training on identifying potentially higher-risk travellers, or those requiring additional personal assistance, such as family groups, or elderly travellers.

As data is central to the operation of effective digital borders, it is essential to understand the type and nature of the datasets that can support ‘Better Borders’:

Traveller Data (API, iAPI & PNR)

Advance Passenger Information (API)

The starting point for traveller data is Advance Passenger Information (API), which is biographic information on individuals from a traveller’s passport, such as their name, date of birth and nationality and can be complemented with travel route information. It is used to confirm the identity of travellers and collected during the booking or check-in process.

API has been around since the 1980s and since the early 2000s countries have been mandated by United Nations Security Council Resolutions to acquire API on all travellers. However to date, only approximately half of the world’s countries have adopted API data processing systems.

UN Security Council Resolutions (UNSCR) 2178 (2014), 2396 (2017) and 2734 (2024) call on Member States to require airlines to provide traveller Advance Passenger Information (API) to national authorities. This data should be cross checked against government watchlists to detect and prevent the travel of foreign terrorist fighters and serious criminals. These UN resolutions also aim to build Member State capacity to collect and analyse passenger data to combat terrorism and organised crime.

As UNSCR 2396 (2017) was adopted under Chapter VII of the UN Charter, compliance with this obligation is mandatory for all UN Member States, yet many States have not yet adopted API systems.

Countries are therefore encouraged to mandate the collection and transmission of Advance Passenger Information (API) for all carriers operating within their borders following the ‘Guidelines on Advance Passenger Information (API)’ jointly issued by the International Civil Aviation Organisation (ICAO), the International Air Transport Association (IATA) and the World Customs Organisation (WCO) and last updated in 2022³¹.

API data should only be transmitted by the transport operator to a single government department in each receiving country (known as the ‘single window’ principle) for the purpose of traveller risk assessment.

Interactive API (iAPI)

Similar data is available to governments with a solution called **Interactive API (iAPI)**. In some countries iAPI is also known as APP, AQQ or ATC.

Whereas traditional API data is delivered by a transport operator to governments as a single file containing the details of all passengers and crew (often sent to governments just prior to, or after, departure), iAPI is a “one-by-one” approach where the data for each traveller is sent to the relevant governments as the traveller checks-in for their journey. This transmission can be hours to days prior to departure and enables governments to decide immediately if a traveller can board, or not. This permission is communicated back to the carrier, making iAPI an incredibly powerful tool to prevent inadmissible passengers from travelling.

One country that has successfully deployed an iAPI system notes that for every eight people who would be denied entry, seven were stopped prior to departure with iAPI. This reduces the administration and cost of physically stopping the traveller at the border and repatriating them to their point of origin.

A little over 20 countries have already implemented iAPI systems and there are approximately another 20 countries who have announced their intention to in 2026 and 2027.

Countries are encouraged to consider implementing iAPI systems, especially as an alternative to API when managing high volumes of inadmissible travellers and to strengthen border security as it allows individual traveller risk assessment at check-in and a ‘board’ or ‘no board’ permission to be issued prior to departure. Countries should follow the ‘Interactive Advance Passenger Information (iAPI) Best Practices’ jointly issued by ICAO, IATA and the WCO and last updated in 2024³².

Additionally, iAPI should be adopted when a country is deploying an Electronic Travel System (ETS) so that the transport operator can be digitally informed, by a destination government, if the traveller holds a valid digital eVisa, or Electronic Travel Authorisation (ETA).



Passenger Name Record (PNR)

The final dataset of note is **Passenger Name Records (PNR)**. These are drawn from a carrier’s reservation system, with PNR data containing information such as the methods and details of payments, traveller contact information, seat and baggage data, and the names of anyone travelling on the same booking. Such data is incredibly powerful, but also personally sensitive. As such, strict data sharing and privacy rules must be observed before nations can permit their carriers to send PNR data to other governments.

But when a nation does have access to PNR data it allows intelligence and border agencies to identify previously unknown threats, connect unknown or suspect individuals with known threats, and identify trends or patterns for deeper analysis of threats.

At the time of publication of this report approximately 60 countries have implemented PNR systems with great success, so countries are encouraged to consider implementing strong data protection regimes and traveller PNR risk assessment systems.



Digital Identity & Digital Travel Credentials (DTC)

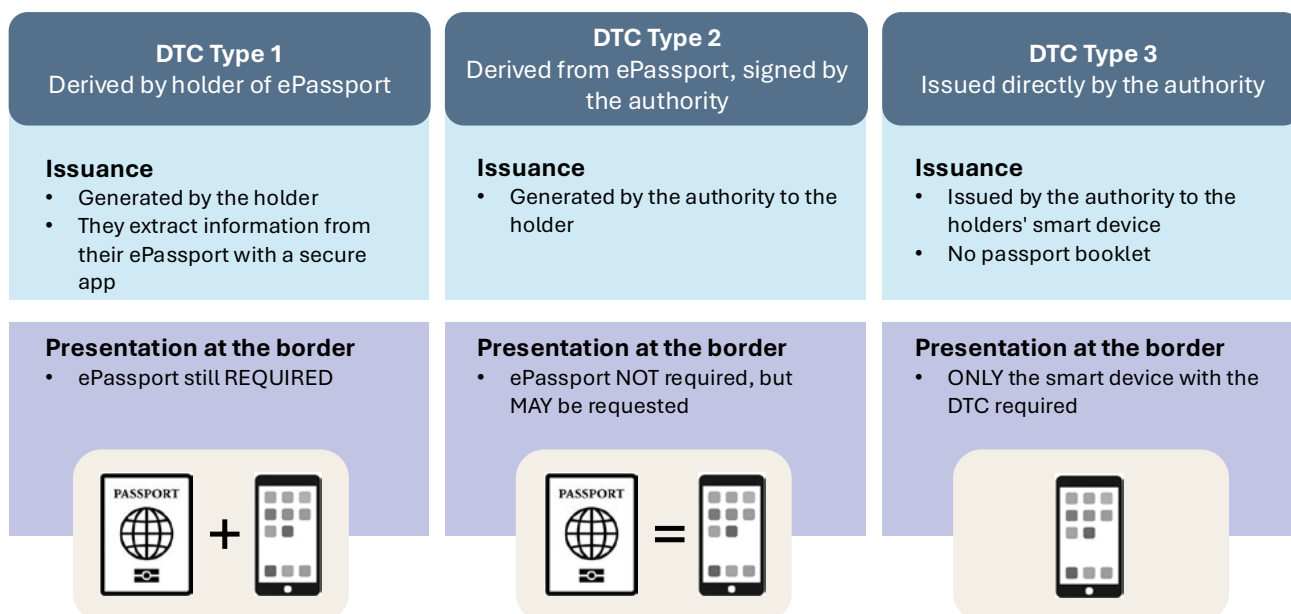
A more recent development in the field of passenger data is the rise of **digital identity**, which refers to electronic versions of official travel or identity documents.

Since the introduction of the e-Passport in the early 2000's, which has an embedded chip containing personal and security information, it has been possible to extract this information to validate a traveller's identity and enhance security checks. Now, with the rise of smartphone technology, it is possible for everyone to extract this data using apps.

Border agencies were quick to capitalise on the availability of verified information to obtain high quality data on travellers in advance of their arrival. One of the first to realise this potential was the US Customs and Border Protection agency (CBP), who developed a Mobile Passport Check app that enabled American and Canadian citizens to electronically extract and share a digital copy of the data from their passport chip with the US government prior to landing. Assuming there were no issues with the data - or the traveller - they were fast-tracked through the border on arrival in the United States.

Since then, ICAO has developed a technical standard relating to the electronic copy of a passport, called the **Type 1 Digital Travel Credential (DTC)**. This provides guidance on how a user can create an electronic copy of their officially issued passport. There are two other types of DTC in development:

- A **Type 2 DTC**, currently under discussion and investigation as of 2025, would allow government passport issuing authorities to issue a digital version of a passport alongside a traditional passport booklet.
- A **Type 3 DTC**, which would be a fully digital passport, eliminating the need for a physical passport altogether - though this remains a future aspiration and some years from reality.



Digital Travel Credential (DTC) Types

In addition to the DTC, governments are also looking at electronic versions of other forms of identity, some of which can already be used for domestic travel. For example in the US, the electronic Mobile Driving Licences issued by 11 States are accepted by 27 American airports for domestic air travel.

As travellers increasingly seek secure and shareable digital identity solutions that they can manage on their smart devices, countries are encouraged to invest in providing digital identity capabilities to their citizens. Border management systems should also be upgraded to accommodate these digital identities - particularly for travellers from approved countries - to enhance security and streamline the border crossing experience. This can be especially effective when combined with Digital Travel Declarations.



Digital Travel Declarations

When travellers apply for a visa, or travel authorisation, they may be required to submit additional “supporting information”, such as a copy of their vaccine certificate. In other instances, upon landing travellers may be required by some countries to fill out a paper landing card, detailing information such as items being brought into the country.

Managing various sources of paper-based health, baggage, customs, and other travel-related information is inefficient, but governments are now able to streamline the capture and verification of this information by using digital versions of this information called **Digital Travel Declarations**. This also reduces congestion at the border and enhances the traveller experience.

Digital Travel Declarations could therefore include digital versions of:

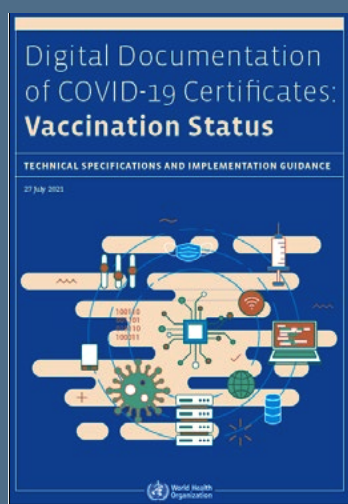
- Landing or Arrival Cards
- Customs or Baggage Declarations
- Criminal Records Declarations
- Health Certificates (vaccinations or test results)

World Health Organisation

The information contained in Digital Travel Declarations should follow international standards, so the data is interoperable across borders and can be digitally verified. This is particularly true for health-related information so that it is not accidentally misinterpreted.

While certain information, such as Health Certificates fall outside the direct remit of National Security or the Travel & Tourism sector, Border Agencies are encouraged to work collaboratively with other government departments (such as Health Ministries for health certificates, or Justice Ministries for criminal records declarations), as well as with relevant international organisations and standard-setting bodies to develop global standards and digital verification tools for any type of information that may be required at the border.

The importance of global cooperation was highlighted during the COVID-19 pandemic when the World Health Organisation (WHO) developed technical specifications and implementation guidance for COVID-19 vaccine and test certificates and is now building a **Global Digital Health Certification Network (GDHCN)**. This is digital public infrastructure that enables the secure and verifiable exchange of digital health certificates between participating countries and by late 2025, **81 countries had enrolled in the GDHCN**.



World Health Organisation (WHO) Technical Specifications & Implementation Guidance³³

The GDHCN uses Public Key Infrastructure, which is the same technology used by border agencies to verify ePassports and Digital Travel Authorisations (DTAs). The GDHCN health system can therefore be easily applied at borders to facilitate safe international travel, should traveller health certificates be required. The Public Key Infrastructure and interoperable trust architecture used in the GDHCN allows countries to verify the digital signatures on travellers health documents without the WHO holding, or accessing, any personal data. Digitalisation and the electronic verification of

any 'supporting information' required for travel would therefore reduce congestion at the border, minimise passenger stress, and allows governments to operate their borders in a highly efficient and secure manner.



Republic of Korea

In 2025, the Republic of Korea introduced the **e-Arrival Card**³⁴, which is a digital travel declaration that replaced the traditional paper landing card for international visitors. This digital system is intended to make the immigration process on arrival faster and more convenient. The e-Arrival Card can be completed online up to three days before arrival and allows travellers to electronically share the required information such as passport details, flight number, and accommodation in South Korea.

A particularly innovative feature of this solution is the ability for travel agencies, or group leaders, to digitally submit a **'Group e-Arrival Card' for up to 1000 people who are travelling together**. A leader can download a Microsoft Excel template which can then be completed with each travellers passport details before their trip. This can be uploaded to the online system to obtain a Group e-Arrival Card and smooths the immigration process for large bodies travelling together, such as sports teams.

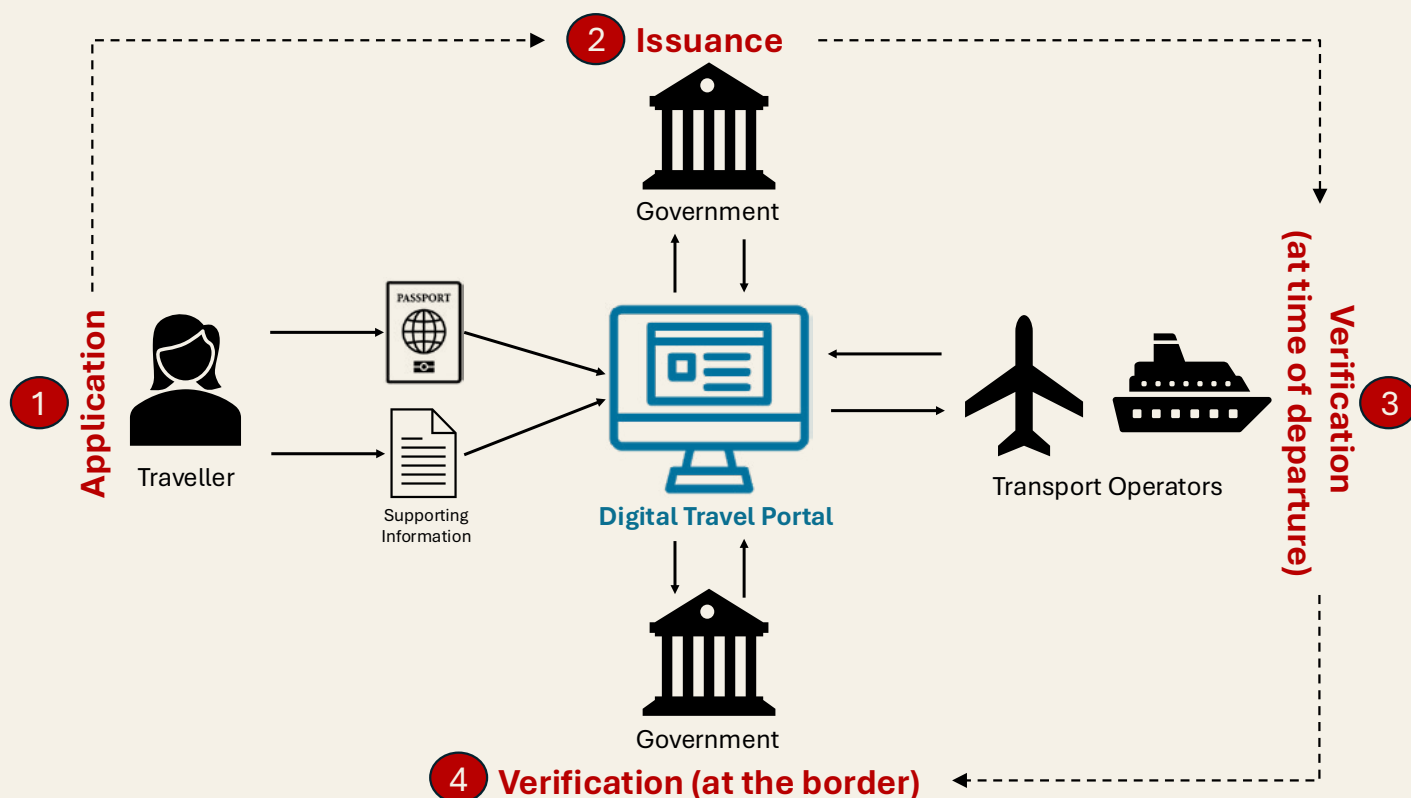


Digital Travel Portal

To facilitate the digital completion of eVisas, Electronic Travel Authorisation (ETA) or Digital Travel Declarations, governments should create a dedicated **online portal** where travellers can complete a digital application form and upload supporting documentation when required, such as a copy of their passport, proof of funds, insurance coverage, biometrics, or any of the other digital declaration types discussed above.

This **Digital Travel Portal** can be both online and available as a smart phone app. For governments a digital portal is an efficient means to capture, analyse and communicate traveller information. It can also help border agencies efficiently address rising numbers of travellers, by shortening traveller risk assessment times and enabling automation of certain tasks, such as the checking of traveller details against terrorist watch lists. This also enhances security as digital systems can be highly accurate.

For travellers, a digital portal makes it easy to submit everything they are required to share with governments electronically and from anywhere in the world, without the need to visit an embassy or consulate.



Japan

Japan has introduced many technological initiatives to facilitate more seamless travel through its airports. This includes the ‘**Visit Japan Web**’ online portal³⁵, where travellers can enter immigration clearance and customs declaration information ahead of travel. This generates a 2D barcode that the traveller can show at the border, or at an electronic declaration terminal in the airport for a rapid arrival experience. The Visit Japan Web portal can also be used by foreign nationals to claim tax-free purchases during their stay in Japan

In 2025, to further streamline border control measures and improve the passenger convenience, the Japanese government introduced an integrated system of ‘**joint kiosks**’³⁶ that combine immigration, customs and identity checks to reduce border processing times at Haneda Airport (Terminals 2 and 3), Narita Airport (Terminal 3), and Kansai Airport (Terminals 1 and 2). The joint kiosk scans the traveller’s fingerprints and captures their facial biometrics, along with their 2D barcode and passport.

For the most secure and accurate solution, a Digital Travel Portal should accept the details of a traveller’s passport information either directly from a government passport issuing authority (with a DTC Type 2 discussed earlier in this chapter), or directly from the passport chip in a travellers e-Passport, by using an approved app on a smart device (called a DTC Type 1). The app will enable the travellers passport information to be copied from the e-Passport to the smart device quickly and securely using wireless Near Field Communication (NFC) – which is the same secure technology used in contactless credit cards.

In this process, an exact, but temporary, digital copy of the passport is created on the smart device which can then be electronically shared with the destination government by the traveller during their visa, or travel authorisation application on the Digital Travel Portal.

SITA

SITA Digital Travel Declarations allow travellers to share any required documentation with governments ahead of travel. The solution includes a public facing web portal that can be integrated with a new, or existing Digital Travel Portal used for visa and travel authorisation applications. The portal can digitally collect relevant data, and can be further enhanced with the addition of a smart device app to include biometric and passport data capture.

Where a smart phone app is used, **SITA's Digital Travel Solutions** enable the use of Digital Identities and Digital Travel Credentials (DTCs) to be used in the declaration process. The system can automatically approve, or reject, applications based on configurable government rules, while also allowing manual application review, if required.

For example, the government of Aruba worked with SITA to develop an app that combined the creation and sharing of digital passport data (DTC Type 1) with the Caribbean islands existing electronic declaration system. This enabled visitors to electronically share their identity information in advance of travel, giving the government time to review the information and, once all internal checks were passed, issue a digital **"Trusted Traveller Credential"** directly into the visitor's digital wallet on their smart device. On arrival at the border, the traveller was permitted to use a fully automated immigration lane, **passing through the border in as little as six seconds.**

Once on the island, this "Trusted Traveller" status could also be selectively shared by the traveller with other parties such as hotels, transportation companies or attractions, providing an efficient digital travel ecosystem on the island.



Recommendations for Digital Border Technologies

By embracing innovative border technologies, governments can transform their borders into strategic national assets that strengthen security, stimulate economic growth, and elevate the visitor experience.

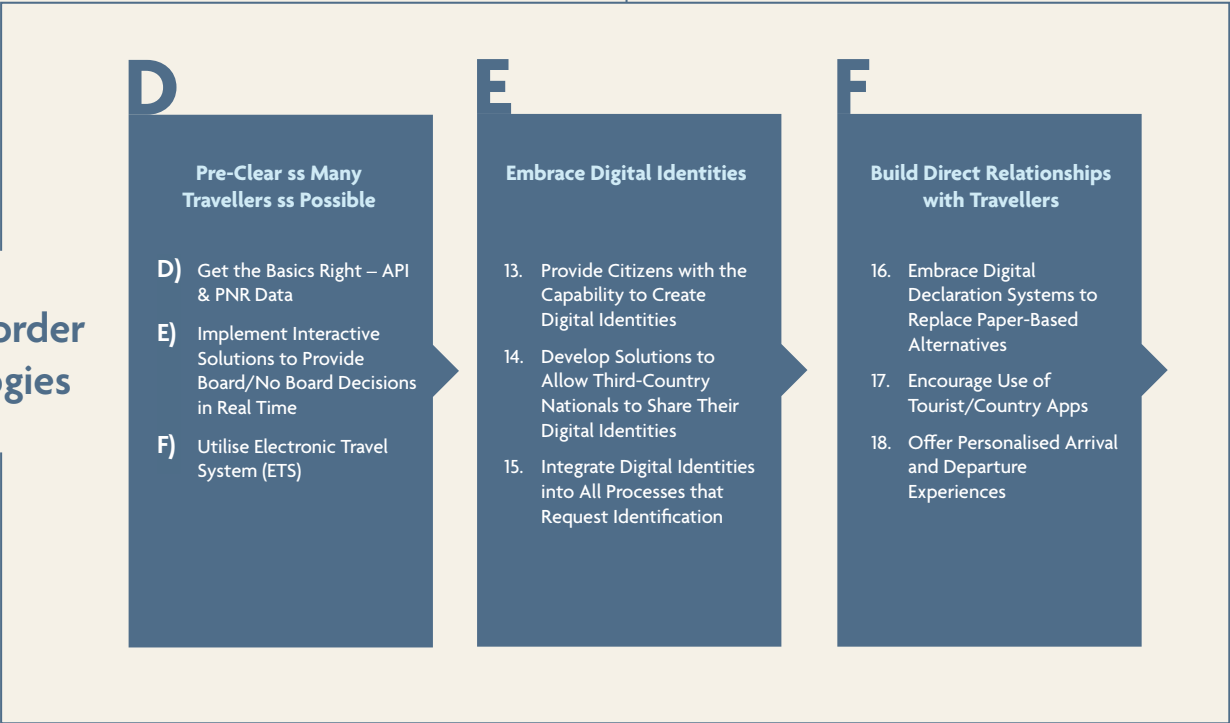
To achieve this, **nine actions**, grouped under **three principles** are recommended. These should be implemented alongside the visa and travel authorisation recommendations covered in the previous chapter:

Principles

- A) Pre-Clear as Many Travellers as Possible
- B) Embrace Digital Identities
- C) Build Direct Relationships with Travellers

Actions

Digital Border Technologies



Recommendations for Digital Border Technologies

By adopting these recommendations, governments can build a digital border system that is capable of scaling up seamlessly as global traveller numbers continue to rise. It also provides a border experience that is more secure and more welcoming, which can lead to greater national prosperity.



D) Pre-Clear as Many Travellers as Possible

Border operations become significantly more efficient when officers have access to traveller information before arrival.

10. API & PNR Data

As required by UN Security Council Resolutions, governments should enact legislation which mandates that carriers send at least API, and ideally PNR data before departure. This would enable traveller risk assessments to be undertaken before travel and allow border officials time to prepare for the arrival of individuals of interest.

11. Implement Interactive Solutions to Provide Board/No-Board Decisions in Real Time

Interactive solutions, including interactive API (iAPI) are strongly recommended to enable the traveller risk assessment decision-making process to be completed even earlier, with automated system-to-system communication, so that 'board' or 'no board' permissions can be digitally sent to the carrier prior to loading the travellers.

12. Utilise Electronic Travel Systems (ETS)

The evaluation and decision-making process can be applied to travellers even earlier, if Electronic Travel System (ETS) solutions are deployed, including Electronic Travel Authorisations (ETA) or eVisas/Digital Travel Authorisations (DTA), as travellers may submit this information weeks, or even months ahead of travel.



E) Embrace Digital Identities

Digital Identities, such as Digital Travel Credentials (DTCs) and Mobile Driving Licences can unlock a simpler and faster way to travel. Traveller trust in these technologies is growing and their use is expanding around the world.

13. Provide Citizens with the Capability to Create Digital Identities

Nations should explore their own internal initiatives for digital identity (such as digital driving licences) and ensure that they can be used at the border by their own citizens returning home for an expedited arrival experience. For example this could involve fast-track lanes using biometric galleries from the national motoring government agency. Government should also consider accepting certain forms of international digital identity, such as ‘digital passports’ compliant with the ICAO Digital Travel Credential (DTC) standard, from particular nationalities, or from specific destinations. Trust could start through bilateral agreements, creating the option for “digital identity corridors” between countries. This would lead to enhanced security and a better experience for travellers in both directions, with a likely increase in traveller volumes.

Canada & The Netherlands

In early 2024, Canada and the Netherlands launched a bilateral ‘digital identity corridor’ pilot for travellers between Calgary, Edmonton, Toronto, Vancouver and Montreal in Canada, with Amsterdam in the Netherlands³⁷.

Eligible travellers were invited to join the pilot and were able to digitally upload their passport information using a smart phone app. This created a DTC record which the traveller could electronically share with the government from their home. Upon arrival at the airport, participants passed through a special “**DTC Tap & Go**” border gate. Based on a facial scan, the pre-submitted DTC information was called up and travellers ‘tapped’ their passport against the border gate reader. If there was a match between the DTC information and the passport, with no irregularities in the traveller risk assessment, the border could be crossed quickly and efficiently in only a few seconds.

The outcome of the trial was used to inform EU and Canadian policies on the use of Digital Travel Credentials.

14. Develop Solutions to Allow Third-Country Nationals to Share Their Digital Identities

Third-country nationals (e.g. citizens from a different region of the world, who do not have rights to free movement) are often excluded from participating in regional initiatives and unable to benefit from digital identity-enabled travel and regional border crossings, often due to incompatible technologies or infrastructure constraints.

A promising example of a solution to this is the EU eIDAS Regulation in Europe³⁸ which uses technology that enables third-country nationals (e.g. travellers from outside of Europe) to use their national ID cards, drivers licences, and bank cards to access certain services across the European region, fostering greater inclusivity and interoperability between nations. Governments are therefore encouraged to involve third country nations to the greatest extent possible in digital identity travel initiatives.

15. Integrate Digital Identities into All Processes That Request Identification

Countries can harness the power of digital identities used at border crossings to enhance a wide range of other travel services. One example is when checking into a hotel. Currently, many nations require the hotel to take a physical scan, or photocopy of the guest's passport. This can create concern for travellers when their passport is sometimes taken into a back office for processing. With an approved digital identity a guest would be able to share this information electronically and well in advance of arriving at the hotel, fulfilling the requirement to obtain the data without the guest having to physically handover their passport.

Similar efficiencies and privacy preserving methods could also be used through the sharing of digital identity credentials at other tourism attractions such as amusement parks, casinos or stadiums – in fact anywhere where confirmation of identity is required.



F) Build Direct Relationships with Travellers

Obtaining information on who is coming to a country, well in advance of them presenting at an immigration desk is vital for a thorough traveller risk assessment. However, the traditional passenger data of API, iAPI and PNR – while invaluable – does not tell the whole story about a traveller. For this, governments could embrace other innovative approaches.

16. Embrace Digital Declaration Systems to Replace Paper-Based Alternatives

In many countries, traveller data is supplemented by the completion of paper-based documents on arrival. The most well-known are Landing Cards, but this can also include Customs or Health Declarations. Governments are encouraged to replace any paper-based systems with web portals and apps that allow travellers to provide this information electronically, quickly and well ahead of arrival.



New Zealand

In 2023, New Zealand digitised their paper 'Passenger Arrival Card' and replaced it with a digital **New Zealand Traveller Declaration** (NZTD). Every visitor to New Zealand must complete a NZTD, even if they have obtained a visa, or a New Zealand Electronic Travel Authority (NZETA).

Obtaining an NZTD is free of charge and can be completed (and updated) electronically at any time within 24 hours of travel – even in the queue for passport control in New Zealand, via the NZTD smart phone app.

Travellers must provide information such as their flight details and contact information, as well as information about items being brought into the country. This information feeds into an electronic traveller risk assessment conducted jointly by New Zealand's immigration, customs, biosecurity and health agencies, providing rapid cross government assessment and without the need for paper landing cards.

17. Encourage Use of Tourist/Country Apps

By encouraging the use of "Visit Us" tourism related apps and websites, the destination government can acquire necessary information on travellers, as well as encourage in-country activities. This also gives tourists advance information on their destination and can positively promote a country. Tourism apps and digital travel declaration solutions can also be bundled together to promote the country where digital travel authorisations are required.

18. Offer Personalised Arrival and Departure Experiences

To encourage the adoption of digital travel solutions and to build positive relationships with visitors, governments could offer personalised and more efficient services at the border. For example, with the use of biometric information and facial recognition technology, even simple personalised messages at e-gates such as "Welcome to the country, Mr Smith" can have a very positive and powerful effect on visitors. Further personalisation could include direct text messaging to travellers before travel, or on arrival and other initiatives that build a positive relationship between the visitor and government.



ANNEX: Economic Modelling Methodology

Two methodologies and econometric models feed into the policy scenarios in this study:

- Changes in visa policy and border technology types are both estimated using a gravity model approach.
- The impact of moving to/from an eVisa is adjusted to reflect the impact of the price change only. This is calculated using broader price elasticities calculated for accommodation cost.

Modelling Outputs – Gravity Models for Visa Price and Restrictions

The dependent variable across all specifications is the natural logarithm of tourism arrivals. This model covers the years 2016 to 2021, 143 destinations/origin countries and over 78,000 unique observations.

The econometric method is Poisson Pseudo-Maximum Likelihood (PPML) with High-Dimensional Fixed Effects. This is a suitable approach when dealing with gravity models (see Silva and Tenreyro (2006) for a thorough discussion).

Outputs from the modelling indicate that the models capture most of the variation in arrivals between countries and over time ($r^2 > 0.9$).

- Robustness tests indicate that the results are valid.
- Fixed effects are applied across all models to capture push/pull factors behind arrivals that are not captured in the data.
- The log distance is not significant – although this is expected given the models control for any factors that are fixed in each origin/destination.
- All other variables act as expected – with common language, historical links and religion attracting tourists, whilst the presence of visa restrictions, diplomatic disagreements and visa costs acting negatively.

Model Robustness Tests

All models pass tests for correct functional form (RESET & Link Test) and stationarity (Dickey Fuller).

Standard errors are clustered at the origin/destination pair level to account for heteroskedasticity and serial correlation, and dealt with effectively by PPML. Low overdispersion ratios are consistent with the decision to use a PPML model.

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For more information, visit: www.SITA.aero

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