



IMPLEMENTING A DIGITAL TRAVEL PORTAL

GOOD PRACTICE RECOMMENDATIONS



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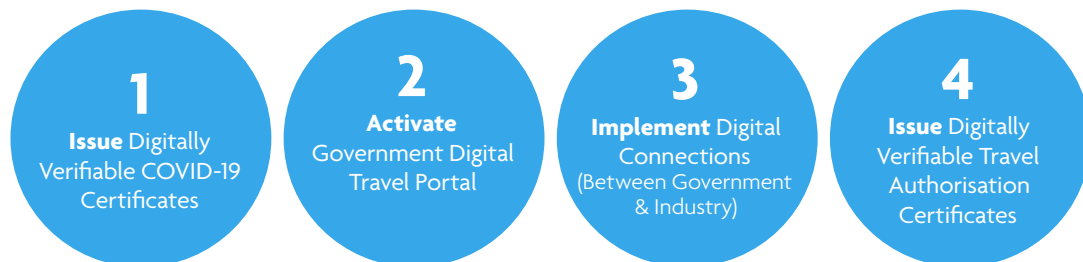
BACKGROUND

This report is for government authorities and should be read alongside the WTTC Report on **Digital Solutions for Reviving International Travel** ¹ and is an extension of that report. It provides additional advice and best practice guidance on implementing a **Digital Travel Portal**

The Digital Solutions for Reviving International Travel report provided guidance for countries that would enable them to meet the commitments made by governments in 2021 at the WHO, ICAO, OECD, G7 and G20 for the safe and efficient COVID-19 health checks of travellers in a way that was globally interoperable and internationally scalable.

The report included eight recommendations that could be implemented by governments to enable them to grow their economies again by safely reconnecting their country with the world and provided the digital foundations for technologies that could be integrated with other Government services and healthcare systems to address both the COVID-19 pandemic and other future health risks at the border.

Technical Recommendations:



Policy Recommendations:



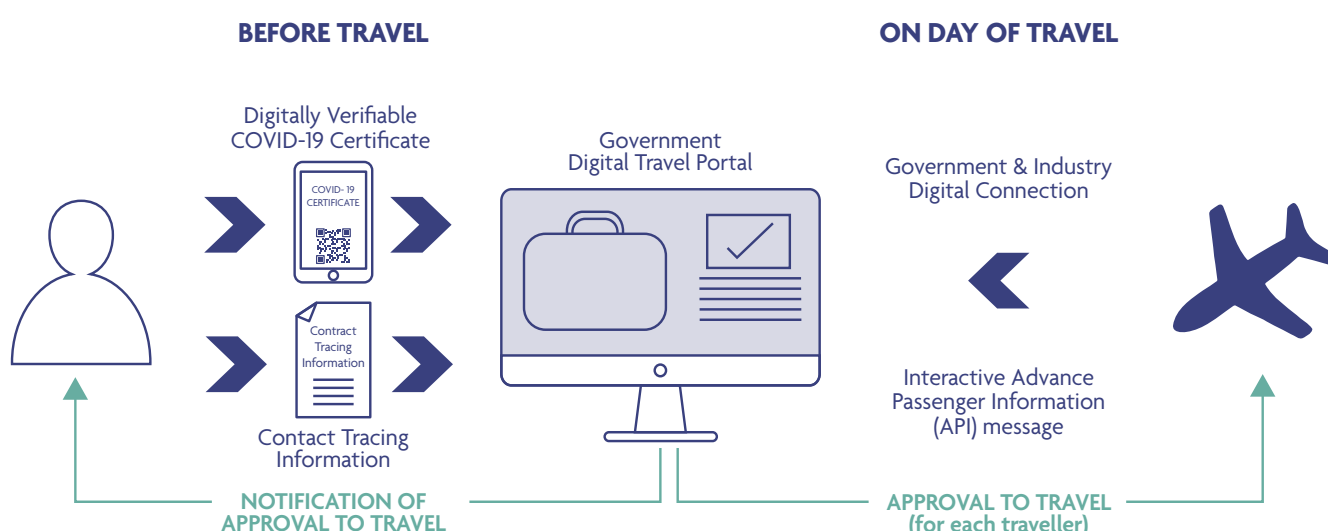
Central to addressing health risks at the border are recommendations two and three to activate a **Government Digital Travel Portal** and to establish **digital connections between Government and Industry**. This report therefore provides best practice advice and support for governments in implementing a connected Digital Travel Portal that can be used not only for COVID-19, but also for rapidly addressing future health risks to national economies and international travel and tourism.

A Digital Travel Portal is an online, or smartphone based system, that enables a country to publish their health entry requirements in a single location and for a traveller to digitally share their health status information with a destination government before their journey and receive an electronic notification pre-travel that they have met the health entry requirements. This provides governments with a robust border health security system and allows a person to travel internationally both safely and easily.

A Digital Travel Portal could be used with all modes of international travel and the UN agency responsible for air travel (the International Civil Aviation Organization [ICAO]) recently updated their guidance for governments in Chapter 10 of their Annex 9 Facilitation Standards and Recommended Practices (Amendments 29), to include the following two recommendations for governments for use of a digital portal, with a digital notification system.

- ICAO Recommended Practice : Contracting States requesting standardized health documents and/ or health-related documentation should consider developing a **HEALTH DIGITAL PLATFORM** where passengers can apply for obtaining a **NOTIFICATION OF APPROVAL TO TRAVEL** by the States of destination and transit
- ICAO Recommended Practice : When Contracting States establish a **HEALTH DIGITAL PLATFORM**, aircraft operators should, where required, perform checks at the point of embarkation to ensure that each passenger has been granted **APPROVAL FOR TRAVEL** by the States of transit and destination
 - **ICAO Additional Note** : In situations where States have interactive API the State could combine the portal with its interactive API response message (**CUSRES**) to the airline, providing an **OK / NOT OK to board message**

ICAO has also introduced a ‘Health Master List’ to enable government Digital Travel Portals to automatically and electronically authenticate the COVID-19 certificates submitted by travellers as genuine. WTTTC therefore encourages all governments to follow the above two ICAO recommendations to establish a Digital Travel Portal with digital connections to industry and to both join and use the ICAO Health Master List to digitally authenticate traveller COVID-19 certificates. Further information on Digital Travel Portal integration with the ‘ICAO Health Master List’ is included later in this report.



* The Digital Travel Portal may return a negative response if the traveller has not met the destination entry requirements

For governments to achieve maximum efficiencies a Digital Travel Portal could be integrated with an existing visa application system, but the functional requirements for general visa applications are outside the scope of this report, which focusses only on mitigating health risks at the border and **best practice recommendations for the critical elements and general design principles of an effective Digital Travel Portal.**



General Requirements & Principles

The following 12 recommendations are offered as general best practice principles that should be applied to the whole Digital Travel Portal. Recommendations related to specific functionalities of the portal are covered later in this report.

1 Privacy by Design & Privacy by Default

A Digital Travel Portal should be based on the principles of 'Privacy by Design' and 'Privacy by Default', which minimises the amount of personal data requested from the traveller and processed by the destination government to fulfil its entry requirements. Privacy by Design refers to taking a proactive and diligent approach to preventing privacy invasive events, whilst Privacy by Default ensures that personal data is automatically protected by the portal, without any specific action required to be taken by the traveller.

Traveller data processing, storage and use should be in line with frameworks from the International Organisation for Standardisation (ISO) such as ISO 29100 ² which covers designing, testing, maintaining and operating IT systems that process personal information, ISO 17975 ³ which provides frameworks for the consent, use or disclosure of personal health information and ISO 27799 ⁴ which provides guidelines for managing health information securely. These should all be underpinned by national law, enabling the destination government to legally obtain the relevant data elements.

The traveller should also be able to fully understand what information is required and why it is being requested so that they can provide informed consent to its usage. This becomes especially important if use of a Digital Travel Portal is mandated for entry to a country, as non-consent by a traveller to the use of their data would mean they could not enter a destination country.

Governments may also wish to consider establishing a portal user account facility. This should not be a required feature, but a system that a traveller could voluntarily join. This would retain certain information that the traveller had agreed to, such as contact tracing information to make their next submission quicker and easier to complete. This would require additional Government focus on privacy principles and IT security, but is widely practiced online with voluntary user accounts existing in many other areas.

2 Compliance with Data Protection & Privacy Laws

The Digital Travel Portal should be compliant with the local data protection and privacy laws of the country that it serves.

It is also recommended that the portal aligns with international standards such as ISO 27001 ⁵ and 27701 ⁶ which provides the requirements for an Information Security Management System (ISMS) and global best practices, such as the European General Data Protection Regulation (GDPR) ⁷, or the US Health Insurance

Portability & Accountability Act (HIPAA) Privacy Rule ⁸ and Security Rule ⁹, which establishes US national standards for protecting health information when it is transmitted in electronic form.

To ensure and demonstrate compliance with the selected rules, a Data Privacy Impact Assessment (DPIA) ¹⁰ should be completed and available to the traveller via the Digital Travel Portal.

3 Language Capability

The Digital Travel Portal should operate in the local language(s) of the country that it serves, as well as English as a minimum. The more languages it can manage the better, with the six official languages of the UN being the recommended next level of enhancement (Arabic, Chinese, English, French, Russian & Spanish).

For the languages selected, the portal should not only have the ability to present information to the traveller in a foreign language, but also be able to read and process documents in that same foreign language, such as identity documents, or health certificates present by the traveller.

4 24x7 Communication for Traveller Questions

To make the use of a Digital Travel Portal as easy as possible a Frequently Asked Questions (FAQ) section should be created to enable travellers to quickly self-serve any queries they may have. This could be extended with a real time online 'chat' function that would further enhance the service, possibly using an artificial intelligence (AI) chatbot – sometimes called a 'Virtual Assistant'. Guides from the UK ¹¹ and US ¹² Governments provide advice for Government Agencies on the use of chatbots to improve customer service and the Singapore ¹³ Government provides an overview of COVID-19 chatbots that they launched during the pandemic.

Alternatively phone, or email contact details, could be made available for queries, but if implemented by a government should be sufficiently resourced (especially during peak travel periods) and operational 24 hours a day, 7 days a week to enable a rapid and accurate response to travellers.

5 24x7 Government & Travel Operator Communication

Separate to the communication methods for addressing traveller queries, there should be a fast 24 hours a day, 7 days a week resolution centre that enables direct communication between travel providers (e.g. airlines, cruise lines, international rail operators) and the destination government, so that travel operators can receive an approval (or not) to board a traveller when an issue needs resolving. For example, this could be due to a new entry rule introduced between the time a traveller completed their submission on the Digital Travel Portal and their journey date.

It is recommended this communication service is provided via phone or email to enable a rapid response and is only for use by travel providers (such as an airline) and only for boarding decisions at the time of travel when required. It is suggested the existing 24x7 contact centres used by countries for immigration clearance decisions could be used for this additional health security purpose.

6 Ability to Process Several Certificate Formats

Across the globe are a number of different formats for health certificates, with four emerging as the leading global standards. WTTC recommends that countries select one of these four as their national format for COVID-19 certificates, with further advice and guidance on this topic provided in the accompanying WTTC report on **Digital Solutions for Reviving International Travel** ¹. A certificate 'format' is considered to be the technical standard used for the certificate data and its presentation (such as the SMART Health Card standard), whereas a certificate 'type' is considered to be contents of the certificate (such as a vaccination, test or recovery certificate).

WTTC recommends countries adopt one of the following four standards as their national COVID-19 health certificate format:

SMART Health Card ¹⁶

The SMART Health Card is an open, interoperable format for health certificates that was developed by a consortium of leading health and technology organisations. As an 'open standard' it can be used for both COVID-19, or other health data and some countries have expressed an interest in using SMART Health Cards to share routine immunization records in the future

At the time of publication of this report, SMART Health Cards for COVID-19 are very dominant in the USA and Canada and have also been adopted by Japan and other countries in Africa and Europe as their national standard for COVID-19 certificates.

As the SMART Health Card is an 'open standard' anybody could in principle issue a SMART Health Card, so the CommonTrust Network (CTN) ¹⁷ is a supporting body for use by governments and other verifying agencies that oversees whether a SMART Health Card has been issued by a legitimate source

EU Digital COVID Certificate (EU DCC) ¹⁸

The EU DCC is in use across the EU, including in all of the 27 EU nations.

In addition, many countries outside of the EU are also adopting this standard and countries can apply to join the EU DCC scheme. This involves an EU vetting process to evaluate another country's compliance with the EU DCC standard and if accepted by the EU, COVID-19 certificates issued by an applying country are then recognised as equivalent to an EU DCC. This enables the COVID-19 certificates of an applying country to be accepted in Europe and the applying country is also able to electronically verify COVID-19 certificates issued by any of the other countries in the EU DCC scheme

At the time of publication of this report, 35 non-EU countries have successfully joined the EU scheme, meaning COVID-19 certificates are interoperable between 62 countries (27 EU + 35 non-EU countries), however the European regulation governing the use of the EU DCC only runs until June 2022 and is currently subject to an EU review which could extend its use to June 2023. There are no time limits on the use of the other three certificate formats.

ICAO Visible Digital Seal (ICAO VDS-NC) ²⁰

The Visible Digital Seal for Non Constrained Environments (VDS-NC) is the health certificate standard published by the International Civil Aviation Organization (ICAO) and was designed specifically for use in international travel

It follows the approach used for issuing and verifying non-electronic visas and Emergency Travel Documents (e.g. a temporary passport) and has been adopted by Australia as their national standard for COVID-19 certificates

DIVOC ¹⁹

The Digital Infrastructure for Vaccination Open Credentialing (DIVOC) was developed by the eGov Foundation in India as open source software that is freely available for anyone to use

Originally developed to support large scale vaccination programmes, the DIVOC format can now be used for both vaccination and test certificates

At the time of publication of this report, India, Sri Lanka, the Philippines, Jamaica and Indonesia are using the DIVOC standard for their digital vaccination certificates, whilst India, Sri Lanka and the Philippines are also using the DIVOC standard for their COVID-19 test certificates

In the mid-to-longer term WTTC encourages global consolidation towards a single international standard for health certificates, but whilst this is not yet achieved, governments should adopt one of the above four standards for their national COVID-19 certificates and implement a Digital Travel Portal.

However, countries should not design their Digital Travel Portal to be able to electronically verify only one certificate format - their own selected certificate format – rather the portal should, as a minimum, be able to accept and verify every one of the four major certificate formats. This will ensure the Digital Travel Portal can be used by travellers from all over the world.

At the time of publication of this report, several Digital Travel Portals in existence only accept one or two certificate formats and whilst four are emerging as the leading global formats, WTTC urges all governments to ensure that all four certificate formats are accepted by their Digital Travel Portal, irrespective of which format they have chosen for their national use. However, countries may also choose to expand their portal to accept other certificate formats if they wish.

To support countries with accepting multiple certificate formats, ICAO has launched a 'Health Master List' as a global repository of 'public keys' for the secure and rapid electronic validation of COVID-19 certificates. This can be used by countries to digitally verify the authenticity of COVID-19 certificates that are shared by travellers through the Digital Travel Portal process. WTTC is encouraging each of the above four standards to join the ICAO scheme and strongly encourages all countries to use the ICAO Health Master List as a secure and efficient way to electronically validate travellers COVID-19 certificates. Countries can download the ICAO Health Master List from a dedicated ICAO website¹⁴.

The Digital Travel Portal should also provide links to each of the four major certificate formats and inform travellers with paper certificates (such as handwritten vaccination cards) that they may also have access to a digital equivalent certificate in their home country. For example, many people who have a paper US CDC Vaccination Card, may also have access to a digital SMART Health Card in the USA.

For travellers where no digital certificate exists, the portal should include the ability for a traveller to manually enter their COVID-19 information from their paper certificate, which may need to be physically inspected and verified at the border. Additional guidance on preventing paper certificate fraud is contained in the accompanying WTTC report on **Digital Solutions for Reviving International Travel**¹.

7 Ability to Accept Multiple Certificate Types

It should not be assumed that all the requested health information from a traveller will be on a single certificate and therefore the Digital Travel Portal should have the ability to accept multiple certificates. These certificates may contain different information and therefore be considered different 'types' of certificate, such as a vaccination, test or recovery certificate.

For example, the entry rules for a country may require a traveller to present both a vaccine certificate and a negative test certificate and therefore the portal will need to be able to accept and process two different certificate 'types'.

In this example it may also be the case that a traveller received their vaccine in one country and their test in another and that each certificate may be based on a different format (as described above). This further supports the previous recommendation that the Digital Travel Portal should be able accept each of the four main health certificate 'formats' as a minimum (e.g. SMART Health Cards, ICAO VDS-NC, DIVOC & EU DCC), as well as the ability to process several different certificate 'types' (e.g. vaccination & test certificates)

8 Agile Rules Engine

The COVID-19 pandemic has demonstrated that health threats are very dynamic and can change quickly and unpredictably. The Digital Travel Portal therefore requires an agile rules engine that can be changed and updated at short notice when required.

If country entry rules are to be changed at a future date, the portal also needs the ability to be able to run both the existing and future health entry rules simultaneously, but applied on different dates. For example, if new entry rules are to be implemented in two days, one traveller may complete their submission on the Digital Travel Portal for a trip tomorrow and be subject to the 'existing' entry rules, whereas another traveller may complete their submission on the Digital Travel Portal for a trip in three day's time and be subject to the 'future' entry rules. The portal therefore needs to be able to recognize the date of travel and have the ability to apply either the 'existing' or 'future' rule set.

Although discouraged due to its disruption, it is recognized that there may be situations where it is necessary for governments to change the country entry rules suddenly and apply them with almost immediate effect. In these situations, travellers may have already completed their entry on a Digital Travel Portal for a future trip and received their notice of approval to travel. To resolve issues such as this the travel operator should communicate directly with the destination government at the time of travel using the 24x7 contact details described earlier in this report (recommendation 5)

Where travel rules change rapidly and frequently and therefore constant communication between a destination government and travel operator is not sustainable, there should be measures in place on arrival that enable travellers to comply with health requirements and not be deemed inadmissible. For these situations in air transport ICAO has recently issued a recommended practice for governments that "*Contracting States should consider **measures on-arrival** to mitigate the consequences to passengers who may become inadmissible or **out of compliance with State health-related requirements**. Note: Vaccination, revaccination, testing and/or quarantine measures might be **alternatives to deeming a passenger inadmissible***" (ICAO Annex 9, Amendments 29)

9 IT Intelligence & Exception Handling

To minimise the number of entries on a Digital Travel Portal that require human intervention, the portal requires a certain level of 'intelligence', so that it can automatically resolve frequently occurring discrepancies.

For example, the name of a traveller manually entered by a person on a portal (e.g. John Smith) might not 100% match the name on their passport (Jonathan Smith), or on their vaccination certificate (Mr J Smith). The portal therefore requires a certain level of computational intelligence (sometimes called 'fuzzy logic') to be able to automatically handle and successfully process these exceptions, without rejecting the travellers submission on the portal.

For more significant exceptions, such as the ability to process submissions for disabled individuals (such as those with visual impairment), the government should provide a human service that can be contacted by the traveller.

10 Ability for Multiple People to Apply as a Single Group

The Digital Travel Portal should have the ability to be able to process groups of people, especially family groups, within a single session (or be accessed via a single user account), rather than requiring each individual traveller to complete an independent submission.

For example, it should be possible for the portal to process several members of the same family within a single submission and for relevant parts of the information, such as the address where the family will stay during their trip, to be entered only once and declared to be the same for all members of the group for which the submission applies.

11 24x7 Availability of the Digital Portal

As international travel is a global business, that operates 24 hours a day, 7 days a week, in all regions and time zones, a Digital Travel Portal could be used by travellers at all times around the world.

Therefore, the portal should be continuously available and any outages (for maintenance or other reasons) kept to a minimum. During any outage periods, the portal should automatically re-direct travellers to a holding page, where it is clearly articulated when the service will be available again and any alternative procedures that should be followed by a traveller if they require an urgent travel submission. All timings should be clearly marked in local time and UTC/GMT.

12 Legal Path in Case of Disputes

It is to be expected that not all travellers will agree with the output from a Digital Travel Portal, especially if a rejection prevents them from traveling to a destination. For such cases the portal should clearly articulate what options the traveller has to request a review of their case and the government should have procedures in place to consider and redress these situations if required. This information could be included within a FAQ for travellers (recommendation 4)





FIVE CRITICAL PARTS OF A DIGITAL PORTAL

The following 5 recommendations relate to specific features and functionalities of a Digital Travel Portal and are considered critical for an effective portal that will provide robust health security for governments and an efficient experience for travellers and travel providers.

1 General Travel & Country Entry Information

The initial part of a Digital Travel Portal should be fully open and available to the public, without any need for a registration or login process.

It should include all of the general information that a traveller would need to know to enter a destination country, so that they can prepare in advance and address any pre-departure questions or concerns. This information may be accessed a significant time in advance of their trip, so the portal should also contain a warning notice that the information is subject to change and recommend that all travellers revisit the information as close to their departure date as possible.

This information may be contained directly on the portal itself, or the traveller may be re-directed from the portal to links if the information is stored in a different location online. In either case there should only be one official source of travel information, to prevent duplication and the possibility of conflicting or different official information in more than one location.

This open section of the portal must include details of all the information that a traveller should have to complete a submission on the Digital Travel Portal and any other specific requirements that may be applicable such as whether certain types of insurance are required. If testing or quarantine is required upon arrival, the portal should include how these can be booked and if there are any costs involved. If there are any limitations, or bans on certain travellers entering the country, based on specific criteria such as recent travel history, these should also be clearly articulated. If travellers have any questions there should be a suitable communication channel to address these rapidly and accurately, as described in recommendation 4 of the previous section.

The health data requirements and types of acceptable certificates should also be clear for the traveller, including for example, which vaccines are accepted, the number of doses required and any relevant timings between when the last dose was administered and the date of travel if there are any limitations in this area.

WTTC recommends that the use of a Digital Travel Portal and the sharing of traveller health information with a destination government for pre-travel review and approval should always be free to the traveller, but if there are any costs associated with a submission, these should be clearly stated and how they can be paid.

A crucial part of the portal is to also inform the traveller what they must do in case they experience COVID-19 related symptoms, or test positive for COVID-19 while in the destination country, including where and how they

can receive medical care. This information may be provided via links from the travel portal to other online pages containing domestic rules, but the government should consider that they will be read by both visitors and residents of the destination country and therefore ensure there is suitable language compatibility (described in recommendation 3 of the previous section) and include any special conditions or requirements for visitors, which may for example include if certain types of insurance are required by international travellers for medical care.

If country entry rules are known to be changing in the future, both the current and future rules should be clearly stated, as well as the exact date and time (in local time and UTC/GMT) that the rule change will take place.

Finally, the portal should also contain information on how a traveller can access domestic venues (such as restaurants and museums) in the destination country, if proof of their COVID-19 status is required for entry. This may involve using a local smartphone 'app', but as this may not be compatible with international vaccine or test certificates, WTTC recommends that countries enable their domestic venues to also accept a travellers authority to enter their country, issued by the Digital Travel Portal, as proof they have met the COVID-19 entry requirements. Further details on this are provided in the accompanying WTTC report on **Digital Solutions for Reviving International Travel**¹.

2 Traveller Questionnaire

The second part of a Digital Travel Portal should also be fully open and available to the public, without any need for a registration or login process.

Once a traveller understands the general requirements, they should be directed towards a short series of questions that will provide them with country entry information that is specific to their circumstances. These questions should not include personal data, such as their name or passport number, but may include questions related to their date of travel, purpose of their trip, nationality, vaccination status, residency status, recent travel history, or more.

The output of this questionnaire should be a clear YES or NO on whether the traveller is eligible to enter the destination country. If the answer is NO, the reasons why should be clearly explained and if the answer is YES, the portal may provide a set of further options that are applicable to this specific traveller.

For example, the testing options available for a vaccinated traveller who is eligible to enter the country may be either of the following two options:

- 1) Negative test, of a certain type, taken within 72 hours of departure, with no quarantine on arrival

OR

- 2) RT-PCR test on arrival, with no need to pre-book, but a cost to be paid on arrival and mandatory quarantine until the result is published

The ability to show all of the options that could be applicable to a traveller and their specific circumstances (based on defined questions and criteria such as described above) will provide the traveller with ownership of deciding what is best for them.

The portal should also include the capability to be able to send the output of the questionnaire to the traveller as an email, so that they can refer to it offline. This should include the answers to each of the questions, so that the traveller can see exactly what information was given to reach the conclusion and the options available to them, as described above.

3 Completion of the Digital Travel Portal Process

Once a traveller has received the information to prepare for their trip from the general information pages and the specific options unique to their circumstances from the traveller questionnaire, they will be fully prepared to execute and complete the portal process.

This part of the Digital Travel Portal is all about processing the private and personal data of the traveller and should start with a validation of the email address of the traveller to confirm where the results will be delivered to. This could be achieved by providing a 'validation link' through a message sent to an email address provided by the traveller, or via a One Time Password (OTP) sent to a travellers email address that they must confirm and enter into the portal. It is good practice to capture and validate the email address at this point, so the results of the portal submission can be correctly communicated to the traveller.

Elements of the next part of the portal process may include requests for the same information that was submitted during the traveller questionnaire (such as recent travel history), so if a traveller is completing this stage of the process immediately after the questionnaire, or has established a user account where the information was retained, the portal could re-use this information to avoid repetition and duplication, only asking the traveller to confirm if all the information is still valid.

However, the next step needs to include new personal data from the traveller and information relevant for the destination government, such as the travellers name (first, [middle] and last) and the Identity Document number that will be used by the traveller for entry to the destination country (this is most commonly a passport). The best practice to capture this data is not for it to be input and typed by the traveller, but for an image of the passport to be uploaded to the portal, which could use Optical Character Recognition (OCR) technology to extract the data into a readable format. To enhance security the portal could also apply software that would digitally verify the passports machine-readable zone (MRZ), or even the data on the travel document chip in case of an ePassport following the new ICAO Digital Travel Credential (DTC)¹⁵ standard.

It makes sense to ask for the travellers identity data first, as beyond this point a submission to the Digital Travel Portal becomes a legal declaration and any wrongly given information could result in a destination government refusing entry, or imposing fines and criminal proceedings. Without this identity process first, there is a greater risk that data may not correlate with an individual later in the travel process, causing unnecessary delays and it also allows the destination government to differentiate the arrival process based on an individuals possible risk factors (discussed in the final section of this report).

The options then presented to the traveller (if more than 1) should be identical to the output of the traveller questionnaire if all of the traveller data is the same. The traveller could then make a selection of which option they wish to choose (which for example could include whether they wish to submit a negative Antigen test no older than 24 hours, or a RT-PCR test no older than 72 hours before departure) and the required health certificates could be uploaded by the traveller. This could be achieved in several ways, such as through an image of the certificate taken by the camera of the device used by the traveller, or by an ability for the traveller to select or 'drag & drop' the certificates stored on the travellers device. If a camera is used, it should read the QR code of the certificate to obtain the information, whereas if the file is uploaded directly from the device, the portal could use Optical Character Recognition (OCR) software to extract the data into a readable format (following a similar process that was used for reading the travellers passport as described above).

If the uploading of the health certificates is declined by the portal it should be made very clear to the traveller why it was rejected and this reason should also be sent to the traveller via their validated email address, so that the traveller can submit a question to the destination government if they wish (as described in recommendations 4 and 12 from the previous section), or to be able to show the reason for the rejection, along with an original copy of the certificate, to the travel provider or destination Border Agency at the time of travel to explain why they have not been able to complete the online process, but still believe they have a valid health certificate that could be manually verified. If this is presented to a travel provider at the time of travel, they may wish to use the communication tool established to connect them with the destination government for an authority to board the traveller as described in recommendation 5 from the section above.

At the end of a successful portal process the traveller should receive a 'notification of approval' to proceed with their trip. This may include one or two QR codes. One QR code should enable international travel and contain information that demonstrates a traveller has successfully completed the portal process and met the country entry requirements, whilst a second QR code could contain different information and be used by the traveller to prove their COVID-19 status to enter domestic venues (such as restaurants or museums) in the destination country, where this is required.

The difference between the QR codes should be very clearly marked and when printed should be on two different pages to avoid scanners picking up the wrong one. For international travel, the QR code should contain the minimum amount of information necessary (following the principles of Privacy by Design outlined in recommendation 1 of the previous section) to confirm to the travel provider or Border Agency that the traveller has met the health entry requirements. It does not therefore need to contain specific health related information and travel providers should not have access to this information, whereas the QR code that could be used for access to domestic venues in the destination country should be fully aligned and compatible with the certificate standard used by the destination country for their health certificates (and follow one of the four major health certificate standards described in recommendation 6 of the previous section of this report).

Additionally, countries may wish to allow travellers to input the 'domestic QR code' into their local smartphone 'app', or similar system used within the destination country, to allow travellers to quickly and easily enter domestic venues and access local services. This could be achieved by either the traveller scanning the 'domestic QR code' into the local smartphone app, or by using a 'pull' service where the smartphone app would electronically receive the correct information from their governments portal, based on the identity information input by the traveller into the smartphone app. However, for either option to work effectively, the destination government must ensure that the smartphone app is available on all of the global app stores and not just on the local country app store, as international travellers are unlikely to have access to that.

4 Government Integration & Traveller Level of Compliance

For a destination government to receive the greatest benefit from a Digital Travel Portal, WTTTC recommends that it is directly integrated with the government immigration systems (or other similar system), so that a traveller's level of compliance in meeting the health entry requirements is accessible and actionable by the Border Agency. It is envisaged that all travellers who complete the portal process, could be assigned to one of four categories. In each scenario a traveller may be provided a 'notification of approval' to proceed with their trip after completing the portal process, but still require additional action or inspection on arrival. The four categories envisaged are:

Category	Status	Example
1	Traveller COVID-19 status is assessed and deemed to be fully compliant	No further action is required from either the travel provider, or the Border Agency on arrival
2	Traveller COVID-19 status is assessed and considered likely to be compliant , but requires manual verification on arrival	This could be in scenarios such as: <ul style="list-style-type: none"> a) A paper health certificate was submitted by the traveller which requires physical inspection by the Border Agency on arrival to confirm its authenticity b) A SMART Health Card was submitted by the traveller, but the issuing authority is not part of CommonTrust Network (CTN), so requires physical inspection by the Border Agency on arrival

3	Traveller COVID-19 status is assessed and is unable to be fully verified , so requires manual verification on arrival	<p>This could be in scenarios such as:</p> <ul style="list-style-type: none"> a) The health certificates submitted were unable to be fully read by the portal b) There was a name discrepancy between the name on a travellers passport (e.g. Jonathan) and the name on their health certificate (e.g. John). Note: A full name mismatch, such as Jonathan on a passport and Paul on a health certificate would result in a submission rejection
4	Traveller COVID-19 status is assessed and considered a possible case of fraud which requires manual inspection on arrival	<p>This could be due to the portals digital inspection of the submitted documents where:</p> <ul style="list-style-type: none"> a) They were from an unknown or suspicious source (Note: A submission from a known illegitimate source would result in a submission rejection) b) They contained digital signatures that did not confirm, indicating possible tampering, or errors in the scanning/reading of the certificate data c) They failed other document digital authenticity checks which requires manual verification

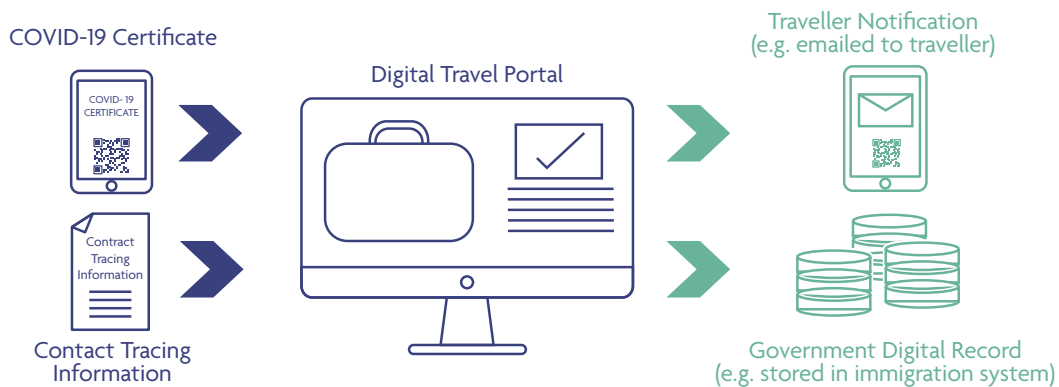
Each of the above four states could be recorded in the destination governments immigration system against the travellers identity document details. This data could then be used to signal a differentiated arrival process to the Border Agency, or to how the travel provider could communicate with the traveller (described in the last section of this report).

For travellers who do not complete the portal process there is a possible fifth and sixth state, but this does not need to be recorded in the immigration system as a traveller will not have completed the portal process.

Category	Status	Example
5	Traveller COVID-19 status assessment was started and a real identity document (e.g. passport or ID Card) was uploaded, but the full process was never completed	<p>This could be in scenarios such as:</p> <ul style="list-style-type: none"> a) Relevant health documents were not available, or ready to be uploaded b) People played with the portal, but never intended to travel
6	Traveller COVID-19 status is not assessed	This is where a traveller may have registered for a portal account, but either never intended to travel, or did not pass the first stages of email verification or uploading of their identity document.

5 Travel Providers Ability to Query the Assessment

For travel providers (e.g. airlines, cruise lines, international rail operators) it is important that there is a common and unified way for them to quickly verify the outcome of a travellers interaction with a Digital Travel Portal that is easy to administer (to reduce queues on the day of travel) and to prevent the need for the traveller to present their health certificates all over again to the travel provider (as they have already been reviewed by the destination government through their portal submission). However, travellers should always be advised to carry physical copies of their health certificates with them during their trip in case of any issues.

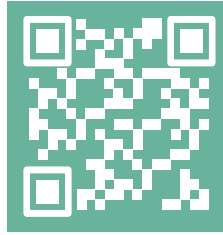


This verification process should also be common and unified so that it does not matter which country the person is travelling between, or which technology vendor is supplying the portal solution. As described in the accompanying WTTTC report on **Digital Solutions for Reviving International Travel**ⁱ, there should be two key outputs from the Digital Travel Portal that enable a travel provider to verify a travellers status

1. Traveller Notification

Upon completion of the Digital Travel Portal process the traveller should receive an acknowledgement containing a QR code. This may be emailed to the traveller and printed on a physical piece of paper, or stored within a travellers smartphone 'digital wallet' (such as within an airline smartphone app)

This QR code can be scanned by the travel provider on the day of travel to verify the travellers completion of the Digital Travel Portal process (or be shared directly and electronically by the traveller from their smartphone digital wallet during an online check-in process). It should contain appropriate security features, such as the use of Public Key Infrastructure (PKI), so that the travel provider can have confidence it is authentic and not been tampered with, but as described in recommendation 3 from the previous section of this report, it does not need to contain any of the personal health information that was contained on the original COVID-19 certificates, making it much more privacy compliant and only needs to contain data that confirms a traveller has completed the Digital Travel Portal process and any special conditions that must be applied (such as manual inspection of a health certificate on arrival to confirm a name discrepancy). The information that may be contained in the QR code could include:



Reference number, or code, that refers to the specific portal transaction



Basic traveller identity elements, based on the identity document submitted by the traveller to the portal, such as the travellers name (last/first), nationality, travel document number and date of birth. This is to be able to match the traveller with this document and with their travel booking.



Basic travel data (such as a flight number and its date/time) such that this document can be matched to a specific journey and date (this is important in case entry rules change on a specific date and this approval then becomes no longer valid)



Length of time the QR code is valid for
This could be short (e.g. less than 72 hours) if based on a COVID-19 test result, but may be longer if based on a vaccination (or recovery) certificate

PORTAL DECISION

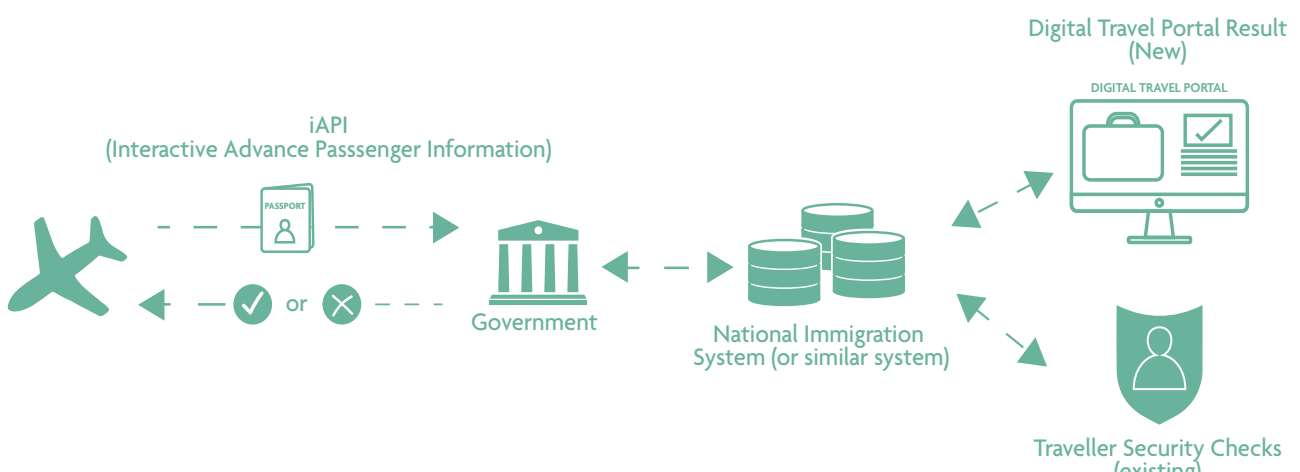
BOARD – the traveller can be boarded and carried to their destination, without any further action required

ADDITIONAL CHECKS REQUIRED – including an explanation of what is required, by who and when. This may involve the Border Agency on arrival (as described in section 4 above), or the travel provider on departure. If action is required by the travel provider, this should also include if the travel provider can board the traveller if the matter is resolved to their satisfaction, or whether authorisation from the destination government is required prior to departure (using the specific portal transaction reference number detailed first in this list and the communication tool described in section 5 earlier in this report)

A NO BOARD decision would not be included here, because if there was a reason that the traveller could not enter the destination country based on their health status, their submission would have been rejected during the portal process

2. Government Digital Record & Interactive API (iAPI)

An even better way for verification is to use an ‘all digital’ process, without any paper or physical scanning of documents. This ‘all digital’ process stores a record of the travellers transaction from the Digital Travel Portal in the destination country immigration system (described in section 4 of this report), with a procedure called Interactive Advance Passenger Information (iAPI) (or sometimes also called APP or AQQ) that enables the travel operator to receive the portal decision electronically and directly from the destination government.



This process very closely matches the existing and already widespread iAPI process in place in many countries, that enables airlines to receive a digital approval to board a traveller if they have passed the destination governments electronic pre-departure security checks (by for example confirming the traveller is not on a terrorist watchlist – illustrated via the bottom path of the above diagram). WTTTC recommends this existing iAPI process is extended to not only include a travellers pre-departure compliance with border security, but also their compliance with health security checks performed through the Digital Travel Portal and (as recommended in section 4 above) integrated with the immigration system, which will make this joint border and health security assessment simpler.

This extended process does not require any changes to the existing iAPI standard, as the same traveller information is transmitted between the traveller operator and the destination government and the return includes the same authority (or not) to board the traveller, with any additional checks or conditions that must be applied. The only difference is the destination government uses the iAPI information as a pointer to not only check for border security risks (such as if the traveller is on a terrorist watchlist), but also the output from the Digital Travel Portal and any health security risks.

To ensure both of the above options for 1) Traveller notification QR code and 2) Government electronic record with interactive API work smoothly and globally, WTTTC proposes that common standards and approaches are agreed. This could include agreement on the format of the traveller notification document, the data elements of its QR code and the procedures for extending the existing border security use of iAPI to include its use for health security. As iAPI systems already exist within air travel, this could be through organisations such as the International Civil Aviation Organization (ICAO) and International Air Transport Association (IATA).

However, all other modes of international travel (such as cruise lines, ferries and international rail) should also be considered and therefore WTTTC recommends that the needs of all international transport stakeholders should be taken into account and considered by governments when developing these standards, as we live in a globally connected and multi-model transport world. If there is a positive from the COVID-19 pandemic, it has shown the benefit of cross sector collaboration between all Travel & Tourism sector stakeholders and both industry and government should not simply return to pre-pandemic sector silos of aviation, maritime and rail (etc), where there are common challenges to address, such as health risks at the border and the safe and efficient movement of international travellers.

Governments should also not impose fines on travel providers where they can clearly prove a decision to board a traveller was based on the above information.





TRAVELLER JOURNEY & EXPERIENCE

The final part of the process is to differentiate the travel experience based on the level of compliance the traveller has achieved passing through the Digital Travel Portal. In general, the higher the level of compliance, the easier and smoother the journey is for the traveller and the minimum level of additional processing required by the travel operator (on departure), or the Border Agency (on arrival).

High levels of 'pre-travel' and 'off-airport' (or other off-transport facility) compliance with the health entry requirements, through an online Digital Travel Portal therefore also:

- Reduces **traveller anxiety** by allowing them to complete the health checks before their journey
- Enables governments with the same resources to focus their energies on **higher risk cases**, rather than checking the health status of every traveller at the border
- Allows travel operators to focus on **safely transporting travellers**, without lengthy and time consuming queues in transport terminals (which creates additional health risks in themselves)



Example Travel Experiences

Below are some suggestions for how the travel experience could be differentiated based on traveller compliance through the Digital Travel Portal. They are based on the six possible categories described in section 4 of this report.

#	Compliance Level	Travel Provider DEPARTURE process	Border Agency ARRIVAL process
1	Fully compliant	No additional checks required	Fast track processing through the border, without the need for human intervention. This could include the use of Automated Immigration Gates [where available] based on the travellers identity document only
2	Likely compliant	<p>If checks are required by travel operators - manual verification of the specific points raised by the portal</p> <p>Travel operators should only be expected to resolve 'simple' issues – more complex document inspection issues should be handled by the Border Agency on arrival</p> <p>(Travel operators should be authorized to board the traveller if the issue is resolved to their satisfaction)</p>	If checks are required by the Border Agency - Manual verification of the specific points raised by the portal
3	Unable to verify	<p>If checks are required by travel operators - manual verification of the specific points raised by the portal</p> <p>(Travel operators should be informed if they can board the traveller if the issue is resolved to their satisfaction, or requires authorization from the destination government using the communication tool described in section 5 of this report)</p>	If checks are required by the Border Agency - Manual verification of the specific points raised by the portal
4	Possible fraud	<p>No additional checks required</p> <p>(These are issues that cannot be resolved by travel operators, so should only be assessed by the Border Agency)</p>	Strict interviewing and document inspection on arrival, with escalation to law enforcement if necessary
5	Process not completed	Deny traveller ability to check in	N/A
6	Portal was not used	Deny traveller ability to check in	N/A

Lastly, destination governments should establish a lessons learned and measurement exercise to determine the number and proportion of travellers in each category, with an active programme of work to explore the reasons why travellers are not falling into Category 1. Changes and continuous improvements should then be introduced to continually increase the level of compliance with the health entry requirements, which will lead to a smooth, efficient and robust solution to mitigate health risks at the border.

Whilst this report is written in the context of COVID-19, it is applicable to all other current and future health risks at the border and therefore even if COVID-19 mitigations are reduced, the recommendations from this report should be actioned as resilience and preparation for future health risks to international travel.

This report should be read alongside the WTTC Report on **Digital Solutions for Reviving International Travel**¹.



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