Future
Aviation
Forum

POLICY WHITE PAPER

# HARMONISING AIR TRAVEL

MAY 2022

# FOREWORD

The past two and a half years have been extremely challenging for our industry.

The COVID-19 pandemic has had a major negative impact on passenger volumes as a result of sustained border closures and travel restrictions.

However, it has also been an opportunity for learning, and for ensuring we now build significantly increased resilience into the information systems upon which our industry relies.

As we begin to imagine a post-COVID reality, the imperative is to attract once again the millions of people now discouraged from booking flights as a result of confusion over travel requirements, and also to ensure as an industry we are prepared for future health crises.

For this reason, it is my great pleasure to introduce the Harmonising Air Travel policy White Paper.

Informed by knowledge acquired during the pandemic, the White Paper seeks to eradicate confusion over passenger requirements for air travel during health emergencies, and also to create a unified global system whereby individuals and businesses can access in real time the information needed to make decisions relating to air travel.

The Harmonising Air Travel White Paper is ambitious and far sighted, and was created in consultation with a broad range of aviation stakeholders.

I believe it will bring much needed simplicity back to air travel, and in turn restore passenger trust and confidence in the sector.

In order for the policy to be successful, we require your support to help it evolve. Our intention is to build the policy into a Working Paper for consideration at the ICAO General Assembly later this year.

Thank you to everyone involved in the development of the Harmonising Air Travel White Paper.

**H.E. Abdulaziz Abdullah Al Duailej**
President, General Authority of Civil Aviation (GACA), Saudi Arabia

# POLICY BRIEFING

## SUBJECT

This White Paper establishes the long-term policy objectives and pathways towards achieving the creation of a universally recognised and harmonised health requirement framework that facilitates and simplifies the air passenger journey and experience.

## SCOPE

External shocks have the potential to greatly impact air transport services and subsequent economic growth. Covid-19 has severely disrupted air traffic and passenger travel across the globe. As a result, passenger traffic is not expected to return to pre-2019 levels until 2024 and air transport remains vulnerable to other future global health crises.

Despite past efforts to get passengers back in the sky, the unilateral and fragmented approach taken by most countries to coordinate and communicate travel restrictions continues to hamper air passenger traffic recovery, while also making the air transport industry vulnerable to future health crises.

With improving air transport resilience as a guiding principle, the aims of this White Paper are: **to harmonise health information protocols, to enhance information sharing and transparency, to protect the health and safety of passengers, and to restore and retain passenger trust.**

With the co-operation and guidance of the International Civil Aviation Authority (ICAO), this Policy proposes the establishment of a framework that:

**(a) increases understanding of country-specific information requirements – particularly for air passengers; and**
**(b) harmonises health requirements.**

Through four pillars comprising a harmonised reporting system for all countries, communication systems for states and other stakeholders, new governance and coordination mechanisms, and compliance mechanisms such as a digital health certificate, the proposed new framework will help to increase the transport sector's resilience to public health emergencies and reduce the negative impact on passenger volumes.

To achieve the goals of this policy, coordination must be consistent within the civil aviation sector (led by ICAO), but also among the health and tourism sectors also (led by the World Health Organization (WHO) and the United Nations World Tourism Organisation (UNWTO).

By building on the previous work of ICAO, its Member States and regional bodies, our aim is to present the White Paper at the Future Aviation Forum in Riyadh, in May 2022, and to submit it to the 41st ICAO General Assembly, to be held later in 2022.

# STAKEHOLDER ENGAGEMENT

- International Authority of Civil Aviation
- The International Air Transport Association
- World Health Organisation
- Airports Council International

- General Authority of Civil Aviation (Saudi Arabia)
- Saudi Arabia Ministry of Health
- Saudi Data and Artificial Intelligence Authority

# EXPECTED IMPACTS

The introduction of this policy and framework will make the air transport sector more resilient to public health emergencies and reduce the negative impact on passenger volumes, by facilitating and simplifying the passenger journey and experience.

**Specifically, the policy will help to:**

- Limit the magnitude of lost traffic due to a health crisis by allowing states to rapidly exchange information on their evolving situations and implement the "safe flight" concept.
- Increase the speed of recovery for passenger traffic following the development and roll out of appropriate treatments (eg vaccines). In other words, speeding up the movement from an "emergency" state of affairs to more "normal" or less restricted conditions.

Following a preliminary but detailed financial analysis, the policy's expected economic impact is estimated to be approximately USD 1.1 trillion as a base case scenario.

|  | UNIT | VALUE |
|---|---|---|
| Additional passengers recovered (Base Case scenario) | million pax | 1,356 |
| Aviation Industry Added Value (Global Direct, Indirect, Induced and Tourism Catalytic) | USD/pax | 834` |
| Policy implementation impact | USD trillion | 1.13 |

Source: Consulum Aviation

**Important Disclaimer:**

This policy recognises the full sovereignty of all countries and does not call for any changes to national aviation or health laws, rules, or regulations, but rather aims to encourage a greater understanding and communication of health requirements between all sovereign states.

# "UNFLATTEN THE CURVE" A NEW GLOBAL POLICY FRAMEWORK FOR HEALTH REQUIREMENTS

**This policy paper calls for the establishment of a universally recognised and accepted international health requirement framework for air passengers.**

Health requirements for international air transport should be easy to access, simple to understand, reliable, consistently applied across all countries, and support the resilience of the global air transport sector. This policy proposes a framework aimed at restoring and retaining passenger trust and avoiding the "flattening" of air traffic growth that is experienced during public health emergencies.

## RECENT CHALLENGES & SHOCKS FACED BY THE GLOBAL AIR TRANSPORT SYSTEM

**01**  The Covid-19 pandemic has discarded the notion that the aviation industry can withstand all external shocks, including public health events and emergencies[1]. According to the March 2022 International Civil Aviation Organization's (ICAO) Covid Impact report, the Covid-19 pandemic affected the aviation industry like no other previous crisis.

**02**  From 2000 until 2019, global air passenger traffic increased from 1,674 million to 4,558 million, or 172% aggregate growth rate, dropping to 1,809 in 2020, corresponding to a 60% year-on-year decrease[2]. At the lowest point, in April 2020, passenger traffic fell almost by 95% year-on-year – back to 2004 levels.

FIGURE 1  |  **TOTAL GLOBAL AIR PASSENGERS (2000-2020)**
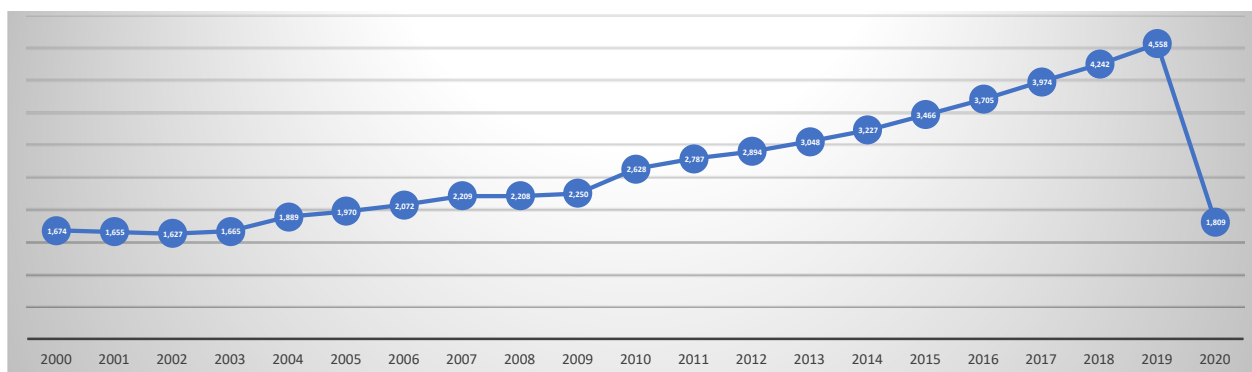


Source: World Bank

[1] Public health events are defined by the World Health Organization as any event that represents an immediate threat to human health and requires prompt action. An example of an event that might cause a public health emergency could be a nuclear powerplant explosion that would emit a radioactive plume that impinges on aircraft routes.

[2] World Bank Statistics.

**03** IATA's pre-Covid-19 forecast had estimated 25 revenue passenger kilometers (RPKs) for 2050 for its central forecast, while its latest post-Covid forecast saw an 8% reduction in estimated RPKs for 2050[3]. As a result, passenger traffic is not expected to return to pre-2019 levels until 2024.

**04** Tourism was one of the hardest hit sectors globally as result of this fall in aviation activity and passenger traffic. A UNTWO study concluded that the Covid-19 crisis caused a 74% drop in global international tourist arrivals by from 2019 to 2020 (1.1. billion).

FIGURE 2 | **UNWTO ESTIMATES OF LOST TRAFFIC (INTERNATIONAL TOURIST ARRIVALS)**
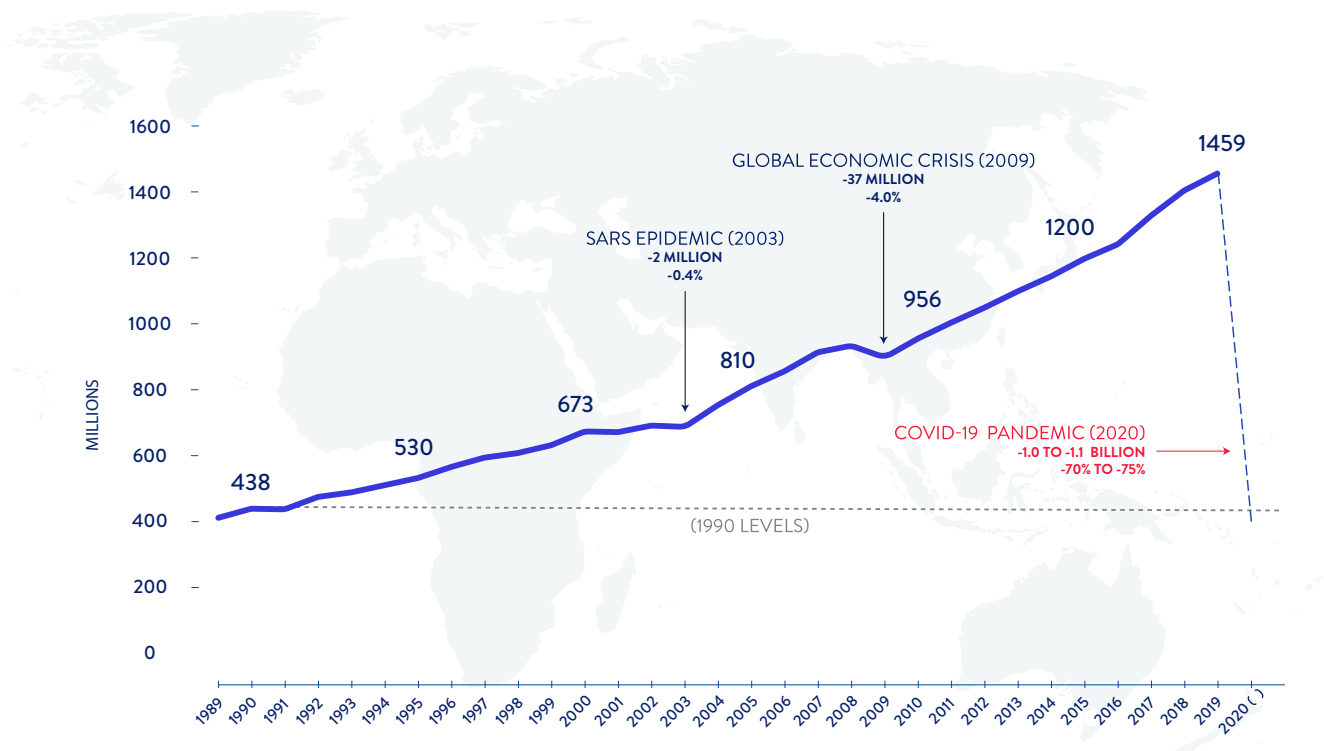


Source: UNWTO

**05** Air transport continues to remain vulnerable to future global health crises and the air transport sector has yet to develop a system to effectively combat the impacts of highly infectious disease outbreaks without simply stopping air travel altogether.

## HOW HAVE PREVIOUS CRISES IMPACTED THE AIR TRAVEL INDUSTRY AND OTHER SECTORS ECONOMICALLY?

**06** Over the past two decades, the global aviation sector has faced several global and regional shocks that have led to a reduction in passenger volumes (see table 1).

| TABLE 1: **EXAMPLES OF PAST AND PRESENT EXTERNAL SHOCKS THAT HAVE IMPACTED AIR PASSENGER TRAVEL** | | |
|---|---|---|
| **EXTERNAL SHOCK** | **YEAR** | **SCALE - REGION AFFECTED** |
| Asian Crisis | 1997 | Regional |
| SARS | 2003 | Regional |
| Avian Flu | 2005- | Regional |
| Financial Crisis | 2008-2009 | Global |
| Icelandic Eyjafjallajökull volcano eruption | 2010 | Regional |
| MERS Flu | 2015 | Regional |
| Ebola | 2013-2016 | Regional |
| Covid-19 | 2019- | Global |

**07** ICAO's economic impact analysis of the Covid-19 pandemic looked at these major historical shocks (e.g., wars, financial crises, public health emergencies, etc.) and mapped them against global air passenger transport figures. Past evidence shows that these shocks have typically led to a decline or "flattening" of air passenger traffic growth for a short period or in some cases of 2-3 years, followed by a fairly rapid recovery[4]. For Covid-19, the recovery is expected to take longer (Figure 3).
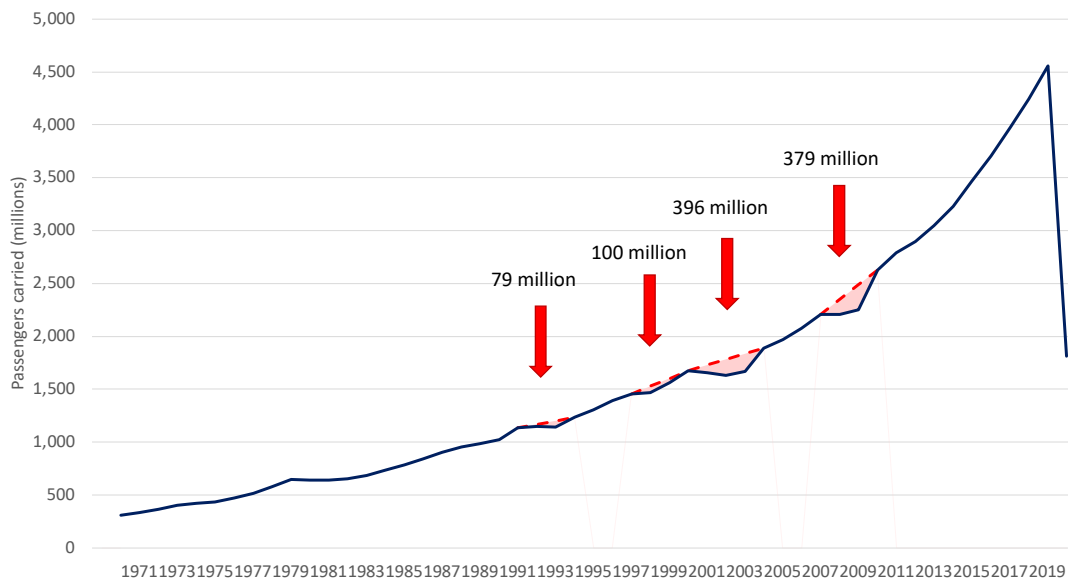
FIGURE 3 | **WORLD PASSENGER TRAFFIC EVOLUTION 1945-2022 WITH MAJOR CRISES**
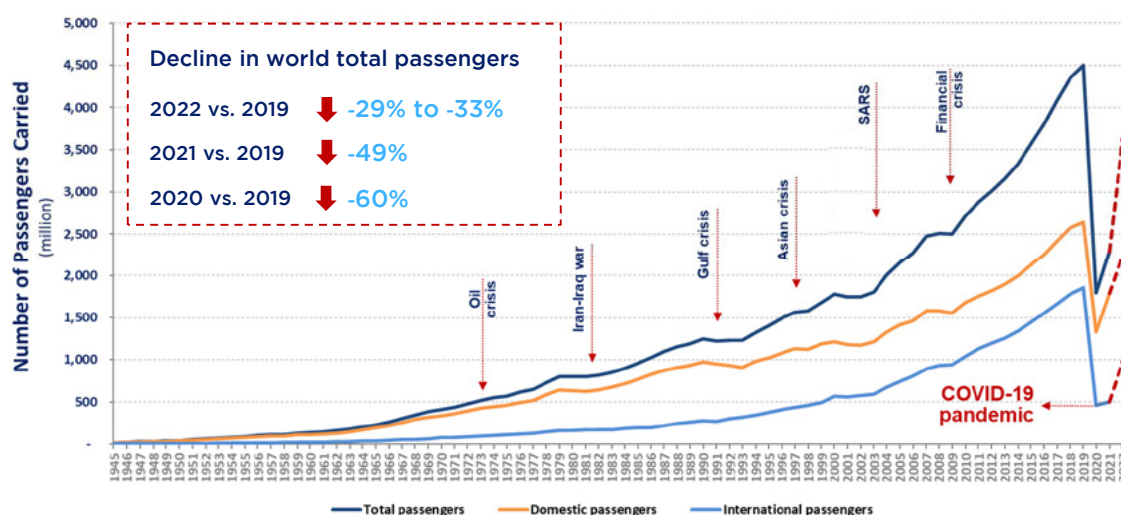


Source: Consulum Aviation (based on ICAO data)

Source: Consulum Aviation

**09** Economic impacts from disruptions to air transport caused by external events are often significant, a recent publication by the Air Transport Action Group (ATAG) shows. Prior to Covid-19, for example, air transport supported USD 3.5 trillion in economic activity and 87.7 million jobs worldwide (11.3 million of which are directly related to aviation). Overall, a 52% drop in economic activity and jobs supported by the air transport sector was recorded as a result of air transport disruptions caused by Covid-19.

FIGURE 5 | **ECONOMIC IMPACT OF THE AIR TRANSPORT SECTOR**

|  | Africa | Asia-Pacific | Europe | Latin America and Caribbean | Middle East | North America | World |
|---|---|---|---|---|---|---|---|
| **Employment supported** | | | | | | | |
| Pre-Covid | 7.7 m | 46.7 m | 13.5 m | 7.6 m | 3.3 m | 8.8 m | 87.7 m |
| Post-Covid | 3.2 m | 22.2 m | 6.5 m | 3.7 m | 1.6 m | 4.5 m | 41.7 m |
| % change | -58% | -53% | -52% | -52% | -51% | -49% | -52% |
| **Economic activity supported** | | | | | | | |
| Pre-Covid | $63 billion | $944 billion | $991 billion | $187 billion | $213 billion | $1.1 trillion | $3.5 trillion |
| Post-Covid | $26 billion | $453 billion | $465 billion | $93 billion | $108 billion | $553 billion | $1.7 trillion |
| % change | -58% | -52% | -53% | -50% | -49% | -50% | -52% |
| **Direct aviation jobs supported** | | | | | | | |
| Pre-Covid | 440,000 | 4.2 m | 2.7 m | 722,000 | 595,000 | 2.7 m | 11.3 m |
| Post-Covid | 267,000 | 2.4 m | 1.5 m | 408,000 | 323,000 | 1.6 m | 6.5 m |
| Jobs at risk | 172,000 | 1.8 m | 1.2 m | 314,000 | 272,000 | 1.1 m | 4.8 m |

Source: ATAG, Aviation: Benefits Beyond Borders

**10**  In addition, a recent European Central Bank (ECB) study analyzed the economic impact of different types of historical regional / global events and found that for past epidemics, the initial impact on the level of potential output is relatively short-lived, tending to dissipate two years after the end of the epidemic. However, they note that past epidemics considered in the analysis were mostly localised events, which are not comparable to a major global pandemic.

**11**  The ECB figure below shows the estimated impact of different types of crises on potential output growth (the shaded areas represent the estimated 95% confidence interval).

FIGURE 6   |   **IMPACT OF PAST EPIDEMICS ON POTENTIAL OUTPUT GROWTH**
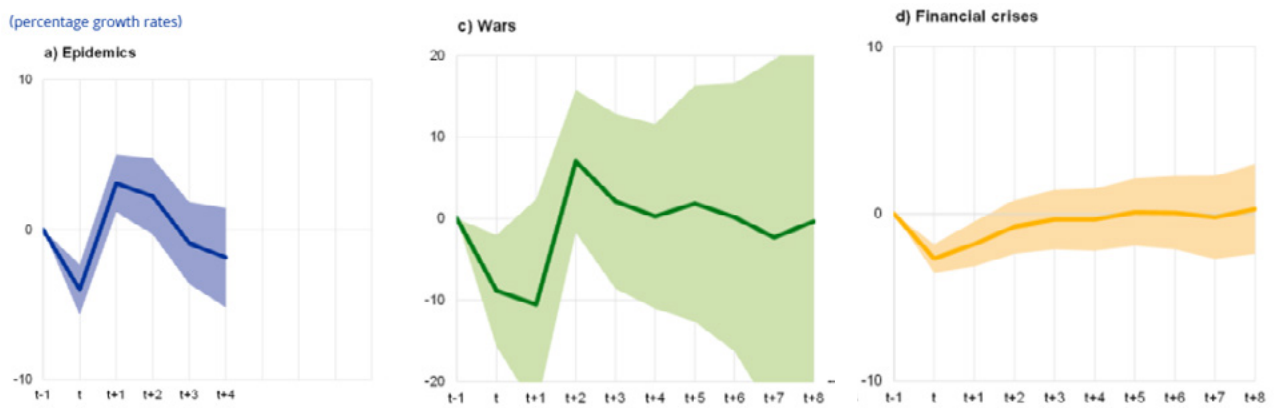


Source: ECB, The scarring effects of past crises on the global economy

**12**  The ECB study notes the Covid-19 crisis is unique in many respects and that past crises may not be reliable indicators of the lasting effects. One example of this is the multi-layered shock from Covid-19 where the public health emergency is intensified by an induced supply and demand shock (following the adoption of stringent lockdown measures and increased unemployment and heightened uncertainty).

**13**  The analysis of past public health emergencies undertaken by ICAO shows that the impact on traffic has differed between regions/countries, with major impacts being experienced within countries in which the health crisis is occurring. As shown in the figure below, for the MERS and SARS outbreaks the recovery period for air passenger traffic was 5-6 months. This has not been the experience with Covid-19, which has been much more widespread and long-lasting.

FIGURE 7 | **IMPACT OF PAST DISEASE OUTBREAKS ON AVIATION**
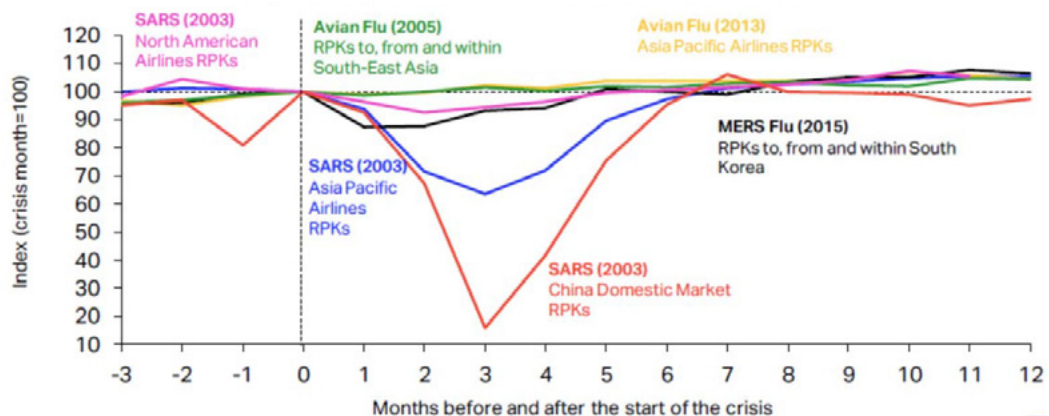
Source: ICAO (2022) Effects of Novel Coronavirus (COVID-19) on Civil Aviation: Economic Impact Analysis

**14** To summarize, external shocks (including health crises) have the potential to greatly impact air transport services and subsequent economic growth. Covid-19 has been no exception to this and has magnified vulnerabilities across the global economy. Therefore, the air transport sector should pursue options to mitigate the impact of external shocks, especially those which are novel.

## WHAT SOLUTIONS EXIST TO MANAGE THE IMPACT OF EXTERNAL SHOCKS IN THE FORM OF PUBLIC HEALTH EVENTS?

**15** National and international policy frameworks to manage public health risks in aviation were deemed to be largely outdated, according to the WHO. They did not provide the necessary guidance to ensure the continuity of aviation services during crises such as the Covid-19 pandemic. This has led many countries to take a unilateral approach by imposing their own national-level procedures and restrictions without any true consultation or coordination with other ICAO members states.

**16** Subsequent to the SARS outbreak, attempts were made to harmonise health requirements for air travel. For example, in 2006 ICAO put in place the Collaborative Arrangement for the Prevention and Management of Public Health Events in Civil Aviation (CAPSCA)[5] - a voluntary cross-sector, multi-lateral program managed by ICAO with support from the WHO. Before the arrival of Covid-19, CAPSCA had put forward objectives and recommendations that states could adopt to help with preparedness and response to global health events.

**17** In addition to CAPSCA, there are the ICAO Standards and Recommended Practices (SARPS) from ICAO Annex 9 – specifically Chapters 2, 3, 8 and 10, which include standards and recommendations to facilitate the implementation of international health regulations and promote close collaboration between countries, ICAO and the WHO to prevent the spread of communicable disease by air.

**18** Following the onset of Covid-19, several other initiatives were immediately introduced by ICAO to resume air travel in 2020 while taking into consideration public health requirements, such as the recommendations listed through the Council Aviation Recovery Task Force (CART), including the Public Health Corridor concept[6]. CART had established many of the first steps taken toward setting out measures and recommendations to harmonise procedures for the safe and efficient restart and recovery of civil aviation and to restore the sector's 'resilience'[7].

**19** Despite these past efforts to harmonise health requirements for travel, travel restrictions continue to be fragmented from country to country and coordination between member states is lacking, both in terms of specific information requested from passengers as well as format (e.g., paper, on-line declaration, apps, interviews).

**20** Using a set date (14 April 2022) as an example, the US required only proof of a negative test from all vaccinated travelers prior to entering. Saudi Arabia and the UK on the other hand had removed all covid-related travel restrictions for incoming travelers. Meanwhile, China - through its zero Covid strategy - only allowed entry of foreigners following visa approval, proof of vaccination, two negative tests, health declaration form and further checks and quarantine upon arrival. For the rest of the world, restrictions on that specific date were either siloed/unilateral or congruent to a region, such as France and the EU. These restrictions are likely to have changed in the weeks and months following. A detailed matrix of travel restrictions for worldwide travelers to various countries and regions is found in the appendix of this document (Appendix A – Covid-related travel restrictions for travelers to enter a country/region (14 April 2022).

**21** The unilateral-learning approach taken by most countries during the whole Covid-19 crisis led to passengers being faced with multiple, non-harmonised health travel requirements when traveling between countries as well as domestically within countries (e.g., from province to province). In addition, these requirements have often changed on a weekly basis, usually without warning or clear rationale for how the changes were decided[8]. This has resulted in an extremely cumbersome process for passengers globally.

**22** As a result, the increased uncertainty has reduced overall passenger confidence, comfort, and willingness to travel. According to an IATA study done in early 2021, 68% of passengers said that their quality of life had suffered due to uncertain travel restrictions and 40% reported mental stress as a result[9].

**23** Despite a rebound in air passenger volumes since the arrival of vaccines in 2021 and the introduction of testing certificates and travel passes at national level, variable and poorly communicated travel restrictions will continue to affect air passenger confidence and thus hamper the true potential recovery rate in air passenger traffic post-Covid, while also maintaining a lower resilience to future health crises by the air transport industry.

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[6] ICAO - Public Health Corridor
[7] ICAO CART Report
[8] As an example, the UK government announced the end to all travel restrictions to enter the UK on 14 March 2022, four days before the rules came into place on 18 March 2022.
[9] IATA

24   In October 2021, a working paper was developed and presented by Saudi Arabia during the High-Level Conference on Covid-19 (HLCC) facilitation stream[10], which proposed to ICAO to:

a. include under Annex 9, a specific provision/chapter relating to travel facilitation during pandemics, for the purpose of developing Standards and Recommended Practices for enabling seamless travel during pandemic situations[11].

b. Provide common standards, including travel protocols and recommended practices, to facilitate seamless movement of international air traffic within the shortest possible time during Covid-19, and similar pandemic situations in future, in a globally coordinated manner.

25   By the end of the HLCC, several recommendations were proposed to ICAO and were endorsed subsequently. A full list of the most relevant recommendations can be found in Appendix B - HLCC Recommendations to ICAO.

26   This White Paper attempts not only to build on the work done by ICAO and other organisations and task forces, but to help advance on these endorsed recommendations through the proposed establishment of a universally recognised and accepted international health requirement framework for air passengers. The framework allows for a more coordinated response and clear communication of travel requirements, which should help to reduce the magnitude of traffic impacts and increase the speed of recovery from public health crises. The proposed framework looks to include many of the HLCC recommendations in its establishment and implementation while offering new innovative approaches and digital tools to improve communication and coordination.

# GUIDING PRINCIPLE: IMPROVING AIR TRANSPORT SECTOR RESILIENCE

27   The underpinning principle of this White Paper is that the provision of a universally recognised and accepted international health requirement framework for air passengers is essential to improve the resilience of the global air transport sector in the foreseeable future.

28   The White Paper supports the recovery of the air transport sector from the impacts of Covid-19 and its futureproofing against future health crises, restoring and retaining passenger trust in air travel.

29   By providing passengers with easily accessible, simple-to-understand, reliable, and consistently applied health requirements for international air transport across all countries, the impacts on air transport from future health events should be felt less. Global and regional harmonisation of procedures is essential to strengthen confidence in air travel.

[10] High-Level Conference on Covid-19 (HLCC 2021) Facilitation Steam – Working Paper presented by Saudi Arabia.
[11] Point a) of the working paper presented by Saudi Arabia was achieved following the introduction of a new amendment 29 to Annex 9.

**30**  Other values that form part of this White Paper include:

    a.  Health protection of the traveling public.

    b.  Health protection of the aviation workforce across the aviation supply chain in contact with the traveling public (crews, airport frontline employees, public transportation system to and from airports, etc.).

    c.  Health protection / integrity of the populations of the destination countries.

# WHAT DOES THIS POLICY SEEK TO ACHIEVE?

**31**  The main objective behind adopting a universally recognised and accepted international health requirement framework for air passengers is **to improve the resilience of the global air transport sector to external global public health events.**

**32**  The specific objectives of the Policy are:

### OBJECTIVE 1: TO HARMONISE THE HEALTH INFORMATION REQUESTED FROM AIR PASSENGERS

- Help countries to establish and communicate health requirements for international travel in a harmonised way. This should lead, ideally, to a single health declaration that could be used by all countries involved in the journey of a passenger.

- Enable integrated and harmonised health requirement management for civil aviation and for border crossing.

### OBJECTIVE 2: TO IMPROVE INFORMATION SHARING AND TRANSPARENCY

- Increase information sharing and transparency among countries.

- Enhance health information and statistical systems to better future-proof the system against health crises.

- Strengthen co-operation among all administrations and government agencies involved in border crossing so that health requirements can be captured without increasing the burden on the travel facilitation process.

### OBJECTIVE 3: TO PROTECT THE HEALTH AND SAFETY OF PASSENGERS

- Promote a more consistent application and reporting of health regulations and status globally.

- Allow customers to make more informed decisions about their own health and safety.

- Help to maintain minimum levels of essential services in times of crisis

### OBJECTIVE 4: TO RESTORE AND RETAIN PASSENGER TRUST

- Establish global standards that provide passengers with certainty and predictability.

- Improve customer service, while maintaining appropriate health security requirements.

- Help passengers navigate health requirements of different countries.

- Increase passengers' willingness to travel again and continue to travel during future health crises.
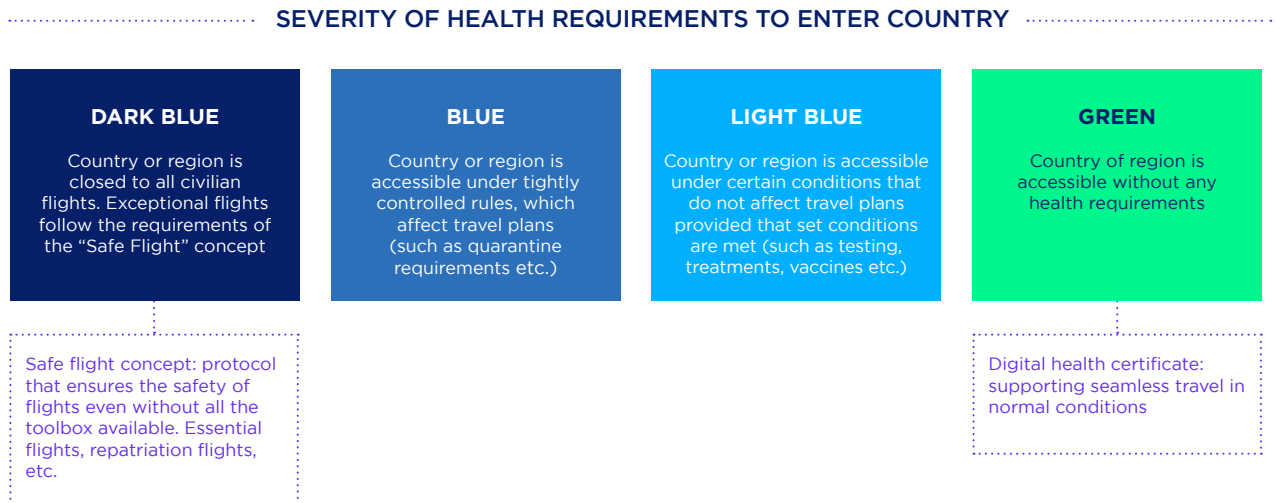
**33**  With a focus on achieving these objectives, sustained coordination and an open, reliable and harmonised framework are expected to result in the restoration of trust and confidence in the air transport sector, an increase in the number of passengers and ultimately sustainable economic development of the entire civil aviation system.

# A NEW GLOBAL HARMONISED HEALTH REQUIREMENTS FRAMEWORK

**34**  The white paper offers a framework that: (a) increases the understanding of information requirements from country to country for all – and especially the air passenger; and (b) harmonises these health requirements in the long-run. This is to encourage predictability so that prevention measures can be more effective when faced with new health crises and their numerous impacts. The implementation of the policy will allow the passenger to quickly navigate the requirements for each country, based on a simple framework that defines the risk levels for each country.

**35**  The proposed harmonised health requirements framework comprises four pillars:

    a.  **PILLAR 1:** A Harmonised Reporting System for All Countries

    b.  **PILLAR 2:** Communication Systems for States and Other Stakeholders

    c.  **PILLAR 3:** Governance and Coordination Mechanisms

    d.  **PILLAR 4:** Compliance Mechanisms.

## PILLAR 1: A HARMONISED REPORTING SYSTEM FOR ALL COUNTRIES

**36**  Under Pillar 1, the priority is to establish an agreed upon categorized system or index that defines the level of health "openness" for each country based on their communicated health entry requirements. This categorization system would ideally be standardised across all states. The technical definitions of each category would be harmonised and informed by a technical panel that works with ICAO and WHO – and would aid in easing communication between countries. An example of this system can be:

    a.  **DARK BLUE**
       Country or region is closed to all civilian flights. Exceptional flights follow the requirements of the "Safe Flight" concept.

    b.  **BLUE**
       Country or region is accessible under tightly controlled rules, which affect travel plans (such as quarantine requirements, etc.)

    c.  **LIGHT BLUE**
       Country or region is accessible under certain conditions that do not affect travel plans provided that the set conditions are met (such as testing, treatments, vaccines, etc.)

    d.  **GREEN**
       Country or region is accessible without any health-related requirements.

SEVERITY OF HEALTH REQUIREMENTS TO ENTER COUNTRY

| DARK BLUE | BLUE | LIGHT BLUE | GREEN |
|---|---|---|---|
| Country or region is closed to all civilian flights. Exceptional flights follow the requirements of the "Safe Flight" concept | Country or region is accessible under tightly controlled rules, which affect travel plans (such as quarantine requirements etc.) | Country or region is accessible under certain conditions that do not affect travel plans provided that set conditions are met (such as testing, treatments, vaccines etc.) | Country of region is accessible without any health requirements |

Safe flight concept: protocol that ensures the safety of flights even without all the toolbox available. Essential flights, repatriation flights, etc.

Digital health certificate: supporting seamless travel in normal conditions
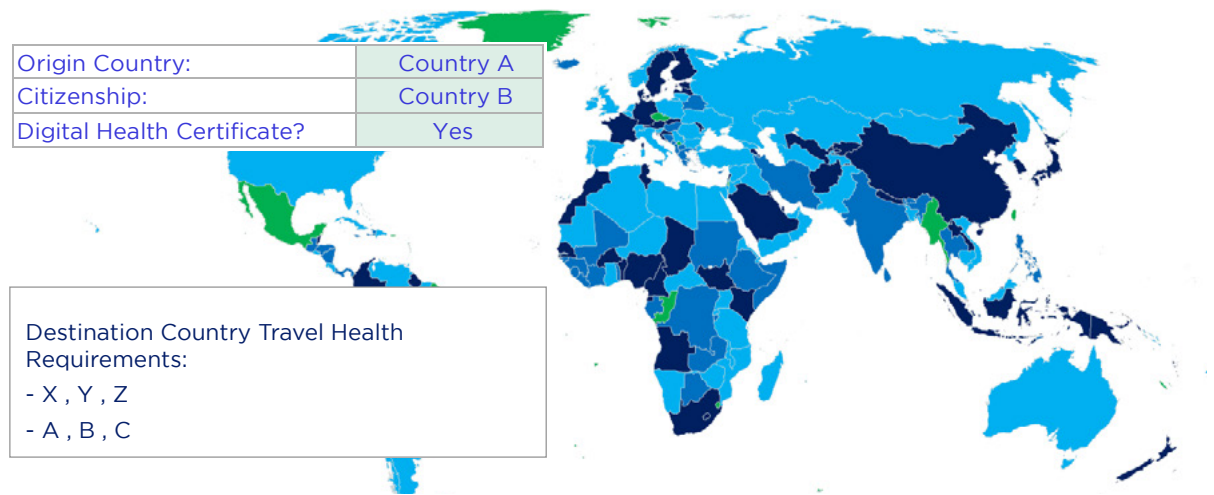
Source: Consultant

**37** There may be valid reasons for travel health requirements to vary depending on the country of origin (e.g., if a particular country or region has a disease of concern present). Therefore, each country may need to group all other potential countries into these common categories (rather than having a single rating).

**38** Underlying this classification system would be an aligned set of health reporting requirements and definitions as well as a data entry system that would allow all the required data to be gathered in a consistent manner. This will require definitions for the components and information needed from the countries, which would need to be standardised/harmonised and integrated in the Information System of Health Requirements for International Air Travel. In developing this, existing work developed by ICAO (e.g., the "PHC Template: State Information Sharing") could be leveraged and extended. Both HLCC Recommendations 6/1 f and 8/1 c could be applicable and further built on here.

## PILLAR 2: COMMUNICATION SYSTEMS FOR STATES AND OTHER STAKEHOLDERS

**39** To allow smooth and timely communication between states, ICAO, passengers, and other stakeholders, new communication platforms (or updating of existing platforms) may be needed. These platforms should be established with standard operating procedures and processes that define the code of conduct, frequency of data provision/updates, procedures for communication during public health emergencies, etc.

**40** In alignment and to build on HLCC recommendations 6/1k and 8/1c (see annex B), there needs to be separate systems for information exchange for states and systems for information communication with passengers. At a minimum, there is a need for a platform (or set of platforms) that:

a. Allows for **ongoing communication** between states during normal (business as usual) times and emergency situations (these scenarios are described further in the next section). This would allow states to share updates, best practices, etc. for the response to a particular health emergency.

b. Allows states to **share information regarding health requirements** for travel to the destination country.

c. Allows states to **communicate regarding certificates.** This exists already under the ICAO-led initiative of Health Master Lists (HML) and is complemented by the cross-recognition of Visible Digital Seals (VDS).

d. Allows states to **communicate with airlines** regarding travel health requirements. This exists already – for example through IATA's Timatic product, which is integrated into travel agents' or carriers' systems – during the check-in process where the agent has access to a system that lists all the requirements for passengers to a specific destination.

e. Allows for the **communication of travel health requirements to passengers**. The information presented to passengers would be official as it would be provided by the government institutions. The platform would allow a passenger to enter their nationality, resident status, country of origin (and possibly itinerary) and view the list of travel health requirements. There are a range of interactive options available that could enhance / simplify passenger experience – one such possibility is shown in the figure below.

FIGURE 9 | **ILLUSTRATIVE INTERACTIVE DASHBOARD FOR PASSENGERS**[12]



| Origin Country: | Country A |
| Citizenship: | Country B |
| Digital Health Certificate? | Yes |

Destination Country Travel Health Requirements:
- X , Y , Z
- A , B , C

## PILLAR 3: **GOVERNANCE AND COORDINATION MECHANISMS**

**41** In alignment with HLCC recommendation 6/1n and 7/1f, the new framework will need to have clear governance and coordination mechanisms to maintain a relevant and reliable inter-operable system for passengers. Several established bodies would be needed to advise, govern and coordinate the implementation of the inter-operable framework. The actual provision of data into the new data entry system would be undertaken by an organisation responsible for implementation at the national level.

**42** Given the expected challenges to come from this component with regards to coming to an agreement and implementing, it will be necessary to clearly define ownership and accountability, to avoid duplication of efforts with other ongoing initiatives, to obtain buy-in from public and private stakeholders and to define the communication mechanisms.

[12] Several non-public institutions such as IATA have built and shared platforms similar to this for the COVID pandemic but none of the institutions thus far can be seen as having official authority to be a key legitimate and authoritative player in communicating global travel restrictions.

**43** With this in mind, the following bodies should be established with clearly defined roles and responsibilities:

   a.  A **Governance Body** oversees the framework and makes strategic decisions and future plans. This could be formed of members from ICAO, WHO and UNWTO, for instance.

   b. An **Operational Body** runs the systems, coordinates and communicates on the various platforms, and ensures relevant data is gathered from all parties. This could be undertaken by ICAO, for instance.

   c. A **Technical Committee** advises on the technical operational issues including the alignment of health requirements, definition of health "openness" categories, and the interaction of states in different categories, etc. This could be formed of representatives from WHO, ICAO, and other organisations.

   d. **Implementation Bodies** at the national level that are responsible for providing data and engaging with the framework, including up-to-date points of contact. Recommendations and guidance for implementation bodies may also need to be established (e.g., by the technical committee).

**44** In addition to the various bodies identified above, a coordination mechanism / set of rules should be established which defines the functioning of an air transport system with countries with different situations (reflected by different colors).

## PILLAR 4: **COMPLIANCE MECHANISMS & TOOLS**

**45** Compliance mechanisms and tools would need to be established to allow the Implementation Bodies to collect the necessary data from passengers and ensure their compliance with national travel health requirements. These include:

   a. **A GLOBAL DIGITAL HEALTH CERTIFICATE.** The global Digital Health Certificate (DHC) is defined here as a globally standardised travel document that would be delivered at the national level by health authorities in electronic format and include the vaccine information of passengers. The DHC would be recognised by all domestic applications (to be QR readable)[13]. Most importantly, this certificate would only contain the health information necessary to travel abroad and would contain no other sensitive personal information.

   b. **APPS / SYSTEMS** developed in countries that will be able to exchange data (e.g., through a "travel app") and hold the information that passengers need to travel. These would provide relevant information for each country the passenger travels to and allow the receiving country to read this data to check compliance with health requirements. The convergence and inter-operability of health information systems between all states is key to making this a reality.

**46** In accordance to HLCC recommendations 6/1q and 6/1v, other standardised and inter-operable tools would also be available through a new platform that would allow countries to easily leverage best practices and the most up to date guidance on implementing health requirements and collecting data from passengers. This could
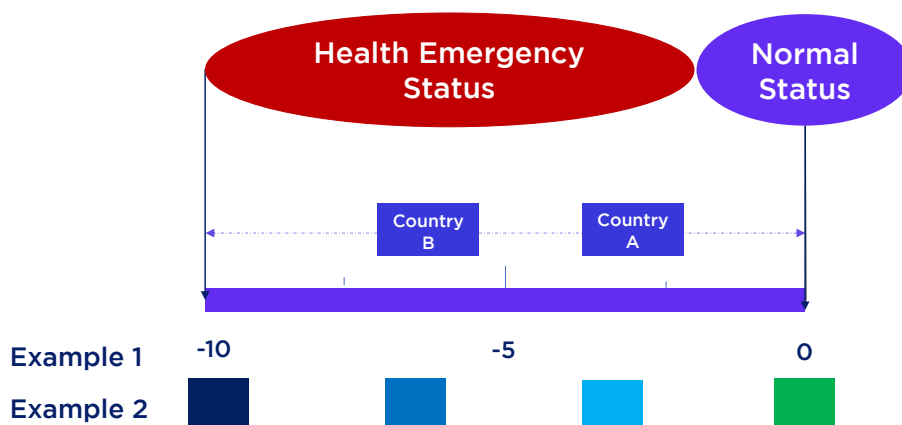
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[13] The WHO's yellow book is an example of such a digital health certificate and has been in place for several decades, but it is not universally used or accepted around the world and is not properly digitalized in an integrated global platform or system, and thus lacks the legitimacy to act as the proposed digital universal certificate for all countries to use.

include, for example, standardised templates and procedures for health screening. This would leverage and consolidate existing work that has already been done, e.g., under CART[14], CAPSCA[15], and other programs / initiatives.

# HOW WILL THIS WORK IN PRACTICE?

**47** The proposed framework shall be applicable to the following two situations:

   a. **A "NORMAL" STATE OF AFFAIRS** where there are no current major health-related regional or global threats impacting people's ability to travel by air.

   b. **AN "EMERGENCY" SITUATION** where regional or global air passenger travel is likely to be impacted and countries' reactions become unpredictable.

**48** The rationale behind this two-tier categorisation is that one cannot predict what is not predictable, and so in emergency situations one should expect countries and governments to react in ways that cannot be predicted. However, by moving into a pre-assigned and categorised "emergency mode", a country can better communicate to other countries how it may or may not react in terms of border control and air travel restrictions.

**49** The solution is to put in place a simple governance and communication system to deal with the emergency as soon as possible, expecting and planning for the country to move from a normal state of affairs to an emergency mode, and move back to normal state of affairs in an orderly manner.

**50** However, this system should not be a dual or binary system and should recognise the fact that each country will be at different stages and will move across the spectrum from normal and emergency to normal at different times. In addition, it should recognise that different regions and sub-regions within a country will be at different levels as well.

FIGURE 10   |   **ILLUSTRATION OF CATEGORISATIONS IN A HEALTH EMERGENCY STATE OF** AFFAIRS



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## NORMAL STATE OF AFFAIRS: NO CURRENT MAJOR HEALTH-RELATED REGIONAL OR GLOBAL THREATS IMPACTING PEOPLE'S ABILITY TO TRAVEL BY AIR

**51**  Under a "normal "or "usual" situation related to health, travel should be as seamless as possible by following the health travel standards set in place. The normal status does not mean that there are no health crises or outbreaks occurring – just that the crises in place do not affect people's ability to travel by air from and/or to that country, region or sub-region.

**52**  Very importantly, this entire policy framework, together with the four proposed pillars, needs to be maintained throughout a normal situation just as much as an emergency situation because it goes beyond Covid-19 and considers the existence of other health crises (yellow, fever, Ebola, malaria, etc.), and the emergence of future crises.

**53**  The objectives and priority during this normal stage should therefore be the continuous improvement of the travel facilitation process, including the maintaining of regulations in each State from ICAO standards and the establishment and upgrading of the world recognised and accepted Digital Health Certificate defined above (in paragraph 41a). The Digital Health Certificate needs to be in place and continuously updated by the appointed health and travel authorities who have the flexibility to add information that could be useful for the management of future health related crisis, such as new vaccines, new treatments, new kinds of tests.

## AN "EMERGENCY" SITUATION: REGIONAL OR GLOBAL AIR PASSENGER TRAVEL IS LIKELY TO BE IMPACTED AND COUNTRIES' REACTIONS BECOME UNPREDICTABLE

**54**  It needs to be recognised that in case of an emergency, states may have to take unilateral decisions to protect the health and wellbeing of their populations. While this situation is not ideal, it is also a reality that was observed in the wake of the COVID-19 pandemic.

**55**  Regardless of unilateral decision of one or more state, a platform that allows states to communicate swiftly with all others is necessary. A Global Emergency Committee for Health would allow states to communicate in real time with all others on matters regarding health crisis that affects the whole community. States would publish their travel openness categories and any relevant details with regards to the assigned categories (i.e., the travel health requirements). States would then update this information on a regular basis and move between different categories as the situation evolves.

**56**  During an emergency (e.g., Code Blue or Level 10) and/or for travel from and to countries whose borders are closed, a 'safe flight' concept or protocol would be used. This protocol ensures the safety of flights even without all the toolboxes available, thus allowing for essential flights and repatriation flights.

**57** To travel during emergency times, several health-related requirements may be necessary. Considering each health-related emergency, states need to reach agreements quickly on the following:

    a. **TESTING**

    b. **VACCINES**

    c. **PROPHYLACTIC TREATMENTS**

    d. **CERTIFICATES**

    e. **PROTOCOLS TO FOLLOW**

    f. **OTHERS**

**58** The Digital Health Certificate would be used and updated during a health emergency to provide air transport providers and national agencies with the information required to validate compliance with health requirements.

# POTENTIAL ECONOMIC BENEFITS OF THIS POLICY & FRAMEWORK

**59** The introduction of this policy and framework will help to "unflatten the curve" during public health events by making the air transport sector more resilient to public health emergencies and reducing the negative impact on passenger volumes.

## A CONCEPTUAL FRAMEWORK FOR ANALYSIS

**60** The conceptual framework for the estimation of economic benefits hinges on the potential for the policy and associated framework to:

    a. Limit the magnitude of lost traffic due to a health crisis by allowing states to rapidly exchange information on their evolving situations and implement the "safe flight" concept.

    b. Increase the speed of recovery for passenger traffic following the development and rolling out of appropriate treatments (e.g., vaccines) for the health emergency at hand. In other words, speeding up the movement from an "emergency" state of affairs to more "normal" or less restricted conditions.

**61** This concept is illustrated through the stylised figure below. The difference between the "Health emergency, with new policy and framework" and the "Health emergency, with existing systems" represents the benefits (in terms of passenger traffic) from the implementation of the policy.

FIGURE 11 | CONCEPTUAL FRAMEWORK FOR THE IMPACT OF THE NEW TRAVEL HEALTH FRAMEWORK
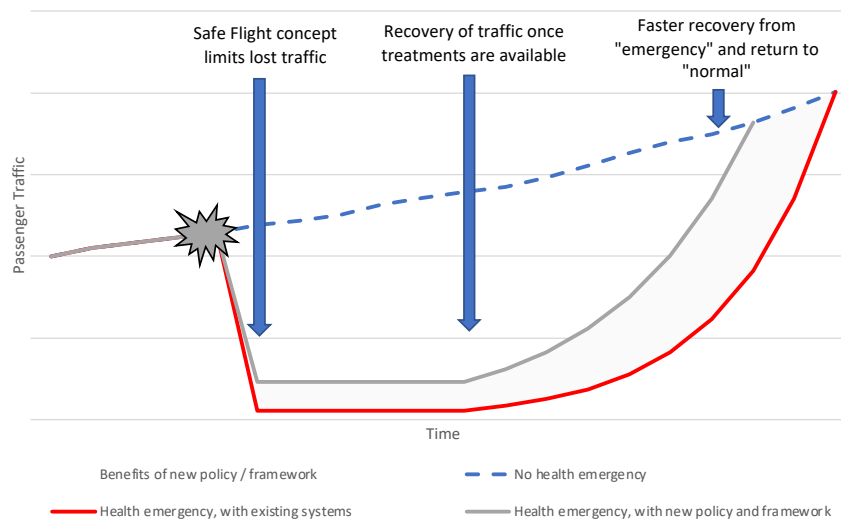
**62** As noted previously, air transport is a major contributor and facilitator of economic growth. A significant amount of work has been done on the benefits and economic activity supported by air transport. Economic impacts are often considered in terms of[16]:

a. **DIRECT IMPACTS.**
   The activities required to provide air transport services. Operation of airlines and airports (technical support and handling, catering, fuel, security and cleaning); commercial activities (shopping, restaurants, motor vehicle rental, parking); land transport and air cargo.

b. **INDIRECT IMPACTS.**
   Supply of goods and services to direct activities, including wholesalers providing food for in-flight catering, oil refining activities for jet fuel, companies providing accounting and legal services to airlines, travel agents booking flights, and so on.

c. **INDUCED IMPACTS.**
   Impacts of income generated by direct and indirect effects especially by private consumption, (i.e., spending by employees in activities that are considered "direct" and "indirect").

d. **CATALYTIC IMPACTS.**
   Captures the way in which the airport facilitates the business of other sectors of the economy through a number of mechanisms such as: (a) location impacts (firms and labour), e.g., industrial/commercial investment decisions; (b) tourism and trade (e.g., export markets); and (c) productivity (e.g., access to new markets which in turn enables businesses to achieve greater economies of scale, etc.).

**63** This same approach was used in this case to estimate the impact on economic output (GDP) of the proposed policy framework. For this, the most recent publication of Aviation Benefits Beyond Borders (September 2020) was used, which sets out the economic impacts of aviation to derive unit rate estimates for the GDP impact per passenger. This is then applied to the benefits (in terms of air passengers) from the implementation of the policy. This is demonstrated in the figure below.

[16] See Appendix C for more detail on what is typically considered under each category of impact.

FIGURE 12 | ILLUSTRATIVE EXAMPLE OF THE NEW POLICY & FRAMEWORK
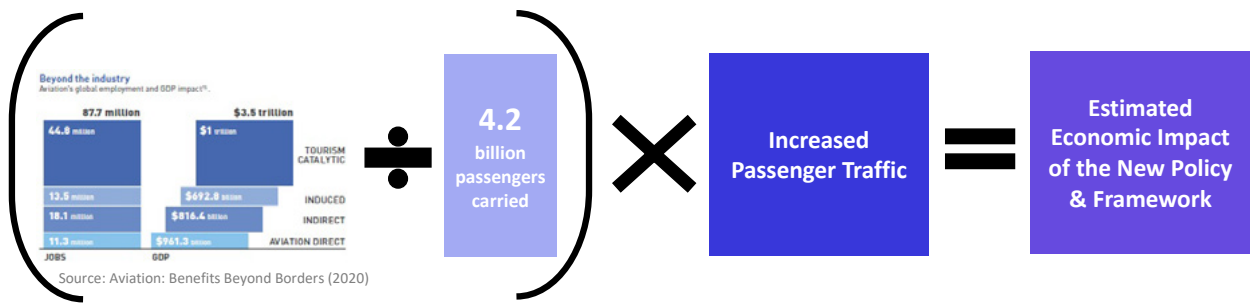
Source: Consulum Aviation + Aviation Benefits Beyond Borders

## WHAT IMPACT COULD THIS POLICY AND FRAMEWORK HAVE?

**64** Whilst this policy proposal is applicable for public health emergencies beyond just the COVID-19 pandemic, the downturn in the global aviation sector experienced in the wake of the onset of the pandemic was used as a case study for this analysis.

**65** To estimate the impact of the policy framework, a Base Case alternative scenario was used for traffic volumes, and sensitivity analysis was conducted around this Base Case[17]. The Base Case Scenario is defined by:

a. An initial drop in passenger volumes, but lower than that which was actually experienced in 2020. The Base Case Scenario assumes a decline in passenger volumes of 80% compared to pre-pandemic levels rather than the 96% experienced. The rationale for this 20% difference is the introduction of the Safe Flight or Always Safe concept during future public health emergencies[18].

b. A recovery that starts three months after the onset of the pandemic (May 2020), instead of the actual start of recovery from Covid-19 (February 2020).

c. A growth in passenger volumes directly proportional to the share of population that has been fully vaccinated across different countries. Fully vaccinated is taken to mean that individuals have received a full course of treatment for a given vaccine (e.g., two doses of the Pfizer-BioNTech vaccine, one dose of the Johnson and Johnson vaccine).

d. Most international travelers are assumed to be fully vaccinated. Given how analysis during the Covid-19 pandemic shows a correlation between passengers being vaccinated and having a higher travelling propensity[19] a 1.9 factor has been applied to the growth rate of global vaccinated people to factor this correlation in.

e. The results of the scenario have been assumed to be optimistic (100% of the recovery). To build a base case scenario an 80% of the recovery passengers has been assumed as more realistic.

---

[17] This analysis is high-level and driven in large part by the assumptions regarding limiting passenger loss and passenger recovery. These assumptions would need to be further explored and refined if this analysis were to be extended / elaborated upon.

[18] The Safe Flight concept is one that has been proposed by a team of health and aviation experts, which involves putting into place certain specific and effective sanitation measures used by airline staff in health emergencies to guarantee a minimum volume of flights even during the worst-case public health crisis scenarios. The assumption here is that these new measures will severely limit the risk of transmission of airborne diseases such as Covid-19 and thus prevent any quasi-total collapse in aircraft and air passenger traffic.

[19] https://www.researchgate.net/publication/358737981_Propelled_evidence_on_the_impact_of_vaccination_against_COVID-19_on_travel_propensity

**66** The estimated Base Case Scenario passenger volumes compared to actual passenger volumes is shown in the figure below.



FIGURE 13 | **ACTUAL AND BASE CASE SCENARIO PASSENGER VOLUMES**

Source: Consulum Aviation

**67** To estimate the economic impact of the additional passenger traffic, an average unit rate of USD 834/passenger was applied. This is based on an average contribution derived from the Aviation Benefits Beyond Borders report which indicated, at a global level, that aviation contributed USD 3.5 trillion (4.1% of global GDP) while carrying 4.2 trillion passengers in the year 2018.

**68** The resulting economic impact of the Base Case scenario is USD 1.1 trillion (over the period from March 2020 to December 2021) as set out in the table below.

| TABLE 2: **POTENTIAL HIGH-LEVEL ECONOMIC IMPACTS FROM THE POLICY** | | |
|---|---|---|
| | **UNIT** | **VALUE** |
| Additional passengers recovered (Base Case scenario) | million pax | 1,356 |
| Aviation Industry Added Value (Global Direct, Indirect, Induced and Tourism Catalytic) | USD/pax | 834` |
| Policy implementation impact | USD trillion | 1.13 |

Source: Consulum Aviation

## SCENARIOS ANALYSIS

**69** A sensitivity analysis was conducted around the Base Case scenario by adjusting the assumption regarding the share of recovery passengers captured (which is set to 80% in the Base Case). These two sensitivities have the following characteristics:

a. **PESSIMISTIC SCENARIO:** 50% OF PASSENGER RECOVERY

b. **OPTIMISTIC SCENARIO:** 100% OF PASSENGER RECOVERY

**70.** The estimated passenger volumes for these scenarios are presented in the figure below.

FIGURE 14 | **SCENARIOS ON PASSENGER VOLUME RECOVERY**
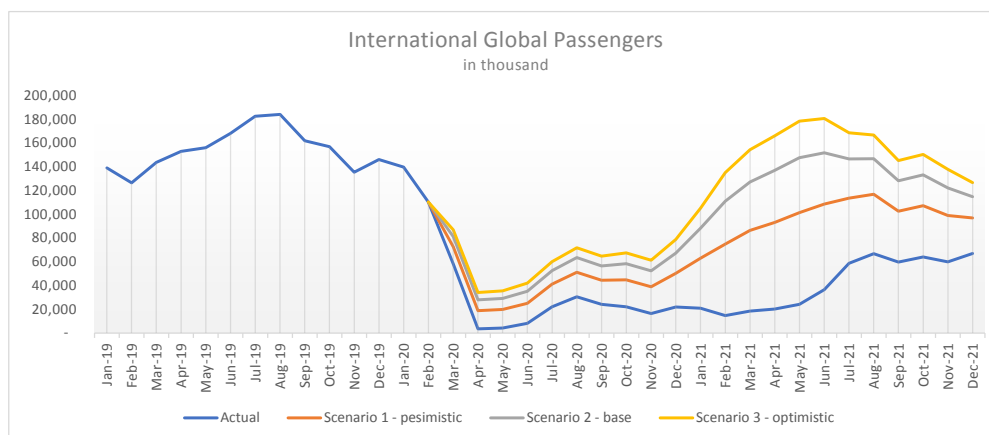


Source: Consulum Aviation

**71** In terms of economic impact, these scenarios result in USD 706 billion and USD 1.4 trillion (using the same GDP unit rates as above), as set out in the subsequent table.

TABLE 3: **POTENTIAL HIGH-LEVEL ECONOMIC IMPACTS FROM THE POLICY (SENSITIVITIES)**

| | UNIT | SENSITIVITY 1 PESSIMISTIC | BASE CASE | SENSITIVITY 3 OPTIMISTIC |
|---|---|---|---|---|
| Additional passengers recovered | million pax | 848 | 1,356 | 1,695 |
| Aviation Industry Added Value (Global Direct, Indirect, Induced and Tourism Catalytic) | USD/pax | 834 | 834 | 834 |
| Policy implementation impact | USD trillion | 0.70 | 1.13 | 1.4 |

Source: Consulum Aviation

**72** The analysis above is preliminary in nature and could be extended further to capture a more granular representation of economic benefits, as well as other economic costs / benefits that would accrue but would not necessarily be reflected in aggregated economic output values (i.e., GDP). This includes:

a. Developing and calibrating further the key assumptions that drive the estimation of economic impacts.

b. Quantifying the potential impact of the policy at regional and/or country levels.

c. Undertaking more in-depth analysis of the assumptions and the components of economic value addition (i.e., those set out in Appendix C).

d. Quantifying other benefits accruing to passengers and other stakeholders, such as:
   i. Faster arrival processing times related to checking health documentation / requirements. This would lead to time savings for passengers

ii. Improving travel time reliability for passengers, as since reporting and compliance would eventually become more harmonised.

iii. Reducing search costs for passengers, through a harmonised reporting framework and reliable communication platform.

iv. Reducing queuing and the physical space required to undertake travel physical checks of travel documents. This would optimise the use of terminal space.

**73** Considering in more detail the potential costs of the policy, including implementation costs (discussed further below), but also other externalities (e.g., environmental).

**74** These topics could be explored in more detail as this policy is developed further.

# WHAT IS NEEDED TO MAKE THIS POLICY SUCCESSFUL?

**75** To achieve the goals and objectives of this policy, and build on the HLCC recommendations, it is imperative that active coordination is sustained among all the different actors. Coordination must be consistent within the civil aviation sector, but also among the health, migration, and tourism sectors through the National Air Transport Facilitation Committee launched by ICAO .

**76** It is foreseen to build a global digital hub (or a global information system) as a central source for updated information and latest advice regarding health requirements processes in all countries. The digital hub will allow passengers to make informed decisions when planning their journeys and will enhance transparency in information management from the civil aviation sector's side.

**77** **STRATEGIES** to build and implement the global digital hub **INCLUDE:**

a. Fostering a culture of continuous exchange of information.

b. Scenario-based testing of the new tool.

c. Implementing a participant survey.

d. Instituting a risk management program.

e. Monitoring the impact of the system on passengers.

f. Establishing potential measures and indicators for success in terms of outputs (eg, number of countries with harmonised requirements) and impacts (eg, passenger volume increases, increases in lead time to book flights prior to travel, reduction in costs associated to travel, etc.).

# HOW TO MAKE THIS VISION A REALITY

**78** The White Paper is to be presented at the Future Aviation Forum in Riyadh in May 2022. It supports ICAO's mandate to provide a space for cooperation and concerted action and devise practical solutions to address challenges of global importance.

**79** By building on the previous work done by ICAO, its Member States and other regional bodies through CAPSCA and other initiatives, and by directly supporting ICAO's overall mandate to provide a space for cooperation and concerted action and devise practical solutions to address challenges of global importance, the expectation is that enough traction will be obtained by key actors during the presentation of the White Paper at the Future Aviation Forum in Riyadh in May 2022 to garner support for discussion at the 41st ICAO General Assembly, to be held later in 2022.

## POTENTIAL FUNDING REQUIREMENTS AND ARRANGEMENTS

**80** In addition to coordination and collaboration at high levels in key institutions (including ICAO, WHO and others), the framework set out under this policy proposal will require dedicated resources to:

a. Establish the proposed governance arrangements and fund the ongoing governance, coordination, and technical functions. Importantly, the fund will need strong governance, tight control, and transparency with regards to disbursements. A Steering Committee made up of contributing Member-States could be responsible for overseeing this fund.

b. Undertake the work necessary to achieve a harmonised reporting system.

c. Develop and/or improve communications platforms. This includes investment in systems and technical assistance.

d. Develop and roll-out the proposed compliance mechanisms. This may differ country-by-country or region-by-region, depending on the existing level of digitization and systems that exist.

**81** To determine a budget for this entire mechanism, an initial investment will be needed to:

a. Establish the governance, operational and technical bodies,

b. Create and put into operation each of the tools and compliance systems listed previously that form the basis of the framework, and

c. Build a physical space (e.g., a building or center) to host the tools and people that will be needed to make the framework function.

**The initial investment is estimated to be approximately USD 15 million.**

**82** Subsequently, a recurrent annual budget will need to be determined for each body and for each of the tools and compliance systems for the following ten years after their establishment. This annual budget is estimated to be USD 1.5 million per year for the Governance body, USD 5 million per year for the operational body and USD 1.5 million per year for the technical bodies. This equates to approximately USD 8 million per year.

## POTENTIAL ROADMAP FOR IMPLEMENTATION

**83** This policy and framework are ambitious and will need to go through several stages to become a reality. The table below is an example of a roadmap that can deliver on the expected outcomes of the policy.

| | |
|---|---|
| **March + April 2022** | • Initial articulation of White Paper for a universally recognised and harmonised international health requirement framework for air passengers.<br>• Further elaboration of the policy in coordination with key stakeholders (e.g., ICAO, WHO, and others). |
| **May 2022** | • Presentation at the Future Aviation Forum |
| **Sep-Oct 2022** | • Presentation at ICAO International Conference on Aviation Operations. |
| **Nov + Dec 2022** | • Refinement of policy. |
| **2023 and 2024** | • Agreement from key stakeholders and finalisation of final policy.<br>• Formal adoption of policy and signature of MoUs<br>• Preparation of a detailed Implementation Plan<br>• Establishment of Governance, Coordination and Technical Committees.<br>• Development of standardised reporting systems, including training and technical assistance.<br>• Development / enhancement of communication systems, including training and technical assistance.<br>• Initial work on compliance mechanisms and tools. |
| **2024** | • Go-Live for standardised reporting systems.<br>• Go-Live for communication systems.<br>• Continued work (and possible roll-out) of compliance mechanisms and tools |
| **2025** | • Ongoing review of the policy and framework.<br>• Functioning of the framework and systems with regular updating being undertaken by implementation bodies. |

# APPENDIX A

## COVID-RELATED TRAVEL RESTRICTIONS FOR FULLY VACCINATED TRAVELERS TO ENTER A COUNTRY/REGION

(14 APRIL 2022)

| | DESTINATION COUNTRY OR REGION | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **COUNTRY / REGION OF ORIGIN** | | US | China | EU | GCC | UK | Mexico | Saudi Arabia | Australia | South Africa | Brazil |

| COUNTRY / REGION OF ORIGIN | US | China | EU | GCC | UK | Mexico | Saudi Arabia | Australia | South Africa | Brazil |
|---|---|---|---|---|---|---|---|---|---|---|
| **US** | | Visa, health declaration form, negative tests, health checks and quarantine | Variable - Negative tests and health forms | Variable - Negative tests, health insurance and health forms | No Restrictions | No Restrictions | No Restrictions | Negative PCR test, passenger declaration form, quarantine requirements dependent on individual state | No Restrictions | No Restrictions |
| **China** | Negative COVID-19 viral test | | Variable – Entry bans, negative tests and health forms | Variable - Negative tests and health forms | No Restrictions | No Restrictions | No Restrictions | Negative PCR test, passenger declaration form, quarantine requirements dependent on individual state | No Restrictions | No Restrictions |
| **EU** | Negative COVID-19 viral test | Visa, health declaration form, negative tests, health checks and quarantine | | Variable - Negative tests and health forms | No Restrictions | No Restrictions | No Restrictions | Negative PCR test, passenger declaration form, quarantine requirements dependent on individual state | No Restrictions | No Restrictions |
| **GCC** | Negative COVID-19 viral test | Visa, health declaration form, negative tests, health checks and quarantine | Variable – Entry bans, negative tests and health forms | | No Restrictions | No Restrictions | No Restrictions | Negative PCR test, passenger declaration form, quarantine requirements dependent on individual state | No Restrictions | No Restrictions |
| **UK** | Negative COVID-19 viral test | Visa, health declaration form, negative tests, health checks and quarantine | Variable - Negative tests and health forms | Variable - Negative tests and health forms | | No Restrictions | No Restrictions | Negative PCR test, passenger declaration form, quarantine requirements dependent on individual state | No Restrictions | No Restrictions |
| **Mexico** | Negative COVID-19 viral test | Visa, health declaration form, negative tests, health checks and quarantine | Variable - Negative tests and health forms | Variable - Negative tests and health forms | No Restrictions | | No Restrictions | Negative PCR test, passenger declaration form, quarantine requirements dependent on individual state | No Restrictions | No Restrictions |
| **Saudi Arabia** | Negative COVID-19 viral test | Visa, health declaration form, negative tests, health checks and quarantine | Variable – Entry bans, negative tests and health forms | Variable - Negative tests and health forms | No Restrictions | No Restrictions | | Negative PCR test, passenger declaration form, quarantine requirements dependent on individual state | No Restrictions | No Restrictions |
| **Australia** | Negative COVID-19 viral test | Visa, health declaration form, negative tests, health checks and quarantine | Variable - Negative tests and health forms | Variable - Negative tests and health forms | No Restrictions | No Restrictions | No Restrictions | | No Restrictions | No Restrictions |
| **South Africa** | Negative COVID-19 viral test | Visa, health declaration form, negative tests, health checks and quarantine | Variable - Negative tests and health forms | Variable - Negative tests and health forms | No Restrictions | No Restrictions | No Restrictions | Negative PCR test, passenger declaration form, quarantine requirements dependent on individual state | | No Restrictions |
| **Brazil** | Negative COVID-19 viral test | Visa, health declaration form, negative tests, health checks and quarantine | Variable - Negative tests and health forms | Variable - Negative tests and health forms | No Restrictions | No Restrictions | No Restrictions | Negative PCR test, passenger declaration form, quarantine requirements dependent on individual state | No Restrictions | |

Sources: Consulum Aviation from 14 April 2022 with the aid of the following links:

https://www.cdc.gov/coronavirus/2019-ncov/travelers/testing-international-air-travelers.html
https://www.gov.uk/foreign-travel-advice/china/entry-requirements
https://travel.state.gov/content/travel/en/traveladvisories/traveladvisories/china-travel-advisory.html
https://www.interieur.gouv.fr/covid-19-international-travel
https://www.auswaertiges-amt.de/en/coronavirus/2317268#content_2
https://www.visitsaudi.com/en/health-regulations
https://u.ae/en/information-and-services/justice-safety-and-the-law/handling-the-covid-19-outbreak/travelling-amid-covid-19/travelling-to-the-uae
https://www.homeaffairs.gov.au/covid19/vaccinated-travellers
https://www.gov.za/covid-19/individuals-and-households/travel-coronavirus-covid-19
https://visitbrasil.com/en/covid/

# APPENDIX B

HLCC RECOMMENDATIONS
TO ICAO

» Multi-sector communication, coordination and collaboration between all relevant stakeholders including industry in the development of an aviation pandemic response plan (HLCC Recommendation 6/1 c).

» Coordination and harmonization between the various State actors responsible for management of pandemics and disaster, including strengthening collaboration and consultations between health, aviation and other authorities (HLCC Recommendation 6/1 f).

» Implement, to the extent practicable, globally and regionally-harmonised, collaborative, and mutually accepted measures that take into consideration different national circumstances and policies, without creating undue economic burdens or compromising the safety and facilitation of civil aviation, while being in line with Annex 9 provisions and related guidance material, towards widespread adoption of practical, flexible processes and solutions for travel acceptance to facilitate the recovery of international passenger travel (HLCC Recommendation 6/1 h).

» Communicate health-related entry requirements to the travelling public and all stakeholders in the aviation community in a timely manner in order to build resilience and regularly assess the possibility of eminent public health threats and promptly apply contingency measures (HLCC Recommendation 6/1 k).

» High-level of engagement and coordination between civil aviation and public health authorities and close cooperation with international and regional organisations, and all involved stakeholders (HLCC Recommendation 6/1 n).

» Adoption and acceptance of digital health certificates for testing and vaccination to facilitate international air travel and, if issuing health certificates, consider adopting the ICAO specifications for Visible Digital Seals for non-constrained environments or including other interoperable formats such as from regional or global intergovernmental bodies, or internationally recognised organisations. Emphasis should be put on also accepting non-digital certificates taking into account the importance of No Country Left Behind (NCLB) initiative (HLCC Recommendation 6/1 q).

» ICAO to work towards interoperable long-term solutions that use digital travel documents and health-related credentials established by States, taking into account existing solutions and global limitations (HLCC Recommendation 6/1 v).

» Designate an appropriate authority for the air transport facilitation as States deem appropriate and allocate necessary resources (HLCC Recommendation 7/1 f).

» ICAO to develop a unified framework to improve the effectiveness of global management of public health risk in aviation together with relevant stakeholders (HLCC Recommendation 7/1 q).

» ICAO to develop a shorter procedure for decision-making to be implemented during public health emergencies, in collaboration with the WHO, to enable a more rapid response to these events in the future (HLCC Recommendation 7/1 v).

» Appropriate regulatory framework that considers all data protection and privacy requirements for use of health proofs for travel and incorporates appropriate safeguards (HLCC Recommendation 8/1 c).

» ICAO to continue to monitor new developments and collaborate with relevant stakeholders to further develop the guidance material supporting the implementation of the health-related provisions of Annex 9 (HLCC Recommendation 9/1 j).

» ICAO to support the strengthening of facilitation capabilities through establishment of sustainable funding mechanisms and resources (HLCC Recommendation 9/1 k).

# APPENDIX C

## ECONOMIC IMPACTS OF AVIATION[21]

[21] ATAG (2020), Aviation Benefits Beyond Borders

**DIRECT**
[within the industry]

**Airlines**
Passenger
Air cargo
Airline ticketing
General aviation
*flight crew, check-in staff, maintenance crew, reservations and head office staff*

**Airports**
Airport management
*maintenance, operations, security, rescue fire*

**Airport on-site**
Retail
Restaurants
Hotels
Car rental
Freight services
Catering
Ground handling
Aircraft maintenance
Office parks
Government
*customs, immigration, security, police*

**Air navigation service providers**
*Management, air traffic controllers*

**Civil aerospace**
Airframe
Engine
Components
*Engineers, designers, construction teams*

**INDIRECT**
[industry supply chain]

**Off-site**
Fuel suppliers
Food and beverage
Construction
Transport providers

**Manufacturing**
Computer components
Retail goods

**Services**
Accounting firms
Lawyers
Call centres
IT systems

**INDUCED**
(spending of direct and indirect employees)

Food and beverage
Recreation & leisure
Transport
Housing
Taxes
Clothing
Furniture
Services
Telecommunications

**TOURISM CATALYTIC**
(spending by the 57% of tourists that travel by air)

Hotels
Entertainment
Restaurants
Museums
Attractions
Tour operators
Retail
Car rental

**OTHER CATALYTIC**
(the benefits of air transport to other sectors and businesses in the economy)

Global trade
Labour supply
Productivity of other businesses
Education access
Healthcare
Family ties
Connectivity
Lifelines to remote communities and small island states
Investment
Remittances
Research / innovation

*(these impacts are not included in the numbers presented in this study)*

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