ICAO GLOBAL ROADMAP SUPPORTING THE IMPLEMENTATION OF THE RECOMMENDATIONS AND GUIDANCE OF THE COUNCIL AVIATION RECOVERY TASK FORCE (CART) FOR THE RESTART, RECOVERY AND RESILIENCE OF CIVIL AVIATION FOLLOWING THE COVID-19 OUTBREAK

(GLOBAL IMPLEMENTATION ROADMAP)

Executive Summary

The mission of the present *Global Implementation Roadmap* (GIR) document is to contribute to the restart and recovery of the civil aviation system by establishing an enabling framework for ICAO to effectively implement the recommendations and guidance outlined in the Council Aviation Recovery Task Force (CART) Report and the associated "Take-off" guidance document. A series of ICAO's priority activities and initiatives contained in the GIR aim to support, coordinate and monitor the implementation of CART recommendations and guidance by States and industry. The GIR allows for appropriate flexibility in the implementation efforts in light of national and regional specificities and needs; and therefore positions itself in support and complement of actions made by States, industry and other stakeholders, where necessary and in respect of their responsibilities. Through the GIR, global and regional initiatives will be aligned and updated with associated timelines in the online interactive version of this roadmap, which will be accessible through the COVID-19 Response and Recovery Implementation Centre (CRRIC).

The GIR identifies outcome-driven activities and initiatives undertaken by ICAO, ranging from implementation support and coordination to monitoring and reporting:

a) **Implementation support activities** focus on providing guidance, training tools and expert assistance to States in line with the CART recommendations on areas of aviation safety, aviation public health, facilitation, aviation security and economic and financial measures, as well as pertinent aspects of aerodromes, air navigation services, international general aviation. They also include activities related to resource mobilization and communication. As a cornerstone of these activities, ICAO is developing and deploying Implementation Packages (iPACKs) tailored to the' evolving needs of States and the industry. In addition, Regional Offices continue to provide assistance to States by adopting and implementing regional initiatives while ensuring alignment with the GIR.

b) **Coordination activities** aim to enhance cooperation and synergies between ICAO, States, regional organizations and commissions, industry stakeholders and the World Health Organization (WHO) and other United Nations (UN) entities to avoid duplication of efforts in implementing the CART recommendations and guidance. Specific coordination mechanisms enable the effective and timely exchange of information and experience, including best practices, challenges and lessons learnt, among all the stakeholders. The Collaborative Arrangement for the Prevention and Management of Public Health Events in Civil Aviation (CAPSCA) programme will continue to be an essential forum for multi-sectoral collaboration on public health-related measures.

c) **Monitoring and reporting activities** are facilitated through multi-functional interactive tools available in the CRRIC, including a gap analysis tool, a database of risk mitigation measures as well as an information-sharing tool. Various dashboards and reports are also available to monitor the global implementation status and to assess the ongoing impact of COVID-19 on air transport.

In line with the CART report and associated "Take-off" guidance document, the GIR is also intended to be a "living" document; and as such shall be periodically reviewed and adjusted to appropriately address the changing and new situation of the COVID-19 pandemic. Data, insights and feedback collected through the ICAO tools and mechanisms will enable accurate and continuous assessment of the evolving needs of States and the industry, which will consequentially be addressed in a timely and cost-effective manner.

1- Introduction

At its 220th Session, the ICAO Council approved the Report of the Council Aviation Recovery Task Force (CART) and the associated document entitled *Take-off: Guidance for Air Travel through the COVID-19 Public Health Crisis* (hereinafter referred to as the "Take-off" guidance document). The CART Report contains ten (10) key principles and eleven (11) recommendations for a harmonised international approach to aviation restart and recovery efforts. The "Take-off" guidance document includes measures to reduce public health risk to air passengers and aviation workers while strengthening confidence among the travelling public, global supply chain stakeholders and governments.

2- Scope

The Global Implementation Roadmap (GIR) presents ICAO's activities, mechanisms and tools to support, coordinate and monitor the implementation of the CART recommendations and guidance. The GIR addresses all areas covered in the CART Report by following the key principles and the guiding considerations outlined in the "Take-off" guidance document, in particular the principle of 'working as one aviation team'. In line with the GIR, global and regional initiatives will be documented, updated and adjusted, as appropriate, as the situation and needs evolve. These global and regional initiatives, along with the associated timelines, will be compiled in the online interactive roadmap (hereinafter referred to as the Online Roadmap) which will be accessible through the COVID-19 Response and Recovery Implementation Centre (CRRIC, paragraph 3.2 refers). The Online Roadmap will enhance transparency, allow flexibility in regional implementation, and facilitate partnerships with all stakeholders.

Since the outbreak of the COVID-19, and as part of the articulating role of ICAO, all Regional Offices have been actively involved in various activities to support States and the aviation industry at regional and national levels, in collaboration with relevant international and regional organizations, including RSOOs, and in liaison with Headquarters. In line with the regional activities and the GIR, each Regional Office will document the linkage between its initiatives and the GIR content, and document those initiatives and associated timelines on the Online Roadmap.

3- Implementation Support Activities

To support the implementation of the CART recommendations and guidance, ICAO will make use of all available resources, including through the Collaborative Arrangement for the Prevention and Management of Public Health Events in Civil Aviation (CAPSCA), enhanced cooperation with the industry, Regional Safety Oversight Organizations (RSOOs) and ICAO regional groups. In several cases, existing regional ICAO technical cooperation projects, especially Cooperative Development of Operational Safety and Continuing Airworthiness Programmes (COSCAPs), will contribute to the implementation support activities.

3.1   Implementation Packages (iPACKs)

As an essential part of the implementation support activities, Implementation Packages (iPACKs) continue to be developed in full alignment with the CART recommendations and guidance. The iPACK is

a bundle of guidance material, training, tools, expert assistance and, when applicable, procurement guidance. It aims at facilitating and guiding the implementation of the applicable ICAO provisions and recommendations by State entities (e.g. Governments, Civil Aviation Authorities and National Air Transport Facilitation Committees), aviation service providers, supply chain stakeholders and their personnel. The contents of the iPACKs can be customized according to specific needs of regions, sub-regions or States. Two iPACKs (for facilitation and safety management) are currently available for deployment, and additional ones are under development. Further information can be found at: http://www.icao.int/iPACK.

3.2   COVID-19 Response and Recovery Implementation Centre (CRRIC)

A COVID-19 Response and Recovery Implementation Centre (CRRIC) was created on the ICAO Secure Portal (https://portal.icao.int). The CRRIC bundles resources and tools to assist implementation support, coordination, monitoring and reporting activities; and provides easy access to, inter alia:

- standard slide-deck presenting the content of the CART report and the "Take-off" guidance document;
- dedicated CART website providing mobile access to the content of the CART report, as well links to iPACKs and assistance activities delivered by CASPCA or other means;
- the Online Roadmap;
- a series of webinars related to the CART recommendations and guidance;
- a list of focal points in regions and Member States;
- email support hotline to answer CART-related questions;
- online tools; and
- dashboards.

3.3   Aviation Safety

CART Recommendation 1 - *During the global COVID-19 outbreak, Member States should continue updating COVID-19 Contingency Related Differences (CCRDs) in the Electronic Filing of Differences (EFOD) subsystem.*

Providing regulatory certainty to air operators during the COVID-19 contingency is paramount for the sustainability of international civil aviation. Physical distancing practices, closure of workspaces in Civil Aviation Authorities (CAAs) in some States and other measures as a result of the COVID-19 outbreak made it difficult for some States to comply fully with certain ICAO Standards. A focus of ICAO has been to support States in managing temporary departures from ICAO Standards(hereinafter referred to as 'alleviations') while ensuring that any associated safety risks are adequately addressed, facilitating recognition and acceptance by other States, and making that information readily available for all stakeholders.

The CCRD sub-system of the EFOD system allows States to file temporary differences and at the same time indicate what they would find acceptable from other State alleviations to facilitate international operations and meeting their obligations under Article 40 of the *Convention on International Civil Aviation* (Chicago Convention). Through its Regional Offices and the RSOOs, ICAO is identifying States' needs and providing any further guidance when required by working with subject matter experts nominated by States and international organizations to Panels. ICAO also continues to review published

alleviations and, in consultation with States, keep the list of alleviations up-to-date. States will indicate in the CCRD when they resume normal surveillance activities and are expected to continue accepting alleviations from other States until COVID-19 is over.

CART Recommendation 2 - *Member States should avoid retaining any COVID-19 related alleviation measures as soon as normal operations are resumed. Differences that remain after the contingency if any should be filed in the EFOD system.*

Retaining safety operational contingency measures beyond the required period can create undue burden for States and industry. ICAO is working with industry to identify expiring operational safety alleviations, and coordinating with relevant States through Regional Offices to reassess their published alleviations and announce the resumption of their normal surveillance activities when appropriate.

CART Recommendation 3 - *Member States should expedite the development of guidance for safety management of new operations or operation change during this crisis.*

States need to adopt a risk-based approach to surveillance activities with the establishment of mechanisms to ensure that service providers are actively managing any new risks while continuously complying with the requirements under which their approvals were granted. Capability to conduct remote activities will also need to be developed to address the challenges of conducting on-site surveillance. A new COVID-19 webpage on the Safety Management Implementation (SMI) website (Safety Management Implementation COVID-19 webpage) has been created to help States with Tabletop exercises to simulate the restart of operations. This website also contains links to Member States' websites where guidance is published. In addition, practical examples and tools are collected to complement the *ICAO Handbook for CAAs on the Management of Aviation Safety Risks related to COVID-19* (Doc 10144).

3.4   Public Health Related Measures

CART Recommendation 4 - *Global and regional harmonization of procedures is essential to strengthen public and passenger confidence in air travel. To that end, Member States should establish aviation public health procedures aligned with the guidance in the Take-off: Guidance for Air Travel through the COVID-19 Public Health Crisis.*

CART Recommendation 5 - *In order to support the fastest possible return to normal aviation operations, Member States should regularly review the necessity of continuing the application of risk mitigation measures as the risk of COVID-19 transmission diminishes; and measures which are no longer needed should be discontinued.*

CAPSCA mechanism

CAPSCA is an instrumental platform bridging the public health and aviation sectors, which encourages multi-sectoral collaboration between the United Nations (UN) entities, multiple sectors of national authorities, including CAAs, public health authorities, customs and immigration, as well as industry stakeholders at international, regional and national levels. CAPSCA is strongly supported by WHO with

active participation in CAPSCA activities. ICAO and WHO have developed a joint funding proposal to support CAPSCA COVID-19 implementation activities. During the COVID-19 pandemic, CAPSCA has further strengthened its partnerships with States (increased membership of ICAO States) and the industry (new partnerships) resulting in enhanced coordination and collaboration to support States and the industry. The World Health Organization (WHO) has also supported the involvement of regional and national public health authorities in CAPSCA activities.

Since the beginning of the pandemic, public health and aviation guidance material and best practices have been disseminated on the [CAPSCA website](), which will be revamped and relocated to the ICAO main frame. Through the CAPSCA on-line training package, ICAO has accelerated its training in coordination with the Joint Aviation Authorities Training Organisation (JAATO) and Member States, to increase the pool of the subject matter experts and enable assessment and monitoring of the public health measures implementation in States. Additional training has also been provided through CAPSCA webinars and regional meetings, as well as by supporting WHO's regional virtual trainings, and vice-versa. All of these activities will be continued with the focus on regional implementation, mainly through CAPSCA technical assistance visits, which are designed to assess preparedness and response plans and provide recommendations for improvement. Initially, this will be done by submission through on-line checklists completed by States, followed by webinar discussion with all stakeholders and then, pending resources and travel restrictions, on-site assessments.

Public Health Corridor (PHC) Concept

Based on the survey results on health related restrictions and procedures by States and international organizations in response to the COVID-19 pandemic, new CAPSCA guidance on *Implementing a Public Health Corridor to Protect Flight Crew during the COVID-19 Pandemic* was published in May 2020 (Electronic Bulletin 2020/30 refers). The initial guidance, which was applicable to flight crew conducting cargo operations, was subsequently revised with the most recent available scientific information and with an expanded scope to maintenance, ferry, and delivery flight operations (Electronic Bulletin 2020/36 refers). Further guidance addressing humanitarian, repatriation and scheduled passenger flights is under development through CAPSCA.

The objectives of the PHC are to ensure continued flight operations with minimal restrictions, prevent the spread of COVID-19 through air travel, protect the health and safety of crew and passengers and strengthen passenger confidence in air travel. The key elements of this concept includes the use of "clean" crew, "clean" aircraft, "clean" airport facilities and transporting "clean" passengers and cargo, with "clean" meaning as far as possible a "COVID-19 free" environment.

The PHC expands on CAPSCA activities and is a mechanism to implement the modules outlined in the "Take-off" guidance document (crew, aircraft, airport facilities, and cargo). Various means such as CAPSCA and CART forms and templates, on-line reporting and monitoring tools, and Smart Phone applications will be used to encourage digitalization, where possible, and to ensure uniform implementation of the guidance. PHC forms to date include: the Crew COVID-19 status Card (PHC Form 1); Aircraft COVDI-19 disinfection control sheet (PHC Form 2); and the Airport COVID-19 cleaning/disinfection control sheet (PHC Form 3). More forms and guides are currently under development, including a Passenger COVID-19 Status Card, a Quick Reference Guide (QRG) on Health Restrictions implemented in Arrival States and a Quick Reference Guide on Health Restrictions implemented in Departure States. Use of QRG forms will facilitate mutual recognition of measures by States, and thus reduce the application of excessive health restrictions, e.g. quarantine measures. These

forms will be made available to States on the CRRIC and also to operations crew through aeronautical information circulars (AICs) that allows for quick updates of information. Implementation of the PHC will be supported by capacity building and training, by means of webinars, a PHC course and iPACK related to the PHC.

3.5   Facilitation

CART Recommendation 6 - *Member States that have not done so should immediately establish a National Air Transport Facilitation Committee (or equivalent) as required by Annex 9 to increase national level cross-sectoral coordination.*

Effective coordination is crucial not only to facilitate an effective restart and recovery of aviation but also to ensure a safe, secure, efficient and sustainable air transport system. Standard 8.19 of Annex 9 – *Facilitation* to the Chicago Convention mandates establishment of appropriate committees to provide a forum for consultation and information-sharing about facilitation matters amongst government stakeholders including: civil aviation, customs, immigration, quarantine, public health and other authorities, representatives of other air transport-related communities (including those related to both passenger and cargo operations) and industry at the national and airport levels.

ICAO will monitor and support State efforts to collaborate in such fora, and through Regional Offices, with a view to alleviating challenges for both passenger and cargo services. The Organization has already collated information on existing structures in place at national level during its initial response to the COVID-19 pandemic, which will provide for direct targeted outreach where required. Further, a series of webinars on Facilitation matters will be held to assist States establish National Air Transport Facilitation Committees or similar arrangements.

ICAO will stimulate the establishment and active work of collaborative, cross-sectoral National Air Transport Facilitation Committees through training, capacity building and targeted outreach. Outreach on National Air Transport Facilitation Committees will be founded upon existing guidance material, in particular, the *Model National Air Transport Facilitation Programme* (Doc 10042 – available on the ICAO public website); and support of Regional Offices and States' National Points of Contact for facilitation. This guidance will be amended periodically as new and updated best practices come to light following the gradual restart and recovery of aviation. States are required to continually update information on the activities of National Air Transport Facilitation Committees to inform their status of implementation.

The CART Report (page 10 refers) states that "ICAO should lead and facilitate the review of global standards, policies and guidance material, especially health-related provisions contained in Annex 9 – *Facilitation* in coordination with the WHO, to support States needs in building a more robust air transport system". In this regard, a newly-established ICAO Task Force on Health Issues Outbreaks in Aviation was mandated to review and update, as required, existing health-related provisions and corresponding guidance material contained in Annex 9 in accordance with the planned timelines (as stipulated in Attachment A to State letter 2020/58.

CART Recommendation 7 - *Member States should systematically use a Passenger Health Locator Form to ensure identification and traceability of passengers to help limit the spread of the disease and resurgence of the pandemic.*

Public health surveillance measures include passenger contact tracing to prevent the spread of COVID-19. To enable relevant authorities to quickly collect passenger contact information, a Passenger Health Locator Form has been developed (Appendix 13 to Annex 9 refers). Use of this form is recommended when public health authorities suspect the potential for disease transmission on board an aircraft and a subsequent need for contact tracing (Recommended Practice 8.15.1 of Annex 9 refers). Information of form is intended to be held by public health authorities in accordance with applicable law and is to be used only for authorized public health purposes.

ICAO will monitor and assess States' usage of Passenger Health Locator Forms and make modifications to the form, in collaboration with CAPSCA, the WHO and other relevant parties, if necessary to enhance global harmonization. To address the need for broader digitalization of information exchange, efforts will be made to further facilitate larger scale aviation movements of passengers and cargo by gathering the information using contactless digital tools, rather than on paper. Modification of the data collected will be considered when deemed necessary with the goal of ensuring global adherence to demonstrated best practices.

CART Recommendation 9 - Member States should take measures to ensure that relevant personnel are provided training to identify and manage unruly passenger situations related to non-respect of essential aviation public health and safety measures.

To implement this recommendation, a particular focus will be placed on monitoring whether all suitable measures are taken to guard against the occurrence of incidents and all relevant parties are suitably prepared in cases of unruly or disruptive passengers. In accordance with Standard 6.43 of Annex 9, States will need to ensure that passengers understand that compliance with sanitary measures is critical for their own safety and that of others and non-compliance is subject to punishment.

ICAO will remind States of their obligations to proactively curb and manage unruly passenger situations and, to the extent possible, support efforts by authorities to publish effective notices on the matter and make them readily available to passengers. Pursuant to Standard 6.44 of Annex 9, which requests States to ensure the appropriate training of the relevant personnel, ICAO will encourage full delivery of cabin crew training as prescribed in the *Handbook for Cabin Crew Recurrent Training during COVID-19*. Adherence to the ICAO/IATA guidance on the management of unruly passengers, contained within the *Manual on the Legal Aspects of Unruly and Disruptive Passengers* (Doc 10117), will be advocated.

Awareness will also be raised of relevant guidance contained in Annex 17 — *Security*, the *Security Manual* (Doc 8973), the *Manual on the Implementation of the Security Provisions of Annex 6* (Doc 9811), Annex 9 — *Facilitation* and *The Facilitation Manual* (Doc 9957) throughout ICAO's implementation activities on this matter. In addition, ICAO will request States to provide updates on incidents of unruly passengers associated with COVID-19 activities, information of which can be used to identify best practices for dissemination and to guide awareness raising and training activities.

3.6   Aviation Security

CART Recommendation 8 - While temporarily adapting their security-related measures, using the guidance provided, Member States should strengthen their oversight system to ensure these measures are consistently applied with the objective of protecting aviation against acts of unlawful interference.

ICAO will continue to support States with respect to aviation security during the COVID-19 pandemic through periodically updated guidelines, training and assistance, highlighting the importance of oversight and quality control of the implementation of aviation security-related contingency measures. In addition to the security-related measures outlined in the "Take-off" guidance document, ICAO has developed the *Guidelines for Aviation Security Contingency Measures during the COVID-19 Pandemic.* It is made available for early use by States and stakeholders, as a working copy. The guidelines incorporate inputs and best practices shared by industry and State experts; and will be amended periodically as new and updated best practices come to light following the gradual resuming of aviation security operations worldwide. This will also be complemented by webinars (restricted to aviation security stakeholders concerned with the implementation of aviation security measures).

The implementation of the measures laid out in the guidelines should not undermine baseline security measures as set by Annex 17 Standards and Recommended Practices (SARPs). Should States not be in a position to implement certain Annex 17 SARPs, they should follow the mandatory procedure of filing a difference by indicating the reasons and the planned duration of the difference. The difference should be clearly linked to and driven by operational aspects related to the COVID-19 crisis.

3.7   Aerodromes

ICAO has published aerodrome related guidelines, including sample checklists for States, to address various challenges caused by the COVID-19 pandemic and facilitate aerodrome restart (available at: https://www.icao.int/safety/COVID-19OPS/Pages/aga.aspx). In particular, ICAO has advised States of options to provide interim aerodrome certificates or extend the validity of aerodrome certificates, where required for a defined period based on established guidelines, while maintaining a robust State safety oversights system. These guidelines will be amended periodically based on lessons learnt and updated best practices following the gradual resuming of aerodrome operations worldwide. Global and/or regional webinars will continue to be held on relevant aerodrome topics. Regional Offices will continue to support the implementation of the ICAO guidelines by States in their respective regions, in collaboration with all stakeholders. They will also provide ICAO Headquarters with lessons learnt and feedback from States on the implementation of the ICAO guidelines.

3.8   Air Navigation Services

The constant changes in the operational and financial environments surrounding to air navigation services (ANS) and public health measures for essential works have brought new challenges to the global ANS system to maintain operations and services with required levels of availability, safety, and efficiency, in a context with a reduced number of operations. In some regions, States have modified the airspace structure to implement more efficient flight paths and separations, forcing the amendments of national plans and related documents.

The reduced traffic levels coupled with social distancing requirements has affected the number of active workstations, supervision functions, and duty times. In some cases, the number of working personnel is kept at the minimum to maintain operations in the facility. States should bear in mind the need for safety analysis and supervision to address key risks. ICAO is working with the Civil Air Navigation Services Organisation (CANSO) and other ANS providers in the development of a module(s) aligned with the "Take-off" guidance document.

Licensing, including training, rating, and proficiency for air traffic controllers (ATCOs), will continue to be a challenge in the short and near term. Alleviation measures in this regard are being updated by States in the CCRD subsystem of the EFOD system, and the information on these measures is made available to all stakeholders through the ICAO COVID-19 website. In some regions, ANSPs are facing difficulties in carrying out the maintenance and calibration of meteorological (MET) equipment, ground and flight calibration NAVAIDS, and validation of Instrument Flight Procedures (IFPs). As this situation could impact the implementation of the Regional and Global Air Navigation Plan, ICAO will review and update respective plans to reflect changes as and when required.

ICAO will continue to support States with respect to ANS during the COVID-19 pandemic through periodically updated guidelines, coordination, cooperation, training/webinars and assistance. ICAO will foster cooperation with industry partners to address issues related to ANSPs operational staff to improve safety and efficiency and wellness of technical staff. According to the needs, ICAO will continue supporting States in the implementation of measures to enhance airspace efficiency, and to review and update air navigation plans to reflect changes. ICAO will continue to support States in reinforcing their cooperation to provide a seamless ANS and will mobilize financial resources to be allocated for ANS provision, in the framework of regional harmonized projects.

3.9   Economic and Financial Measures

CART Recommendation 10 - *Member States should consider appropriate extraordinary emergency measures to support financial viability and to maintain an adequate level of safe, secure and efficient operations, which should be inclusive, targeted, proportionate, transparent, temporary and consistent with ICAO's policies, while striking an appropriate balance among the respective interests without prejudice to fair competition and compromising safety, security and environmental performance.*

In response to the financial challenges faced by the industry, ICAO has been conducting a range of activities from economic analyses to developing tools and guidance. These activities provide States and all stakeholders with reliable information and guidance and leverage key indicators to make informed, data-driven decisions.
The most significant economic impact from the pandemic is on the liquidity and working capital deficits for the industry, which will risk operations not recovering to pre-pandemic levels and severely impact air connectivity - which both passengers and cargo depend on - in the near term. As there is no single set of documents currently in place to devise appropriate economic and financial measures, a stand-alone document will be prepared by compiling relevant existing material, including ICAO's air transport policies and guidance, which will also address the potential effect and constraint of each of the measures, and provide practical examples.

ICAO is also collecting information on national emergency and contingency plans implemented by States and the industry, as well as various financial and economic recovery measures to mitigate the impact of the pandemic on the aviation industry. This information will be published as a compendium, which will serve to identify necessary recommendations on lessons learnt with a view to developing appropriate guidelines to assist States in any future occurrence. As government support is often provided on an extraordinary scale, it is crucial for States to evaluate the benefits and risks associated with these measures using the internationally harmonized framework of national accounting. Using the Aviation Satellite Account (ASA) framework currently under development, a Value Added Calculator will be

developed to allow States to assess how much value added can be generated through the support to aviation, as well as to the national economy as a whole such as Gross Domestic Product (GDP) and jobs.

The crisis is creating a surge in aircraft re-deployments and cross-border transfers of registration, while the current work arrangements make transmission of information and communications difficult for States that rely on manual execution, delivery and/or physical presentation of documents. To this end, ICAO is exploring the possibility of leveraging the International Registry, i.e. the worldwide database of financial interests on aircraft objects managed by Aviareto Ltd. under the Cape Town Convention and Aircraft Protocol, to create a trusted communication framework.

3.10   International General Aviation

While general aviation plays an important role in supporting communities during natural disasters and other emergencies, the COVID-19 pandemic has equally affected the operation of general aviation for both the lower end and large turbojet aircraft. Safety operational measures for alleviations related to international general aviation are included in the CCRD. ICAO is also working with the International Business Aviation Council (IBAC) and the International Council of Aircraft Owner and Pilot Associations (IAOPA) in developing modules applicable to international general aviation, which would be incorporated into the next update to the "Take-off" guidance document.

3.11   Resource Mobilization

ICAO has developed a specific Resource Mobilization Strategy for the COVID-19 crisis (under the umbrella of ICAO's general resource mobilization strategy), reflecting the uniqueness of the COVID-19 crisis in terms of the scale and protracted nature of the crisis, the related high cost of the response, and the urgent need to diversify the donor base to ensure sustained funding by mobilising both humanitarian and development resources and strengthening the organization's engagement with non-traditional partners, both public and private. The objectives of this strategy is to mobilize and maintain quality, reliable and flexible resources, from public and private sector donors, in a timely manner to meet the needs of civil aviation in the context of the COVID-19 crisis. A priority is given to secure funding and financing through to the end of 2021 and beyond, especially for the CAPSCA programme and iPACKs as products to mobilize resources against. The ICAO Resource Mobilization Strategy is a living document and can be accessed on the Resource Mobilization Platform (direct link is here).

This strategy highlights aviation's essential role in economic growth, job creation, delivery of goods and services, and global connectivity, and is vital to the most vulnerable States, including SIDS, LLDCs and least developed countries. Restoring air connectivity will be a key contribution to a successful and rapid recovery of the global economy post-COVID-19. Sustainable transport and aviation have no dedicated Sustainable Development Goal (SDG). However, civil aviation is enabling 15 out of 17 SDGs, with far reaching tangible impacts to the well-being and resilience of the people worldwide, including vulnerable populations.. To achieve the goal of financing the ICAO COVID-19 response on behalf of States, ICAO will set up structures and approaches to diversify the donor base and accept non-traditional donors and finance modalities if offered. International financial institutions, multilateral development banks, regional banks, regional economic commissions, foundations and private sector are a few examples of

non-traditional donors; and innovative finance modalities include loans, blended financing, Development Impact Bonds (DIBs) and Social Impact Bonds (SIBs).

3.12 Communication

The CART Report (page 9 refers) states that "ICAO, civil aviation and public health authorities, in cooperation with the industry, should communicate clearly and effectively to strengthen the confidence of the travelling public and help individuals understand how they can contribute to a safe travel journey."

Since the beginning of the COVID-19 outbreak, ICAO has been frequently communicating with States, the public and all relevant stakeholders (in particular, UN entities, industry, regional organizations, including RSOOs, and regional commissions) and sharing information on various aspects related to the pandemic, its impact on the aviation sector and the response and recovery activities. At ICAO Headquarters level, the information has been provided through numerous means, including:
a) ICAO public website, with a dedicated COVID-19 Response and Recovery Platform containing links to the Regional Offices' COVID-19 related websites and CAPSCA website;
b) State letters and Electronic Bulletins;
c) joint statements with the WHO or other UN entities;
d) news releases;
e) social media;
f) organization of, or participation in webinars (including ones to promote the CART Report and "Take-off" guidance document, which have been organized in all regions available in English, French, Spanish and Russian) and other virtual meetings; and
g) interviews with media.

In parallel, Regional Offices have been actively communicating with States and other stakeholders in their accreditation areas, both at strategic and tactical levels, and again through various means (such as public website, webinars, virtual meetings, social media, news releases, correspondence and targeted phone calls to State authorities and other stakeholders).

The main objectives of the communication have been to:
a) ensure the transmission of relevant, consistent, accurate and updated information to all stakeholders;
b) support the implementation of ICAO provisions and the CART recommendations and guidance;
c) help obtain States' commitment and engagement to the aviation restart/recovery activities;
d) work with applicable stakeholders on appropriate campaigns aimed at strengthening consumer confidence in air travel;
e) reach out to all stakeholders that may be affected by implementation activities related to regional roadmaps;
f) assess and respond to States' needs, in particular through the Regional Offices' direct assistance; and
g) enable effective and timely receipt and processing of feedback from States and other stakeholders.

Both Headquarters and Regional Offices will ensure clear, accurate, transparent and continuous communication with States, the public and all relevant stakeholders throughout the COVID-19 pandemic. A coordinated effort will be made on communication activities at global and regional levels.

4- Coordination Activities

4.1   Objectives, Mechanisms and Tools

CART Recommendation 11 - *Member States should facilitate information-sharing and exchange on their actions and best practices by contributing to an ICAO database of measures.*

The main objective of ICAO's coordination activities is to facilitate the exchange of information and experience, including best practices, challenges and lessons learnt, among all aviation stakeholders. They also enable cooperation and synergies between States, industry, regional organizations and regional commissions whenever possible and avoid duplication of efforts by them. ICAO will continue to make use of appropriate mechanisms to coordinate activities with all stakeholders, adjusting the frequency, type and scope of such coordination activities as needed. At Headquarters level, coordination mechanisms include CAPSCA, regular "Technical Meetings" with all stakeholders, RSOO Cooperative Platform meetings, and specific teams addressing matters related to air cargo, which is a vital component of the global supply chain. Regional Offices assume a key role for coordination at regional, sub-regional and bilateral levels, and also for inter-regional coordination when needed. The most appropriate mechanisms are used according to the situation and needs in each Region. Regional Offices will provide Headquarters with lessons learnt and feedback from States on the implementation of the CART recommendations and guidance.

The tools contained in the CRRIC will support coordination activities, in particular with respect to the exchange of information, the sharing of best practices, the provision of updates and the identification and implementation of support activities. Coordination and information sharing will also be supported by the continuous publication and update of information on the ICAO public websites, which States can use in reviewing and updating their implementation activities.

4.2   Coordination with Member States, Regional Organizations and Commissions

Coordination with regional organizations (including RSOOs) and regional commissions aims at ensuring a consistent regional strategy by identifying and implementing actions and projects that support States in their aviation restart, recovery and resilience efforts. These actions and projects will also facilitate the effective measurement of the level of implementation of the CART recommendations and guidance in States. Regional Offices, by leveraging their close position to the States, will continue to convene regular meetings with States, regional organizations (including RSOOs) and regional commissions. Support provided by Regional Offices ranges from the sharing of information on actions undertaken, experience, best practices, challenges encountered, initiatives implemented, and assistance required, to training and assistance activities. ICAO will encourage Member States, regional organizations and regional commissions to support capacity-building initiatives by providing relevant subject matter experts and other resources. The RSOO Cooperation Platform supports RSOOs in the conduct of risk analyses and the assessment of mitigation strategies for their concerned sub-regions based on operational commonalities of each State and the exchange of best practices, including COSCAPs.

Through the regional coordinating mechanisms, ICAO will ensure that States report when operations are returning to normal and mitigations are no longer necessary, update the CCRD subsystem accordingly

and continue to accept alleviations from other States until the entire community is back to normal operations. The initial target date for all States to return to normal operations is 31 March 2021.

4.3   Coordination with Industry Stakeholders

The CART Report (page 10 refers) states that "a closer and continuous collaboration between ICAO and civil aviation industry, as well as international and regional organizations, will be beneficial for information sharing and a harmonized global response suitable for all States, regions and stakeholders."

As the global forum for international civil aviation, ICAO will continue to coordinate closely with industry partners, representing both passenger and cargo operations, to ensure their needs are recognized by aviation authorities and national regulators and to leverage industry expertise as appropriate. Both Headquarters and Regional Offices will keep abreast of implementation strategies and initiatives by the industry and strive for synergies whenever possible to ensure effective and timely implementation of the CART recommendations and guidance.

4.4   Coordination with WHO and Other UN Entities

At Headquarters level, ICAO coordinates and collaborates with WHO and other UN entities, principally through meetings of the Crisis Management Team, the UN Trade and Travel Working Group and CAPSCA, as well as collaborative work plans. Where appropriate, coordination with the wider UN community is performed in order to ensure that the full landscape around aviation operations is understood and considered, e.g. supply chain disruptions and challenges to airline operations arising from areas beyond airports such as terminal facilities, warehouses and land borders. Through the CAPSCA programme and other existing mechanisms, Regional Offices will maintain coordination with WHO Regional Offices and other relevant local UN Agencies involved in the implementation activities. Regional Offices will continue to support their activities when relevant taking into account the regional context, and ensure their participation to ICAO initiatives when deemed necessary.

Considering the similar impact of the pandemic on both air and maritime transport, ICAO will also maintain cooperation with the International Maritime Organization (IMO) to align the applicable practices for the respective modes of transport as necessary. This alignment is especially recommended on issues such as the facilitation of crew changes, and the tests and quarantine requirements.

5- Monitoring and Reporting Activities

5.1   Objectives, Mechanisms and Tools

The CART Report (page 10 refers) states that "a successful path from this crisis will rely on a diligent and consistent follow-up to these recommendations and measures at all levels, including ICAO", and that "ICAO, in cooperation with all civil aviation stakeholders, should continue to monitor and assess the situation by leveraging this harmonized global approach for a timely response to the evolution of the crisis and by seizing the opportunity to reinforce the aviation ecosystem."

The availability of timely and accurate information on the status of implementation of the CART recommendations and guidance is an important element to support decision making by States in the restart and recovery of international aviation operations, on a bilateral, sub-regional or regional basis. It also enables ICAO to assess the situation, identify challenges encountered by States in their implementation efforts and best practices that can be shared, and consequently adjust its implementation support activities (including guidance, training, tools and expert assistance) as appropriate, in an effective and timely manner, to meet the needs of State and the aviation industry.

As an essential element of the CRRIC (sub-part 3.2 refers), ICAO has made available online tools for States to monitor, document and report their progress in the implementation of the CART recommendations, as well as their service providers' level of implementation of the guidance contained in the "Take-off" guidance document. An agile approach will be taken to continuous deploy tools and components as soon as they become available. The online tools currently available include:

1) An online gap analysis tool, for the State to report (based on their self-assessment) on progress in the implementation of each of the 11 CART recommendations; and

2) A database of risk mitigation measures (as called for CART Recommendation 11), for the State to report on the level of implementation of the risk mitigation measures contained in the "Take-off" guidance document by their service providers (in this case, air operators and international aerodrome operators). States are encouraged to use all available resources for the assessment of their service providers, working in partnership, as 'one aviation team', with industry organizations, in particular the International Air Transport Association (IATA) and Airports Council International (ACI), and with the CAPSCA programme and related Public Health Corridor implementation initiatives.

These online tools help States provide additional information on, *inter alia*, intended or planned actions, challenges and barriers encountered to effective and timely implementation, sharing of measures considered as best practices, additional custom measures adopted by the State, and comments on the CART recommendations and guidance. This will facilitate future updates to the CART Report and/or the "Take-off" guidance document. The data collected will also be used to help evaluate the effectiveness of ICAO's implementation support activities, identify the need for additional iPACKs, and provide appropriate information to the responsible ICAO Secretariat groups and the Council. To ensure effectiveness and consistency in reporting, States will be requested to designate 'national focal points' for reporting to ICAO on the follow-up and implementation of the CART recommendations and guidance. The list of national focal points will be made available on the CRRIC.

To ensure the sharing of information and lessons learnt, the CRRIC contains an information-sharing tool to allow Member States to share best practices and solutions, as well as challenges with respect to the implementation of the various measures. To ensure harmonization, a standard ICAO presentation slide-deck presenting the content of the CART Report and the "Take-off" guidance document has been made available. A dedicated ICAO CART website is established to provide mobile access to the CART Report. It also provides access to all iPACKs.

5.2   Dashboards and reports

A dashboard has been created on the CRRIC to monitor the global implementation status, which includes indicators and associated information for evaluating the level of implementation by States. Through this dashboard, States and other stakeholders are able to track the evolution of the situation and continuously re-assess the need for COVID-19 related safety operational alleviations.

ICAO is also monitoring and assessing the economic impact of COVID-19 on air transport, including the supply chain, for informed, data-driven decision-making. The analysis presents the estimates of the current state of the industry, as well as provides forward-looking scenarios, and is regularly updated and published on the ICAO public website (https://www.icao.int/sustainability/Pages/Economic-Impacts-of-COVID-19.aspx). In addition, using Automatic Dependent Surveillance-Broadcast (ADS-B) data and ICAO statistical air transport reported data, multiple interactive dashboards were created to assess the evolving impact of COVID-19 on air transport, covering operational and economic aspects of airlines, airports and ANS providers, the status of aircraft utilization, as well as the level of country-pair traffic (https://www.icao.int/sustainability/Pages/COVID-19-Air-Traffic-Dashboard.aspx). This dashboard will be complemented by post-COVID-19 mid- and long-term air traffic forecasts, which are currently under development with experts from States and industries through the Multi-Disciplinary Working Group on Long-term Traffic Forecasts.

6- Periodic Reviews and Updates

6.1   Collection and Processing of Feedback

ICAO will encourage States and stakeholders to provide their feedback on a regular basis concerning the content of the CART Report and the "Take-off" guidance document. Such feedback will be received by Regional Offices through their coordination mechanisms, and will also be collected directly through the on-line tools available on the CRRIC. The information collected will be reviewed, and the review outcome will be made available for the benefit of all States and stakeholders.

6.2   Periodic Reviews of the Global Implementation Roadmap

ICAO will monitor the evolution of States' risk mitigation measures and the eventual return to normal operations. The GIR will be updated as needed to reflect the changing landscape during the COVID-19 contingency. Regular meetings between ICAO Headquarters and all Regional Offices will be convened to discuss the evolution of COVID-19 contingency and any need to amend the GIR accordingly. The target date to resume normal operations will be continuously re-assessed and amended as deemed appropriate.

6.3   Identification and Processing of Proposed Amendments to the "Take-off" Guidance Document and Other Guidance Material

From time to time, the "Take-off" guidance document will be reviewed to determine if any amendments are needed to address the evolving situation. In this regard, Regional Offices will work with States and stakeholders to identify which risk mitigation measures contained in the "Take-off" guidance document

are effective and which measures would need to be removed, adjusted or added based on their operational experience. Regional Offices will also collect the feedback from States and share it to Headquarters for consolidation. This work will continue to be performed in close collaboration with all stakeholders. Changes and adjustments will be made to risk mitigation measures on an ongoing basis as the situation evolves, and non-policy related technical and procedural amendments pertaining to the "Take-off" guidance document will be published under the authority of the Secretary General and reported to the Council. Where proposed amendments to the "Take-off" guidance document may require modification of the key principles or recommendations contained in the CART Report, they will be coordinated within the CART before publication under the authority of the Secretary General and reported to the Council.

Conclusion

With the prominent goal to restart aviation operations, achieve a recovery in a prompt and sustainable manner and build a more resilient aviation system, the GIR encompasses, in a non-exhaustive manner, ICAO's priority activities and initiatives with essential means, to support States and industry in their implementation of the CART recommendations and guidance.

These outcome-driven activities will require efforts orchestrated by States, international and regional organizations and industry, through the platforms established by ICAO at global and regional levels, as well fora such as CAPSCA. Continuous two-way communication, exchange of information and reporting of the implementation status will enable ICAO to accurately identify the challenges and needs of States and the industry; and consequentially address them with increased implementation and assistance capacity, for example, through the deployment of more iPACKs and sharing of more best practices. Information and feedback collected from States will also facilitate the future updates to the CART Report and/or the "Take-off" guidance document.

Regional Offices will leverage their close position to the States to, inter alia, update them on all activities, mechanisms and tools, and encourage them to report progress through the online platform and to reach out to ICAO for assistance. Regional Offices will also be able to streamline their regional initiatives with the GIR, ensuring alignment with the CART recommendations and guidance.

Accounting for aviation's instrumental role in the post-crisis recovery and its value and benefits towards the realization of national, regional and global priorities, States' firm engagement and willingness to the implementation of the CART recommendations and guidance is pivotal to navigate aviation through the course of restart and recovery. In this vein, ICAO reaffirms its highest commitment to actively providing support and expanding its activities as required to tackle imminent issues and challenges arising from the evolving pandemic.

Acknowledging the uncertainty surrounding the evolution of the crisis, the GIR will remain flexible in its approach and activities in order to lead its mission to a successful end, which shall always be a safe, secure and sustainable restart and recovery of the industry and more resilient aviation system in the future.

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Appendix

Mapping of CART Recommendations with the content of the Global Implementation Roadmap (GIR)

CART Recommendations	GIR References	
	Chapter	Section
Aviation Safety-Related Measures *(Recommendations 1, 2, 3)*	3	3.3 : Aviation Safety 3.7: Aerodromes 3.8: Air Navigation Services 3.10 : International General Aviation
Aviation Public Health-Related Measures *(Recommendations 4, 5)*	3	3.4: Public health-related measures
Security- and Facilitation – Related Measures *(Recommendations 6, 7, 8, 9)*	3	3.5: Facilitation 3.6: Aviation Security
Economic and Financial Measures *(Recommendation 10)*	3	3.9: Air Transport Economics 3.11: Resource Mobilization
Monitoring and Sharing of Experiences through ICAO *(Recommendation 11)*	4 & 5	4.1 & 4.2: Coordination activities 5.1 & 5.2: Monitoring and Reporting Activities

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