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AGENDA ITEM 8:   CAPACITY DEVELOPMENT AND
                  IMPLEMENTATION SUPPORT

LEVERAGING ICAO'S PORTFOLIO OF CAPACITY DEVELOPMENT AND IMPLEMENTATION SUPPORT PRODUCTS AND SERVICES TO SUPPORT APAC STATES' AVIATION NEEDS

Presented by the International Civil Aviation Organization (ICAO)

SUMMARY

ICAO's central role is to develop Standards and Recommended Practices (SARPs). Just as important, ICAO also provides services to support its Member States in successfully implementing those standards.

The Technical Cooperation Bureau's (TCB) transformation into the Capacity Development and Implementation (CDI) Bureau highlights more completely its mandate, as well as its mission to support States in achieving their safety, efficiency, security, and sustainability goals.

This Discussion Paper highlights the diversified portfolio and capacity development and implementation support products and services provided by ICAO to support States in the APAC Region.

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IMPLEMENTATION SUPPORT PRODUCTS AND SERVICES TO SUPPORT APAC
STATES'AVIATION NEEDS**

1. INTRODUCTION

1.1 The need for more effective and globally coordinated implementation support is crucial. The pace of innovation places significant demands on States to modernize their infrastructure and regulatory frameworks. Unfortunately, the pace of change presents challenges that many States are ill equipped to address.

1.2 ICAO's audit data highlights that States, including those in the APAC Region, continue to face significant challenges implementing ICAO Standards, particularly in areas such as Aerodromes and Ground Aids and Air Navigation Services. These are among the most important foundational elements of a safe and efficient air transportation system, and when they're improved, they deliver benefits that extend beyond national borders.

1.3 Deficiencies in these fields, as well as in other fields, undermine the advancement of important global goals, including the full integration of remotely piloted aircraft, the development of advanced urban air mobility, or the reintroduction of supersonic air transports.

1.4 When these capacity gaps are considered, alongside the significant interdependency of the global aviation system, it means that all States will be impacted by implementation challenges, and regardless of where they occur.

1.5 ICAO's Capacity Development and Implementation Bureau (CDI) aims to provide crucial support to the aviation community in achieving their aviation objectives, through the transformation and modernization of its portfolio of products and services to meet the needs of the rapidly evolving aviation sector.

2. DISCUSSION

ICAO's Policy on Implementation Support

2.1 A new Policy on "ICAO Implementation Support Provided to States" was approved by the ICAO Council in March 2022 and presented to the 41st session of the ICAO Assembly. It serves to align the management of the Technical Cooperation (TC) and Technical Assistance (TA) programmes, projects, products, and services, as well as strengthen the coordination and management of implementation support activities to better meet the needs of Member States, with a greater focus towards improving performance and results.

2.2 Various programmes, projects, and activities, under all ICAO Strategic Objectives, constitute the Organization's implementation support activities, with the ultimate aim of assisting with the implementation of ICAO Policies, Plans, SARPs, PANS and guidance material by Member States as well as non-State entities.

2.3 The new Policy has introduced a more holistic concept for managing the implementation support provided by the Secretariat, including the clear roles of ICAO's Technical Bureaus and the Regional Offices.

2.4 Furthermore, the Policy's implementation has facilitated the ongoing development of enhanced needs assessments at regional and State levels, streamlined implementation support processes and procedures, strengthened governance mechanisms, improved voluntary funding prioritization, and business intelligence tools, all of which generate efficiencies that can be passed on to Member States.

2.5   Under a collaborative, coordinated and harmonized approach, the progressive implementation of the Policy has allowed for the execution of a series of projects across different ICAO regions focussing on diverse civil aviation areas including, inter alia: assistance for the strengthening of the Civil Aviation System, assistance for Safety Oversight Systems, and capacity building for ATM infrastructure operations.

2.6   In line with ICAO's current transformational activities, an enhanced portfolio of capacity development and implementation support products and services is being made available to Member States in order to achieve their near and long term aviation implementation plans.

ICAO's Enhanced Portfolio of Products and Services

2.7   ICAO's Portfolio of products and services has been diversified to support Member States and other relevant entities and organizations (e.g., regulatory bodies, airport authorities, air navigation service providers, accident and incident investigation offices, development partners, international and regional organizations) to undertake civil aviation projects and strengthen their institutional capacities in full compliance with ICAO Standards and Recommended Practices (SARPs).

2.8   Services provided under the umbrella of ICAO's Capacity Development and Implementation Support activities include:

>   2.8.1   **Project Management**, including planning, organizing, securing, and managing resources to achieve specific aviation goals and objectives. Project Management activities range from developing new airport and air navigation infrastructure, to the implementation of new safety or security SARPs.

>   2.8.2   **Provision of Subject Matter Expertise**, leveraging ICAO's roster of experts comprising over 4,000 highly qualified professionals covering the nineteen Annexes of the Chicago Convention. These experts can be deployed to meet immediate or longer-term needs of Member States in the most expeditious manner.

>   2.8.3   **Training**, through the deployment of ICAO's training portfolio comprising over 350 competency-based training courses across 10 specialized aviation training areas, including Aerodromes, Air Navigation Services, Air Transport, Aviation Law, Aviation Management, Environment, Flight Safety and Safety Management, Facilitation, Security, and Training Competency Development.

>   2.8.4   **Procurement**, through the provision of full turnkey solutions to procure software or hardware required, on behalf of Member States. These include the procurement of radio navigation facilities, aircraft, simulators, radars as well as experts to produce studies and plans.

2.9   The appendix to this Discussion Paper provides examples of ICAO products and services associated with areas of the Universal Safety Oversight Audit Programme (USOAP) that may of interest to APAC States.

New ICAO Implementation Support Products

2.10   In order to align emerging State implementation needs, new products and services are continuously being developed and socialized to Member States.

New Training Packages

2.11   ICAO training courses are developed to support the implementation of ICAO SARPs and guidance material. In 2022, a total of 35 courses were developed or updated by ICAO, while an additional 24 new courses have been developed in 2023 (as of September 2023). These courses are

delivered in a face-to-face, online or virtual formats, and aligned to the launch of new ICAO provisions. Newly developed training packages relate to Aviation Resilience, Risk Management Fundamentals, State Safety Programme, Monitoring Implementation of the National Aviation Safety Plan, Overview of Aerodrome Operational Environment and Airport Pavement Strength Rating. More information in ICAO's portfolio of training packages can be found here: www.icao.int/training

New Implementation Packages (iPacks)

2.12　　　　The Implementation Packages (iPacks) initiative continues to grow with the development of new titles. The iPacks consolidated the relevant training(s), a dedicated subject matter expert as well as the corresponding guidance material and tools. As of Q2 2023, six new iPacks have been developed on subject matter related to National Aviation Safety Planning (NASP) Performance, State Safety Programme (SSP), and Aerodrome Certification. A total of 16 iPacks titles are now available, while 27 iPacks are being deployed. Additionally, 22 iPacks have been deployed in the APAC region, benefitting 17 Member States. More information can be found here: www.icao.int/iPack

New Implementation Support Progamme (ISP)

2.13　　　　The ISP is a new product, which is a multi-phased, longer-term, thematic implementation support programme aimed at providing a complete array of activities for the implementation of relevant ICAO provisions. The first ISP is projected to be completed by Q4 of 2023 regarding the topic of building safety oversight capacity. Additional ISP titles are expected to be developed annually during the upcoming triennium, which will further support ICAO's diversification efforts.

Civil Aviation Master Plans (CAMPs)

2.14　　　　ICAO is currently supporting several States in the development or update of their CAMPs The primary objective of this support is to establish a long-term, strategic framework for comprehensive and sustainable development of a State's civil aviation system in a manner that is in alignment with the State's broader economic and social development objectives, as well as the United Nations' 2030 Sustainable Development Goals (SDGs). It also aims to create enhanced funding opportunities for the implementation of these plans.

2.15　　　　Specifically, the CAMP support entails the development of a detailed roadmap for the growth and future development of various aspects of civil aviation, including airports, airlines, airspace management, manufacturing, air navigation services (ANS) provision, human resources, and oversight responsibilities related to safety, security, and economic regulation, all in accordance with ICAO's global and regional plans.

Data Product

2.16　　　　To support States in accessing up to date transport data, the ICAO Civil Aviation Data Solutions (CADS) portal is continuously upgraded with new sets of statistics such as passenger traffic per city pair, annual traffic statistics and State traffic ranking. The portal is continuously updated with the aviation industry's needs in mind, integrating the entirety of data, business intelligence products, and a selection of curated ICAO reports and documents.

Implementation Support Projects in APAC

2.17　　　　As of September 2023, a total of nineteen projects are active in the APAC region, related to:

- Implementation support in Airport Traffic Forecasting at Airports
- Assistance for detailed aeronautical studies in airports
- Civil Aviation Purchasing Services

- Review of technical specifications and contract for an advance passenger information system
- Developing Countries Training Programmes (DCTP)
- Air traffic management (ATM) infrastructure
- Procurement of aeronautical information management (AIM) equipment,
- Cooperative Development of Operational Safety and Continuing Airworthiness Programmes (COSCAPs)
- Cooperative Aviation Security Programme (CASP-AP)
- Flight Procedure Programme (FPP)
- Common Regional Virtual Private Network (CRV)
- ICAO Programme for Young Aviation Professionals Programme.

Resource Mobilization

2.18   In order to coordinate all Resource Mobilization (RM) efforts, ICAO has launched a Resource Mobilization Strategy, which lays out the aim of the RM function in ICAO to secure quality resources to supplement the ICAO Business Plan, to support Member States. These resources are expected to be mobilized from a diversified pool of donors and be used for: Unfunded portions of the ICAO Business Plan, Transformational Objective of the ICAO Business Plan and Implementation support activities.

2.19   ICAO has had many successes globally from APAC States' voluntary contributions. In 2023, ICAO has deployed the Civil Aviation Master Planning Course benefitting States throughout Asia Pacific, thanks to the funding provided by the People's Republic of China. Furthermore, 17 APAC States have benefited from Implementation Packages (iPacks). All this has been made possible thanks to the generous contributions of ICAO partners. The ICAO RM Team is continuously undertaking RM-related activities for the support of States in the APAC region. Currently such efforts are centered around support to the Pacific Small Island Developing States as well States requiring training for their Government Safety Inspectors.

Added-Value of Leveraging ICAO's Implementation Support Products and Services

2.20   The values that govern the work of the Bureau are transparency, accountability, quality, efficiency, partnership and respect for diversity. The added-value of ICAO's services can be summarised as follows:

- Ensuring strict neutrality, technical objectivity and full transparency, devoid of any commercial or national interest;
- Implementation with the highest level of technical expertise, in full compliance with ICAO SARPs;
- Aligned with the overall mandate and strategy of the Organization, including global plans and regional air navigation plans, and provides specific advice on compliance pertaining to ICAO Standards and Recommended Practices (SARPs), while respecting the national priorities of States; and
- Provision of flexibility in project and fund structure, offering States unique solutions to help address their priorities and issues.

3.   ACTION BY THE CONFERENCE

3.1   The Conference is invited to:

   a) Recognize the enhanced portfolio of ICAO's Capacity Development and Implementation Support Products and Services;

   b) Leverage from the Portoflio in order to address immediate and longer term implementation support needs of APAC Member States;

c)   Contact the ICAO Capacity Development and Implementation Bureau to explore how their State's needs can be addressed through CDI's support.

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Appendix
Examples of ICAO Products and Services, per audit area related to the
Universal Safety Oversight Audit Programme (USOAP)

Audit Area	Common Areas of Deficiency (USOAP scores for the APAC Region)	Alignment with ICAO Products (Sample of Available Implementation Packages and Courses)
Primary Aviation Legislation and Civil Aviation Regulations (LEG)	Critical Elements (CE) 1[1], 2[2], and 5[3]	1. State Safety Program Implementation Package (iPack) 2. National Aviation Safety Program (development) iPack 3. National Aviation Safety Program (implementation) iPack 4. USOAP CMA Phase 2 - Aviation Legislation and Civil Aviation Organization
Civil Aviation Organization (ORG)	Critical Elements 3[4], 4[5], and 5	1. Managing Compliance with ICAO SARPs 2. National Aviation Safety Program (development) iPack 3. National Aviation Safety Program (implementation) iPack 4. Training Needs Assessment iPack 5. Competency Based Training iPack 6. Managing Aviation Training Intelligence 7. Validating Competency-based Training 8. Training Needs Analysis Fundamentals 9. Training Managers Course 10. Virtual Classroom Instruction
Personnel Licensing and Training (PEL)	Critical Elements 2-8[6]	1. Competency and Licensing of UAS Remote Pilots 2. USOAP CMA Phase 2 - Personnel Licensing and Training 3. ICAO Government Safety Inspector – Personnel Licensing 4. Oversight of Competency-based Training 5. Personnel Licensing System 6. ICAO English Language Proficiency Interlocutor/Rater Initial Training
Aircraft Operations (OPS)	Critical Elements 1-8	1. Cargo Safety Program iPack 2. Oversight of Aircraft Leasing Operations 3. ICAO Government Safety Inspector Operations – Air Cargo Certification 4. ICAO Government Safety Inspector Operations – Air Operator Certification 5. Air Cargo Safety Management 6. USOAP CMA Phase 2 - Aircraft Operations including Dangerous Goods
Airworthiness of Aircraft (AIR)	Critical Elements 2-8	1. ICAO Government Safety Inspector Airworthiness – Air Operator and Approved Maintenance Organization Certification 2. Aviation English for Aircraft Maintenance Technicians 3. Safety Management for Approved Maintenance Organizations under ICAO/EASA Rules 4. USOAP CMA Phase 2 - Airworthiness of Aircraft
Aircraft Accident and Incident	Critical Elements 1-5, and 8	1. Accident/Incident Data Reporting iPack 2. Emergency Response Tabletop Exercises Management 3. Aeronautical search and Rescue Operations

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1 CE-1: Primary Aviation Legislation

2 CE-2: Specific Operating Regulations

3 CE-5: Technical guidance, tools, and provision of safety critical information

4 CE-3: State system and functions

5 CE-4: Qualified technical personnel

6 CE-6: Licensing, certification, authorization, and approval obligations
        CE-7: Surveillance obligations
        CE-8: Resolution of safety issues

Audit Area	Common Areas of Deficiency (USOAP scores for the APAC Region)	Alignment with ICAO Products (Sample of Available Implementation Packages and Courses)
Investigation (AIG)		4. Search Area Calculation for SAR Operation 5. ATM Incident Investigation Techniques 6. Safety Information Protection 7. USOAP CMA Phase 2 - Aircraft Accident and Incident Investigation 8. Safety Occurrence Reporting for Practitioners 9. Service Provider Safety Investigation - Operational Incidents 10. Safety Management System Assessment and Monitoring
Air Navigation Services (ANS)	Critical Elements 1-8	1. UAS Regulatory Framework iPack 2. NOTAM Improvement iPack 3. Aeronautical Information Quality Management 4. Performance-Based Navigation Airspace Design 5. Performance-Based Navigation Operations Approval 6. Air Navigation Services AIS Inspector 7. Air Navigation Services ATM Inspector 8. Aircraft Emergencies for Aerodrome Controller Refresher Course 9. ATC Competency Assessment 10. Handling Emergencies and Unexpected Events in Terminal and En-Route Airspace
Aerodromes and Ground Aids (AGA)	Critical Elements 1-8	1. ACI-ICAO Aerodrome Certification iPack 2. Overview of Aerodrome Operational Management 3. ACI - ICAO Global Reporting Format for Airport Operators 4. ACI - ICAO Implementing Annex 14: Advanced Aerodrome Design and Operations 5. Airport Wildlife Management 6. Aerodrome Emergency Handling 7. Aerodrome Inspection 8. Aviation Risk Management and Business Continuity Management System 9. Airfield Pavement Markings 10. Human Factors for Airport Operators

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