



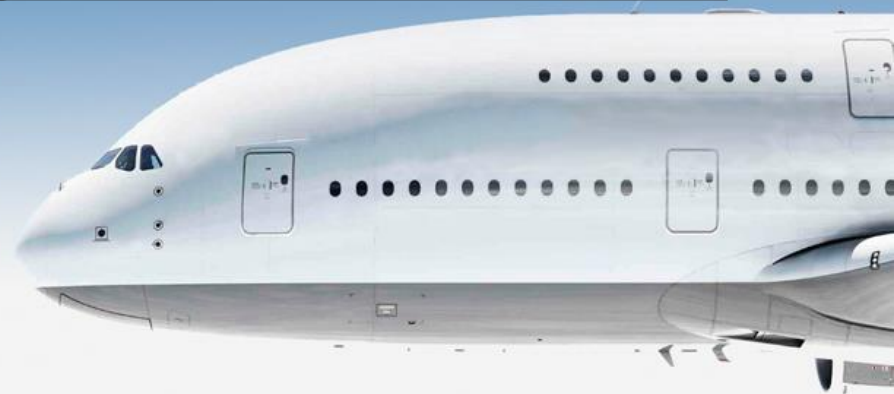
Agenda Item 9a: Beijing Declaration – Follow up and way forward

Status of APAC States vis-à-vis Beijing Declaration Commitments

Breakout workshop

Raphael Guillet

Chief of ICAO Asia and Pacific Regional Sub-Office (APAC RSO)



Kathmandu, Nepal, 21 August 2019



Choose a rapporteur

- ✈ Which State would accept to report the discussion during this breakout workshop to the plenary session ?
- ✈ A first draft ppt is proposed here



Timing

11.35 : Aviation Safety

- a) USOAP Effective Implementation (EI) **Michiel**
- c) Significant Safety Concerns (SSCs)
- b) State Safety Programme (SSP) **Wayne**
- d) Certification of international aerodromes **Punya**

12.25 : Accident Investigation **Nicolas**

- a) Independent accident investigation authority

12.35 : Air Navigation Services **Raphael**

- a) Aeronautical Information Management (AIM)
- b) Performance Based Navigation (PBN)
- c) Ground telecommunication infrastructure
- d) Civil Military cooperation
- e) Surveillance capability
- f) Air Traffic Flow Management (ATFM) / Collaborative Decision Making (CDM)
- g) National Air Navigation Plan

13.25 : Review of the ppt for the plenary session

13.30 : Closure



Aviation Safety

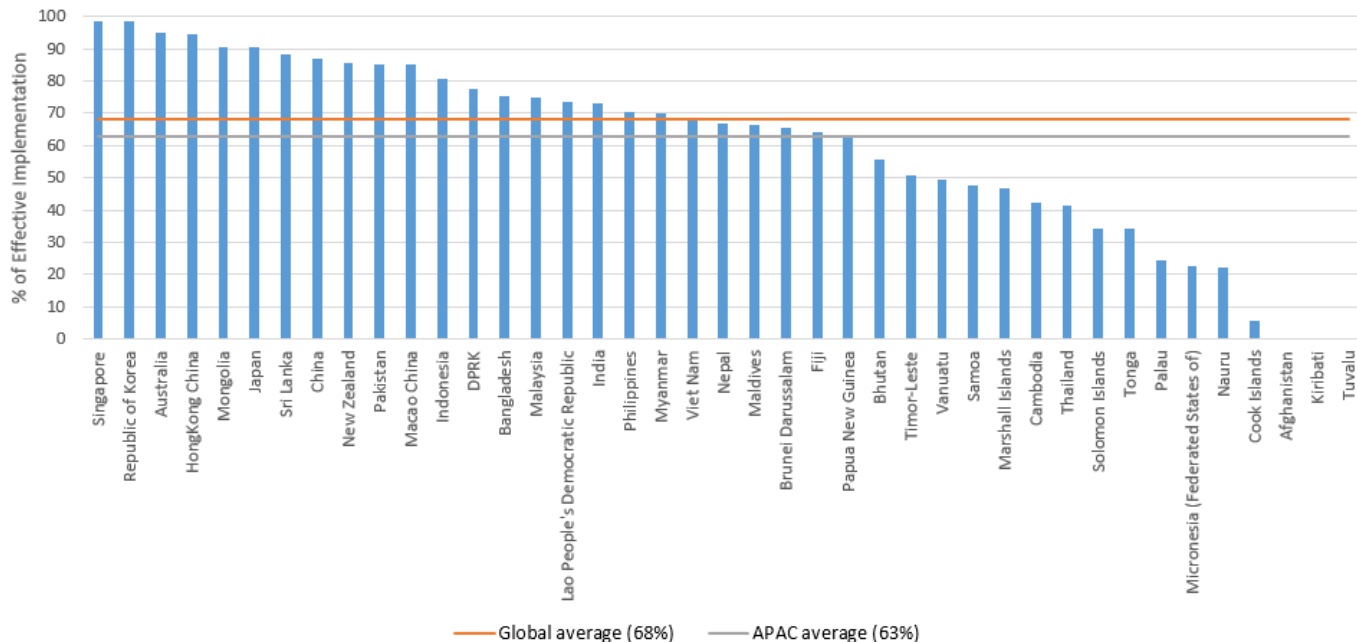
a) USOAP Effective Implementation (EI)



USOAP EI \geq global average
by 2022



iSTARS (USOAP Data
Tables Implementation
Indicators)





Aviation Safety

a) USOAP Effective Implementation (EI)

✈ Progress since January 2018 :

✈ EI Global average :
from 65% to 68%

✈ EI APAC average :
from 60% to 63%

| State / EI % | Jan 2018 | Jun 2019 | USOAP conducted |
|------------------|----------|----------|-----------------|
| Bhutan | 39.1 | 55.6 | Aug 2018 |
| Cambodia | 37.6 | 42.4 | Dec 2018 |
| India | 65.7 | 72.9 | Nov 2018 |
| Myanmar | 65.9 | 70.0 | Dec 2018 |
| Papua New Guinea | 51.1 | 63.3 | Mar & Aug 2018 |
| Sri Lanka | 87.4 | 88.4 | Jun 2018 |

Note : Thailand : ICVM completed in May 2019. Report not published.



Aviation Safety

c) Significant Safety Concerns (SSCs)



Endeavour not to have any Significant Safety Concerns (SSCs) under the USOAP Continuous Monitoring Approach (CMA), and to resolve any future SSCs within the time frame agreed with ICAO

Only one State has a SSC

No SSC in Jan 2018



Aviation Safety

a) USOAP Effective Implementation (EI)

- ✈ Main challenges for States which have negligible progress:
 - ✈ Aviation safety/compliance is not visible to & prioritised by Gov't
 - ✈ Unawareness accident risk exposure & potential consequences
 - ✈ Legislation and regulations out-of-date & inadequate
 - ✈ Institutional instability & insufficient continuity – DG changes
 - ✈ Potential SSC & economic/reputational impact
 - ✈ Not using RSOOs or delegating safety oversight functions
 - ✈ Not engaged with & making use of ICAO RO



Aviation Safety

a) USOAP Effective Implementation (EI)

- ✈ Main challenges for States which have minimal progress :
 - ✈ Financial and human resource shortcomings
 - ✈ Ineffective organisation and HR strategy
 - ✈ No separation between regulator and service provider
 - ✈ No legal provisions for enforcement
 - ✈ Potential SSC & economic/reputational impact
 - ✈ Not engaged with & making use of ICAO USOAP



Aviation Safety

a) USOAP Effective Implementation (EI)

- ✈ Main challenges for States which have made significant progress:
 - ✈ Continued safety oversight system improvement
 - ✈ Growth, changes and complexity of industry
 - ✈ Frequent changes and complexity of international standards
 - ✈ Insufficient financial and human resources
 - ✈ Inadequate training programmes and plans
 - ✈ SSP implementation
 - ✈ Infrequent USOAP validation activities



Aviation Safety

a) USOAP Effective Implementation (EI)

- ✈ Main challenges for States with high EI:
 - ✈ Complacency
 - ✈ Sustainability
 - ✈ Safety culture
 - ✈ Risk based surveillance
 - ✈ Infrequent USOAP validation activities



Aviation Safety

a) USOAP Effective Implementation (EI)

✈ Recommendations :

- ✈ Avoid SSC, IASA Cat 2, EU Safety List
- ✈ Avoid fatal accident
- ✈ Avoid withdrawal of air services
- ✈ NASP & SSP – involve Ministry in development & approval
- ✈ Regional collaboration in implementation
- ✈ APAC RO, COSCAPs, RSOOs & GASOS
- ✈ USOAP IVAs



Aviation Safety

a) USOAP Effective Implementation (EI)

✈ Recommendations :

- ✈ SSP implementation (Thailand)
- ✈ regional & sub-regional cooperation by sharing resources (Nepal)
- ✈ ICAO APAC CAT missions, Tech. Assist. and COSCAPs (Bangladesh)
- ✈ ICAO USOAP enhancement - proportionate and risk-based (New Zealand)
- ✈ Beijing Declaration commitments (Montreal Group)
- ✈



Aviation Safety

b) State Safety Programme (SSP)

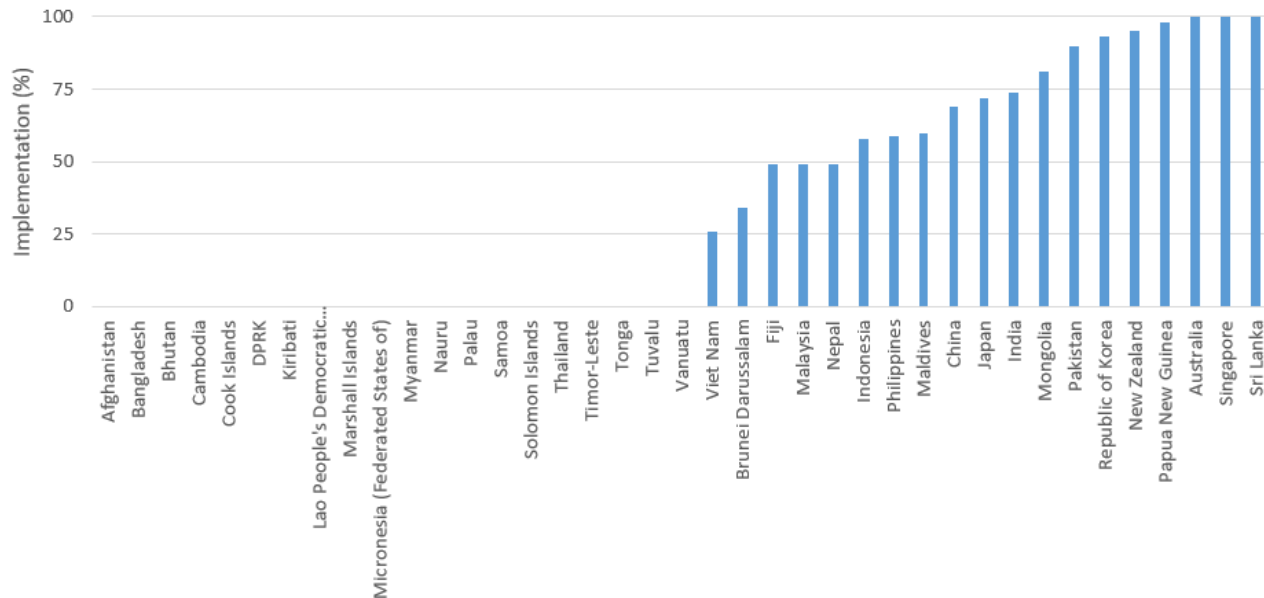


Implement an effective
SSP by 2025



iSTARS (SSP Gap Analysis
- SMM 4th Ed.)

APAC States having implemented SSP





Aviation Safety

b) State Safety Programme (SSP)

✈ Main challenges : DP8

- ✈ Putting in place appropriate legislation and supporting mechanisms for the protection of safety data and safety information
- ✈ Identifying appropriate safety performance indicators and targets
- ✈ Addressing “commensurate with size and complexity” (scalability)
- ✈ Properly managing interfaces between SSP and SMS, and between the SMS of service providers and between the SMS of service providers and other third party organizations
- ✈ Identifying and addressing the safety management competencies needed across the organization



Aviation Safety

b) State Safety Programme (SSP)

✈ Main challenges :

- ✈ SSP requires coordination among multiple authorities responsible for the aviation functions of the State. Commitment by States Senior management
- ✈ Some safety management activities require new competencies: conducting safety risk assessments, performing safety data analysis, evaluating SPIs ... technical training
- ✈ Limited resources to start and implement project. Establishing a suitable coordination group.



Aviation Safety

b) State Safety Programme (SSP)

✈ Main challenges :

- ✈ Enforcement policy that supports and encourages a positive safety culture. Applicable Service Providers to implement SMS
- ✈ Relationship between a State and its Service Providers needs to evolve beyond just compliance and enforcement
- ✈ Independent Accident Investigation group



Aviation Safety

b) State Safety Programme (SSP)

Recommendations : DP8

ICAO Regional office may promote more CAT missions for the post audit and post ICVM activities to improve State's safety oversight capability in the below mentioned two phases:

- Developing regulations, manuals, checklists and other guidance material;
- Developing corrective action plans (CAPs) to address USOAP Findings;
- Developing of SSP and National Aviation Safety Plans(NASP) in line with the GASP and GANP;
- Drawing up of a pool of inspectors or experts.



Aviation Safety

b) State Safety Programme (SSP)



Recommendations : DP8

- Providing training to inspectors;
- Performing certification and surveillance tasks such as inspections, audits, or reviews, aeronautical studies, safety risk assessment, when so delegated and permitted by the State's national Regulations.



Aviation Safety

b) State Safety Programme (SSP)

✈ Recommendations :

- ✈ Smaller States. Delegate some specific functions or tasks to another State, RSOO, or competent organization
- ✈ Establish appropriate technical and administrative processes to ensure delegated functions are carried out... SSP implementation group within the CAA.
- ✈ Ensure an effective Legislative framework with supporting specific operating regulations. RO assistance. Model SSPs. SMI website.



Aviation Safety

b) State Safety Programme (SSP)

✈ Recommendations :

- ✈ Use all available tools. iStars apps ... State Safety Foundation, Gap analysis tools. SMS Manual interactive SMI resources.
- ✈ Request targeted ICAO CAT (combined action teams) from RO BKK. Technical assistance including COSCAPs.
- ✈ COSCAP capacity building matrix (SA developed)



Aviation Safety

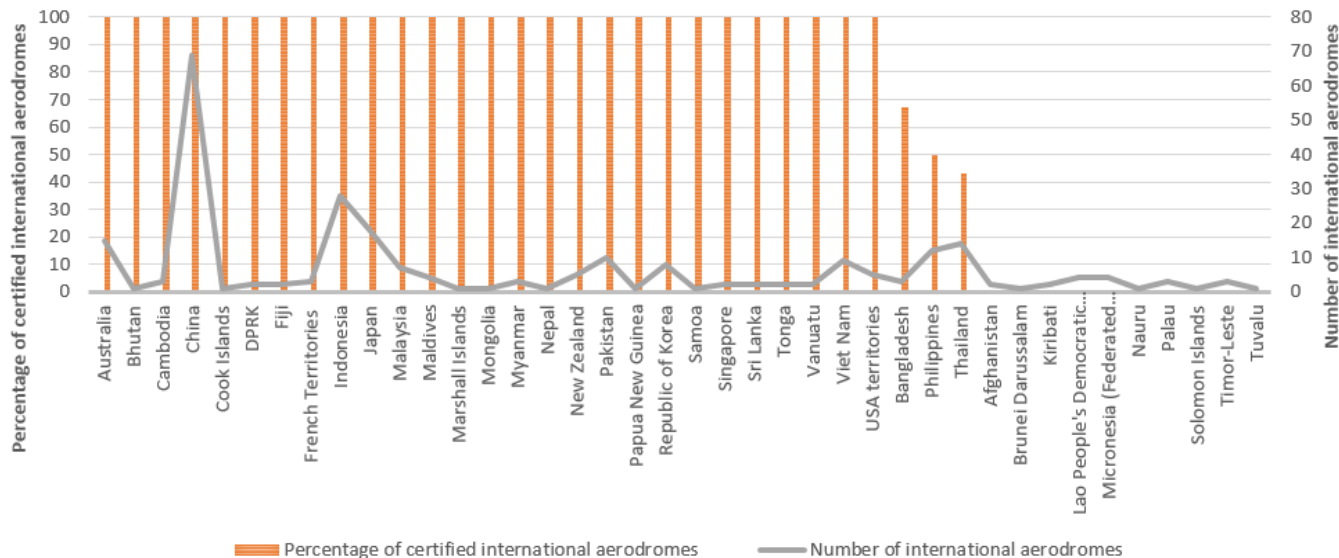
d) Certification of international aerodromes



Certify all aerodromes used for international operations by 2020



Aerodromes Operations and Planning Sub-Group (AOP/SG/3)



In January 2018, 83 % of aerodromes used for international operations were certified. Today it is 85%.



ICAO BEIJING RSO UNITING AVIATION

NO COUNTRY
LEFT BEHIND



Outcomes of Break-out Session on Beijing Declaration Commitment on Aerodrome Certification at 55th DGCA Conference

Nadi, Fiji, 24 October 2018



Commitment on Aerodrome Certification

Establishment of an Aerodrome Certification Plan including:

- 1) Regulatory Framework
- 2) Qualified Technical Personnel
- 3) Certification of aerodromes with exemptions



Issue 1 – Regulatory Framework

Recommendation:

State
(Ministry/CAA)

Promulgate effective Legislation and Regulations
Ensure Procedures, Guidance Material and tools (inc. checklists, manuals) in place
Consultation with Industry

Aerodrome Operator

Familiarity with Requirements and engagement with the Regulator
Preparation of documentation
Implementation of SMS

ICAO/COSCAPs/PASO/
IOs/Other Agencies

Monitor implementation (CMA and Missions)
Provide assistance



Issue 2 – Qualified Technical Personnel

Recommendation:

| | |
|--|--|
| State (Ministry/CAA) | Provision of high level commitment and sufficient budget Effective recruitment, training, qualification and retention programmes Request support from external organisations |
| Aerodrome Operator | Provision of sufficient budget Effective recruitment, training, qualification and retention programmes Request support from external organisations |
| ICAO/COSCAPs/PASO/IOs/ Other Agencies | Provision of training, technical assistance, and experts (in support of staff development or to support operational activities as delegated) |



Issue 3 – Certification of aerodromes with exemptions

Recommendation:

State
(Ministry/CAA)

Review, accept and enforce safety assessment mitigation measures for non-compliances (e.g. elimination of deficiency, operational restrictions, introduction of new procedures, training, etc.)
Promulgate and implement runway safety programmes

Aerodrome Operator

Implement effective SMS and runway safety teams
Conduct safety assessments for non-compliances
Maintain compliance

ICAO/COSCAPs/
PASO/IOs/ Other
Agencies

Provide assistance with the implementation of the mitigation measures
Provide training and support



Action Item 42 of the 55th DGCA Conference

Recognising the Ministers' commitment to certify all aerodromes used for international operations by 2020 through the *Beijing Declaration*, the Conference urged:

- a) Aerodrome operators to ***prepare, apply for and maintain the certification*** for all aerodromes used for international operations;
- b) States to ***establish an Aerodrome Certification Plan***, in accordance with their national regulations, incorporating the identification of gaps and implementation of solutions to overcome those gaps, including the safety risk assessment and development of mitigation measures in areas of non-compliance, and allocate the necessary resources to implement the plan to meet the 2020 target;
- c) States, if and when required, ***to request ICAO (Regional Office, COSCAPs, TCB and GAT) and PASO*** support for the implementation of the aerodrome certification plan of their respective States including training and technical assistance in aerodrome certification; and
- d) International Organizations, Champion/Volunteer States, Industry and other Aviation Agencies ***to support States and aerodrome operators in the implementation of the Aerodrome Certification Plans.***



Aviation Safety

d) Certification of international aerodromes

- ✈ Main challenges :
 - ✈ States' efforts – CAA and Airports
 - ✈ Aerodrome regulatory framework
 - ✈ Qualified aerodrome regulatory technical personnel
 - ✈ Joint use aerodromes
 - ✈ Certification with exemptions
 - ✈ Resolutions of major findings



Aviation Safety

d) Certification of international aerodromes

Recommendation:

-  States that have yet to certify aerodromes used for international operations to implement the Action 42 of the 55th DGCA Conference;



Accident Investigation

a) Independent accident investigation authority



In accordance with the Chicago Convention, commit to **establish an accident investigation authority** that is **independent** from State aviation authorities and other entities that could interfere with the conduct or objectivity of an investigation or where appropriate develop a bilateral, sub-regional or regional partnership to support the establishment of accident investigation capabilities to serve the region or sub-region

- ✈ PQ 6.005 (CE-1): Does the primary legislation provide for the independence of the investigation process and of the authority in charge of conducting aircraft accident and serious incident investigations?
- ✈ PQ 6.101 (CE-3): Has the State established an investigation authority with a clear and documented structure and in a manner that ensures independence from State aviation authorities and other entities that could interfere with the conduct or objectivity of an investigation?

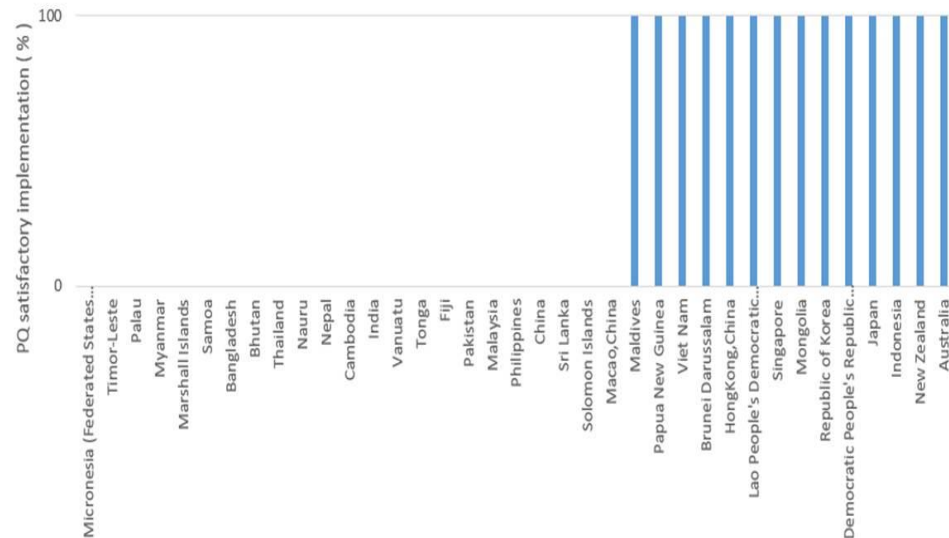




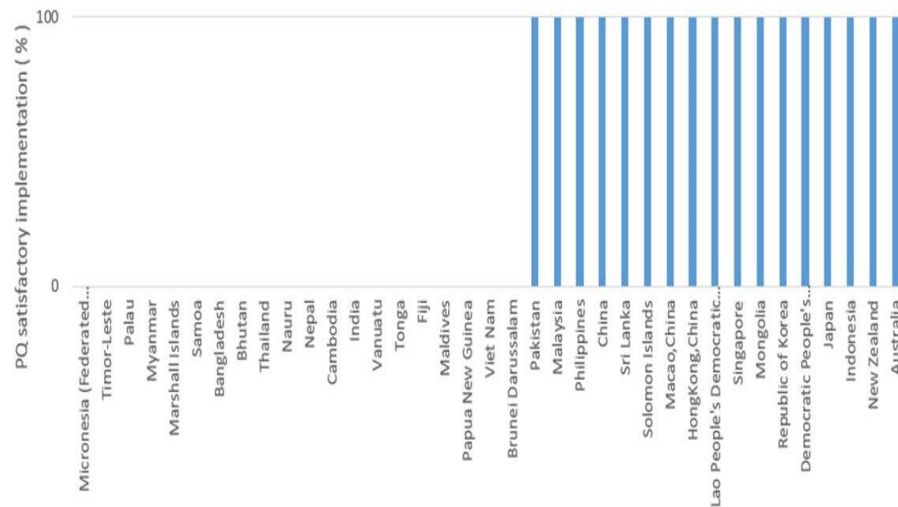
Accident Investigation

a) Independent accident investigation authority

PQ 6.005 (CE 1: primary legislation to provide for the independence)



PQ 6.101 (CE-3 : clear and documented structure that ensures independence)





Accident Investigation

a) Independent accident investigation authority

✈ Main challenges :

- ✈ Understanding the need to have a separate and independent AIG.
- ✈ Training of investigators, especially in participation of actual accident investigation.
- ✈ Providing adequate resources for an AIA considering the extreme and unpredictable operating environment.



Accident Investigation

a) Independent accident investigation authority

✈ Recommendations :

- ✈ Consider collaboration between States or establishing a RAIO.
- ✈ Enhancing communications between AIAs to improve familiarity, collaboration and assistance amongst AIAs.
- ✈ Establish a resource database of resources and equipment for possible sharing amongst AIAs.



Air Navigation Services

a) Aeronautical Information Management (AIM)



Transitioning from
AIS to AIM
by 2022
(Phase I and II)



AIS-AIM Implementation
Task Force
(AAITF/13 & 14)

- ✈ Phase I (Consolidation existing SARPS)
 - immediate implementation
 - current status = 73 % (last year 71%)
- ✈ Phase II (Going Digital)
 - target November 2019
 - current status = 40 % (last year 35%)

Then Phase III (including SWIM, November 2025)



Air Navigation Services

a) Aeronautical Information Management (AIM)

✈ Main challenges :

- ✈ Poor understanding of the criticality of AIS to Air Navigation
- ✈ Lack of understanding of the need for transition to the digital world (AIM)
- ✈ Lack of organizational understanding/policy
- ✈ They (regulator/ANSP/management) don't listen to AIS
- ✈ No law says airport operator – data originator have to comply



Air Navigation Services

a) Aeronautical Information Management (AIM)

✈ Recommendations :

- ✈ Develop Legislation and Regulation to cover ALL originators of aeronautical data and their interaction with the AIS
- ✈ Funding to AIM is essential
- ✈ Better education of senior management on the importance of AIS to AIM
- ✈ Create a framework for AIM-Go-Teams



Air Navigation Services

b) Performance Based Navigation (PBN)

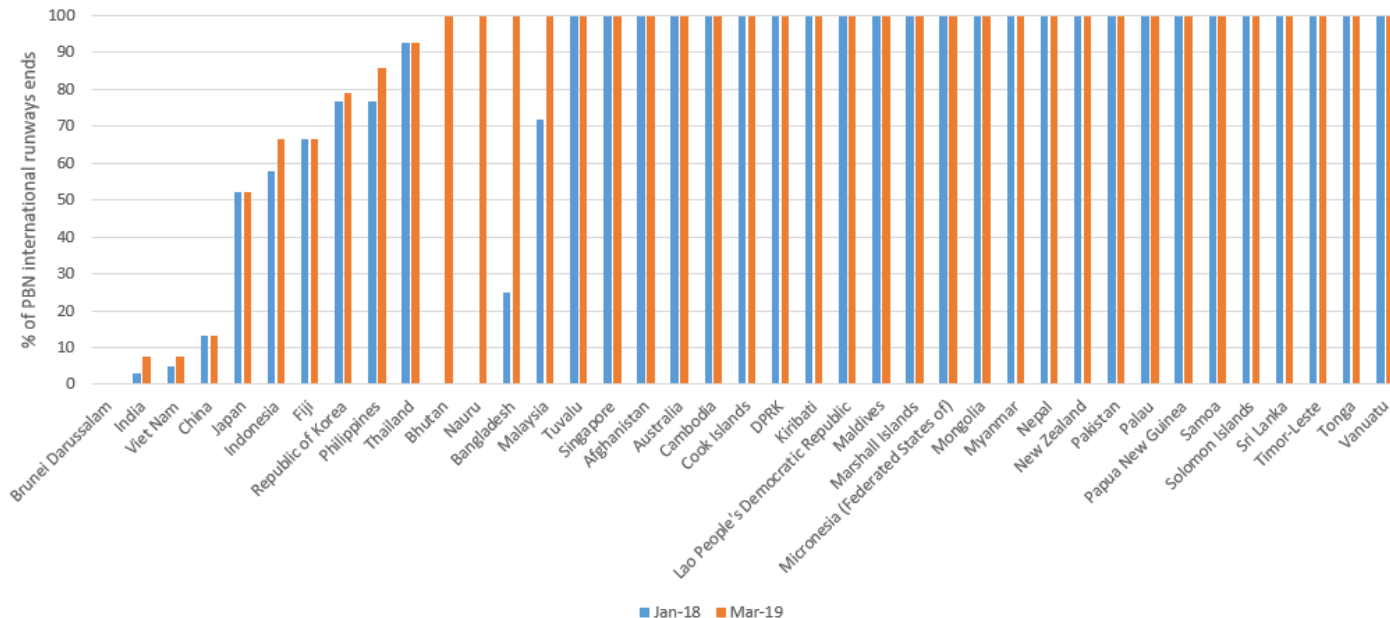


PBN implementation
by 2022



% PBN intl runway ends
iSTARS and Jeppesen
(March 2019)

PBN implementation at international aerodromes





Air Navigation Services

b) Performance Based Navigation (PBN)





- ✈ ICAO is focusing on Intl a/p but PBN can bring benefits to all a/p
- ✈ Main challenges (PBNICG6):
 - ✈ Validation of instrument flight procedure, Flight validation, Charting, Obstacle survey
 - ✈ Operational approval, Safety assessment, PBN training for ATC especially on the mix of traffic



Air Navigation Services

b) Performance Based Navigation (PBN)

ICAO Recommendations :

-  Appoint a national coordinator
-  Update national regulatory material
-  Local meeting with all stakeholders
-  High quality aeronautical information is CRITICAL



Air Navigation Services

c) Ground telecommunication infrastructure



Common ground/ground telecommunication infrastructure to support ANS applications by 2022



CNS Meeting updates received

- 12 cities in 7 States/Administrations have implemented operations of the Common aeronautical VPN private network (CRV): Australia, Fiji, Hong Kong China, Japan, New Zealand, Philippines and USA;
- Singapore is currently conducting installation;
- Republic of Korea signed service contract on 19 Aug.19;
- Additional 5 States (Bhutan, China, PBN, Thailand and India) have plan to join CRV in 2019;
- Another 3 States/Administration (France-New Caledonia and Polynesia, Indonesia and Malaysia) have plan to join CRV in 2020.



Air Navigation Services

c) Ground telecommunication infrastructure

✈ Main challenges :



- ✈ It would be costly to keep both CRV and legacy circuits operational during the transition period. Some Administrations joined earlier are required to keep the traditional circuits with those partners who join CRV later;
- ✈ Cost of benefit would be minimum for those States/Administrations with low traffic and least developed telecommunication Infrastructure.



Air Navigation Services

c) Ground telecommunication infrastructure

Recommendations :

-  The transition period to CRV from 2018 to 2020 should be harmonized as much as possible between stakeholders in order to achieve the benefits of CRV implementation; States/Administrations are urged to join CRV per Action Item 54/20 resulted from DGCA Conf/54;
-  work out practical solutions with the service provider and to achieve harmonized implementation with counterparts as much as possible.



Air Navigation Services

d) Civil Military cooperation



An enhanced level of
civil/military cooperation
by 2020



Seamless ATM reporting



Given that lack of civil/military cooperation is a significant factor in the Asia/Pacific's relatively poor ATM efficiency compared to more developed areas of the world, the regional progress is well behind expectation for these elements.



Air Navigation Services

d) Civil Military cooperation

✈ Main challenges :

- ✈ Diversified levels and needs in APAC Region
- ✈ Lack of effective and efficient national mechanism
- ✈ Military involvement is low
- ✈ Absence of mechanism for regular meeting
- ✈ Low degree of common training and procedures

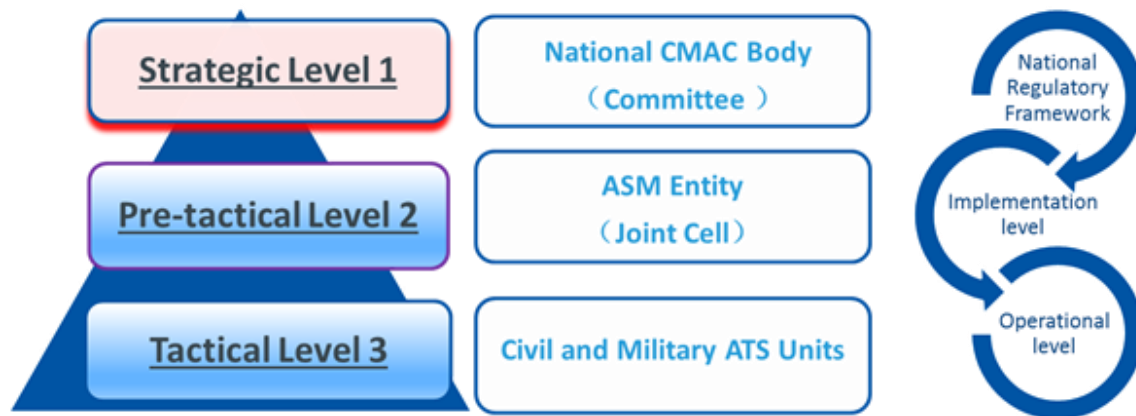


Air Navigation Services

d) Civil Military cooperation

Recommendations :

- ✈ Strong political will to promote civil/military cooperation



Note-1: Please refer to ICAO Cir330-Civil and Military Cooperation in ATM, which will be upgraded to new ICAO Doc10088 later



Air Navigation Services

e) Surveillance capability



Enhanced surveillance capability including ADS-B technology by 2022



iSTARS / Seamless ATM reporting

26 States/Administrations installed ADS-B ground stations and

10 States issued ADS-B mandate

4 States used ADS-B for separation and others for awareness, gap filling and redundancy.



Air Navigation Services

e) Surveillance capability

- ✈ Main challenges :
 - ✈ Integration of ADS-B data into the ATM automation system for air traffic controllers and technical and operational training;
 - ✈ Conducting Safety case if it is used for separation even guidance is given;
 - ✈ Need to monitoring the performance of ADS-B avionics and sharing findings with solutions.



Air Navigation Services

e) Surveillance capability

✈ Recommendations :

- ✈ To mandate the equipage in the airspace in following up the APANPIRG's conclusions to achieve benefits;
- ✈ To participate in the SURICG and CNS SG meetings/activities and share the information on the experience gained and lesson learned on the implementation of ADS-B in the APAC Region.



Air Navigation Services

f)

Air Traffic Flow Management (ATFM) / Collaborative Decision Making (CDM)



ATFM/CDM
implementation for high
density airports by 2022



Seamless ATM reporting (80),
APAC A-CDM Implementation
Survey and APA-CDM/TF/4
Meeting

Two indicators have been selected:

- Number of international high density airports with Airport-CDM implemented, and
- High density FIRs and FIRs supporting Major Traffic Flows and high density aerodromes with ATFM/CDM implemented

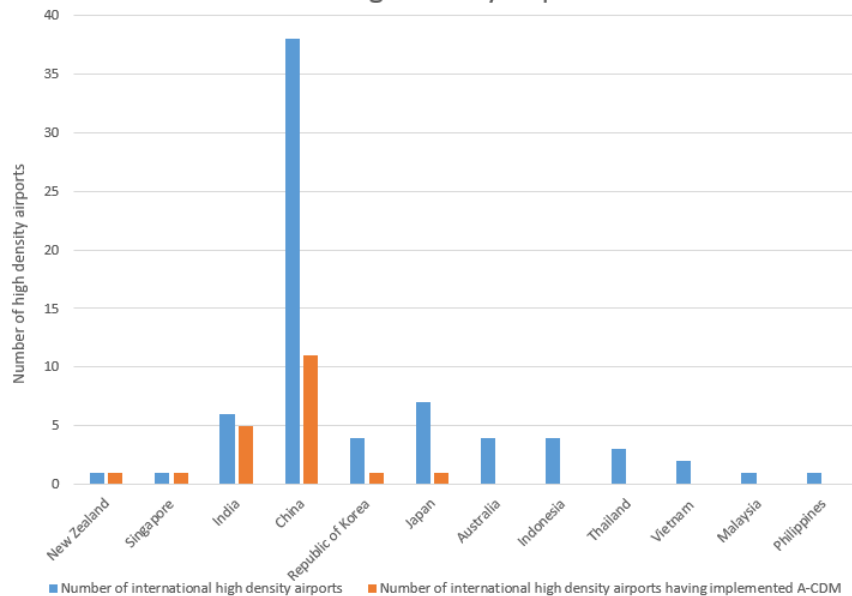


Air Navigation Services

f)

Air Traffic Flow Management (ATFM) / Collaborative Decision Making (CDM)

Status of A-CDM Implementation at
International High Density Airports in APAC



Total number of international high density airports = 72

In Jan 2018, 15 of them had implemented A-CDM. Now, it is 20.

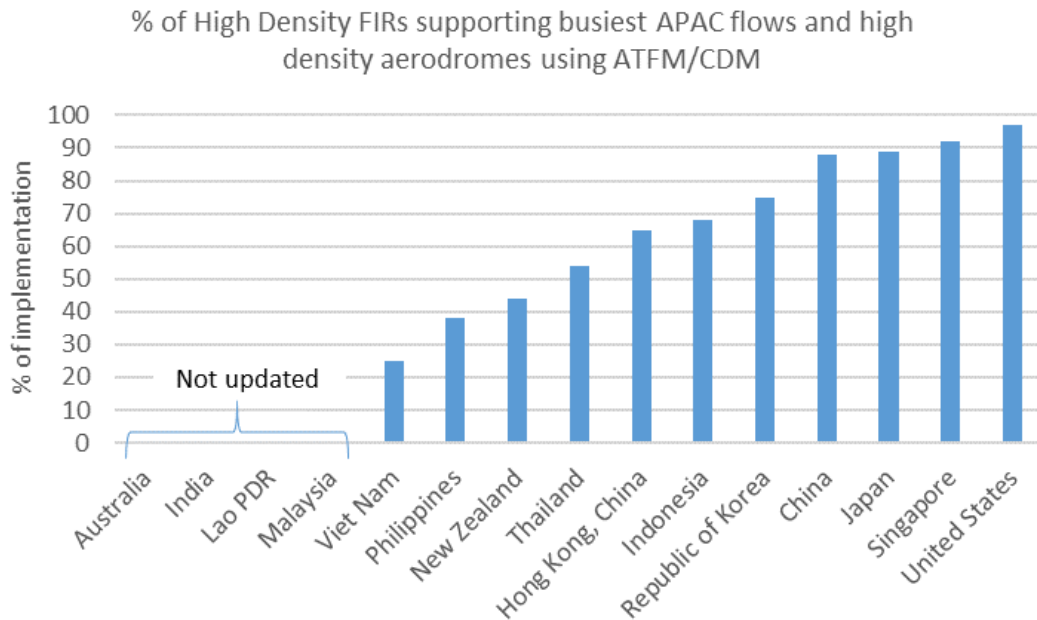
24 have planned to implement A-CDM before end of 2020.



Air Navigation Services

f)

Air Traffic Flow Management (ATFM) / Collaborative Decision Making (CDM)





Air Navigation Services

f)

Air Traffic Flow Management (ATFM) / Collaborative Decision Making (CDM)

✈ Main challenges :

✈ ATFM/CDM

- ✈ Harmonization of sub-regional ATFM initiatives
- ✈ Traditional tactical ATC restrictions
- ✈ Lack of information exchange (e.g. DEP message)
- ✈ Lack of Post Operations Analysis

✈ A-CDM

- ✈ Local constraints and requirements
- ✈ Harmonization of A-CDM process and/or operation



Air Navigation Services

f)

Air Traffic Flow Management (ATFM) / Collaborative Decision Making (CDM)

✈ Recommendations :

✈ ATFM/CDM

- ✈ Increase capacity is fundamental necessity
- ✈ Reform: from traditional tactical ATC restrictions to ATFM
- ✈ Post Operations Analysis is essential for better ATFM

✈ A-CDM

- ✈ Harmonized implementation process and/or procedures
- ✈ Integration with ATFM



Air Navigation Services

g) National Air Navigation Plan



Include air navigation in national planning frameworks such as National Development Plans (NDPs) supported by National Air Navigation Plans by 2022



Survey in 2019

Few States have reported to the Regional Office having developed a National Air Navigation Plan (NANP) :

Indonesia, Lao PDR, Hong Kong (China), Singapore, Thailand, Myanmar, Vietnam and Philippines.



Air Navigation Services

g) National Air Navigation Plan

✈ Recommendations :

✈ Use the template provided at the last ATM/SG



ICAO BEIJING RSO

UNITING AVIATION

NO COUNTRY
LEFT BEHIND



ICAO

North American
Central American
and Caribbean
(NACC) Office
Mexico City

South American
(SAM) Office
Lima

ICAO
Headquarters
Montréal

Western and
Central African
(WACAF) Office
Dakar

European and
North Atlantic
(EUR/NAT) Office
Paris

Middle East
(MID) Office
Cairo

Eastern and
Southern African
(ESAF) Office
Nairobi

Asia and Pacific
(APAC) Sub-office
Beijing

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Bangkok



THANK YOU

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