



ICAO BEIJING RSO UNITING AVIATION

NO COUNTRY
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Relevant ICAO meetings

ICAO APAC RSO

ATFM/IR/SWG

29 August 2018



Year of 2015

- ATFM/SG/5: 30 March – 3 April 2015 (Bangkok, Thailand)
- ATM/SG/3: 3 – 7 August 2015 (Bangkok, Thailand)
- APANPIRG/26: 7 – 10 September 2015 (Bangkok, Thailand)
- DGCA/52: 26 – 30 October 2015 (Manila, Philippines)
 - *Asia/Pacific Regional Framework for Collaborative ATFM*
 - *Regional ATFM Concept of Operations*

Year of 2016

- ATFM/SG/6: 6 – 10 June 2016 (Bangkok, Thailand)
- ATM/SG/4: 4 – 8 July 2016 (Bangkok, Thailand)
- DGCA/53: 1 – 5 August 2016 (Colombo, Sri Lanka)
- APANPIRG/27: 5 – 8 September 2016 (Bangkok, Thailand)



Year of 2017

- ATFM/SG/7: 15 – 19 May 2017 (Fukuoka, Japan)
- ATM/SG/5: 31 July – 4 August 2017 (Bangkok, Thailand)
- DGCA/54: 7 – 11 August 2017 (Ulaanbaatar, Mongolia)
- APANPIRG/28: 11 – 14 September 2017 (Bangkok, Thailand)
- ICAO ATFM Global Symposium: 20 – 22 November 2017 (Singapore, Singapore)

Year of 2018

- The 1st Asia Pacific Ministerial Conference: 31 January – 1 February 2018 (Beijing, China)
- ATFM/SG/8: 14 – 18 May 2018 (New Delhi, India)
- ATM/SG/6: 30 July – 3 August 2018 (Hong Kong, China)
- APA-CDM/TF/3: 13 – 16 August 2018 (Bali, Indonesia)

ATFM/SG/5 30 March – 3 April 2015 Bangkok, Thailand

Decision ATFM/SG/5-1 – ATFM Information Requirements Small Working Group (ATFM/IR/SWG)

That, recognizing the need for the development of operational and technical requirements for the exchange of ATFM information in the cross-border, multi-nodal ATFM network, a small working group comprised of China, Hong Kong China, India, Japan, Singapore and Thailand, be established to draft:

1. An Operational Requirements document for the exchange of and interaction with ATFM information; and
2. A technical interface control document (ICD);

in accordance with the terms of reference at **Appendix C** to this report.

Draft Conclusion ATFM/SG/5-2: Asia/Pacific Regional Framework for Collaborative ATFM

That, the Asia/Pacific Regional Framework for Collaborative ATFM Version 0.4 attached as **Appendix D** to the report be endorsed, and made available on the ICAO Asia/Pacific Regional Office web site.

ATM/SG/3 3-7 August 2015 Bangkok, Thailand

Draft Conclusion ATM/SG/3-2: Regional Cross-border ATFM Implementation Support

That, to support regional cross-border Air Traffic Flow Management (ATFM) progress and implementation, States are urged to:

- support the multi-nodal ATFM operational trial program commencing June 2015;
- ensure timely completion of planning, procurement and resource allocation to enable participation in the multi-nodal ATFM operational trial program; and
- implement cross-border ATFM in accordance with the performance objectives of the Regional Framework for Collaborative ATFM.

Draft Conclusion ATM/SG/3-3: Asia/Pacific Regional Framework for Collaborative ATFM

That, regarding the Asia/Pacific Regional Framework for Collaborative ATFM Version 1.0 attached as **Appendix E** to the Report, and the Regional ATFM Concept of Operations Version 1.0 attached as **Appendix D** to the Report, ICAO be requested to:

- a) make the Framework and the Concept of Operations available on the ICAO Asia/Pacific Regional Office web site, replacing the earlier APAC ATFM Regional Concept of Operations and ATFM Communications Handbook for the Asia Pacific Region; and
- b) reference the Framework within the Asia/Pacific Seamless ATM Plan.

APANPIRG26 7-10 Bangkok Thailand

Conclusion APANPIRG/26/8 – Regional Cross-border ATFM Implementation Support

That, to support regional cross-border Air Traffic Flow Management (ATFM) progress and implementation, States are urged to:

- support the multi-nodal ATFM operational trial program commencing June 2015;
- ensure timely completion of planning, procurement and resource allocation to enable participation in the multi-nodal ATFM operational trial program; and
- implement cross-border ATFM in accordance with the performance objectives of the Regional Framework for Collaborative ATFM.

Conclusion APANPIRG/26/9 – Asia/Pacific Regional Framework for Collaborative ATFM

That, regarding the Asia/Pacific Regional Framework for Collaborative ATFM Version 1.0 (**APANPIRG/26/WP07/Appendix A**), and the Regional ATFM Concept of Operations Version 1.0 (**APANPIRG/26/WP07/Appendix B**), ICAO be requested to:

- a) make the Framework and the Concept of Operations available on the ICAO Asia/Pacific Regional Office web site, replacing the earlier APAC ATFM Regional Concept of Operations and ATFM Communications Handbook for the Asia Pacific Region; and
- b) reference the Framework within the Asia/Pacific Seamless ATM Plan.

DGCA 52 26-30 October 2015 Manila Philippines

DP/3.3/20	Action Item 52/18	<p>Cross Border ATFM Implementation</p> <p>Recognizing that ATFM is one of the key elements in the Asia Pacific Seamless ATM Plan, the Conference encouraged States to:</p> <ul style="list-style-type: none"> a) participate and commit the necessary resources in the cross-border ATFM Operational Trials; b) Maintain close engagement between the aeronautical MET- and ATFM-service providers to ensure development and supply of the MET information necessary to support ATFM; and c) consider developing a regional strategy through the ICAO ATFM Steering Group as the next step towards cross-border ATFM implementation in the Asia and Pacific Regions.
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ATFM/SG/6 6-10 June 2016 Bangkok, Thailand

Draft Conclusion ATFM/SG/6-1: Origination of Flight Plan and ATS Messages	
<p>That, taking into account the Regional Framework for Collaborative ATFM's Performance Improvement Plan provisions relating to the submission of FPL and ATS messages, States are urged to publish in AIP the requirement that:</p> <ol style="list-style-type: none"> 1. Except where necessary for operational or technical reasons, FPL should be submitted not less than 3 hours before EOBT; 2. DLA messages should be originated when the departure of an aircraft, for which basic flight plan data (FPL or RPL) has been sent, is delayed by 15 minutes or more after the EOBT contained in the basic flight plan data; and 3. CHG and CNL messages are promptly originated in accordance with the provisions of ICAO Doc 4444 Procedures for Air Navigation Services (PANS-ATM) 11.4.2.2 	<p>Expected impact:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Political / Global <input type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Ops/Technical
<p>Why: To ensure to the maximum extent possible the timely submission and update of flight plan data used for ATFM demand calculation and the formulation of ATFM measures.</p>	
When: 12 November 2017	Status: Draft to be adopted by Subgroup
<p>Who: <input checked="" type="checkbox"/> States <input type="checkbox"/> APAC RO <input type="checkbox"/> IATA <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other:</p>	

Draft Conclusion ATFM/SG/6-2: Origination and Distribution of Departure (DEP) Messages	
<p>That, recognizing the importance of AFTN departure (DEP) messages in the management and coordination of flight plans in both manual and automated ATM environments, ICAO be requested to:</p> <ol style="list-style-type: none"> 1. Conduct an analysis of the incidence of non-receipt of DEP messages required by ICAO Doc 4444 Procedures for Air Navigation Services (PANS-ATM) Section 11.4.2.2; 2. Request that States failing to ensure correct transmission of DEP messages promptly take corrective action and report the status of corrective actions to the ICAO APAC Regional Office by 30 April 2017; and 3. Raise APANPIRG Air Navigation Deficiencies against failure by States to comply with Doc 4444 Section 11.4.2.2, at APANPIRG/28. 	<p>Expected impact:</p> <p><input type="checkbox"/> Political / Global</p> <p><input type="checkbox"/> Economic</p> <p><input type="checkbox"/> Environmental</p> <p><input checked="" type="checkbox"/> Ops/Technical</p>
<p>Why: To improve regional performance in complying with the requirements of Doc 4444, to improve ATM outcomes by ensuring activation of flight plan details in ATM systems, and to improve ATFM outcomes by improving the accuracy of demand calculation and ATFM measures.</p>	
<p>When: 30 April 2017</p>	<p>Status: Draft to be adopted by Subgroup</p>
<p>Who: <input checked="" type="checkbox"/> States <input checked="" type="checkbox"/> APAC RO <input type="checkbox"/> IATA <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other:</p>	

Draft Conclusion ATFM/SG/6-3: Update Regional Framework for Collaborative ATFM	
<p>That, the Asia/Pacific Regional Framework for Collaborative ATFM Version 2.0 incorporating:</p> <ol style="list-style-type: none"> a) the amended text in Appendix C to the report ; and b) as an appendix, the Regional ATFM Implementation Guidance document (ATFM/SG/6/WP13/Attachment A) <p>be made available on the ICAO Asia/Pacific Regional Office web site, replacing Version 1.0.</p>	<p>Expected impact:</p> <p><input type="checkbox"/> Political / Global</p> <p><input type="checkbox"/> Economic</p> <p><input checked="" type="checkbox"/> Environmental</p> <p><input checked="" type="checkbox"/> Ops/Technical</p>

Draft Conclusion ATFM/SG/6-3: Update Regional Framework for Collaborative ATFM	
Why:	
<ul style="list-style-type: none"> a) To amend the performance expectation relating to submission of flight plans, taking into account operational or technical limitations and ensuring the applicability for ATFM in constrained airspace as well as at constrained airports; and b) To incorporate the regional ATFM implementation guidance material as agreed by ATFM/SG/6 in the Asia/Pacific Regional Framework for Collaborative A 	
When: On adoption by APANPIRG/27 – 8 September 2016	Status: Draft to be adopted by Subgroup
Who: <input type="checkbox"/> States <input checked="" type="checkbox"/> APAC RO <input type="checkbox"/> IATA <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other:	

Draft Conclusion ATFM/SG/6-4: State Review of the Regional Framework for Collaborative ATFM	
That, noting	Expected impact:
<ul style="list-style-type: none"> 1. the need for harmonized, interoperable State and Sub-Regional ATFM implementation to achieve cross-border ATFM in the Asia/Pacific Region; and 2. the Asia/Pacific Regional Framework for Collaborative ATFM, available on the Asia/Pacific Regional Office web site, is the primary planning document addressing ATFM implementation and operational issues in the Asia/Pacific Region; 	<input type="checkbox"/> Political / Global <input type="checkbox"/> Economic <input checked="" type="checkbox"/> Environmental <input checked="" type="checkbox"/> Ops/Technical
States are urged to:	
<ul style="list-style-type: none"> a) Review the Regional Framework for Collaborative ATFM; and b) Ensure that full consideration is given in all ATFM implementation planning to the provisions of the Regional Framework for Collaborative ATFM. 	
Why: To ensure that all State and sub-regional ATFM projects are aligned with the direction provided by the Regional Framework for Collaborative ATFM, facilitating future harmonization, interoperability and effective cross-border ATFM	
When: On adoption by APANPIRG – 18 September 2016	Status: Draft to be adopted by SubGroup
Who: <input checked="" type="checkbox"/> States <input type="checkbox"/> APAC RO <input type="checkbox"/> IATA <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other:	

ATM/SG/4 4-8 July 2016 Bangkok Thailand

Draft Conclusion ATM/SG/4-5: Origination of Flight Plan and ATS Messages	
<p>That, taking into account the Regional Framework for Collaborative ATFM Performance Improvement Plan provisions relating to the submission of FPL and ATS messages, States are urged to publish in AIP the requirement that:</p> <ol style="list-style-type: none"> 1. Except where necessary for operational or technical reasons, FPL should be submitted not less than 3 hours before EOBT; 2. DLA messages should be originated when the departure of an aircraft, for which basic flight plan data (FPL or RPL) has been sent, is delayed by 15 minutes or more after the EOBT contained in the basic flight plan data; and 3. CHG and CNL messages are promptly originated in accordance with the provisions of ICAO Doc 4444 Procedures for Air Navigation Services (PANS-ATM) 11.4.2.2 	<p>Expected impact:</p> <p><input type="checkbox"/> Political / Global</p> <p><input type="checkbox"/> Inter-regional</p> <p><input type="checkbox"/> Economic</p> <p><input type="checkbox"/> Environmental</p> <p><input checked="" type="checkbox"/> Ops/Technical</p>
<p>Why: To ensure to the maximum extent possible the timely submission and update of flight plan data used for ATFM demand calculation and the formulation of ATFM measures.</p>	
<p>When: 8-Sep-16</p>	<p>Status: Draft to be adopted by PIRG</p>
<p>Who: <input type="checkbox"/> Sub groups <input checked="" type="checkbox"/> APAC States <input type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other:</p>	

Draft Conclusion ATM/SG/4-6: Origination and Distribution of Departure (DEP) Messages	
<p>That, recognizing the importance of AFTN departure (DEP) messages in the management and coordination of flight plans in both manual and automated ATM environments, ICAO be requested to:</p> <ol style="list-style-type: none"> 1. Conduct an analysis of the incidence of non-receipt of DEP messages required by ICAO Doc 4444 Procedures for Air Navigation Services (PANS-ATM) Section 11.4.2.2; 2. Request that States failing to ensure correct transmission of DEP messages promptly take corrective action and report the status of corrective actions to the ICAO APAC Regional Office by 30 April 2017; and 3. Raise APANPIRG Air Navigation Deficiencies against failure by States to comply with Doc 4444 Section 11.4.2.2, at APANPIRG/28. 	<p>Expected impact:</p> <p><input type="checkbox"/> Political / Global</p> <p><input type="checkbox"/> Inter-regional</p> <p><input type="checkbox"/> Economic</p> <p><input type="checkbox"/> Environmental</p> <p><input checked="" type="checkbox"/> Ops/Technical</p>
<p>Why: To improve regional performance in complying with the requirements of Doc 4444, to improve ATM outcomes by ensuring activation of flight plan details in ATM systems, and to improve ATFM outcomes by improving the accuracy of demand calculation and ATFM measures.</p>	
<p>When: 8-Sep-16</p>	<p>Status: Draft to be adopted by PIRG</p>
<p>Who: <input type="checkbox"/> Sub groups <input checked="" type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other:</p>	

Draft Conclusion ATM/SG/4-7: Update Regional Framework for Collaborative ATFM	
<p>That, the Asia/Pacific Regional Framework for Collaborative ATFM Version 2.0 incorporating:</p> <p>a) the amended text in Appendix D to the Report; and</p> <p>b) as an appendix, the Regional ATFM Implementation Guidance document provided in Appendix E to the Report;</p> <p>be made available on the ICAO Asia/Pacific Regional Office web site, replacing Version 1.0.</p>	<p>Expected impact:</p> <p><input type="checkbox"/> Political / Global</p> <p><input type="checkbox"/> Inter-regional</p> <p><input type="checkbox"/> Economic</p> <p><input type="checkbox"/> Environmental</p> <p><input checked="" type="checkbox"/> Ops/Technical</p>
<p>Why: a) To amend the Regional ATFM Framework performance expectation relating to submission of flight plans, taking into account operational or technical limitations and ensuring the applicability for ATFM in constrained airspace as well as at constrained airports; and b) To incorporate the regional ATFM implementation guidance material as agreed by ATM/SG/6 in the Asia/Pacific Regional Framework for Collaborative ATFM</p>	
<p>When: 8-Sep-16</p>	<p>Status: Draft to be adopted by PIRG</p>
<p>Who: <input type="checkbox"/> Sub groups <input checked="" type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other:</p>	

Draft Conclusion ATM/SG/4-8: State Review of the Regional Framework for Collaborative ATFM	
<p>That, noting the:</p> <p>a. need for harmonized, interoperable State and Sub-Regional ATFM implementation to achieve cross-border ATFM in the Asia/Pacific Region; and</p> <p>b. Asia/Pacific Regional Framework for Collaborative ATFM, available on the Asia/Pacific Regional Office web site, is the primary planning document addressing ATFM implementation and operational issues in the Asia/Pacific Region;</p> <p>States are urged to:</p> <p>1. review the Regional Framework for Collaborative ATFM; and</p> <p>2. ensure that full consideration is given in all ATFM implementation planning to the provisions of the Regional Framework for Collaborative ATFM.</p>	<p>Expected impact:</p> <p><input type="checkbox"/> Political / Global</p> <p><input type="checkbox"/> Inter-regional</p> <p><input type="checkbox"/> Economic</p> <p><input type="checkbox"/> Environmental</p> <p><input checked="" type="checkbox"/> Ops/Technical</p>
<p>Why: To ensure that all State and sub-regional ATFM projects are aligned with the direction provided by the Regional Framework for Collaborative ATFM, facilitating future harmonization, interoperability and effective cross-border ATFM.</p>	
<p>When: 8-Sep-16</p>	<p>Status: Draft to be adopted by PIRG</p>
<p>Who: <input type="checkbox"/> Sub groups <input checked="" type="checkbox"/> APAC States <input type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other:</p>	

EATMCG Outcomes (IP14)

5.61 IFATCA presented the outcomes of the Ninth Meeting of the East Asia ATM Coordination Group (EATMCG/9, Tokyo, Japan, 27 – 29 June 2016). These included a proposal for revision of the structure of ATS route B576 and associated airspace, reduction of radar spacing, ATFM information and discussion of call-sign confusion and alpha-numeric call-signs.

DGCA 53 1-5 August 2016 Colombo Sri Lanka

DP/3/3/31	Action Item 53/10	<p>Integration of Aeronautical Meteorology and Air Traffic Management</p> <p>Recognizing the effect that meteorological phenomena have on air transport and the need to strengthen the integration between MET and ATM at national and regional level the Conference urged States/Administrations to:</p> <ul style="list-style-type: none"> a) consider adopting the proposed framework presented at Section 2 of the paper for integration between Meteorological Authorities and ANSPs; and b) encourage greater participation and exchange between MET and ATM experts at the national and regional level.
DP/3.3/32	Action Item 53/ 11	<p>Cross Border ATFM Concept:</p> <p>Recognizing that a viable regional cross border ATFM concept aimed to enhance operational efficiency and optimize capacity the Conference encouraged States to:</p> <ul style="list-style-type: none"> a) participate in the Distributed Multi-Nodal Cross-Border ATFM Project and commit the necessary resources to support the ATFM Operational Trials; b) acknowledge the importance of advance flight planning and transmission of associated flight movement messages to ensure accurate demand predictions for ATFM operations; c) acknowledge the importance of engaging the aeronautical Meteorological (MET)community to develop tailored products to support ATFM.

APANPIRG27 5-8 September 2016 Bangkok Thailand

Conclusion APANPIRG/27/13: Update Regional Framework for Collaborative ATFM	
<p>That, the Asia/Pacific Regional Framework for Collaborative ATFM Version 2.0 incorporating:</p> <ul style="list-style-type: none"> a) the amended text in APANPIRG/27/WP/7 Attachment B; and b) as an appendix, the Regional ATFM Implementation Guidance document provided in APANPIRG/27/WP/7 Attachment C; <p>be made available on the ICAO Asia/Pacific Regional Office web site, replacing Version 1.0.</p>	<p>Expected impact:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Political / Global <input type="checkbox"/> Inter-regional <input type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Ops/Technical
<p>Why: a) To amend the Regional ATFM Framework performance expectation relating to submission of flight plans, taking into account operational or technical limitations and ensuring the applicability for ATFM in constrained airspace as well as at constrained airports; and b) To incorporate the regional ATFM implementation guidance material as agreed by ATFM/SG/6 in the Asia/Pacific Regional Framework for Collaborative ATFM</p>	
When: 8-Sep-16	Status: Adopted by PIRG
Who: <input type="checkbox"/> Sub groups <input checked="" type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other:	

Conclusion APANPIRG/27/14: State Review of the Regional Framework for Collaborative ATFM

<p>That, the:</p> <p>a) need for harmonized, interoperable State and Sub-Regional ATFM implementation to achieve cross-border ATFM in the Asia/Pacific Region; and that the</p> <p>b) Asia/Pacific Regional Framework for Collaborative ATFM, (available on the Asia/Pacific Regional Office web site), is the primary planning document addressing ATFM implementation and operational issues in the Asia/Pacific Region;</p> <p>States are urged to:</p> <p>1. review the Regional Framework for Collaborative ATFM; and</p> <p>2. ensure that full consideration is given in all ATFM implementation planning to the provisions of the Regional Framework for Collaborative ATFM.</p>	<p>Expected impact:</p> <p><input type="checkbox"/> Political / Global</p> <p><input type="checkbox"/> Inter-regional</p> <p><input type="checkbox"/> Economic</p> <p><input type="checkbox"/> Environmental</p> <p><input checked="" type="checkbox"/> Ops/Technical</p>
<p>Why: To ensure that all State and sub-regional ATFM projects are aligned with the direction provided by the Regional Framework for Collaborative ATFM, facilitating future harmonization, interoperability and effective cross-border ATFM.</p>	
<p>When: 8-Sep-16</p>	<p>Status: Adopted by PIRG</p>
<p>Who: <input type="checkbox"/> Sub groups <input checked="" type="checkbox"/> APAC States <input type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other:</p>	

Conclusion APANPIRG/27/55: Strengthening MET and ATM integration

<p>That, the Air Traffic Flow Management Steering Group (ATFM/SG) and the Meteorological Requirements Working Group (MET/R WG) are invited to examine the matters presented in APANPIRG/27 WP/20 and to then make appropriate recommendations as necessary in the form of Draft Conclusions to the ATM and MET Sub-Groups.</p>	<p>Expected impact:</p> <p><input type="checkbox"/> Political / Global</p> <p><input type="checkbox"/> Inter-regional</p> <p><input type="checkbox"/> Economic</p> <p><input type="checkbox"/> Environmental</p> <p><input checked="" type="checkbox"/> Ops/Technical</p>
<p>Why: The proposals presented in APANPIRG/27 WP/20 require detailed examination by the appropriate technical bodies of APANPIRG.</p>	
<p>When: Next meetings of the ATFM/SG and MET/R WG</p>	<p>Status: adopted by PIRG</p>
<p>Who: <input checked="" type="checkbox"/> Sub groups <input type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other:</p>	

ATFM/SG/7 15-19 May 2017 Fukuoka Japan

Draft Conclusion ATFM/SG/7-1: Asia/Pacific Regional Guidance For Meteorological Information Supporting ATM	
<p>What: That,</p> <p>1. The Asia/Pacific Regional Guidance for Tailored Meteorological Information and Services to Support Air Traffic Management Operations Version 1 be endorsed and uploaded to the ICAO Asia/Pacific Regional Office Website; and</p> <p>2. The Regional Guidance should be referenced for the provision of Meteorological Information to ATM:</p> <p>a. At ATFM Program Airports as defined in the Regional Framework for Collaborative ATFM;</p> <p>b. In Enroute sector airspace supporting the busiest Asia/Pacific city pairs as defined in the Asia/Pacific Seamless ATM Plan; and</p> <p>c. At other airports or in airspace designated by the relevant authority</p>	<p>Expected impact:</p> <p><input type="checkbox"/> Political / Global</p> <p><input type="checkbox"/> Inter-regional</p> <p><input type="checkbox"/> Economic</p> <p><input type="checkbox"/> Environmental</p> <p><input checked="" type="checkbox"/> Ops/Technical</p>
<p>Why: Specific regional guidance is necessary to assist States in developing and implementing tailored MET information and services supporting effective ATM, including ATFM</p>	<p>Follow-up: <input checked="" type="checkbox"/> Required from States</p>
<p>When: 4-Aug-17</p>	<p>Status: Draft to be adopted by Subgroup</p>
<p>Who: <input checked="" type="checkbox"/> Sub groups <input checked="" type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other:</p>	

Draft Conclusion ATFM/SG/7-2: Amendment to the Asia/Pacific Regional Framework for Collaborative ATFM	
<p>What: That,</p> <p>1. the Regional Framework for Collaborative ATFM be amended to include the information and performance objectives in Appendix C to the Report;</p> <p>2. the ATFM Implementation Status Report form provided in Appendix D to the report be included in the Regional Framework for Collaborative ATFM as an appendix;</p>	<p>Expected impact:</p> <p><input type="checkbox"/> Political / Global</p> <p><input type="checkbox"/> Inter-regional</p> <p><input type="checkbox"/> Economic</p> <p><input type="checkbox"/> Environmental</p> <p><input checked="" type="checkbox"/> Ops/Technical</p>
<p>Why: 1. To improve equity in ATFM delay and predictability of operations for ATC by enabling ground delay at airports located in all APAC States regardless of their need to implement ATFM functions;</p> <p>2. to include a regional ATFM Implementation Status monitoring regime in the Regional Framework for Collaborative ATFM.</p>	<p>Follow-up: <input checked="" type="checkbox"/> Required from States</p>
<p>When: 4-Aug-17</p>	<p>Status: Draft to be adopted by Subgroup</p>
<p>Who: <input checked="" type="checkbox"/> Sub groups <input type="checkbox"/> APAC States <input type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other:</p>	

Draft Conclusion ATFMMSG/7-3: Regional ATFM Implementation Status Reporting	
What: That, 1. the ATFM Implementation Status Report form provided in Appendix D to the report be made available on the ICAO Asia/Pacific Regional Office website; and 2. Asia/Pacific Administrations are urged to report their ATFM implementation status at least once annually by no later than 30 April each year, using the ATFM Implementation Status Report Form.	Expected impact: <input type="checkbox"/> Political / Global <input type="checkbox"/> Inter-regional <input type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Ops/Technical
Why: To facilitate the monitoring of Regional ATFM implementation status, and the identification of priority areas of ATFM for inclusion in Seamless ATM monitoring and for the attention of APANPIRG.	Follow-up: <input checked="" type="checkbox"/> Required from States
When: 4-Aug-17	Status: Draft to be adopted by Subgroup
Who: <input checked="" type="checkbox"/> Sub groups <input checked="" type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other: XXXX	

Draft Decision ATFM/SG/7-4: ATFM/SG Terms of Reference	
What: That, the ATFM/SG Terms of Reference at Appendix E to the Report be adopted.	Expected impact: <input type="checkbox"/> Political / Global <input type="checkbox"/> Inter-regional <input type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Ops/Technical
Why: To update the APANPIRG groups with which ATFM/SG closely coordinates.	Follow-up: <input type="checkbox"/> Required from States
When: 4-Aug-17	Status: Draft to be adopted by Subgroup
Who: <input checked="" type="checkbox"/> Sub groups <input type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other:	

ATM/SG/5 31 July – 4 August 2017 Bangkok Thailand

Draft Decision ATM/SG/5-4: ATFM/SG Terms of Reference	
What: That, the ATFM/SG Terms of Reference at Appendix F to the Report be adopted.	Expected impact: <input type="checkbox"/> Political / Global <input type="checkbox"/> Inter-regional <input type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Ops/Technical
Why: To update the APANPIRG groups with which ATFM/SG closely coordinates.	Follow-up: <input type="checkbox"/> Required from States
When: 4-Aug-17	Status: Draft to be adopted by PIRG
Who: <input type="checkbox"/> Sub groups <input type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other:	

Conclusion ATM/SG/5-3: Asia/Pacific Regional Framework for Collaborative ATFM Amendment	
<p>What: That,</p> <p>1. the <i>Regional Framework for Collaborative ATFM</i> be amended to include the information and performance objectives in Appendix D to the Report; and</p> <p>2. the ATFM Implementation Status Report form provided in Appendix E to the Report be included in the Regional Framework for Collaborative ATFM as an appendix and made available on the ICAO Asia/Pacific Regional Office website; and</p> <p>3. Asia/Pacific Administrations are urged to report their ATFM implementation status at least once annually by no later than 30 April each year, using the ATFM Implementation Status Report Form.</p>	<p>Expected impact:</p> <p><input type="checkbox"/> Political / Global</p> <p><input type="checkbox"/> Inter-regional</p> <p><input type="checkbox"/> Economic</p> <p><input type="checkbox"/> Environmental</p> <p><input checked="" type="checkbox"/> Ops/Technical</p>
<p>Why:</p> <p>1. To improve equity in ATFM delay and predictability of operations for ATC by enabling ground delay at airports located in all APAC States regardless of their need to implement ATFM functions;</p> <p>2. to include a Regional ATFM Implementation Status monitoring regime in the Regional Framework for Collaborative ATFM of implementation status, and the identification of priority areas of ATFM for inclusion in Seamless ATM monitoring for the attention of APANPIRG.</p>	<p>Follow-up: <input checked="" type="checkbox"/> Required from States</p>
<p>When: 4-Aug-17</p>	<p>Status: Adopted by Subgroup</p>
<p>Who: <input type="checkbox"/> Sub groups <input checked="" type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other:</p>	

DGCA 54 7-11 August 2017

DP/3/23	Action Item 54/10	<p>Recognizing the progress made by several States/Administrations in implementing cross border ATFM using the Distributed Multi-Nodal ATFM Network concept along with recent operational trials to regulate air traffic flow to balance demand and capacity and harmonized approach to implement cross-border ATFM in the region is in line with the vision of the Asia Pacific Seamless ATM Plan, the Conference encouraged States/Administrations:</p> <p>a) to participate in the Distributed Multi-Nodal ATFM Network project and commit the necessary resources to support cross-border ATFM operations;</p> <p>b) to participate actively in the ICAO Asia Pacific ATFM Steering Group with a view to contribute towards the harmonization of ATFM information exchange requirements and interface control document to support ATFM system-to-system communication; and</p> <p>c) developing ATFM implementation plans, to harmonize the processes in line with the ICAO Asia Pacific Regional Framework for Collaborative ATFM.</p>
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APANPIRG28 11-14 September 2017 Bangkok Thailand

Decision APANPIRG/28/4: ATFM/SG Terms of Reference	
What: That, the ATFM/SG Terms of Reference at Appendix A to the Report on Agenda Item 3.2 be adopted.	Expected impact: <input type="checkbox"/> Political / Global <input type="checkbox"/> Inter-regional <input type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Ops/Technical
Why: To update the APANPIRG groups with which ATFM/SG closely coordinates.	Follow-up: <input type="checkbox"/> Required from States
When: 14-Sep-17	Status: Adopted by PIRG
Who: <input type="checkbox"/> Sub groups <input type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other:	

ICAO ATFM Global Symposium 20-22 November 2017 Singapore, Singapore

The Symposium introduced the ICAO's global approach to ATFM, discussed the challenges of the ATFM development, stressed on the necessity of ATFM harmonization and interoperability especially focusing on Asia Pacific Region where the Distributed Multi-Nodal Cross-Border ATFM Network was adopted as the core concept in Asia Pacific *Regional Framework for Collaborative ATFM*.

The Symposium also presented and discussed the long range ATFM, ATFM contingency, Aerodrome-CDM (A-CDM) and its linkage with ATFM, information sharing supported by SWIM, ATFM Post Operation Analysis and performance metrics, as well as the innovation in the ATFM development.

The industry presented the development of the ATFM system and their research and development endeavors.

The Symposium fostered the increased awareness by Government, regulators, air traffic service providers and airspace users of the importance of air traffic flow management to support the traffic growth in the Asia Pacific and neighboring regions; facilitated the better understanding of the role that ATFM can play, highlighted the importance of collaboration during regular and during unpredicted disruptions; reinforced the focus on the implementation of information exchange to increase the efficiency of ATFM solutions and mitigate their impact on airspace users' operations; enhanced the awareness of States and regulators of the importance of fostering custom tailored and innovative solutions.

The 1st Asia Pacific Ministerial Conference on Civil Aviation 31 Jan – 1 Feb 2018 Beijing, China

- 1.1 The Conference adopted the *Beijing Declaration*, which demonstrated the common concerns, positions and visions shared by Asia Pacific States on aviation safety, air navigation services, accident investigation and human resource development;

The commitments made in the *Beijing Declaration* included:

- 2.1 *Commit to implementation by 2022 of the Asia/Pacific Seamless Air Traffic Management (ATM) Plan to enhance ATM capacity and harmonization in the Region, including a focus on:*

...

(f) *Air Traffic Flow Management/Collaborative Decision Making (CDM) implementation for high density airports;*

...

2.2 *Promote sharing of best practices in the provision of ANS including Aeronautical Search and Rescue (SAR), Meteorological Services for International Air Navigation (MET) and Air Traffic Flow Management (ATFM) through regional cooperation and enhanced coordination.*

ATFM/SG/8 14-18 May 2018 New Delhi, India

Draft Conclusion ATFM/SG/8-1: Recommended Calculated Take-Off Time Compliance Window	
<p>What: That,</p> <p>1. Asia/Pacific Administrations implementing Ground Delay Programs (GDP) for flights to capacity-constrained destination airports use a recommended compliance window of -5 to +10 minutes to measure compliance with Calculated Take-Off Times (CTOT);</p> <p>2. CTOT compliance windows for individual departure airports be subsequently refined on the basis of post-operations analysis, taking into account the requirements at constrained destination airports and subject to the agreement of the Administration responsible for the departure airport; and</p> <p>3. CTOT compliance windows other than the recommended compliance window be reported to the Air Traffic Flow Management Steering Group.</p>	<p>Expected impact:</p> <p><input type="checkbox"/> Political / Global</p> <p><input type="checkbox"/> Inter-regional</p> <p><input type="checkbox"/> Economic</p> <p><input type="checkbox"/> Environmental</p> <p><input checked="" type="checkbox"/> Ops/Technical</p>
<p>Why: To establish a regionally-recommended CTOT compliance window as an initial measure of compliance with GDP for constrained destination airports.</p>	<p>Follow-up: <input checked="" type="checkbox"/> Required from States</p>
<p>When: 3-Aug-18</p>	<p>Status: Draft to be adopted by Subgroup</p>
<p>Who: <input checked="" type="checkbox"/> Sub groups <input checked="" type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other:</p>	

Interoperability Among ATFM Developments (WP/8)

4.86 An ATFM interoperability matrix to aid the necessary coordination meetings and discussion between the Multi-Nodal ATFM Project and the NARAHG project to achieve interoperability was proposed by China, Hong Kong China, Singapore, Thailand, CANSO and IATA.

4.87 The proposal noted that the diversity in operating environments in various states would result in variation in operating procedures and processes, and the need to ensure interoperability for an effective and satisfactory level of ATFM services, especially for flights transiting multiple active ATFM operation areas. To aid future discussions between the various projects an interoperability matrix was proposed (**ATFM/SG/8 WP/08 Annex A**). The matrix included categorization of areas of interoperability; infrastructure, information exchange, ATFM information, ATFM solutions and operating procedures. The purpose of the matrix was to identify similarities and differences in processes, and to serve as a tool to streamline discussions.

4.88 The meeting supported this important work. CANSO noted that the ICAO Middle East (MID) Region was using the Asia/Pacific Regional ATFM Concept of Operations and Framework for Collaborative ATFM as the basis of their ATFM planning.

4.89 Further activities targeting the harmonization of ATFM in the Asia/Pacific Region were discussed under Agenda Item 5 (WP/18).

Proposal to Establish an ATFM Implementation Harmonization Small Working Group (WP/18)

5.1 The Secretariat presented a proposal to establish a Small Working Group (SWG) to manage the harmonized implementation of various ATFM projects in the Asia/Pacific Region to ensure regional network interoperability.

5.2 While the distributed multi-nodal ATFM network was the core concept in the Region, it was noted that there would be the tendency towards discrepancies between individual nodes of the network that could jeopardize interoperability. It was therefore proposed that the work of the ATFM Information Requirements SWG (ATFM/IR/SWG) be merged into the new ATFM Implementation Harmonization SWG (ATFM/IH/SWG), under the Terms of Reference (TOR) provided in **ATFM/SG/8 WP/18 Attachment A**. The work of the ATFM/IH/SWG would be facilitated by the ICAO Asia/Pacific Regional Sub-Office (APAC RSO), which had recently been provided with increased staff resources to support ATFM activities.

5.3 A Draft Decision was proposed, recognizing the direction provided in the Asia/Pacific Regional Framework for Collaborative ATFM and Regional Concept of Operations. All Administrations and International Organizations participating at the meeting supported the proposal, except China. Japan proposed that a meeting of the SWG in conjunction with the next NARAHG meeting may be considered, and Thailand further proposed a similar meeting in conjunction with the next meeting of the Multi-Nodal ATFM Project.

5.4 The meeting noted that the proposed amended TOR could be further refined at the first meeting of the SWG, and a recommendation made to ATFM/SG accordingly.

5.5 China's representative at the meeting relayed information from his Administration, informing the meeting that China did not support the proposal.

5.6 The meeting noted that this position was not aligned with the position reflected in WP/15, jointly presented by China, Japan and Republic of Korea, which in paragraph 2.2 stated:

1. *NARAHG members hasn't have enough discussion of the framework because it hasn't been so long since the CRACP concepts of NARAHG was established. Besides, NARAHG hasn't shared enough information with the other ATFM groups. Therefore, in order to actualize more global ATFM, NARAHG would like to propose as follows.*
2. *NARAHG would like to suggest that it would be better to have a face-to-face meeting organized by the ICAO APAC Regional Sub-Office (RSO) between NARAHG, Multi-Nodal Project group and other groups to discuss on areas of harmonization and interoperability. A full 2 or 3 days meeting would be useful where we can discuss several key items;*
 - a) *Understanding of Concept of Operations*
 - b) *Operational Procedures at the interface between two sub-regions*
 - c) *Jointly work on technical development and SWIM.*

5.7 Noting that the ICAO APAC RSO now had the staff resources in place to actively support SWG activities, the meeting agreed that the RSO would coordinate and facilitate the ongoing work of the ATFM/IR/SWG, and that the next or subsequent meetings of the SWG may consider recommending an expansion of the scope of work and TOR to include the proposed harmonization support role.

Amendment of Asia/Pacific Framework for Collaborative ATFM (WP/15)

5.8 China, Japan and the Republic of Korea provided discussion of a necessity to modify the Asia/Pacific Framework for Collaborative ATFM. The information provided noted the work undertaken by NARAHG in the last three years, based on the CRACP concept, and that there were differences between the CRACP concept and the Framework.

5.9 Noting the essential need for collaboration between sub-Regional ATFM projects and the current efforts to establish common understanding, the NARAHG States proposed a two to three-day face-to-face meeting between NARAHG and the Multi-Nodal ATFM Project, organized by the ICAO APAC RSO to discuss areas of harmonization and interoperability, including the key areas of understanding of Concepts of Operations, operational procedures at the interface between the two sub-regions, and joint efforts to work on technical development and SWIM.

5.10 ICAO informed the meeting of the process to amend the Regional ATFM Concept of Operations and/or Regional Framework for Collaborative ATFM, including the following points:

1. Any proposal for amendment must be presented in a suitable format. ICAO could assist with the preparation of the proposal. Examples of such amendment proposals were available in the working papers and meeting reports of ATFM/SG/6 and ATFM/SG/7;
2. Any proposed amendment agreed by ATFM/SG must be supported by a Draft Conclusion for consideration by ATM/SG; and
3. Any amendment to Regional ATFM documents would need the unanimous support of ATFM/SG and ATM/SG. It was strongly recommended that the proponent/s therefore engaged fully with and gain the agreement of all relevant Administrations during the preparation of the proposal.

ATM/SG/6 30 July – 3 August 2018 Hong Kong China

Conclusion ATM/SG/6-2: Recommended CTOT Compliance Window	
<p>What: That:</p> <p>1. Asia/Pacific Administrations implementing Ground Delay Programs (GDP) for flights to capacity-constrained destination airports use a recommended compliance window of -5 to +10 minutes to measure compliance with Calculated Take-Off Times (CTOT);</p> <p>2. CTOT compliance windows for individual departure airports be subsequently refined on the basis of post-operations analysis, taking into account the requirements at constrained destination airports and subject to the agreement of the Administration responsible for the departure airport; and</p> <p>3. CTOT compliance windows other than the recommended compliance window be reported to the Air Traffic Flow Management Steering Group.</p>	<p>Expected impact:</p> <p><input type="checkbox"/> Political / Global</p> <p><input type="checkbox"/> Inter-regional</p> <p><input type="checkbox"/> Economic</p> <p><input type="checkbox"/> Environmental</p> <p><input checked="" type="checkbox"/> Ops/Technical</p>
<p>Why: To establish an initial metric for the analysis of compliance with ATFM measures (Ground Delay Programs - GDPs), to be further refined based on post-ops analysis results</p>	<p>Follow-up: <input checked="" type="checkbox"/> Required from States</p>
<p>When: 3-Aug-18</p>	<p>Status: Draft to be adopted by Subgroup</p>
<p>Who: <input checked="" type="checkbox"/> Sub groups <input checked="" type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other:</p>	

APA-CDM/TF/3 13-16 August 2018 Bali Indonesia

ATFM Steering Group Outcomes (WP/4)

2.6 The Secretariat presented the outcomes relevant to APA-CDM/TF from the Eighth Meeting of the Asia/Pacific Air Traffic Flow Management Steering Group (ATFM/SG/8, New Delhi, India, 14 to 18 May 2018).

2.7 Information was provided on ATFM implementation in India, including the integration of ATFM with the A-CDM/Airport Operations Command Centre (A-CDM/AOCC), the progress of the Northeast Asia Regional ATFM Harmonization Group (NARAHG) and the Multi-Nodal ATFM Project (and its Technical Sub-Group), and ATFM/CDM Activities in Japan.

2.8 ATFM/SG/8 had discussed matters of compliance with distributed ATFM measures (Calculated Take Off Times – CTOT), including an analysis of CTOT compliance for flights departing Surabaya/Juanda International Airport, and the effect of non-compliant flights on compliant flights. In discussing the development of an ATFM Post-Operations Analysis Recommended Framework, ATFM/SG/8 also noted that there was no regionally agreed compliance window for CTOT.

2.9 ATFM/SG/8 had subsequently agreed to ***Conclusion ATM/SG/6-2: Recommended CTOT Compliance Window***, implementing an APAC Region CTOT compliance window of -5 to +10 minutes, which could then be refined on the basis of post-operations analysis taking into account the requirements at both the constrained destination airport and the departure airport.

2.10 The meeting was provided with information on the ATFM Implementation Status Report Form, which had been appended to the Regional Framework for Collaborative ATFM and made available on the ICAO Asia/Pacific Regional Office eDocuments web-page in accordance with ***Conclusion ATM/SG/5-3: Asia/Pacific Regional Framework for Collaborative ATFM Amendment***. It was suggested that APA-CDM/TF may also consider developing a Regional A-CDM implementation status reporting form.

2.11 The meeting was also informed of ATFM/SG/8 discussion of an ATFM Interoperability Matrix, and the development of a suite of basic phrases for cross-border ATFM coordination.

2.12 Information on the ATFM/SG/8 consideration of progress in the development of a Flight Information Exchange Model (FIXM) extension for the Asia/Pacific Region, to include ATFM and A-CDM attributes, was also provided.

2.13 In response to a query on the scope of the System-Wide Information Management Task Force, which was formally tasked by APANPIRG to develop any necessary extensions to FIXM or other exchange models for the APAC Region, the Secretariat provided the Terms of Reference (TOR) of SWIM/TF for the information of the meeting (Flimsy 1). The meeting was further informed that the scope of the SWIM/TF included SWIM architecture, governance and the identification of SWIM services, and the development of extensions to FIXM and similar exchange models to support specific Asia/Pacific operational needs. The development of the FIXM extension was further discussed under Agenda Item 5.

2.14 The meeting discussed the ATFM attributes that had been considered by ATFM/SG in 2015 to constitute the minimum suite of attributes for the exchange of ATFM information in the SWIM environment, and the ATFM/SG consideration that CTOT and Calculated Landing Time (CLDT) would provide the minimum for interoperability with A-CDM processes. The meeting was informed that this required further work, and that the identification of milestones in the ATFM and A-CDM process that were necessary for interoperability, and the related FIXM data attributes required that an operational concept was developed and agreed.

2.15 The meeting was informed of the work of the ATFM Information Requirements Small Working Group (ATFM/IR/SWG), formed by ATFM/SG to develop an operational requirements document and interface control document for ATFM information exchange. Subject to offline coordination, it was possible that as part of this work the group may be able to assist in the identification of milestones for ATFM/A-CDM interoperability, and the determination of which stakeholders would distribute/publish them, and/or receive/subscribe to them, and/or amend them.

Interfacing A-CDM with C-ATFM – Issues and Way Forward (WP/7)

5.2 India informed the meeting of the progress made in interfacing the A-CDM/Airport Operations Control Centre (AOCC) with the Central ATFM (C-ATFM) system. The information provided included discussion of the A-CDM and C-ATFM systems’ functionality, the reasons for the interface between A-CDM/AOCC and C-ATFM were necessary, and the interfacing process.

5.3 Major issues and challenges encountered included dissimilarity of Air Traffic Services (ATS) automation systems and A-CDM/AOCC platforms at the airports concerned, different airport operators, and the difficulty of compliance with a Calculated Take-Off Time (CTOT) at the A-CDM airport due to various constraints. Major benefits included the availability at airports of updated flight information through the C-ATFM system, the optimization of resources in the A-CDM process enabled by information received from C-ATFM, updating of information through the exchange of Flight Update Messages (FUM) and Departure Planning Information (DPI) messages, and improved visibility for airlines of the current disposition of their fleets.

5.4 In response to a query, and noting that FUM and DPI messages were a construct of the EUROCONTROL integration of ATFM and A-CDM, India advised that they were following the EUROCONTROL model. In the current Phase 1 of ATFM implementation CTOT were being issued two hours and fifteen minutes before the effective time.

Towards Inclusive Interoperability of Systems, Procedures and Practices for Integrated Operations of A-CDM and ATFM (WP/8)

Note: Hong Kong, China was unable to attend the meeting. This paper was presented via a web-conference link.

5.5 Hong Kong, China informed the meeting of their plan for implementing integrated A-CDM and ATFM operations, in alignment with the strategy promulgated in the Aviation System Block Upgrade (ASBU) framework of the Global Air Navigation Plan (GANP). The paper included discussion of the systems engineering concept and its application to various systems including A-CDM and ATFM in the multi-nodal ATFM network environment (**Figure 1**).

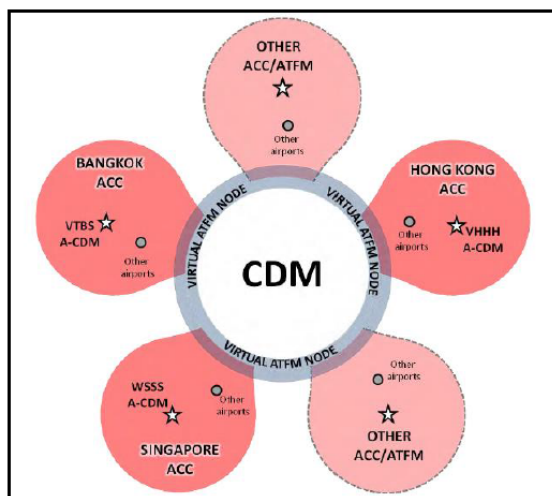


Figure 1: A Distributed Multi-Nodal ATFM Network

5.6 Information was also provided on stakeholder engagement, collaborative activities undertaken by Hong Kong, China through various regional and sub-regional programs, and the leveraging of ASBU Block-0 ATFM and A-CDM implementation to ensure interoperability.

5.7 In response to a query, Hong Kong, China advised that ATFM and A-CDM information exchange would be conducted both internally and cross border. The meeting noted that the exchange of ATFM and A-CDM information within a node of the Multi-Nodal ATFM Network could be in any format considered appropriate by the stakeholders within that node, provided that any cross-border information exchange (i.e. information exchanged between nodes) conformed with the agreed exchange model.

5.8 In response to Hong Kong, China's proposal that ICAO broaden and deepen support for Regional and/or sub-regional activities relevant to A-CDM, the meeting was informed that:

1. Regional cooperation for the research and development of the Flight Information Exchange Model was already being undertaken by the ICAO Asia/Pacific System-Wide Information Management Task Force (SWIM TF), as separately reported to this meeting;
2. Any proposal for amendment to the Regional Framework for Collaborative ATFM should be prepared by the Administrations having an interest in this area, and submitted to the ATFM/SG for consideration. Likewise, any proposal for amendment to ICAO Doc 9971 – Manual on Collaborative ATFM should be made by the proposing Administration/s to the ATM Operations Panel (ATMOPSP); and
3. The ATFM/SG (and its ATFM Information Requirements Small Working Group – ATFM/IR/SWG) and APA-CDM/TF were themselves the appropriate forums for studies of integration and interoperability of ATFM and A-CDM systems. Each of these groups should consider any proposal to establish either separately or jointly a small working group of member Administrations and relevant International Organizations focused on integration and interoperability. Hong Kong, China was encouraged to submit a formal proposal to either, or both, meetings.

5.9 ICAO informed the meeting that the formation of a new task force or working group separate from APA-CDM/TF and ATFM/SG could not be supported.

5.10 The meeting agreed that an ATFM/A-CDM interoperability concept of operations should be developed.

SWIM in ASEAN Demonstration (WP/9)

5.11 Singapore and Thailand presented an overview of the SWIM in ASEAN Demonstration, and the development of the FIXM Extension supporting operational scenarios including cross-border ATFM and A-CDM.

5.12 Operational scenarios under development included:

- Flight Progress Exchange for Situational Awareness;
- Operational Linkage between ATM and A-CDM;
- Ground Delay Program due to Arrival Airport Capacity Constraints;
- Airborne ATFM Measure due to En-route Disruptions; and
- Tactical Re-Routing.

5.13 A set of data attributes that were needed for exchange between systems was derived, and examined against FIXM version 4.1, which was the latest version published by the FIXM Change Control Board (CCB) in December 2017. It was found that attributes considered necessary to support A-CDM operations, such as the key A-CDM milestones Target Off-Block Time (TOBT), target Start-up Approval Time (TSAT) and Target Take-Off Time (TTOT) were not included in the FIXM core version.

5.14 The meeting was informed that, under the coordination of ATFM/SG, SWIM TF, and the Technical Sub-Group of the Distributed Multi-Nodal ATFM Project, acting on behalf of the ATFM/IR/SWG, an FIXM version 4.1 Extension including the ATFM attributes CTOT and CLDT was developed and validated at the end of April 2018. With the aim of utilizing this extension for the SWIM in ASEAN Demonstration where the operational scenarios of cross-border ATFM and A-CDM would be conducted, it was being further developed to include other ATFM and A-CDM data attributes. It was anticipated that development and validation of the extension would be completed by the end of October 2018.

5.15 The meeting was encouraged to submit information on its operational requirements for FIXM attributes supporting A-CDM operations to the SWIM TF as soon as possible in order to have a FIXM extension proposed and developed in due course.

5.16 The meeting agreed that the identification of the minimum set of:

1. A-CDM data attributes for local A-CDM implementation, e.g. TOBT and TSAT; and
2. data attributes considered necessary for the integration between A-CDM and ATFM, e.g. TTOT and CTOT;

should be conducted for the inclusion in an APAC FIXM Extension. In this regard, APA-CDM/TF requested that the SWIM/TF undertake the work of including identified data attributes in the APAC FIXM Extension at the earliest possible opportunity.

5.17 In response to a query, the meeting was informed that Globally Unique Flight Identifiers (GUFID) would be used for the SWIM in ASEAN demonstration, with further discussion to be had on how they would be used.

APA-CDM/TF TASK LIST

(Last updated 6 August 2018)

3/1	<p>Interoperability Milestones:</p> <ol style="list-style-type: none"> 1. Develop Interoperability Operational Concept 2. Identify minimum A-CDM milestones for interoperability with cross-border ATFM; and 3. Prepare Operational Scenarios for FIXM Extension; 	<p>Hong Kong, China/India/Singapore/Thailand/CANSO/IATA/Group of Experts</p>	<p>APA-CDM/TF/4</p>	<p>Open</p>	<p>Proposed milestones to be circulated to ATFM/IR/SWG for review/comment</p> <p>to be included in A-CDM Plan</p>
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THANK YOU