

ANSP Advisory Committee (AAC) Meeting #5 Workstream 4 Update

Asia-World Expo
Hong Kong China
9-10 December 2025



Agenda

1. Welcome
2. Introductions
3. Background of AAC
4. Workstream 4 Action Items:
 - Implementation of Continuous Climb and Descent Operations (Airservices Australia Predictive Sequencing Trial)*
 - Utilising space-based ADS-B /Very High Frequency (ADS-B/VHF) : AAI*
 - Development of ATM system interoperability : SEAC (French Polynesia)
 - Implementation of free route airspace (FRA) : IATA
5. FRA Guidance Material
6. Future Initiatives for Workstream 4

* NB: these items FYI only – not occurring as part of AAC work

Background of the ANSP Advisory Committee (AAC)

- The AAC was formed in 2023 as a group of ANSPs and involving CANSO and IATA.
- To cooperate in the alignment and implementation of regional Air Navigation Services (ANS) initiatives including the ICAO Asia/Pacific Seamless ANS Plan.
- Three workstreams created:
 - Regional FRTO
 - TBO
 - Contingency Planning
- WS4 was tasked with promoting operational efficiency, enhancing coordination and addressing issues of common interest amongst oceanic ANSPs.

Aim : Expand Continuous Climb and Descent Operations

- There is currently no CCO/CDO activities under the AAC program
- Previous AAC meeting agreed that this action would be closed
- Separately, Airservices Australia, in consultation with IATA ASPAC, initiated a CDO Trial in MEL
- The trial has evolved into a Predictable Sequencing trial expanded to include MEL, SYD and PER
- Benefits in separate presentation from Airservices

Aim : Expand space-based ADS-B /Very High Frequency (ADS-B/VHF) for spacing reduction

- The meeting was informed that there are no States conducting SB ADS-B / VHF separation activities under the AAC program
- Seeking Papua New Guinea and French Polynesia to share their experience of utilizing ADS-B as their sole surveillance method at a future meeting
- Separately, since Jan 2024, India (AAI) has conducted a Reduced Longitudinal Separation of 20NM trial on Arabian Sea L639 and L301
- Reduced 20NM separation is based on SB ADS-B / CPDLC with areas of VHF and HF as support
- AAI propose to implement permanently on routes L301 & L639
- The safety assessment for this has been completed in December 2024. The regulator's approval is awaited for permanent implementation.

Development of ATM system interoperability : SEAC (French Polynesia)

- At AAC4 WS Item 3 Lead reported that participants had made significant progress on finalizing a text related to air traffic management (ATM) system interoperability
- Initial consultation with participating States obtained agreement
- Some States advised they required further consultation and review
- It was agreed that the draft would be revised to include all relevant inputs from stakeholders
- All States have now provided comments and the final document will be presented in January to the representatives of the countries already involved in the writing of the ATM System Interoperability document.

South-East Asia – Oceania Free Route Operations (SEA-O FRTO) Trial

WS4 Oceanic Working Group Action 1: Implementation of Free Route Airspace (FRA) Target goals:

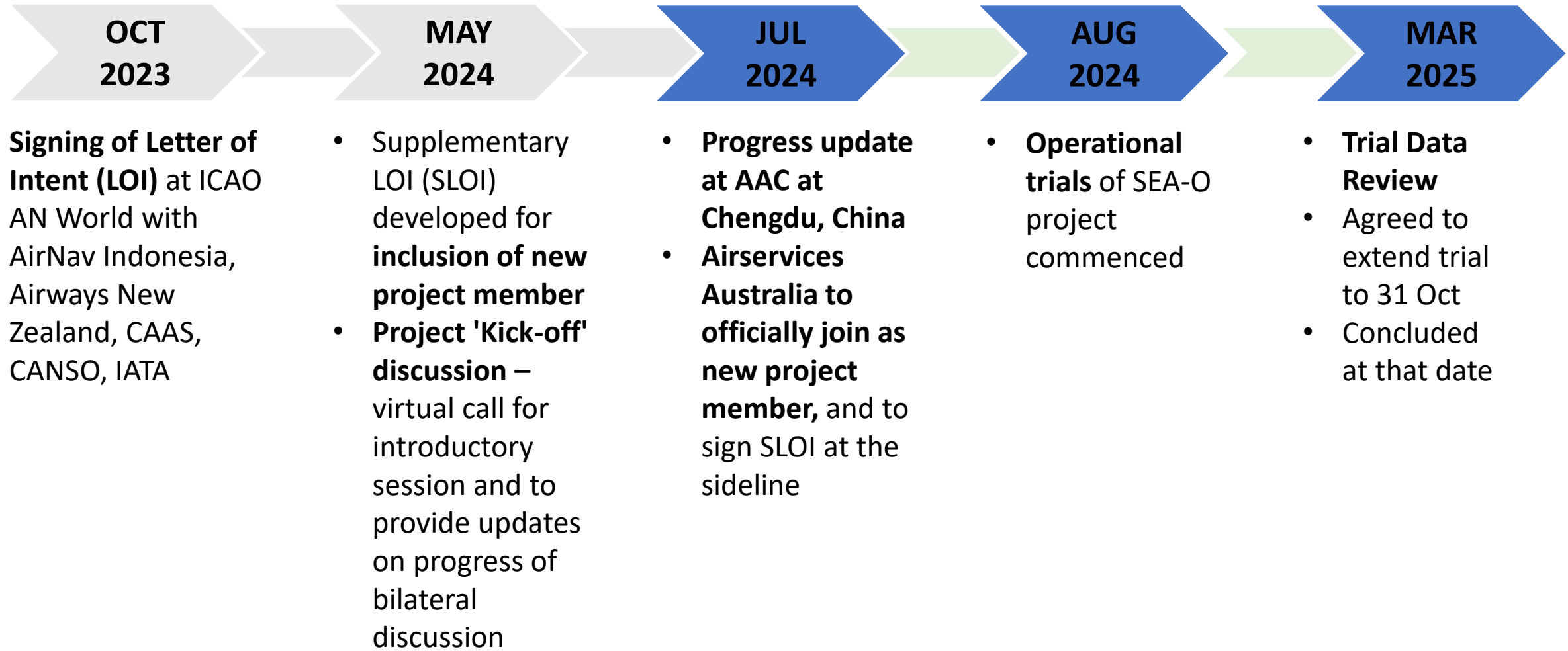
- Promote operational efficiency, enhance coordination and address issues of common interest amongst oceanic ANSPs
- Expand airspace available for free route operations
- Progress cross-border collaboration on FRTO initiatives
 - Demonstrate how benefits can be generated and sustained when multiple States cooperate for common goals
- Optimise flight planning efficiency for operators
 - Enhanced efficiency by optimising flight paths available to operators
 - Increased options for operators during flight planning to find the most optimal route
- Reduce operational cost for aircraft operators and airlines
 - Fewer track miles flown equates to lower fuel burn which will help to reduce fuel uplift and operational costs, or
 - Airlines utilise potential fuel savings in other ways to generate benefits suiting business objectives

South-East Asia – Oceania Free Route Operations (SEA-O FRTO) Trial

Planned Deliverables:

1. Signing of LOI for trial of end-to-end free route options (or user preferred routes) for city pairs in Southeast Asia and Oceania – completed Q4 2023 – SLOI signed by Australia 8 July 2024, new States signed from 1 July 2025
2. Establishment of Project Control Group to work on finalization of procedures and LOAs etc – multiple virtual meetings throughout 2025
3. Start of trial – Commenced 5 August 2024
4. Mid-trial review and identification of expansion opportunities – completed March 2025, trial expanded and extended, then concluded 31 Oct 2025
5. Deliverable 5: evaluation of trial and operationalization for day-to-day use – post trial review, Guidance Material in draft for AAC review

SEA-O FRTO Progress Timeline



Mid-trial Review – March 2025

- Original trial conclusion scheduled for 30 April 2025 – review conducted at AAC meeting in March
- Airline data on fuel and CO2 efficiencies considered
- Agreed to extend trial until 31 Oct 25 – PNG and Fiji ANSPs joined Singapore, Indonesia, Australia and New Zealand with additional city-pairs added from 1 July
- Cathay Pacific, Eva Airways, Fiji Airways and Jetstar Australia joined Singapore Airlines, Garuda, Qantas and Air NZ as participants
- Early reports of very significant savings for some city-pairs
- Data to be collated and reported for AAC and guidance material to be produced for future entrants (both airlines and ANSPs)

Status-quo at trial conclusion – 31 Oct 2025

- All trial city-pair flights continue to be available for planning by the participating airlines as per the reduced restrictions during the trial
- Other UPR planning remains available as per AIPs and other instructions
- New Zealand, PNG and Fiji already have permanent AIP procedures for planning UPRs as per trial rules
- Singapore AIP describes DRO rules however trial airlines are still permitted to FPL UPRs as per the trial city-pairs
- Australia and Indonesia continuing bi-lateral trial but have committed to expanding as and when they are able
- AirNav reiterated ongoing requirement for email notification and Field 18 annotations to support ATCs until new ATM automation system is operating.

Reported Airline Benefits – post trial

Caveats:

- The data collated represents total savings achieved for UPR vs fixed routes for the restricted set of city-pairs used in the trial
- It is not the incremental saving from the trial itself as much of the UPR efficiencies existed already in some States
- It represents what can be achieved in total when multiple States work in cooperation
- Some data needed to be modelled
- The trial city-pair flights are only a small component of total UPRs that can be accessed in the participating States

Reported benefits - Airline 1:

2nd Dry Season (2nd Jul 25 to 31st Aug 25) - 61 days of data					
Aircraft	City Pair	Fuel saving (kgs)	Days this flight participated in trial	Average fuel savings (kgs)	Percentage of participation
A380	SYD-SIN	52,154	50	1043	82
A330	MEL-HKG	2,479	28	89	46
A330	HKG-MEL	25,392	47	540	77
A330	MEL-SIN	7,538	42	179	69
A330	SIN-MEL	3,281	30	109	49
A330	MEL-CGK	1,738	12	145	20
A330	CGK-MEL	665	15	44	25
A330	SYD-CGK	9,536	31	308	51
A330	CGK-SYD	1,034	23	45	38
A330	BNE-SIN	59,117	57	1037	93
A330	SIN-BNE	3,562	31	115	51
A330	PER-SIN	19,437	57	341	93
A330	SYD-HKG	7,799	36	217	59
A330	HKG-SYD	7,818	29	270	48
A330	SYD-MNL	3,045	4	761	7
A330	MNL-SYD	27,791	50	556	82
A330	BNE-MNL	0	0	Nil	0
A330	MNL-BNE	7,636	27	283	44
B738	DPS-MEL	0	0	Nil	0
Total Fuel Saved (kgs)			240,022		
Total CO2 emissions (kgs)			758,470		
Total average participation (%)			49		

Reported benefits - Airline 2:

SIN-AKL-SIN

- Analytics modules were used to compare annual flights over 3 years for fixed routes against annual flights over 3 years for UPRs (both B777 and B787)
- For fixed routes, 3 routes were chosen to give a reasonable spread of routes for the system to choose. For the analysis the most efficient fixed route was compared with the UPR results.
- The period April 2024 – April 2025 was selected to analyse averages and flight counts.



Reported benefits - Airline 2:

Results: Total annual fuel savings April 2024 – April 2025

- 1872 tonnes fuel
- 7208 tonnes CO2
- Substantial savings on both routes resulting from planning UPRs. The 2% fuel burn reduction is slightly higher than anticipated but aligns closely with the airline's experience of UPRs in other regions

SIN-AKL:

- B787 ave fuel saving 1200 kg/trip count 169 / 199 t fuel saved
- B777 ave fuel saving 1700 kg/trip count 410 / 726 t fuel saved

AKL-SIN

- B787 ave fuel saving 1500 kg/trip count 174 / 252 t fuel saved
- B777 ave fuel saving 1700 kg/trip count 415 / 695 t fuel saved

Reported benefits - Airline 3:

- BNE-TPE return flight showed marginal benefit – almost the same effect as using the traditional route
- A/C Type: Boeing 787

Savings	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Time (ave)	00:13	00:14	00:12	00:08	00:04	00:01	00:00	00:01	00:01	00:04	00:07	00:10
CO2 (total kg)	4857	5334	4219	3024	1454	560	123	572	547	1346	2560	4155

Reported benefits - Airline 4:

- Savings reported from Jan – Oct 2025
- Overall, within the 15-month trial period, an average of 170 flights were planned on UPR each month. This equates to approximately 37% of the flights published in LOI.
- Average fuel saving per UPR flight was 180 KG. Although they do not track the flight time and distance differences, they are estimated to be below 5 minutes (average flight time saving) and 25 NM (average track mile saving).

Reported benefits - Airline 4:

Month	Total No. of Flights on UPR	Total UPR Fuel Savings
Jan 2025	214	41 T
Feb 2025	200	41 T
Mar 2025	159	30 T
Apr 2025	182	32 T
May 2025	174	33 T
Jun 2025	170	33 T
Jul 2025	157	28 T
Aug 2025	189	40 T
Sep 2025	165	39 T
Oct 2025	172	31 T
10-Month Total	1,782	348 T

Airline Pros and Cons:

Pros:

- Efficient routes
- Benefits realisation
- Weather and volcano avoidance

Cons:

- Limited city-pairs
- Requirement to email route prior to FPL
- Additional Field 18 annotations
- Ongoing restrictions in some FIRs
- Winds not always conducive to UPR planning
- High terrain constrains some route options
- Requirement to reach minimum FLs before UPR reduces gains
- Requirements at some locations (eg: starting point of STARs) reduces gains
- Some city-pairs didn't yield expected benefits

General Airline Feedback:

- Early days: it took airlines a period to get started. Some faced system setup challenges and change management issues, but once they began, participation and tracking became more consistent.
- Participation: Average rates improved from relatively low to medium-high at times. Some sectors rarely showed gains so in these cases, it wasn't worth participating.
- Flight planning does not normally track fuel savings on a flight-by-flight basis, instead at times uses modelling capability built into the flight planning system to measure potential savings
- Tracking fuel saving requires a separate flight plan to be created for comparison; this flight plan would never be used. This increases planner workload.

General Airline Feedback:

- Administration: Airlines request that the manual processes (e.g., email and commentary on the FPL) be removed as these have an impact on participation. The reality is that a busy dispatch centre will choose the path of least resistance in times of high workload rather than go through these manual steps.
- Next steps: Airlines support making this trial BAU. Additional city-pair proposals have been shared and several other airlines have requested access to the UPR planning procedures from the trial.

ANSP Pros and Cons:

Pros:

- Expansion of Free-Route Airspace
- Seamless FIR boundaries

Cons:

- Slow take-up by some airlines on some city-pairs
- Lack of ATM system automation to support broader expansion
- Change management challenges
- Some airlines still planning incorrectly (eg: FPL using low-level waypoints on STARs which the ATM system detects as an arrival)

FRA Guidance Material:

First draft guidance material available:

- To be submitted as part of this report for AAC review and consideration
- Next version will be updated based on AAC feedback and direction
- IATA will schedule another review meeting with trial Project Control Group late Jan or early Feb 2026
- Final draft for group endorsement by start of Q2/2026.

Future Initiatives for Workstream 4?

- Cross boundary surveillance sharing?
- LR-ATFM (with Workstream ?)?
- What else?