

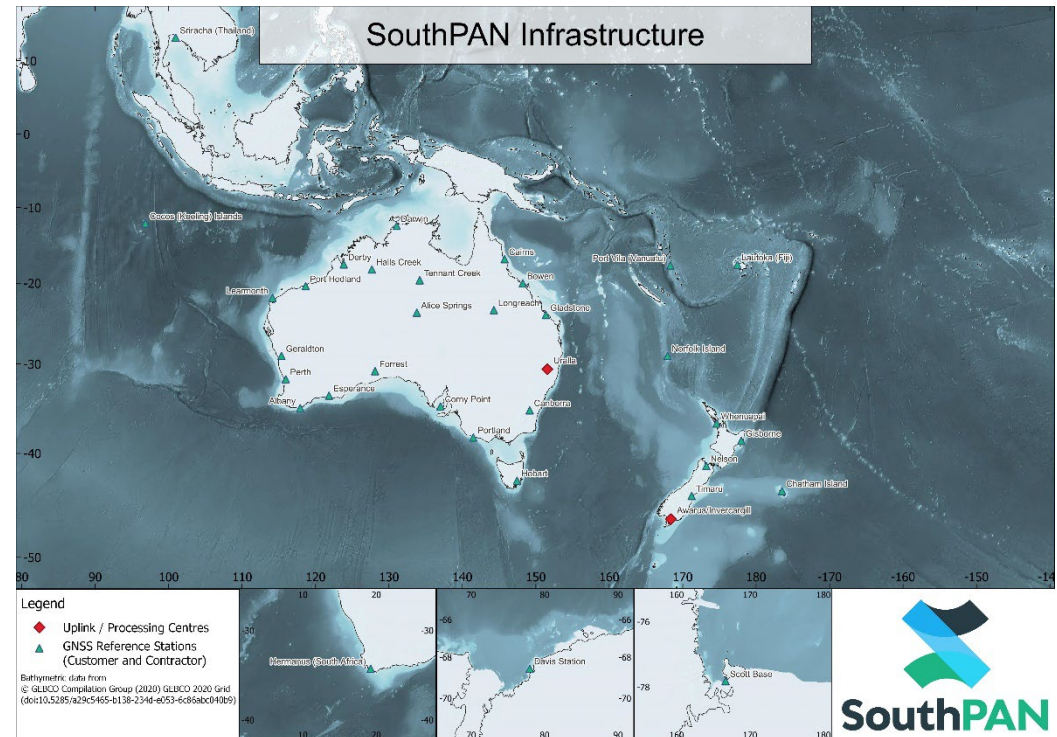


ICAO APAC GBAS/SBAS Implementation Task Force 8

Melbourne, 12 – 14 May 2026

Regulating SouthPAN

- Civil Aviation Authority New Zealand &
- Civil Aviation Safety Authority Australia





Australian Government
Civil Aviation Safety Authority



SouthPAN - agencies

Geoscience Australia (GA) / Land Information New Zealand (LINZ)

- Implementing agencies
- System acquisition, testing, commissioning, and support

Airservices Australia / Airways New Zealand - (ANSPs)

- Aviation industry SBAS service provider
- NOTAM and prediction service

Civil Aviation Safety Authority (CASA) / Civil Aviation Authority New Zealand

- Aviation industry safety regulators

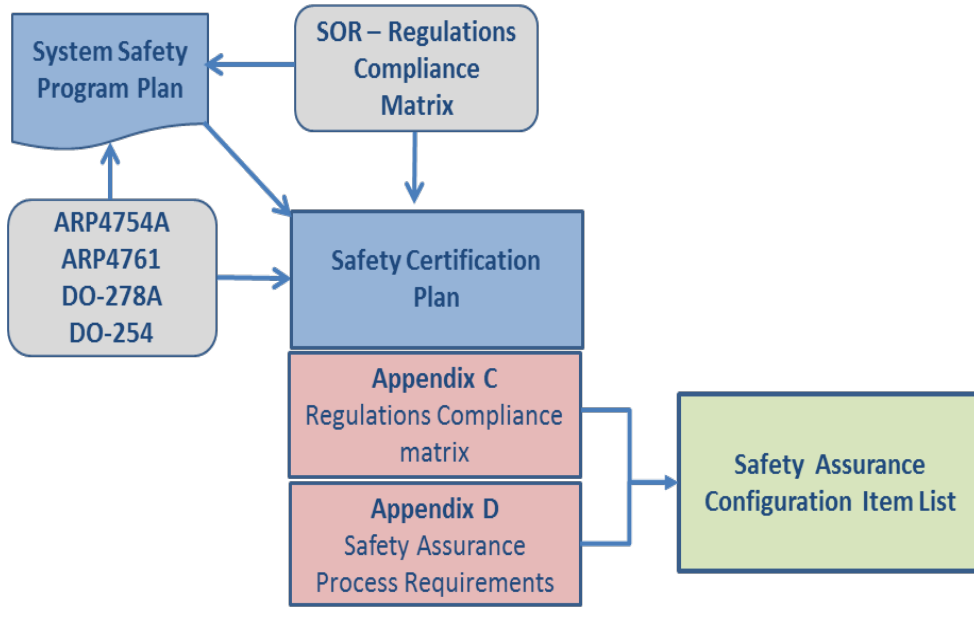
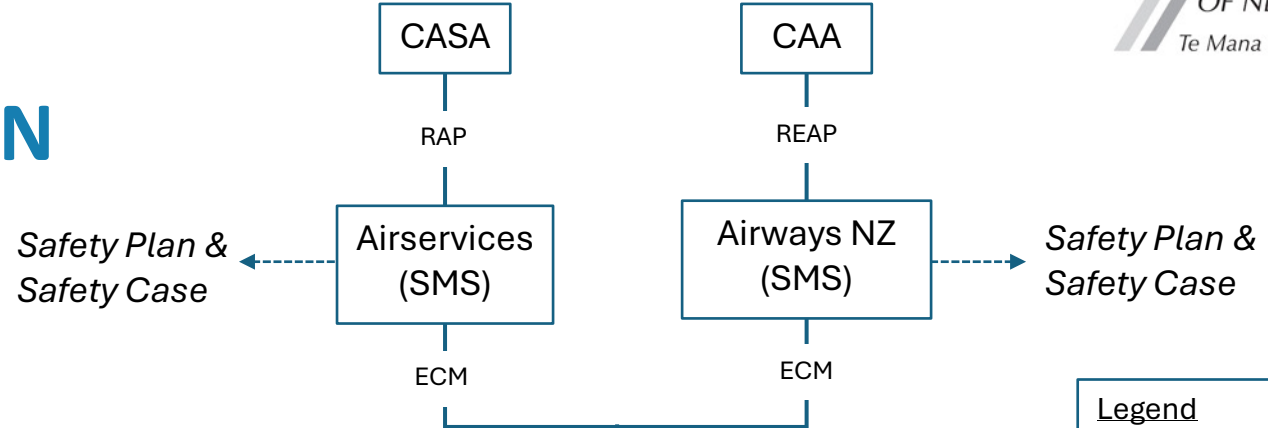


Regulating SouthPAN - Approach

- Harmonise regulatory requirements
 - 4 party meetings (ANSPs and regulators)
 - 6 party meetings (implementing agencies, ANSPs, and regulators)
 - Close collaboration between ANSPs on safety cases to be presented to regulators
 - MOU between regulators to harmonise audits/inspections during operation
- Review existing regulations to determine impact of SBAS operations
 - Aerodrome infrastructure design requirements
 - Pilot training and checking for APV operations
 - Pilots with 2-D instrument rating (avionics automatically selects best approach)
 - Airworthiness specification
 - Procedure validation



Regulating SouthPAN



Legend	
ACP	Aviation Certification plan
ECM	Engineering Coordination Memorandum
FMEAR	Failure Modes & Effects Analysis Report
RAMR	Reliability Availability Maintainability Report
RAP	Regulatory Approval Plan
REAP	Regulator Engagement & Approval Plan
RCM	Regulatory Compliance Matrix
SCP	Safety Certification Plan
SEMP	System Engineering Management Plan
SGP	SouthPAN Geostationary Payload
SSPP	System Safety Programme Plan



Regulating SouthPAN

Safety Certification Plan (SCP)

- Demonstrate compliance to applicable internationally recognized satellite navigation engineering development methods and safety practices meeting Australia and New Zealand governmental regulations and practices
- Minimise chances and effects of misinterpretations of regulatory / assurance frameworks listed in the Regulation Compliance Matrix (RCM) and outline the path to certification

Aviation Certification Plan (ACP)

- Details the planning, conduct, assessment, and control of aviation certification activities
- Outlines the strategy to enable the addition of the SBAS service to the certificates of Airservices Australia and Airways NZ by CASA and CAA NZ, respectively



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Regulating SouthPAN

Regulatory Approval Plan (RAP) – CASA and Airservices Australia

Regulator Engagement and Approval Plan (REAP) – CAA NZ and Airways NZ

- Details the oversight activities and safety artefacts required for SouthPAN implementation



Regulating SouthPAN

Main issues to date - 1

- Meeting the ICAO continuity requirement
 - ICAO Annex 10 Volume I, Chapter 3, Table 3.7.2.4-1
 - States have problems meeting the requirement, also there is no standard method for measuring continuity
 - ANSPs will need to include mitigation measures in safety case if requirement cannot be met by system



Regulating SouthPAN

Main issues to date - 2

- The User Differential Range Error Indicator (UDREI)
 - UDRE is an estimate of the residual error after corrections have been applied
 - Used by avionics to calculate protection levels (HPL, VPL)
 - UDREI range is 0 to 15 (UDREI = 14 – Not Monitored; UDREI = 15 – Do Not Use)
 - Some avionics incorrectly process UDREI = 15 and will not use GNSS satellite in other integrity calculations (e.g. RAIM) – could reduce availability



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→ → → **END** → → →