

Communication Navigation & Surveillance (CNS) Oversight Specialist

Department: Aviation Safety and Security Directorate
Employment Type: Full-Time

About the Role

As a State Aviation Regulator, we seek a Communication, Navigation & Surveillance (CNS) Oversight Specialist to strengthen our oversight and enforcement of safe and efficient CNS operations, including communication systems, radio navigation aids, surveillance equipment, and related infrastructure at aerodromes and en-route facilities. The ideal candidate is a dedicated aviation professional with extensive expertise in local, national, and international regulations to ensure compliance, mitigate risks, and uphold the highest standards of aviation safety and performance. This role is critical in supporting our mission to protect public safety and aligns with ICAO Annex 10 (Aeronautical Telecommunications) Volumes I-V, ICAO Doc 8071 (Manual on Testing of Radio Navigation Aids) Volumes I-III, ICAO Doc 9869 (Performance-based Communication and Surveillance Manual), ICAO Doc 9750 (Global Air Navigation Plan), ICAO Doc 4444 (Procedures for Air Navigation Services - Air Traffic Management), and global best practices for CNS oversight.

Key Responsibilities

- Conduct comprehensive inspections, audits, and surveillance of CNS facilities and operations including communication systems (e.g., VHF/HF voice and data links), navigation aids (e.g., VOR, DME, ILS, GNSS), surveillance equipment (e.g., radar, ADS-B, MLAT), and related providers to ensure compliance with local regulations, ICAO Annex 10 Volumes I-V SARPs, ICAO Doc 8071 testing protocols, ICAO Doc 9869 PBCS requirements, and ICAO Doc 9750 GANP objectives, including approvals for CNS equipment installations, upgrades, and training programs for technical personnel.
- Lead and participate in investigations of serious or critical incidents and accidents related to CNS failures or disruptions, analyze root causes, prepare detailed reports, and recommend corrective actions to prevent recurrence, following ICAO's safety investigation guidance (Doc 9756 and Annex 13).
- Review and assess applications for CNS system approvals, certifications, and modifications; assist the Director of Safety and Security in evaluating equipment specifications, performance data, frequency allocations, and integration procedures for adherence to ICAO Annex 10 Volume V (Aeronautical Radio Frequency Spectrum Utilization), ICAO Doc 4444, and related standards.
- Verify that all CNS operators and maintenance personnel are fully trained and compliant with standards; report instances of non-compliance in areas such as equipment calibration, signal integrity, redundancy measures, or cybersecurity protocols for CNS systems.
- Inspect suspected CNS installations or operations at aerodromes and en-route facilities, coordinate with relevant stakeholders to resolve issues, and ensure proper safety and

performance measures are followed, in line with ICAO Doc 8071 and Annex 10 security provisions.

- Maintain accurate records of CNS applications, correspondence, inspections, and audits; support the Director of Safety and Security in preparing and presenting annual audit/inspection reports.
- Contribute to the development and update of national regulations, standards, and procedures relating to CNS, aligning with ICAO Annex 10 amendments, ICAO Doc 9869, ICAO Doc 9750, and international best practices.
- Perform other related duties, including delivering technical advice, providing training, and supporting regulatory updates, following ICAO guidance (e.g., Doc 10070, 2.2.4).

Essential Requirements

- Bachelor's degree in Electronics Engineering, Telecommunications Engineering, Aeronautical Engineering, or a related technical field.
- Minimum 5 years' progressive experience in CNS operations, maintenance, or regulatory oversight, with at least 3 years in commercial air navigation environments.
- Proven experience conducting audits, inspections, or certifying CNS activities in accordance with ICAO standards.
- Sound knowledge of:
 - ICAO Annex 10 Volumes I-V, including SARPs on radio navigation aids, communication procedures and systems, surveillance systems, and frequency utilization.
 - State regulatory frameworks, international aviation safety law, and safety risk management practices.
 - Installation, testing, calibration, and performance monitoring procedures for CNS equipment, including GNSS, radar, ADS-B, and data links.
- Experience in incident investigation related to CNS operations and infrastructure.
- Familiarity with ICAO safety oversight and compliance frameworks, including SSP and USOAP.

Preferred Qualifications

- Certifications such as ICAO CNS Training, ICAO Aviation Safety Inspector Credentials, or equivalent (e.g., IATA CNS Management or EUROCONTROL CNS courses).
- Experience in risk assessment techniques for CNS systems, such as failure mode analysis, signal interference studies, and cybersecurity evaluations.
- Background working with international organizations or multi-stakeholder environments in CNS operations (e.g., ICAO, EUROCONTROL, or FAA collaborations).
- Proven ability to provide technical training and conduct capacity-building activities in CNS safety and performance.
- Approaches CNS oversight with an effective risk management strategy, considering the specific risk profile.
- Analyzes information critically to achieve consistent and desirable outcomes.
- Needed for performance-based surveillance and GNSS monitoring.

Core Competencies

- Strong understanding of hazard & risk management techniques, including risk assessments for CNS systems, failure analysis, and mitigation strategies, with ability to apply and continuously improve technical knowledge and skills related to CNS operations and safety.
- Ability to assess complex CNS scenarios, analyze multifaceted issues, consider risks, and make informed, timely decisions based on relevant facts while approaching oversight with an effective risk management strategy considering the specific risk profile.
- Excellent communication skills with ability to convey and receive information effectively through oral, written, and non-verbal communication, capable of engaging diverse stakeholders including CNS providers, air traffic services, and airport authorities.
- Understands how different components of CNS management systems interact and function together, with ability to analyze information critically to achieve consistent and desirable outcomes.
- Independently and proactively identifies and addresses issues with meticulous attention to detail for inspections, reporting, and compliance verification, demonstrating resilience under pressure with a proactive attitude towards safety improvements and continuous learning.
- Upholds high ethical standards, demonstrating integrity, transparency, and fairness in all oversight activities, guided by ICAO and international best practices.