



Ground ground mission-critical communication for Air Navigation Service Providers (ANSPs)

Use case

Address your mission-critical network services with Nokia's ground ground communication solution for ANSPs and related stakeholders.

Nokia's solution encompasses an IP/MPLS-based mission-critical network including a managed service either for a domestic or international/regional network covering voice and data communication.

The solution ensures that ANSP legacy services are supported and you are prepared for new requirements that are emerging from future Air Traffic management (ATM) concepts.

Challenges

The need for communication at a domestic and international level for ATM business has become perceptible with the potential withdrawal of point-to-point connections from telecommunications providers, thereby creating a need for an IP-based network for new and emerging ATC applications.

The strategic vision of the International Civil Aviation Organization (ICAO) to achieve sustainable growth of the global civil aviation system that enables airspace users (including aircraft operators) to meet their operational needs with fewer constraints but without lowering safety levels has inevitably created the need for development of ATM networks. This vision requires the application of technology that will enable the transformation of ATM by supporting collaborative decision-making (CDM), dynamic airspace management, strategic conflict management and flexible use of airspace, among other considerations. CNS/ATM systems are crucial components of the transformation drive.

In addition, the primary users of ATM services (the airline industry) demand safe operations and are looking for ways to improve their efficiency. According to IATA, achieving the ICAO vision will result in a wide range of benefits such as safe operations, efficient use of resources, reduction in emissions and overall lowering of operational costs. ANSPs recognize that better communications, navigation and surveillance systems will undoubtedly increase the level of safety. The use of improved data and voice communications services as well as enhanced aeronautical information services combined with precision navigation tools such as Global Navigation Satellite Systems (GNSS) solutions will significantly reduce the hazards the traditional solutions could not tackle. **But this will certainly require a robust and efficient infrastructure to support the emergence of new applications and services.**

How we help you

Some key requirements for ANSPs includes the provision of a solution that meets ANSP safety standards, security and service continuity. It is crucial that operations are protected to the greatest possible degree using a platform with the highest possible resilience to failure and resistance to external interference. Equally important during migration for ANSPs is to ensure that there is a seamless transfer of legacy applications and services to the new operating environment.

“Ensuring the safety of the flying public is our most important job, and one to which we are absolutely committed. We turned to Nokia because of their many years of experience developing and deploying mission-critical networks. The IP/MPLS network provided by Nokia will help us bolster the safety, reliability and efficiency of Switzerland’s air traffic control system today and in the future.”

Dr. Klaus Meier, Technical Director & CIO, Skyguide

Nokia has positioned itself strongly in the transport community with specific focus on the Aviation environment. NOKIA works closely with Airport Authorities and ANSPs on long term partnerships by installing and maintaining the networking infrastructure and applications, enabling airport and ANSP operations in an efficient, secure and safe way.

Nokia's ground ground ANSP communications network solution provides the required protection and resilience to support ATC Safety, security and service continuity requirements. The ground ground solution is composed of an IP/MPLS network and managed services with the following characteristics:

- Where required, parallel separate networks with redundancy
- Internet and extranet access
- Market-leading and award-winning products with industry recognition including ANSP's
- High availability fit for purpose network
- Redundancy and reliability for mission-critical applications
- Design based on open standards for interoperability
- Industry leading solution for legacy ANSP application support
- Mature, scalable and flexible network for future demand
- Predictable and deterministic network design
- Network longevity with longer technology refresh life cycle
- Simplified service provisioning and comprehensive reporting
- Compliance with relevant standards and supporting ANSP safety requirements

How our approach changes the game

Nokia's ground ground solutions to ANSP's provides a different dimension:

- Ground Ground Network:
 - Implemented on highly available and highly secure platforms.
 - Fully standards compliant
 - Highest integration of legacy interface/application support
 - Powerful Network Management Solution
- Managed Services:
 - Innovative business models, pay as you grow—end-to-end solution
 - Services management and customer experience management
 - Time to market, modern technology introduction, skill set management
 - State-of-the-art tools, process and procedures to support managed service approach.
 - Unified management for configuration, policy control, alarm correlation and reporting

Figure 1. Nokia currently provides managed services in over 55 countries.



Nokia, Delivering state of the art services for over 20 years

Why our approach is different

- Tailored technology and services
- Full turnkey end-to-end solution
- Multiple business models to match any market
- High Reliability and Security Hardened IP/MPLS Platform with highest integration of legacy interfaces/applications

How you benefit

- Substantial cost savings in provision of network infrastructure support services
- No need to recruit, contract or manage considerable numbers of network specialist staff
- Better exploitation of technology for business benefit
- Transfer of the risks of technology obsolescence, implementation, integration and availability
- Access to ATC network specialists, technical and IT development resources
- Reduced supplier management and procurement overheads
- Highly reliable and secure ground ground platform that effectively addresses ANSP service continuity



Let us help you

With Nokia ground ground ATM network managed service solution, you will be able meet your national and international commitments/regulations on ATM communication services.

Contact us to learn how our ground ground ATM network service can help you succeed with your communication requirements.

As the specialists in providing technologies and communications, Nokia is committed to meeting industry demands.... every day.

About Nokia

We create the technology to connect the world. Powered by the research and innovation of Nokia Bell Labs, we serve communications service providers, governments, large enterprises and consumers, with the industry's most complete, end-to-end portfolio of products, services and licensing.

From the enabling infrastructure for 5G and the Internet of Things, to emerging applications in virtual reality and digital health, we are shaping the future of technology to transform the human experience.

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