



Air Traffic Management Training: Airspace, Flow Capacity and ANSP Performance



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Introduction:

Air traffic management training on airspace, flow capacity and ANSP performance is a 5-day course for airport, airline operations and air navigation service provider managers that ends with an ATM Performance Review and Capacity Improvement Plan for a case airspace and airport. Delay, fuel burn and lost capacity grow when airspace structure, flow measures and airport planning are managed apart, without shared performance data. Nominees already manage operations that depend on air navigation services and work through case studies built on traffic, delay and capacity data. CoreConcept Training Center delivers this air traffic management course.

Course Objectives:

- Explain how air traffic services, airspace management and air traffic flow and capacity management combine into one ATM system and who provides each service
- Interpret airspace structure and ICAO airspace classes A to G when assessing routes, sectors and terminal areas that serve an airport or airline network
- Judge where performance-based navigation with RNAV and RNP specifications can shorten routes, separate flows and cut fuel burn
- Evaluate demand against declared capacity and select flow measures such as ground delay and departure slots with airport and network partners
- Monitor ANSP performance using delay, capacity and flight efficiency KPIs alongside safety, contingency, technology and environmental factors
- Produce an ATM Performance Review and Capacity Improvement Plan for a case airspace and airport

Target Audience:

- Managers in air navigation service providers responsible for capacity planning, airspace change and performance reporting
 - Airline operations control and network managers responsible for flight planning, slot use and delay recovery
 - Airport managers responsible for runway capacity declarations, traffic forecasts and coordination with air traffic services
 - Managers responsible for ATM technology investment, system transition and digital tower projects
 - Aviation authority and planning managers who oversee air navigation performance targets and airspace development
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Course Outline:

Day 1: ATM System Foundations and the Air Navigation Service Landscape

- Chicago Convention Basis for State Air Navigation Services
- ATM Building Blocks of ATS, ASM and ATFCM
- ATS Unit Roles From Aerodrome Tower to Area Control
- ANSP Ownership Models, Governance and Cost Recovery Arrangements
- ATM Current-State Assessment Using Traffic and Delay Records

Day 2: Airspace Structure, Classification and Navigation Frameworks

- ICAO Airspace Classes A to G and Service Levels
- FIR, Control Area, TMA and Control Zone Structure
- Airspace Management Allocation of Routes, Zones and Flight Levels
- PBN Navigation Specifications Comparing RNAV and RNP Capability
- PBN Airspace Concept Benefits for Route Spacing and Fuel

Day 3: Air Traffic Flow and Capacity Management in Practice

- Demand and Declared Capacity Balancing for Sectors and Airports
- Capacity Drivers Including Runways, Staffing, Sectorisation and Weather
- ATFCM Strategic, Pre-Tactical and Tactical Planning Phases
- Ground Delay Programmes and Departure Slot Regulation Measures
- Airport Collaborative Decision Making Link With Network Flow Data

Day 4: ANSP Performance, Contingency, Technology and Environment

- ANSP Performance KPIs for Delay, Capacity and Flight Efficiency
- ANSP Safety Management Interfaces and Safety Performance Monitoring
- Digital and Remote Tower Concepts for Multiple Aerodrome Control
- ATM Contingency Plans for System Outage and Airspace Closure
- Environmental Efficiency Through Continuous Descent and Direct Routing

Day 5: Case Study for an ATM Performance Review and Capacity Improvement Plan

- Case Airspace and Airport Traffic, Delay and Capacity Pack
 - Bottleneck Analysis Across Sectors, Runways and Flow Regulations
 - Capacity Improvement Options Ranked by Cost and Delay Impact
 - ATM KPI Dashboard With Targets and Stakeholder Review Cadence
 - ATM Performance Review and Capacity Improvement Plan Completion
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Skills You Will Gain:

- Airspace Structure Interpretation
- Navigation Specification Appraisal
- Demand and Capacity Balancing
- Flow Measure Selection
- ANSP Performance Measurement
- ATM Contingency Planning
- Flight Efficiency Analysis
- Capacity Improvement Planning

Why Attend This Course:

- Deliver an ATM Performance Review and Capacity Improvement Plan for a case airspace and airport to the operations director and the ANSP planning unit
- Decide which capacity, airspace and flow measures to request from partners, using delay and capacity evidence instead of anecdote
- Avoid repeated sector overloads, avoidable airborne holding and the fuel cost of inefficient routes by acting on KPI trends early
- Share KPI definitions, bottleneck analysis templates and capacity option scoring sheets with planning and operations colleagues

Conclusion:

Back at work, the participant gives the operations director, the ANSP planning unit and airport and airline partners an ATM Performance Review and Capacity Improvement Plan for the case airspace and airport. Management uses it to agree which capacity measures to fund, which flow and airspace changes to request and which delay and flight efficiency KPIs to track. After the first busy season, the unit should review delay per flight, regulated hours, sector overloads and whether the chosen measures delivered the expected capacity.

Frequently Asked Questions FAQ:

What should participants know before an air traffic management course on airspace, flow capacity and ANSP performance?

Participants should already manage or plan airport, airline or air navigation operations and understand basic flight phases. Bringing a recent delay report, traffic forecast or capacity study helps them apply the case work to their own airspace and airport.

How does air traffic management training differ from airport operations or aviation safety management courses?

It looks at the whole air navigation network: airspace, flow and capacity management and ANSP performance. Airport operations courses focus on stands, turnaround and terminals, while aviation safety management courses focus on hazard logs and reporting schemes.

Why does air traffic flow and capacity management prefer ground delay to airborne holding?

Flow measures hold aircraft on the ground before departure when demand exceeds the declared capacity of a sector or airport. Waiting on the ground with engines off burns far less fuel than airborne holding and keeps controller workload within safe limits.

What do participants take back from the air traffic management and ANSP performance course?

Participants take back an ATM Performance Review and Capacity Improvement Plan for a case airspace and airport, with a bottleneck analysis, ranked capacity options and a KPI dashboard covering delay, capacity and flight efficiency that they can adapt to their own organisation.