Airport Capacity Enhancement: from A-CDM to Performance-Based Airport Management (PBAM)

DATES
13.10 - 15.10.2020 Virtual English
In-house English

Airport capacity shortfalls remain high on every aviation corporate agenda worldwide. While capacity related shortcomings in en-route airspace have been mostly eliminated and upcoming new procedures and separation methods will further enhance capacity, airport operators will face severe challenges in the years to come.

The current unusual circumstances of a global crisis should be used to plan carefully for industry recovery including a paradigm shift to incorporate lessons learned from this period as well as innovative elements.

This training course is designed to enable participants to review their pre-crisis challenges and consider the best ways to approach recovery, identifying opportunities for emerging with a system better than ever. Stepping out of traditional silos and adopting new, holistic thinking, smart investments in future-proof solutions become possible and capacity enhancement and disruption management as well as recovery potential of existing and new procedures and tools can be fully unlocked in a cost-effective way.

As a result of the changes the COVID-19 crisis forced on the way organizations work and conduct their business, corporate thinking has also changed in many respects, including the role of IT and the adoption of efficiency increasing and disruption management technologies and procedures. Leveraging this new view on the world at large, course participants will explore ways to apply it to their particular segment of aviation.

Participants learn about the newest version of Collaborative Decision Making (CDM), surface traffic management, total airport management (TAM), performance-based management in general and how it can be applied to airports through a streamlined effective AOC/APOC. Additionally, all these elements will be placed in the context of crisis recovery planning and unlocking opportunities.

The Virtual Classroom duration of this course duration is 3 days, with 6 hours per day as well as some elements of self-study. The training is designed to be highly interactive with the participants expected to play an active role in the running of the course to allow for all individual backgrounds and specific problem solving.
Course Content

The course contains presentations on all main topics as well as material for self-study, supported by interactive discussions and examples for participants of develop a deep understanding of all new concepts and how they can be applied to facilitate the crisis recovery process.

Course Targets

Participants will learn specifically:

- Why crisis recovery planning should be started early
- Proven capacity benefits of new initiatives & tools and how they fit in the post-crisis scenario
- Characteristics and advantages of the new EASA regulations
- How A-CDM2.0 covers the entire airport and what new opportunities there may be to implement is or to upgrade the original A-CDM system
- Structured methodology when implementing capacity enhancement initiatives & tools in a post-crisis environment
- Why silo boundaries affect investments
- The added value of new a trajectory and process based, service-oriented approach
- How to develop a tailor-made, future-proof and technology agnostic CONOPS that takes into account the impact of the COVID-19 crisis
- Why a structured approach is required when establishing or upgrading AOCC
- What to consider and how to ensure future-proof technology and infrastructure, taking the requirements of the crisis recovery into account
- How to apply the knowledge of A-CDM2.0 and CONOPS modules in the AOCC
- What does TAM consist of
- What does PBAM entail
- How to implement TAM and PBAM in phases to support the crisis recovery

Introduction

- Traffic management at airports: current status, trends and challenges in terms of aircraft and passengers
- The impact of COVID-19
- Turning problems into opportunities

Enhancing capacity safely

- Theory and background
- Comparison of the pre- and post-crisis scenario
- Key capacity improvement initiatives and tools: ACE, A-SMGCS, SMAN, simulation etc.
- Surface traffic management: capacity and safety (focus runway incursion and excursion prevention)
- The regulatory environment: new EASA regulations

A-CDM2.0 – “a new world view” – away with all the silos

- The evolution of traditional A-CDM to A-CDM2.0:
  - A new holistic approach of air traffic management
  - Encompassing both airside and landside
- A process-based approach and service-oriented descriptions:
  - TBO: Trajectory Based Operations, incl. novel elements such as “the 5th dimension” (economic value)
  - The concept of “Passenger Trajectories”
- The need to break down traditional silos in company structures and in operational airport traffic management
  - Breaking up the airside/landside boundary from the traffic management perspective
  - Modernizing processes and services: trajectory- and process-based, service-oriented methodologies
  - Opportunities afforded by the crisis recovery

The way of developing concepts of operation (CONOPS)

- Developing modern concepts of operation (CONOPS): taylor-made future-proof, technology agnostic, supports crisis recovery
- Concept development: “3-tier-approach”: data, business logic and interaction
- Mapping and allocating processes and supporting services
- Methodology for the transfer of concepts to individual locations

AOCC/APOC (Airport Operations Control Centre)

- Basic principles of AOCCs
• Structured approach of establishing or upgrading AOCCs in a post-crisis environment
• Future-proofing technology and infrastructure elements
• How AOCC facilitates the A-CDM2.0 implementation

TAM & PBAM (Total Airport Management & Performance-Based Airport Management)
• Advanced concepts maximising the use of available airport capacity (i.e. “sweating” the airport assets)
• Basic elements of TAM
• Introduction to performance-based airport management (PBAM)
• Structured approach and step-by-step roadmap towards TAM and PBAM implementation

Managing change
• Planning the transition to the new concepts and tools in recovery mode
• Best-practice methodologies