

„Performance Based Navigation (PBN) for ATCos“ Refresher Training



Time of Training	On request
Place of Training	Estonian Aviation Academy / as agreed on
Schedule for Training	Schedule tailor-made
Teaching Methods	Classroom teaching
Language of Instruction	English
Instructor(s)	Experts from French Civil Aviation University
Base of course syllabus	Air Traffic Services curriculum (<i>Registered in EHIS, code 2282</i>)
Volume of Training	
Curriculum group	Transport Services
Price of Training	As agreed on
Target Group	Air traffic controllers, ATM managers and airspace designers
Size of Training Group	10-20 participants
Aim of Training	ICAO DOC 9613: “As end-users of the PBN concept, controllers and pilots are more involved in the navigation application which includes the navigation specification and the navaid infrastructure.” The PBN concept represents a shift from sensor-based to performance-based navigation. Performance requirements are identified in navigation specifications, which also identify the choice of navigation sensors and equipment that may be used to meet the performance requirements. These navigation specifications are defined at a sufficient level of detail to facilitate global harmonization by providing specific implementation guidance for States and operators
Topics of Training	Area Navigation Concept <ul style="list-style-type: none">• Conventional routes vs Area Navigation routes;• Area Navigation definition;• Advantages of Area Navigation;• Area Navigation Method and available sensors;• Waypoints: Fly-by and Fly-over, Presentation of the GNSS Concept <ul style="list-style-type: none">• On-board receiver;• Positioning system (GPS, GLONASS, ...);• Augmentation System (ABAS, SBAS, GBAS) PBN Concept <ul style="list-style-type: none">• Navigation Application;• Navigation Specification (RNAV X, RNPX),• Navaid Infrastructure RNP APCH, RNP AR APCH <ul style="list-style-type: none">• Where?• Presentation of ICAO GNSS Instrument Approach Procedures Classification;• LNAV/ LNAV-VNAV/ LPV Instrument Approach Procedures Types

ATC Impact

The aim of this last operational module is to study from an ATCo point of view the impact of the implementation of the PBN concept and especially:

- Different types of PBN Operations;
- Flight preparation;
- ATC interface;
- Phraseology;
- Speed use;
- Direct route;
- Procedure interruption;
- Feedback.

ATC scenarii

Interactive scenarii to be played individually:

- SID RNAV1;
- STAR RNAV1 and Approach RNAV;
- Non radar Context;
- Vectoring;
- Global loss of GPS signal

Learning outcomes

At the end of this course people involved in PBN operations will be able to understand the PBN concept in its vastness. The training objectives recommended by ICAO for ATCos in DOC 9613 will also be covered

Study materials

Available in Moodle e-learning environment (moodle.eava.ee)

Requirements for

Participation – 100%

Passing the Training

Certificate

Eesti Lennuakadeemia Certificate of Attendance (tõend)

Registration and

Registration and additional information from Karine Mandel,

Additional Information

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