



EASA

European Aviation Safety Agency



ARISE+

Funded by the European Union and implemented by the
European Aviation Safety Agency

Airspace Design Improvements

Anders Hallgren
ARISE+ ATM Expert

Your safety is our mission.

An agency of the European Union





OBJECTIVES

Improve the understanding and use of the ASEAN Sim&Mod function through examples of different airspace design improvement cases, together with a visit to the ATM Research Institute.

Share European experiences on the preparation and conduct of airspace design improvement projects, such as Trajectory Based Operations, the implementation of Free Routes Airspace and other modern airspace design and management concepts and technologies.



Workshop content



Presentations by International organisations.

Introduction of ATMRI and its function
Joint presentation by States and ATMRI on the re-sectorisation work

Ongoing and planned projects done by ATMRI in support of ASEAN airspace re-design



Workshop content



Examples of how the ASEAN Sim&Mod Function can support airspace design experts in ASEAN

Overview of other ATM research work done in ATMRI

Ideas for a way forward for ASEAN Member States to cooperate on region-wide airspace design improvements



ARISE+ added value

Share European experiences and knowledge on the preparation and conduct of airspace design improvement projects

Trajectory Based Operations;
Free Routes Airspace





ARISE+ added value

Other modern airspace design and management concepts and technologies

Remote Tower ops

ATC Centre re-location

TBO 4/D in China



Functional Airspace Blocks



Workshop content



Developments leading up to FRA
Why did we go for FRA
Discussions during the planning of FRA

System area definition - flight plan processing rules -
data exchange between Centers – AIDC enhancements

TBO/4D activities in Europe SESAR projects:

- Airborne/Ground development status - Benefits expected from 4D Trajectory Operations – Challenges
- Next steps



Workshop outcome



Discuss ideas for ASEAN-wide cooperation on the development of Airspace Design Improvement

Seeking the input from the ASEAN experts as to what their priorities are, active participation from int'l experts.



Detailed timing and structure

DAY 1

ICAO views on the importance of airspace improvement projects in ASEAN

- The ICAO ATM Regional Officer to provide the meeting with some aspects related to airspace design and management discussed under the APANPIRG umbrella. Things like airspace design and capacity, service delivery requirements and appropriate airspace classification, Civil/Military cooperation and flexible use airspace; and ATC separation and the use of FLAS .

IATA views on the importance of airspace improvement projects in ASEAN

- A representative from the users will provide the workshop with a short presentation on their views on priorities with regard to airspace design and management in ASEAN.

Status of the ASEAN Sim&Mod function

This is to allow the ATMRI to give us an introduction explaining their functions and and a joint presentation by States and ATMRI on the re-sectorisation work in airspace re-design supported by M&S functions in ATMRI. They will also explain ongoing and planned projects done by ATMRI in support of ASEAN airspace re-design.

Visit to the ATMRI at Nanyang University

Apart from visiting the premises, we will also be provided with examples of how the ASEAN Sim&Mod Function can support airspace design experts in ASEAN, together with an overview of other ATM research work done in ATMRI.



Detailed timing and structure

DAY 2

The introduction and application of Free Routes in Europe

A general presentation on the development of Free Routes Airspace, including a discussion on the developments leading up to FRA and why Europe decided to pursue the implementation of FRA. We will also hear more in detail about the European discussions during the planning of FRA, including issues and challenges faced.

Technical aspects to be considered for FRA implementation

This agenda item is a general discussion on some of the technical challenges faced when implementing FRA, including things like system area definition, flight plan processing rules, data exchange between Centers, and AIDC enhancement to support controllers awareness, as FRA composes random traffic scenarios.

Development and implementation of FRA in the Nordic States and in Germany

Detailed explanation of how it was implemented in these two areas, discussing issues and challenges faced from different aspects, such as operational, technical, regulatory and methodology.

FAB initiatives in Europe

Other modern airspace design and management concepts and technologies



Detailed timing and structure

DAY 3

The concept of Trajectory Based Operations

This will be a presentation on the various TBO/4D activities in Europe SESAR projects, including discussions on Airborne development status, Ground development status, Benefits expected from 4D Trajectory Operations, Challenges, Next steps

TBO/4D in China: I4D China project

An explanation of the project in China run by Airbus on TBO/4D.

Round Table discussions on the priorities of ASEAN

The workshop finishes by a round table discussion led by the ICAO rep and three experts from Europe, seeking the input from the ASEAN experts as to what their priorities are.

Conclusions and agreement on next steps



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