
## FABEC Implementation Phase

# FABEC Airspace Policy

## EC Information

## Annex G

Co-financed by the European Union
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## DOCUMENT SUMMARY

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| **Objective** : The FABEC Airspace Policy is the policy document approved by the [Provisional] FABEC Council, developed for the FABEC Member States to fulfil their obligations under provision of the FABEC Treaty with respect to the design and management of airspace (Art 8 and 9), in line with SES regulation.<br>The FABEC Airspace Policy contributes to the information to be submitted to EC by Member States to demonstrate their compliance with European Commission Regulation (EU) No 176/2011. | |
| **Origin** : Chairman FABEC Airspace Committee (AC) | **Audience** : FABEC Provisional Council, ANSCB, ASB, AFG, European Commission |

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## ATTACHMENTS CONTAINED IN THIS ANNEX

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## 1. BACKGROUND

The FABEC Airspace Policy lies within the regulatory framework set by the SES basic regulations and implementing rules, the FABEC Treaty, EUROCONTROL and ICAO standards.

FABEC States are committed to ensure i.a.:

- the design and management of a seamless FABEC airspace as well as the coordinated air traffic flow and capacity management,
- the development of a common FABEC Airspace Policy in close cooperation with civil and military authorities,
- the design of the structure of the airspace concerned to facilitate defragmentation and dynamic sectorisation,
- the effective and consistent application of the concept of flexible use of airspace,
- the establishment of a common airspace management function and
- the coordination of classification of the various parts of the airspace concerned.

## 2. PURPOSE AND CONTENT OF THE DELIVERABLE

The document determines a framework to steer, monitor and assess FABEC airspace design and management against agreed principles with a view to contribute optimally to FABEC performance.

The scope of this policy comprises the design and modification of airspace structures, including temporary segregated airspace and its booking, ATS routes and airspace classification. It focuses on airspace changes, when they relate to cross-border airspace or, where a State considers that coordination at FABEC level will foster the management of the project, changes relating to TMA of fully coordinated airports or local modifications below FL195 with a significant impact on the FABEC performance. The assessment of needs for airspace changes is conducted within the collaborative decision making process of the Network Manager.

The FABEC Airspace Policy is a reference document for FABEC States airspace and/or supervisory authorities and ANSPs. All FABEC and national airspace design and management projects shall be aligned according to the established rules and procedures set up under the FABEC Airspace Policy.

The Airspace Policy defines also the arrangements with the NM regarding the airspace changes that FABEC intends to implement.

## 3. ATTACHMENT

FABEC Airspace Policy

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# FABEC Airspace Policy

## DOCUMENT SUMMARY


The FABEC Airspace Policy is the policy document approved by the [Provisional] FABEC Council, developed for the FABEC Member States to fulfil their obligations under provision of the FABEC Treaty with respect to the design and management of airspace (Art 8 and 9), in line with SES regulation.
The policy is the reference working document of the Airspace Committee and the Harmonisation and Advisory Committee of the FABEC for FABEC ANSPs when executing operational work. It includes also the principles of participation to the collaborative decision process of the NMF.


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| Origin : FABEC provisional Airspace Committee | Audience : FABEC Council; FABEC Bodies |

**Title** : FABEC Airspace Policy

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## TABLE OF CONTENT

# 1 EXECUTIVE SUMMARY

The Airspace policy document is developed for the FABEC Member States to fulfil their obligations under provision of the FABEC Treaty with respect to the design and management of airspace ( Art 8 and 9). The scope of this policy comprises the design and modification of airspace structures, including temporary segregated airspace and its booking, ATS routes and airspace classification. It focuses on airspace changes, when they relate to cross-border airspace or, where a State considers that coordination at FABEC level will foster the management of the project, changes relating to TMA of fully coordinated airports or local modifications below FL195 with a significant impact on the FABEC performance. The assessment of needs for airspace changes is conducted within the collaborative decision making process of the Network Manager.

In addition to the principles laid down by the applicable SES regulation, the following principles are agreed when considering an airspace change:

1. A performance statement is required on the anticipated performance achievement in capacity, environment and military mission effectiveness;
2. SESAR and/or other related technological developments shall be taken into account at the earliest time possible;
3. Horizontal direct routes (2 D) and optimal vertical profiles (3 D) shall be developed based on aircraft performance to enable improvements of environment through direct routeings from the departure point to the destination, with a longer-term view to time-based operations with minimum delays (4D);
4. Continuous Descent Operations (CDO) and Continuous Climb Operations (CCO) at main TMAs shall be encouraged wherever possible;
5. Airspace structures and their management shall be supported by the implementation of advanced operational systems (AMAN-, DMAN- and XMAN);
6. FABEC airspace structures and sectorisation shall take into account the implementation of Free Route Airspace where it contributes to performance.

The role and interactions in the course of an airspace project between National Airspace Authorities, the Airspace Committee, the ANSPs and users are outlined in a workflow. This aims at facilitating multilateral coordination when required. Required documents to be submitted for approval of an airspace change are mentionned. A process is further defined to settle potential diverging views.

The workplan of the Airspace Committee for the period 2012-2015 is attached to the policy. It contains activities for harmonization of rules and procedures, assessment of airspace and air traffic management bottlenecks, the development of a FABEC Airspace Design Manual and required coordination with ANSPs.

# 2 INTRODUCTION

## 2.1 Overview

In order to achieve the realisation of the Single European Sky (SES), the European Union decided in 2009 that it was necessary to establish Functional Airspace Blocks (FABs), to be implemented by 4 December 2012 that shall meet basic requirements related to airspace design, airspace management, air traffic flow and capacity management and airspace classification (Regulation (EC) 550/2004, Art.9a, amended by Regulation (EC) 1070/2009). As a result, the Treaty establishing the Functional Airspace Block Europe Central (FABEC) was signed by Belgium, France, Germany, Luxemburg, the Netherlands and Switzerland.
The objective of FABEC is to achieve optimal performance in the ATM areas regarding to safety, environmental sustainability, capacity, cost-efficiency, flight efficiency and military mission effectiveness. More precisely, according to the FABEC Treaty, FABEC States are committed to ensure i.a.: the design and management of a seamless FABEC airspace as well as the coordinated air traffic flow and capacity management, the development of a common FABEC Airspace Policy in close cooperation with civil and military authorities, the design of the structure of the airspace concerned to facilitate defragmentation and dynamic sectorisation, the effective and consistent application of the concept of flexible use of airspace, the establishment of a common airspace management function and the coordination of classification of the various parts of the airspace concerned.

This requires a balanced approach to the needs of the stakeholders involved: civil aircraft operators require improved FABEC airspace capacity and airspace organization allowing for improvements of flight efficiency; military operators require adequate areas for training together with an improvement of military mission effectiveness; other airspace users expect to use FABEC airspace without undue restrictions. To meet these user requirements, FABEC States have agreed to adopt the FABEC Airspace Policy.

Based on the FABEC feasibility study and the States Declaration of Intent, FABEC ANSPs identified several cross border airspace re-design projects as a mean to achieve the identified improvements in FABEC airspace on safety, capacity, efficiency, cost-effectivity and military mission effectiveness.

## 2.2 Regulatory Framework

The FABEC Airspace Policy lies within the regulatory framework set by the SES basic regulations and implementing rules, the FABEC Treaty, EUROCONTROL and ICAO standards. The FABEC Performance Plan and the FABEC Governance Manual provide an important framework and guidance. Main reference documents for the FABEC Airspace Policy are listed in annex 1.

In particular, the FABEC Airspace Policy is in line with the airspace planning and design principles listed in Annex I, Part B & C of EC 677/2011.

According to the FABEC Treaty, the airspaces concerned by the FABEC Airspace Policy are the entire Flight Information Regions (FIRs) and Upper Information

Regions (UIRs) of the States as listed in the Article 3.1 of the FABEC Treaty. The boundaries of the FIRs and UIRs are defined under the ICAO's rules. The FIRs and UIRs contain the airspace under sovereignty and under responsibility of the States. This means that, the "airspace concerned" encompasses parts of the airspace over the high seas which are within FIRs and therefore under the responsibility of the respective FABEC States.

FABEC States ability to meet the performance targets agreed upon and outlined in the FABEC Performance Plan is highly dependent on improvements to be achieved in the fields of airspace design and management.

Due to different and diverging rules and procedures applied for airspace design and management of the States and ANSPs, preliminary rules and procedures were agreed for use on a case by case basis to enable the projects to progress.

A harmonized FABEC Airspace Policy shall facilitate the FABEC airspace strategy, airspace design and airspace management even though the implementation falls within the framework of national Law.

## 2.3 Objectives

The document determines a framework to steer, monitor and assess FABEC airspace design and management against agreed principles with a view to contribute optimally to FABEC performance.

The FABEC Airspace Policy is a reference document for FABEC States airspace and/or supervisory authorities and ANSPs. After its approval by the FABEC Council, all FABEC and national airspace design and management projects shall be aligned according to the established rules and procedures set up under the FABEC Airspace Policy ([1]). Furthermore, the FABEC Airspace Committee continuously assesses FABEC airspace performance and developments and approves FABEC airspace changes accordingly.

Based on the FABEC Airspace Policy, FABEC ANSPs shall develop a strategy and working packages for the short, medium and long term for the realisation of optimized airspace design, airspace management and air traffic flow and capacity management. Based on the FABEC airspace strategy the ANSPs will address the required guidance on legal, institutional and financial issues in addition to those described in the Airspace Policy.

These plans shall be approved by FABEC AC.

## 2.4 Tasks and Responsibilities

The Airspace policy document is developed for the FABEC Member States to fulfill their obligations under provision of Art 8 and 9 of the FABEC Treaty.

The FABEC Airspace Policy and revisions thereto are approved by the FABEC Council, according to Art 22.2 of the FABEC Treaty. FABEC States may consult

[1] Airspace Design projects already under development will be taken into account within the framework of the airspace policy, in close coordination with the ANSPs, as long as this process appears as a way to foster FABEC Airspace development

stakeholders before requesting a revision. FABEC Airspace Committee is responsible for the FABEC Airspace Policy document, its further development and periodical review. It is a version controlled document.

Tasks, competencies and responsibilities of the FABEC States Governance organisation related to FABEC airspace design and management are laid down in the State Governance Manual. FABEC States remain responsible to approve FABEC airspace changes for implementation and to implement the approved changes in legal frameworks and legislation.

Revisions to FABEC Airspace Policy annexes will be approved by the FABEC Airspace Committee on grounds of a FABEC Council mandate and notified to the FABEC Council.

FABEC States implement the principles contained in the FABEC Airspace Policy through their national airspace policies and adapt or align national procedures and frameworks for airspace changes through their national authorities and ANSPs .

Requests for revisions shall be addressed to the FABEC Airspace Committee and can be initiated by FABEC States, FABEC Committees and the FABEC ANSP organization. FABEC airspace users apply for revision through their national airspace authorities.

# 3 FABEC AIRSPACE AND AIRSPACE DESIGN (AD)

## General Principles

The FABEC airspace has a broad range of airspace users, airports and airbases that claim their requirements on FABEC airspace. The geographical positioning of airports, airbases and military training areas plays an important role in the further development of the European network. Interferences between user requirements and traffic flows from and to airports create bottlenecks within the FABEC airspace. Each of these bottlenecks could be addressed on an individual basis. Still, most of them have to be regarded as ‘common’ bottlenecks due to similar dynamics in (interfering) traffic flows and air traffic management challenges in different ‘volumes’ of the FABEC airspace.

In order to achieve the performance improvements in safety, capacity, environment and military mission effectiveness, airspace structures and configurations should be established based on the operational characteristics of traffic flows and respond to the requirements of different objectives in that airspace.

The ability to respond to the diversity of civil and military user requirements requires effective, flexibel and dynamic management of airspace configurations through integrated Collaborative Decision Making (CDM) processes at network, regional, national and local level.

Corresponding Airspace Design projects within FABEC should be based on forecasted traffic demand.

The FABEC States recognise the need to prioritise traffic flows from and towards airports to improve the network performance and to provide the ANSPs guidance on the design and management of airspace and the development of air traffic management concepts in order to accommodate the expected demand in air traffic and achieve the required performance improvements.

This requires the elimination of the existing bottlenecks in the FABEC airspace. In order to adress suitable solutions towards these bottlenecks, the FABEC States and ANSPs should focus on an air traffic management concept that resembles specific dynamics in air traffic flows, namely:

- Free route airspace
- Fixed route airspace
- Connectivity between free route and fixed route airspace

### Free route airspace

A specified airspace within which users may freely plan a route betweeen a defined entry point and a defined exit point, with the possibility to route via intermediate (published or unpublished) way points, without reference to the ATS route network, subject to airspace availability. Within this airspace, flights remain subject to air traffic control.

### Fixed route airspace

Within the fixed route airspace, adequate airspace configurations are contained primarily within terminal airspace structures. Changes in this airspace volume are focussed at the optimisation of arrival and departure routes from the perspective of safety, efficiency, and environmental aspects as noise and emmissions. Airspace configurations may be activated depending upon the runway configuration in use at one or more airports.

### Connectivity between free route and fixed route airspace

The seamless connectivity between free route airspace and fixed route airspace is to be assured through adequate air traffic management concepts. In this context, a main focus is to be directed on the connection of arriving and departing traffic flows.

Corresponding arrival and departure management systems of ANSPs should be harmonized and further developed.

### Flexible use of airspace

Airspace reservations (TSAs/TRAs) shall be usable for airspace users according national priorities as determined by management and allocation on a strategic, pre-tactical and tactical level. Airspace configurations will be activated, through a CDM process, depending upon the driving Strategic Objective(s) for a particular geographic area and/or time period.

### London/UK-IR FAB interface

The geographical position of the London TMA and the intensity of the traffic flows arriving to and departing from this TMA shall be incorporated within the European network and further development of the FABEC Airspace. This requires an increased cooperation with the FAB UK/IRL.

## 3.1 Principles applicable to FABEC Airspace Structures

FABEC airspace principles shall overcome divergent rules and procedures in FABEC States and FABEC ANSPs and facilitate the implementation of airspace changes. In order to improve the FABEC performance the FABEC ANSPs will need to develop, validate and implement a FABEC airspace strategy. The FABEC airspace policy provides the framework, requirements and guiding principles in the development and implementation of measures and changes that contribute to the performance achievements.

### 3.1.1 Criteria for the Establishment of Airspace structures or changes

In FABEC the establishment of airspace structures shall be achieved through the consistent and common application and assessment of a set of criteria which allow for transparency in the airspace design and planning process.

### 3.1.2 Airspace Reservation and Restriction

In FABEC, airspace reservations and restrictions shall be established according to the requirements of the following activities:

**Airspace reservations (TSA, TRA, CBA with status of TRA or TSA):**

- For military activities
- For VFR flights above FL 195 (Airspace Planning Manual)
- For other specific activities, required by an Approved Agency (AA), e.g. Flying of Oldtimer Jets, Test flights etc.

**Airspace restrictions (D-, R-, P- areas)**

Danger areas:

For activities requiring a raised awareness of the pilot (e.g. intense flying activity under VFR, special activity by low flying Jet under VFR, Target flights for ground to air simulated exercise, isolated simulated air to ground activities etc.)

Restricted areas:

For activities where the safety of aircraft cannot be achieved by a raised awareness of the pilot (e.g. all types of shooting, intense flying activity not respecting VFR, intense paraglide activity etc.)
Sometimes R areas are used to impose an obligation (e.g. transponder mandatory for VFR to transit)

Prohibited areas:

No fly zone, shall remain a national issue and is mostly connected to security and not to safety goals

### 3.1.3 Airspace Classification

In compliance with EC Regulation730/2006 a common airspace classification C was implemented in Europe above FL 195.
For new FABEC airspace changes a justification for the assignment of an airspace classification shall be part of the airspace change proposal. In the medium term (2015 -2018) FABEC AC will assess the existing airspace classification scheme of FABEC airspaces and propose adjustments to national Airspace Authorities as appropriate.

In the meantime FABEC States shall:

(1) in advance of the Standardized European Rules of the Air (SERA) Part B harmonize the substantive national rules and procedures relevant to airspace classification and apply strictly ICAO classifications;

(2) apply the least restrictive classification possible to airspace needed to assure safety and taking into account specific airspace user requirements.

### 3.1.4 FABEC Airspace Design Principles

Note: The following principles are developed with respect to Annex I of the Commission Regulation (EU) N0 677/2011 of 7 July 2011.

For airspace design purposes, the following principles shall be applicable to any FABEC airspace change as defined in Ch 3.2:

(1.) Airspace design and management shall aim to improve the overall performance of FABEC Airspace in order to meet needs and requirements of civil and military users and thereby contributing to the European route network performance to the largest extent possible;

(1.1) Airspace structure and sector organisation shall facilitate optimal traffic flows and user preferred businesss and mission trajectories;

(1.2) The FABEC airspace design recognises and supports the responsibilities and requirements of Military airspace users. In order that all airspace users gain benefit, military airspace planners shall be part of the planning process. The FABEC airspace developments shall support these requirements through greater flexibility and dynamic planning and use of airspace, the efficient allocation of segregated airspace and associated re-routeing of GAT users.

(2) The FABEC airspace will provide seamless connectivity from the perspective of the airspace users. This requires a seamless connectivity between adjacent and subjacent airspace structures (including terminal airspace, Fixed Route Airspace and Free Route airspace structures) and ATC centres in order to facilitate user preferred business and mission trajectories.

(3) Airspace design shall enable the establishment of sector dimensions regardless of national and organisational boundaries. Traffic flows to or from major hubs/main airports and military requirements shall be supported regardless of national or organisational boundaries.

(3.1) FABEC airspace shall enable the establishment of more horizontal direct routes (2 D) and optimal vertical profiles (3 D) based on aircraft performance to enable improvements of environment through direct routeings from point of departure to the destination based on time-based operations with minimum delays (4D);

(4) The future design of airspace structures concerned shall facilitate defragmentation and dynamic sectorisation;

(4.1) Vertical and horizontal dimenions of sectors and the clustering of sectors (between and within centres) shall be determined based on operational

requirements. Sectors shall be dynamically adjusted to facilitate main traffic flows and user preferred trajectories;

The future dimensions of sectors (between and within centres) or the position of cross border sectors within FABEC airspace shall be based on a performance case, taking into account safety, complexity, capacity and workload at a manageable and safe level.

(4.2) Cross border militairy training areas (CBA) shall be implemented where feasible to enable the establishment of larger areas over land and sea for military training purposes without hampering main traffic flows.The main purpose shall be the assurance of Military Mission Effectiveness (MME) and the demand to 'train as you would fight' while offering better airspace performance for General Air Traffic (see also annex 2);

(4.3) Methods used to delineate FABEC airspace for cross border operations shall be harmonized in order to avoid any discrepancy, misunderstanding or inconsistency in the publication and utilisation of the airspace by the airspace users and Air Navigation Service Providers;

(5.) Military training areas shall allow the establishment of CDR 1 & 2. Initiatives for plannable CDRs shall be coordinated by FABEC ANSPs with the Network Manager for consistency with CDR initiatives in the European Civil Aviation Conference (ECAC) area;

(6.) FABEC airspace design projects shall be developed applying the standards of A RNP. Based on safety assessment results intermediate implementation steps shall be foreseen until full implementation of A RNP;

(6.1 The implementation of A RNP and user preferred trajectories shall be complemented by Continuous Descent Operations (CDO) and Continuous Climb Operations (CCO) at FABEC main TMAs and major airports;

(7.) FABEC airspace structures and their management will support the implementation of advanced operational tools like AMAN-, DMAN- and Cross Center Arrival Management (XMAN) systems by ensuring the establishment of required airspace reconfigurations based on pre-mentioned principles;

(8.) FABEC airspace structures and sectorisation will support the extension of the implementation of Free Route Airspace where it contributes to the performance;

FABEC will consider international developments on the implementation of a common Transition Altitude.

## 3.2 FABEC Airspace Changes

### Definition

“FABEC airspace changes comprise the design and modification of airspace structures (horizontal and vertical delineation), airspace restrictions and reservation, ATS routes, direct routes, Free Route airspace, sector design and airspace classification. The airspace to take into consideration is cross-border airspace as well as, when a State considers that coordination at FABEC level will foster the management of the project, changes related to:

- airspace structure (TMA) of fully coordinated airports, as defined by the European Council regulation (EEC) N 95/93 of 18 January 1993 on common rules for the allocation of slots at Community Airports;
- Local modifications below FL195 and outside TMA fully coordinated airports, with a significant negative impact on the FABEC performance”.

### 3.2.1 FABEC Airspace Change Requirements

(1) A performance statement and impact analysis are required on the anticipated achievement of performance in capacity, environment and military mission effectiveness and shall be included into the FABEC airspace change proposal; adjacent FAB initiatives shall be taken into account, where appropriate. Compliance with these requirements as well as compromises or trade-offs shall be documented in the FABEC airspace change proposal;

(2) Interference of local airspace projects with FABEC airspace projects shall be mitigated through close coordination between FABEC ANSPs and as required between States involved through an agreed phased development and implementation of airspace initiatives. Interferences shall be made visible in the FABEC airspace change proposal. Persisting conflicts of interests shall be referred to the FABEC AC which may seek advice from the Air Navigation Services Consultative Board for a solution. In case no solution can be achieved the case will be submitted to the FABEC Council for decision;

(3) FABEC airspace change initiatives shall be closely coordinated with the Network Manager. This shall be documented in the FABEC airspace change proposal;

(4) SESAR and/or other related technological developments shall be taken into account for FABEC airspace design planning at the earliest time possible. Reference shall be made in the FABEC airspace change proposal.

# 4 Airspace Management (ASM) in FABEC

EUROCONTROL guidelines listed in Annex 1 shall be applied within FABEC. Thereby current differences in the application of the EUROCONTROL FUA concept in FABEC States shall be eliminated through harmonization.

## 4.1 FUA Level 1

FUA Level 1 is a responsibility of FABEC States. FABEC AC is mandated by the FABEC Council to coordinate strategic FUA Level 1 at FABEC Level with respect to design and definition of booking principles.

## 4.2 Airspace Management Principles

(1) FABEC booking principles and priority rules (see annex 3) approved by the provisional FABEC Council shall be the reference document. The CDM principle shall be applied on all levels of ASM and will require close collaboration between FUA level 1 bodies, ANSPs and airspace users. FUA Level 2 is managed at national level.

(2) A consolidated report ([2]) should be established by the joint ASM function as a yearly document for performance monitoring and assessment by FABEC AC. Dedicated KPIs on the anticipated achievement of performance as mentioned in the performance plan will be developed by the AC in cooperation with the Financial and Performance Committee. The performance report will include at least the planned versus non-planned military airspace allocation and the use of the airspace by civil users (i.a. availability and use of CDRs; use of Reduced Coordination Areas, vectoring airspace for civil ANSP's, FRA, etc)

(3) Interference of:

- manageable airspace allocations shall be mitigated according to the procedures laid down in the respective annex of the FABEC Booking Principles and Priority Rules;
- specific short term airspace requests (e.g. special events, airshows, large scale military exercises) with local airspace requests within national boundaries shall be addressed at States level;
- long term airspace requests (i.e. planification more than one year in advance) with FABEC airspace shall be addressed to FABEC AC for coordination.

[2] Report will be prepared by the AC with the support of the FABEC STATES Bureau until an ASM function is established

## 4.3 FABEC Airspace Management Function

A FABEC common civil/military Airspace Management function at pre-tactical level shall be established starting first with a lead AMC for each cross border military training area.

Based on the results of the evaluation on the ATFCM/ASM live trial the FABEC AC, in close cooperation with the FABEC ANSPs, will monitor and advise further developments.

## 4.4 Data Exchange

To create the desired flexibility in the use of airspace it is necessary that the related data exchange of the civil-military pre tactical coordination is unambiguous. The result of the coordination shall be available to all airspace users (civil, military and the General Aviation community).

Therefore States and ANSP shall ensure that systems shall be in place to permit mutual provision of airspace data to allow the real-time activation, deactivation or reallocation of the airspace in all volumes of the FABEC airspace.

# 5 Air Traffic Flow and Capacity Management (ATFCM) in FABEC

The FABEC Treaty in its Article 8.1 requires FABEC States to ensure coordinated air traffic flow and capacity management taking due account of collaborative processes at international level regardless of existing boundaries.

Currently, ATFCM for the FABEC area is provided by the Eurocontrol Central Flow Management Unit (CFMU), in coordination with regional ATFCM units and local Flow Management Positions (FMP) at ACCs/UACs.

FABEC AC will assess the strategic developments at the Network Managing Function (Strategic Plan, Network Operations Plan and European Route Network Improvement Plan) related to ATFCM.

## 5.1 General Air Traffic Flow and Capacity Management Principles

- FABEC States shall ensure a consistent and effective application of ATFCM in FABEC;
- FABEC airspace management shall support the Central Flow Management Unit in the strategic, pre- tactical and tactical phases to resolve capacity shortfalls.

## 5.2 ATFCM Developments

Air Traffic Flow and Capacity Management is highly dependent on a well-functioning Airspace Management function, assuring real time airspace availability and airspace use as a result of civil – military coordination and collaborative decision making (CDM). This requires CDM on a national and FABEC level. between State, ANSP and airspace users The integration of ATFCM and ASM has the potential to supplement a seamless interaction between airspace design, the airspace/route utilisation and capacity/flow optimisation at network, regional and local levels.

As an evolutionary step forward from a common FABEC ASM function, an integrated FABEC ATFCM/ASM function should be established if a significant performance improvement can be demonstrated. Decision on the establishment shall be based on a performance case and a cost benefit analysis.

The results of the ATFCM/ASM live trial will be assessed by the FABEC AC and further ATFCM initiatives will be coordinated with the Network Manager.

# 6 FABEC COORDINATION WITH THE NETWORK MANAGER

The Network Manager will develop the Network Strategy Plan, Network Operation Plan (NOP) and European Route Network Improvement Plan (ERNIP), using a cooperative decision-making process with FABEC States, Functional Airspace Blocks and air navigation service providers as part of Functional Airspace Blocks or individually.

FABEC AC will:

(1) ensure that FABEC States representatives are involved in the cooperative decision making process with the Network Manager in strategic planning, the Network Strategy Plan, the Network Operation Plan and the European Route Network Improvement Plan in a consistent way with the regulation EU (No) 677/2011, Annex 1;

(2) ensure that, prior to implementation, Functional Airspace Block airspace design projects are compatible and consistent with the European Route Network Improvement Plan and are coordinated with those States impacted by them and the Network Manager;

(3) ensure compatibility of FABEC airspace changes and the application of FUA and ATFCM through usage of common FABEC principles and the assessment of FABEC airspace design changes;

(4) closely coordinate with the FABEC member of the Network Management Board in order to assure a common FABEC view incl. military requirements for the Network Operations Plan, the European Network Improvement Plan, the FUA and current ops, and to allow for further development of common airspace design and planning principles including best practises used in FABEC.

# 7 ROLE OF THE FABEC AIRSPACE COMMITTEE

The FABEC Airspace Committee is accountable to the FABEC Council for compliance of FABEC airspace design, management and changes thereto with requirements stemming from the FABEC Treaty, SES regulations and principles agreed upon in the FABEC Airspace Policy.

## 7.1 Airspace Design

FABEC AC shall support FABEC performance by establishing common rules and procedures for airspace. Accordingly FABEC AC will develop a FABEC Airspace Design Manual. (see annex 4).

FABEC AC will assess that airspace change proposals comply with the design principles laid down in this document.

FABEC AC will periodically review airspace bottlenecks within FABEC airspace using existing data of the Network Manager. FABEC AC will, where appropriate, liaise with the Financial & Performance Committee in order to help it determine and implement measures in case of low capacity and performance.

## 7.2 FABEC States Airspace Management

FABEC Airspace Committee is the coordination body at FUA Level 1 tasked to establish common rules as well as booking principles and priority rules for the flexible use of FABEC airspace. Key tasks are to:

(1) define airspace structures and common procedures for the allocation of airspace to airspace users;

(2) assess the yearly FUA performance report and to initiate mitigation measures for negative impacts on FABEC performance;

(3) establish and periodically review a list of airspace management bottlenecks within FABEC airspace or at interfaces to neighbouring FABs hampering optimal flows of GAT while ensuring military mission effectiveness. FABEC bodies concerned will be tasked to develop mitigation measures;

(4) agree on activities requiring airspace segregation and assess the level of risk for other airspace users;

(5) monitor and support the coordination of long term major events such as large scale military exercises, which require additional segregated airspace.

## 7.3 Air Traffic Flow and Capacity Management

FABEC AC shall ensure an efficient and consistent application of air traffic flow and capacity management. FABEC AC will contribute to the optimisation of the European Network usage through the application of a harmonized concept of the enhanced flexible use of airspace and performance improvements of the FABEC airspace organization for en route air traffic flows and air traffic from and to major airports. FABEC AC assesses the results of the ATFCM/ASM live trial and coordinates ATFCM initiatives with the Network Manager.

## 7.4 Harmonization of Rules and Procedures

FABEC AC shall ensure a consistent application of rules and procedures based on the guiding principles provided on Airspace Design, Airspace Management and Airspace Classification. These principles shall be applied on changes in the FABEC airspace.

In case of the existence of current divergences in the application of rules and procedures on airspace issues that are regarded as a bottleneck for performance improvements, FABEC AC shall initiate harmonization by engaging the FABEC Harmonization and Advisory Committee.

Items as a matter of priorty for harmonization will be contained in the FABEC AC Work Plan (see annex 4).

## 7.5 Stakeholder Consultation

Generally, without prejudice regarding stakeholder consultation by national airspace authorities, FABEC ANSPs are responsible to consult stakeholders on airspace changes before requesting the approval of FABEC AC for a FABEC airspace change.

The State Airspace Authority shall ensure consultation of stakeholders at national level as required by national regulations.

FABEC AC will assess stakeholder consultation as part of the approval process of FABEC airspace changes.

## 7.6 FABEC Airspace Change

The FABEC Airspace Committee may define the need for FABEC airspace changes at the request of a FABEC State or by another FAB. FABEC AC holds a list of all proposed FABEC airspace changes (as defined in section 3.2) and will assess the FABEC airspace change request, submitted by ANSPs through the National Airspace Authorities, on compatibility with determined priorities.

The FABEC Airspace Committee approves changes in FABEC airspace and management to the extent this role and responsibility is formally given by the ‘FABEC Council’. The supporting information required prior to approval is available at annex 5.

## 7.7 Coordination with the Network Manager

The FABEC Airspace Committee supports FABEC Member States to fulfil their obligations under Art 10 of Commission Regulation (EU) No 677/2011 by participating in the collaborative decision making of the NM.

Four levels have been identified:

- Identification of bottlenecks and specific airspace changes needs in cooperation with the SC OPS and the NM,
- Definition of a FABEC consolidated view when interfacing with the NM at the institutional level (RNDSG, NetOps, NMB) in cooperation with the FABEC Member States and the ANSPs,
- Management of the FABEC airspace change development in cooperation with the NM,
- Regular informal review of working arrangements and on-going work in order to develop best working practices in line with EU regulations applicable for the Single European Sky.

# 8 FABEC AIRSPACE CHANGE WORKFLOW

## 8.1 Processes of the FABEC Airspace Change Workflow.

The FABEC Airspace Change Workflow consists of five main steps:

- Initiation and acceptance of a FABEC airspace change request,
- Initial development of an airspace change proposal,
- Development of an airspace change until acceptance/approval,
- Implementation of an airspace change,
- Post implementation review of performance and safety.

## 8.2 Roles of the Actors in FABEC Airspace Change Processes.

Needs for a FABEC airspace change can be expressed as follows:

- by the FABEC ANSPs, military authorities, airspace users and the NM via the CDM process of the NM,
- by an airspace user through the consultation conducted by the FABEC AC,
- by the respective national Airspace Authority in response to a national process,
- by the FABEC AC during its continuous monitoring of FABEC Airspace development.

FABEC ANSPs shall:

- develop an initial airspace change proposal for acceptance by the FABEC AC,
- execute an airspace change project after acceptance of the initial proposal,
- consult stakeholders/initiator on the intended airspace change,
- submit required airspace change information to the AC (see annex 5),
- implement the airspace change.

National Airspace Authorities shall:

- take appropriate measures in order to comply to the process,
- assess and approve/disapprove an airspace change request, through the FABEC AC,
- request FABEC ANSPs to submit an initial airspace change proposal for acceptance or request modifications,
- request FABEC ANSPs to execute an airspace change project,
- consult with stakeholders on the intended airspace change if so required by national regulation,
- accept/not accept the results of the airspace change project or require modifications, through the FABEC AC,
- decide on the implementation of the airspace change.

FABEC NSAC shall accept/not accept the safety case or require modifications.

FABEC Fin&Perf Committee shall accept/not accept the performance assessment or require modifications.

FABEC Airspace Committee shall:

- ensure the participation of the FABEC Member States in the collaborative decision making process of the NM,
- collect the airspace design needs,
- assess and approve/disapprove a need expressed by the stakeholder
- accept an initial airspace change proposal or require modifications,
- liaise with the NSAC, or the NSA(s) agreed by the NSAC for obtaining safety approval, with the Fin&Perf Committee for performance assessment as may be necessary to FABEC AC for final approval of the FABEC airspace change,
- approve/disapprove the FABEC airspace study report,
- organise in the post implementation review of performance and safety with all involved parties.

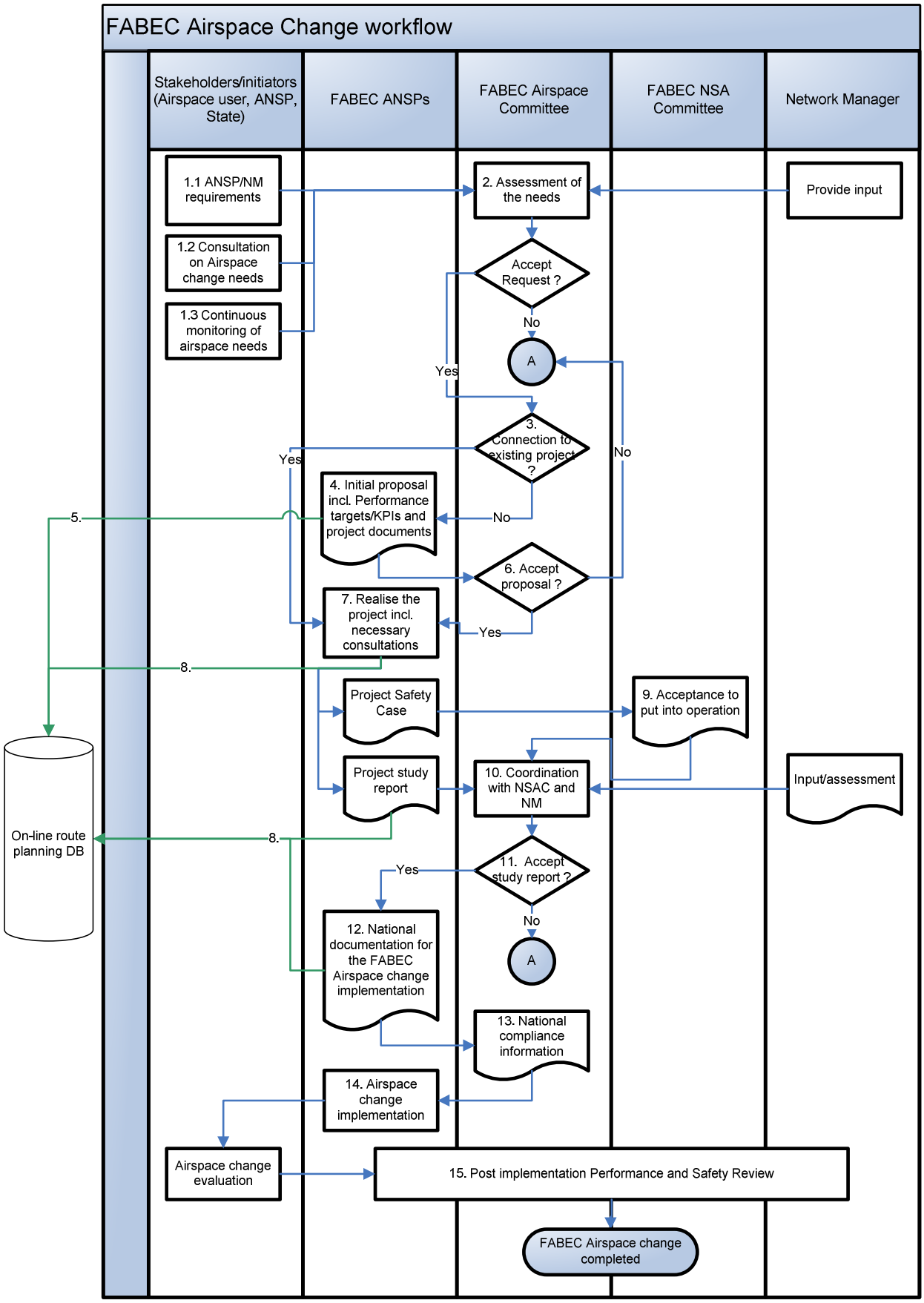
The FABEC Airspace Change Workflow Chart is on next page.

### 8.3 Coordination and Decisions

Coordination between national Airspace Authorities and FABEC AC should be achieved through the national members in the FABEC AC. Decisions on FABEC airspace changes shall be contained in the FABEC AC Meeting Minutes. FABEC AC will meet in two months interval.

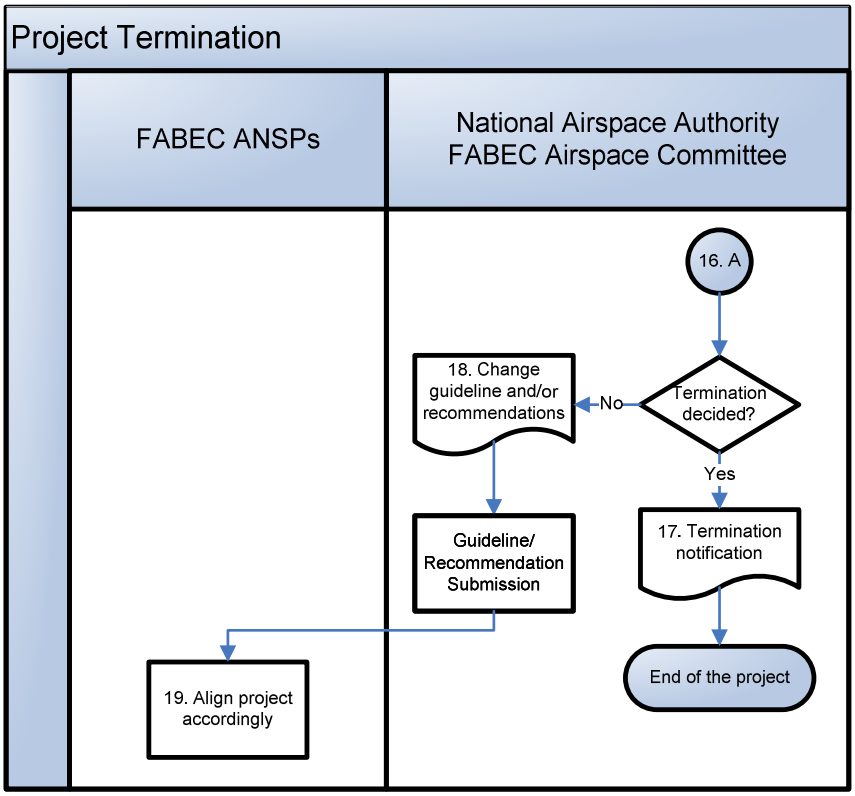
### 8.4 Early Termination of a FABEC Airspace Change Project

National Airspace Authorities and FABEC AC shall be involved if, at any stage of the development, ANSPs intend to terminate a FABEC airspace change project.


FABEC Airspace Change workflow
Stakeholders/initiators (Airspace user, ANSP, State)
FABEC ANSPs
FABEC Airspace Committee
FABEC NSA Committee
Network Manager
1.1 ANSP/NM requirements
1.2 Consultation on Airspace change needs
1.3 Continuous monitoring of airspace needs
2. Assessment of the needs
Provide input
Accept Request ?
No
Yes
A
3. Connection to existing project ?
Yes
No
4. Initial proposal incl. Performance targets/KPIs and project documents
No
5.
6. Accept proposal ?
7. Realise the project incl. necessary consultations
Yes
8.
Project Safety Case
9. Acceptance to put into operation
Project study report
10. Coordination with NSAC and NM
Input/assessment
On-line route planning DB
8.
11. Accept study report ?
Yes
No
A
12. National documentation for the FABEC Airspace change implementation
13. National compliance information
14. Airspace change implementation
Airspace change evaluation
15. Post implementation Performance and Safety Review
FABEC Airspace change completed

| # | Activity | Output |
|---|---|---|
| 1.1 | Requirements identified at FABEC level by the SC OPS and the NM are expressed to the AC | Requirement |
| 1.2 | AC organizes once a year a consultation at FABEC level. Reply is addressed through national process. | Consultation report |
| 1.3 | AC and national authorities make a continuous monitoring of airspace change needs and raise them to the AC. | Requirement |
| 2 | AC makes a compatibility check of the change with the NM and takes position during its next meeting. AC accepts the FABEC scope and its fulfillment to the FABEC Airspace policy.<br>AC is at liberty to call the CM SC OPS and/or the Project Manager to give the adequate information.<br>Decision is sent to the AC members, the CM SC OPS and the Project leader. | Decision list attached to the minutes of the AC meeting |
| 3 | If the requirement is already addressed by an existing project, then the requirement is connected to the existing project otherwise refer to 4. Input of the NM will be required. | |
| 4 | The ANSP(s) develop(s) the initial proposal and the high level plan. CM SC OPS submits selected documents of annex 5 of the FABEC Airspace policy document to the AC. Liaison regarding the Performance and the Safety will be ensured with the F&PC regarding performance and the NSAC regarding safety. | Exhaustive description of FABEC airspace change incl. the location of the airspace (within a State, adjacent to the border, cross-border location),maps, traffic development etc.;<br>Proposal/justification for airspace classification;<br>A high level performance statement, together with dedicated KPIs on the anticipated achievement of performance in terms of safety, capacity, environment and military mission effectiveness;<br>Existing legal/institutional constraints;<br>Statement of compliance with SES, FABEC Treaty, FABEC Airspace Policy requirements, coordination with NM;<br>Timeframe for implementation incl. milestones |
| 5 | A new record is created in the on-line route planning DB either by AC, by FABEC ANSPs or by the NM. The project receives a unique file number. | |
| 6 | AC takes position during its next meeting. Information is sent to all AC members, CM SC OPS and Project Manager | Decision list attached to the minutes of the AC meeting |

| # | Activity | Output |
|---|---|---|
| 7 | Project Manager develops his project. The final file is sent to AC with the approval of the SC OPS. | AD file and Safety case (tous les elements) |
| 8 | The DB is updated based on the information available. The new documents are posted on the DB. | Documents |
| 9 | NSAC reviews the Safety case and delivers its acceptance document to put into operation. A copy is sent to the AC | Acceptance to put into operation form |
| 10 | AC ensures the coordination with the NM in order to get his input. In case of disagreement between the AC and the NM, the AC makes sure that the dialogue with SC OPS, the NM and itself takes place. If no agreement can be found, then the case is put at the agenda of the NMB. | |
| 11 | All the information contained in the documents listed in Annex 5 should be available in the study report.<br>Proposal for aeronautical information should also be made available.<br>On the basis of this report, AC reviews the change and takes decision for implementation. Decision is sent to AC members, the CM SC OPS and the Project Manager. If there are some issues at States level, they are discussed at AC level. AC has 2 to 3 meetings to decide taking into account the approval of the NSAC regarding the safety case. | Decision list attached to the minutes of the AC meeting |
| 12 | The Project Manager ensures that all documentation necessary to implement the change is prepared according to the national rules. The information is provided to the FABEC Member States concerned by the change.<br>States concerned by the change check that the national rules are applied regarding the documentation of the change and gives formal acceptance for implementation to its ANSP. | National document(s) |
| 13 | Having done the national check, each national airspace authority concerned informs the AC that its job is done and gives the official go for implementation to its ANSP.<br>Iteration with NM is ensured by the AC. | National document(s) |
| 14 | ANSPs concerned by the change implement it. | |
| 15 | FABEC AC ensures the post implementation review with the involved parties (NM, NSAC, SC OPS, users) | |




| # | Activity | Output |
|---|---|---|
| 16 | In case of disapproval, the body having rejected the proposal has to decide on the termination of the project. | |
| 17 | When termination is decided, the body notifies the termination to the CM SC OPS | Termination notification |
| 18 | When termination is not decided, the body give guidance and/or recommendations to the CM SC OPS for action | Guidance/Recommendations |
| 19 | The ANSPs take the necessary arrangements in order to take due consideration of the guidance/recommendations formulated | |

# 9 LIST OF ANNEXES

Annex 1 Reference Documents

Annex 2 Agreement on Conditions for Operation of Cross Border Airspaces

Annex 3 FABEC Booking Principles and Priority Rules

Annex 4 FABEC AC Workplan

Annex 5 Required Documents for FABEC Airspace Change Proposals;

Annex 6 Definitions and Abbreviations

# Annex 1 REFERENCE DOCUMENTS

- Applicable SES Regulations, including Regulations (EC 550/2004, 551/2004, Commission Regulations EC (No) 2150/2006, EC (No) 677/2011.
- FABEC States Treaty
- FABEC States Governance Manual
- FABEC 5-Year Work Plan 2011 – 2015
- Agreement between national Supervisory Authorities in FABEC
- SESAR Advanced FUA, Deliverable 07.05.02.D01
- EUROCONTROL:
  - Manual for Airspace Planning, Volume 1,
  - ASM Handbook
  - Specification for the Application of FUA
  - Air Traffic Flow & Capacity Management Strategy
  - Air Traffic Flow & Capacity Management, Evolution Plan for the ECAC States
  - ATFCM User's Manual
  - European ATS Route Network (ARN)
  - The 2015 Airspace Concept & Strategy for the ECAC Area & Key Enablers
  - Generic Military Requirements to be considered when establishing a FAB
  - Advanced FUA 2017 CONOPS
- ICAO Rules and Recommendations
- FABEC Feasibility Study Report, V 2.0
- ERNIP [TBC during AC/1]
- Eurocontrol Strategy [TBC during AC/1]

## Annex 2 Agreement on Conditions for Operation of a Cross Border Airspaces

- **Cross Border ATS Sector:**

  The following main items shall be agreed between ANSPs:

  - Delegation of responsibility for ATS;
  - Provison of alerting services;
  - Application of rules and procedures;
  - Airspace classification;
  - Licensing and training;
  - Handling of State aircraft (GAT/OAT);
  - Coordination and contingency procedures;
  - Publication in AIPs;

- **Cross Border Area:**

  The following main items shall be contained in an agreement between the States concerned:

  - Status (TRA/TSA) and lateral/vertical extension;
  - ATS and tactical services delegation;
  - Alignment of airspace boundaries;
  - Airspace classification;
  - Possibility of subdivision of CBAs and, if yes, subparts description
  - Balanced usage;
  - Alignment of operational procedures between upper and lower airspace;
  - Separation criteria between GAT and OAT flights;
  - Contingency procedures;

**Operational matters shall be contained in Letter of Agreements between operational units concerned.**

# ANNEX 3 FABEC BOOKING PRINCIPLES AND PRIORITY RULES

# ANNEX 4 FABEC AC WORKPLAN 2012-2015

The Airspace Committee organizes its work through the following workplan, which will be updated on a regular basis. It comprises items to be harmonized in priority, as well as rules and procedures in support of such harmonization. During the first year of work, some institutionnal aspects will also be adressed.

**Harmonization:**

- Based on the FABEC Airspace Strategy, the FABEC AC will determine in close cooperation with the NM the required measures in order to facilitate the identified performance improvements
- FABEC AC will assess rules and procedures for design and spacing of Air Routes and training areas especially in view of the advantages to apply RNAV and in the medium to long term A RNP.
- FABEC AC will assess the FUA implementation at national level and the need of further harmonization within the frame of CBA projects.

**Documentation:**

- drawing a list of bottlenecks to deal with in priority
- developing a FABEC Airspace Design Manual in close cooperation with the FABEC ANSPs.
- developing templates for airspace change request

**Institutionnal:**

- Agreement with the Network Manager on strategic airspace issues/matters
- Establishment of the coordination with the FABEC representative in the Network Management Board
- Establishment of the cooperation with the FABEC ANSP organization and airspace users in the FABEC airspace change process
- Establishment of the cooperation with other FABEC Committees

# ANNEX 5 REQUIRED DOCUMENTS FOR THE APPROVAL OF A FABEC AIRSPACE CHANGE PROPOSAL

The National Airspace Authorities concerned will assess and accept a FABEC airspace change proposal. After acceptance of the change FABEC AC will receive a summary of the national assessment - supported by a safety approval of the FABEC NSAC and a performance assessment by the Fin&Perf Committee - for final examination and approval.

**FABEC ANSPs submit the following documents for approval of a FABEC airspace change to related National Airspace Authorities:**

1. Exhaustive description of FABEC airspace change incl. the location of the airspace (within a State, adjacent to the border, cross-border location),maps, traffic development etc.;
2. Proposal/justification for airspace classification;
3. Statement on the achievement of operational and/or user requirements ;
4. Safety case;
5. A performance statement, together with dedicated KPIs on the anticipated achievement of performance in terms of safety, capacity, environment and military mission effectiveness;
6. FABEC Performance analysis regarding each individual AD project using the AFG/PMG methodology;
7. Existing legal/institutional constraints;
8. Statement of compliance with SES, FABEC Treaty and FABEC Airspace Policy requirements;
9. Stakeholder consultation report (if a responsibility of ANSPs) consisting of: Consultation documents made available to stakeholders; Summary of consultation results; stakeholder contributions, proposals taken into account and denied; after consultation communication with stakeholders.
10. Connectivity with the European Route Network and other FABs;
11. Coordinated plan for the implementation related to other FABEC and/or local projects;
12. Timeframe for implementation incl. milestones;
13. Implementation risks and mitigation measures.

**For the establishment or change of airspace reservation (reserved/segregated airspace) the following additional information is needed:**

- Classification of the airspace within which the airspace reservation will be implemented;

- Airspace status (reserved, segregated);
- Associated altitude and / or flight level blocks;
- Impact of the airspace reservation on the current airspace structure;
- Periods of activity taking into consideration the national holidays of the States concerned;
- Activation/deactivation procedures, relationship with ACC(s) concerned;
- Control procedures, including type of flight (VFR, IFR), SSR code allocation and ATC and/or Air Defence procedures related to the area for flights in evolution, transiting and entering/exiting;
- Separation criteria between traffic inside the airspace reservation and transiting and /or circumnavigating traffic;
- Airspace users allowed to request and use the airspace reservation;
- ANS providers and Air Defence (AD) units allowed to delineate and to control, if required, the airspace reservation;
- Mandatory ATS to be provided;
- Mandatory coordination process, both national and international in the case of locations adjacent to or across a national border;
- Mandatory coordination means.

## ANNEX 6 DEFINITIONS AND ABBREVIATIONS

### Definitions

Airspace Classification

'Airspace classification' means the classification of airspace into air traffic services airspaces of defined dimensions, alphabetically designated, and within which specific types of flights may operate and for which air traffic services and rules of operation are specified; air traffic services airspaces are classified as Class A to G as defined by Chapter 2, paragraph 6.1. of Annex 11 (3) to the Chicago Convention on International Civil Aviation. (EC 730/2006)

Airspace Design

'Airspace Design' means a process to contribute to the achievement of network related performance targets and to cater for airspace users' needs as well as to ensure or increase the established safety level and increase the airspace capacity and environmental performance through the development and implementation of advanced navigational capabilities and techniques, improved route networks and associated sectorisation, optimised airspace structures and capacity enhancing ATM procedures. (EC 677/2011)

*The term "FABEC airspace design" used in the FABEC Airspace Policy comprises the design and modification of airspace structures (horizontal and vertical delineation), airspace restrictions and reservation, ATS route and sector design and airspace classification.*

Airspace Management

"In the context of the FUA Concept, airspace management is a generic term covering any management activity at the three Strategic, Pre-tactical and Tactical Levels, provided for the purpose of achieving the most efficient use of airspace based on actual needs and, where possible, avoiding permanent airspace segregation". (ASM Handbook)

*The term "FABEC airspace management" used in the FABEC Airspace Policy comprises both, Airspace Management (ASM) and Air Traffic Flow and Capacity Management (ATFCM).*

Airspace Reservation

"Airspace Reservation is a defined volume of airspace temporarily reserved for exclusive or specific use by categories of users". (EC 677/2011)

Airspace Restriction

"Airspace restriction" means a defined volume of airspace within which, variously, activities dangerous to the flight of aircraft may be conducted at specified times (a 'danger area'); or such airspace situated above the land areas or territorial waters of a State, within which the flight of aircraft is restricted in accordance with certain specified conditions (a 'restricted area'); or such airspace situated above the land

areas or territorial waters of a State, within which the flight of aircraft is prohibited (a 'prohibited area'); (EC 677/2011)

Airspace structure

'Airspace structure' means a portion of airspace or a route created to provide ATS or to regulate access and which is described in the AIPs.

Airspace structures are divided in 3 categories:

- Airspace for ATS provision:
  - Flight information region (FIR);
  - Upper information region (UIR);
  - Control region (CTR);
  - Control area (CTA) : terminal area (TMA), airway (AWY), upper traffic area (UTA);
  - ATS route.
- Restricted airspace: restricted area (R), dangerous area (D), prohibited area (P).
- Airspace used for the application of FUA concept:
  - Conditional route (CDR) ;
  - Temporary reserved airspace: temporary segregated airspace (TSA), temporary reserved airspace (TRA), cross border area (CBA).

Air Traffic Flow Management

'Air traffic flow management' means a function established with the objective of contributing to a safe, orderly and expeditious flow of air traffic by ensuring that ATC capacity is utilised to the maximum extent possible, and that the traffic volume is compatible with the capacities declared by the appropriate air traffic service providers". (EC 549/2004)

Air Traffic Flow and Capacity Management

"ATFCM is a service that is enhancing ATFM with the objective of managing the balance of demand and capacity by optimizing the use of available resources and coordinating adequate responses, in order to enhance the quality of service and the performance of the ATM system". (ATFCM User's Manual)

Enhanced Flexible Use of Airspace (EFUA)

"ASM Directions of Work 2012 – 2017 drafted by EUROCONTROL is a generic view of what is seen as the FUA environment in 2017. It looks at the 2017 ATM environment from the perspective of the FUA Concept. It is a realistic conceptual vision of wider collaborative processes between the ASM, ATFCM and ATS partners that should provide for further short- and medium-term enhancement of the Flexible Use of Airspace. It is based on enablers developed within preceding ATM related programs, projects and activities, such as the DMEAN Framework Programme, the ASM Improvements Initiative and the regulatory enablers implemented through the SES II Package. The short term initiatives are catalogued under "Enhanced FUA", while the medium term will be continued under SESAR". (ECTL, MILHAG, 05/2011)

Flexible Use of Airspace

“Flexible Use of Airspace (FUA) Concept is based on the fundamental principle that airspace should not be designated as either pure civil or military airspace, but rather be considered as one continuum in which all user requirements have to be accommodated to the extent possible”. (ASM Handbook)

Route Network

“A network of specified routes channeling the flow of general air traffic as necessary for the provision of air traffic services."(EC 549/2004)

Temporary Reserved Area

“Temporary Reserved Airspace (TRA) is a defined volume of airspace normally under the jurisdiction of one aviation authority and temporarily reserved, by common agreement, for the specific use by another aviation authority and through which other traffic may be allowed to transit, under ATC clearance.

*In the context of the FUA Concept, all TRAs are airspace reservations subject to management and allocation at ASM level 2”.(ASM Handbook)*

Temporary Segregated Area

“Temporary Segregated Area (TSA) is a defined volume of airspace normally under the jurisdiction of one aviation authority and temporarily segregated, by common agreement, for the exclusive use by another aviation authority and through which other traffic will not be allowed to transit.

In the context of the FUA Concept, all TSAs are airspace reservations subject to management and allocation at ASM level 2”. (ASM Handbook).

## Abbreviations

| | |
|---|---|
| AC | (FABEC) Airspace Committee |
| ACC | Area Control Centre |
| AD | Airspace Design or Air Defence |
| AIP | Aeronautical Information Publication |
| AMAN | Arrival Management(system) |
| AMC | Airspace Management Cell |
| ANS | Air Navigation Services |
| ANSCB | Air Navigation Services Consultative Board |
| ANSP | Air Navigation Service Provider |
| AO | Aircraft Operator |
| ARN | (European) ATS Route Network |
| ARNP | Advanced Required Navigation Performance |
| ASM | Airspace Management |
| ATC | Air Traffic Control |
| ATM | Air Traffic Management |
| ATMNF | ATM Network Functions |
| ATFM | Air Traffic Flow Management |
| ATFCM | Air Traffic Flow and Capacity Management |
| ATS | Air Traffic Services |
| AWY | Airway |
| | |
| CBA | Cost Benefit Analysis or Cross-Border Area |
| CBO | Cross Border Operations |
| CCO | Continuous Climb Operations |
| CDO | Continuous Descent Operations |
| CDM | Collaborative Decision Making |
| CNS | Communication, Navigation, Surveillance |
| CDR | Conditional Route |
| CFMU | (European) Central Flow Management Unit |
| CIV | Civil |
| CONOPS | Concept of Operations |
| CTA | Control Area |
| CTR | Control Zone |
| | |
| D(area) | Danger Area |
| DFL | Division Flight Level |
| DMAN | Departure Management(system) |
| | |
| EATMN | European Air Traffic Management Network |
| EC | European Commission |
| ECAC | European Civil Aviation Conference |
| ECTL | EUROCONTROL |
| ERNIP | European Route Network Improvement Plan |
| EU | European Union |
| | |
| FAB | Functional Airspace Block |
| FABEC | FAB Europe Central |
| FABEC ANSPs | FABEC Civil and Military Air Navigation Services Providers |

| | |
|---|---|
| FAB IR | FAB Implementing Regulation |
| FIN | Financial |
| FIR | Flight Information Region |
| FL | Flight Level |
| FMP | Flow Management Position |
| FRA | Free Route Airspace |
| FTS | Fast Time Simulation |
| FUA | Flexible Use of Airspace |
| GAT | General Air Traffic |
| HAC | (FABEC) Harmonisation & Advisory Committee |
| HLIB | High-Level Implementation Board |
| HR | Human Resources |
| ICAO | International Civil Aviation Organisation |
| IR | (SES) Implementing Regulation |
| LoA | Letter of Agreement |
| KPI | Key Performance Indicator |
| MIL | Military |
| NF | Network Functions |
| NM | Network Manager |
| NMF | Network Management Function |
| NOP | Network Operation Plan |
| NSA | National Supervisory Authority |
| NSAC | (FABEC) NSA Committee |
| OAT | Operational Air Traffic |
| P(area) | Prohibited Area |
| PERF | Performance |
| PFC | Provisional FABEC Council |
| PRTS | Prototype Real-Time Simulations |
| R(area) | Restricted Area |
| RNAV | Area Navigation |
| RNP | Required Navigation Performance |
| RTS | Real Time Simulation |
| SERA | Standardized European Rules of the Air |
| SES | Single European Sky Regulation (Packages I + II) |
| SESAR | SES Air Traffic Management Research |
| TMA | Terminal Airspace |
| TRA | Temporary Reserved Airspace |
| TSA | Temporary Segregated Airspace |

| | |
|---|---|
| UAC | Upper Area Control Centre |
| UIR | Upper Flight Information Region |
| XMAN | Cross Center Arrival Management System |