FABEC Implementation Phase

FABEC arrangements with NM

EC Information

Annex H

Co-financed by the European Union
Trans-European Transport Network (TEN-T)

DOCUMENT SUMMARY

Objective	Provide required evidence when establishing FABEC		
Origin	Chairman NSA Committee (NSAC)	**Audience**	FABEC Provisional Council, ANSCB, ASB, AFG, European Commission
Title	EC Information Annex H		
Reference	FABEC_AFG_EC Information_Annex H_v1-0		
Version	1.0	**Date**	11.04.2012
Status	☐ Draft ☑ Released	**Classification**	☐ Public ☑ FABEC limited ☐ Addressees limited

DOCUMENT CHANGE RECORD

Version	Status	Date	Reason for changes	Author of changes
0.1	Draft	07.12.2011	Template	AFG
1.0	Final	11.04.2012	Document completed	AFG

APPROVALS

Name: Sébastien Travadel
Function: Chairman Airspace Committee
Date: 11/04/2012
Signature

QUALITY CONTROL

Name: Manuel De Klerck
Function: AFG Quality Manager
Date: 12/4/12
Signature

ATTACHMENTS CONTAINED IN THIS ANNEX

ID	Origin	Status	Version	Date	Title
H.1	Airspace Committee	Final	1.0	21.03.2012	State Arrangements with NM
H.2	SC OPS	Final	1.1	11.04.2012	FABEC ANSP Concept on operational working arrangements for Network Management Functions

1. BACKGROUND

A Commission Regulation on Network Management Functions has been adopted by the SSC in February 2011.

FABEC has to be able to cope at FAB-level with:

- European Network Design;
- European Network Management.
  (including planning and operational activities for European Air Traffic Flow Management)

Recent events also led to the allocation of a responsibility for the Network Management function to respond to crisis situations affecting aviation and to coordinate the management of mitigating measures at a regional (or FABEC) level.

Working arrangements for “cooperative decision making” have to be agreed at FABEC level for the above functions and responsibilities. A close cooperation between the Functional Airspace Block and the Network Manager for e.g. strategic planning and tactical daily flow and capacity management is required. Functional Airspace Blocks have to formulate consolidated views related to the network functions.

The definition of such arrangements needs a FABEC OPS level authority which assumes responsibility for Airspace Design, Airspace Management, Air Traffic Flow Management and Crisis Management at FABEC level. To be successful in the 3 areas also requires close cooperation between civil and military FABEC partners in all operational working and consultation arrangements. FABEC Member States remain responsible for the approval and establishment of the structures for the airspace under their responsibility. A collective responsibility is assumed by the Airspace Committee under the FABEC Council.

FABEC also has to be organised to support the monitoring task of the Network Manager by providing requested data.

2. PURPOSE AND CONTENT OF THE DELIVERABLE

In order to comply with NM arrangements, FABEC has defined two separate but complementary streams: one at States level, another at ANSPs level.

States have integrated the coordination with the NM in their Airspace Policy document considering the monitoring of airspace change in close cooperation with the central European function, see Attachment 1, which provides an extract of the relevant information from the Airspace Policy.

In addition, FABEC has defined ANSP Governance Arrangements allowing representation at FABEC level in the aforementioned operational areas. FABEC also defined internal FABEC processes ensuring that a common FABEC position on behalf of all civil and military ANSPs can be established. Both are documented in Attachment 2.

3. ATTACHMENTS

Att.1: State Arrangements with NM

Att. 2: FABEC ANSP Concept on operation working arrangements for Network Management Functions

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FABEC Implementation Phase
States Arrangements with NM

Attachment H.1

Co-financed by the European Union
Trans-European Transport Network (TEN-T)

DOCUMENT SUMMARY

Objective : *This document describes the arrangements of the FABEC States with the Network Manager (NM). It is an extract from the Airspace Policy document.*	
Origin : *Airspace Committee*	**Audience** : *FABEC*

Title : *States arrangements with NM*
Reference : *FABEC_AFG_States_arrangement_NM_AttH1*

Version : 1.0	**Date** : *21.03.2012*	**Status** : ☐Draft ☑ Released	**Classification** : ☐ Public ☑ FABEC limited ☐ Addressees limited

DOCUMENT CHANGE RECORD

Version	Date	Reason for changes	Author of changes
0.1	9.03.2012	Initial draft	Mathieu Pleyers
1.0	21.03.2012	Approved version CM AC	Mathieu Pleyers

1 COORDINATION WITH THE NETWORK MANAGER

The FABEC Airspace Committee supports FABEC Member States to fulfill 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.

2 FABEC AIRSPACE CHANGE WORKFLOW

2.1 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.

2.2 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.

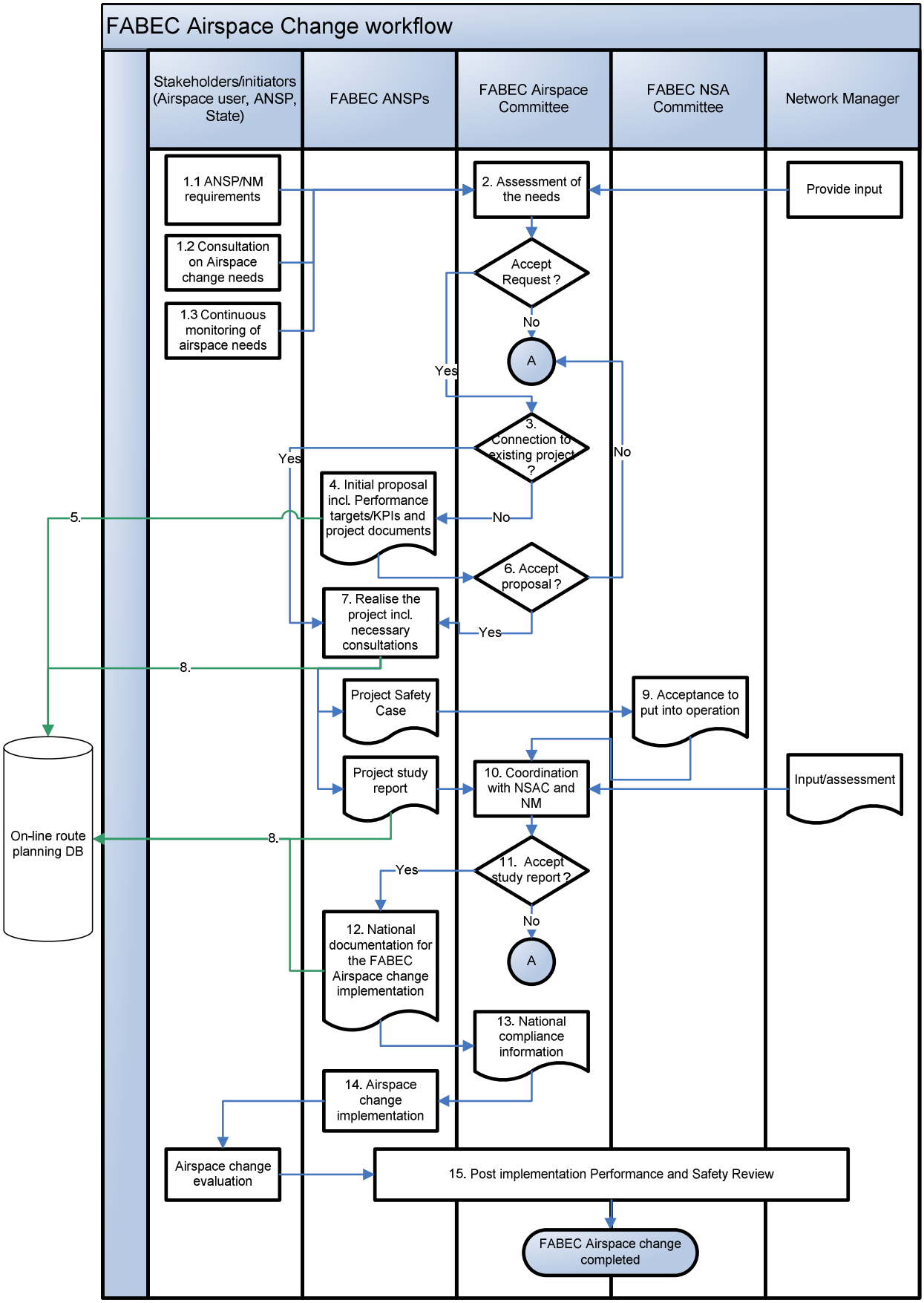
The FABEC Airspace Change Workflow Chart is on next page.

2.3 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.

2.4 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
A
Yes
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
12. National documentation for the FABEC Airspace change implementation
A
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. AC is at liberty to call the CM SC OPS and/or the Project Manager to give the adequate information. 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.; Proposal/justification for airspace classification; 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; Existing legal/institutional constraints; Statement of compliance with SES, FABEC Treaty, FABEC Airspace Policy requirements, coordination with NM; 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
7	Project Manager develops his project. The final file is	AD file and Safety case (tous

#	Activity	Output
	sent to AC with the approval of the SC OPS.	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. Proposal for aeronautical information should also be made available. 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. 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. 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)	

FABEC Implementation Phase

FABEC ANSP Concept on operational working arrangements for Network Management Functions

EC Information

Attachment H.2

Co-financed by the European Union
Trans-European Transport Network (TEN-T)

DOCUMENT SUMMARY

Objective:	Describe the arrangements between the Network Manager and FABEC for the European Network Design, Network Management and crisis management. FABEC ANSP governance arrangements allowing representation at FABEC level on these operational areas. Develop internal FABEC process(es) ensuring that a common FABEC position can be defined on all relevant operational areas.
Origin : DFS	**Audience** :SC OPS

Title :	Operational working and consultation arrangements for Network Management Functions				
Version :	1.1	**Date** :	11.04.2012	**Status** :	released
Reference :	FABEC ANSP concept on ops Working Arrangements for NMF v1.1 released.docx				

DOCUMENT CHANGE RECORD

Version	Date	Reason for changes	Author of changes
0.1	12.07.2011	First Draft	S. Hain, K. Wester
0.15	01.08.2011	Second Draft	S. Hain, K. Wester
0.35	17.10.2011	Third Draft with input from first face to face meeting	S. Hain, K. Tselepi
0.38	25.11.2011	Addition of working arrangements	S. Hain
0.40	14.12.2011	Comments from TF meeting no.3 and merge D1+D3	K. Tselepi
0.45	20.12.2011	Comments from TF meeting no 4	S. Hain, K. Tselepi
0.71	20.01.2012	Text detailed	K. Tselepi
0.8	10.02.2012	received comments included	K. Tselepi
0.9	24.02.2012	TF member review	K. Tselepi
0.95	07.03.2012	TF final review to be confirmed in Telco on 13.03.2012	M. Jung
0.99	13.03.2012	final comments of TF members included, version submitted to SC OPS	K. Tselepi
1.0	22.03.2012	Endorsement SC OPS	K. Tselepi
1.1.	11.04.2012	Feedback SPG from 04.04.12 included	K. Tselepi

Executive Summary

Commission Regulation (EU) 677/2011 details the rules for implementation of the air traffic management network functions as defined in article 6 of regulation (EC) 551/2004 and concern Functional Airspace Blocks:

1. European Network Design
2. European Network Management (including planning and operational activities for European air traffic flow management)

Beyond that the regulation comprises the allocation of a responsibility for the Network Manager to respond to crisis situations affecting aviation and to coordinate the management of mitigating measurements with a regional level.

The Network Management Functions Regulations orders for Functional Airspace Blocks to formulate consolidated views related to the network functions. Of equal importance is the FAB Regulation which provides for a FAB to be implemented on information on arrangements of FABEC with the Network Manager.

With the above mentioned Regulations in force FABEC coordination and common positioning is becoming necessary from the start on numerous operational issues such as strategic planning, ATFCM and ASM, European Route Network improvements, Airspace Design projects, and FAB operational performance. FABEC ANSP operational partners are required to implement coordination processes within FABEC.

The concept focuses on the working and consultation arrangements for the operational area of interest between FABEC ANSPs and Network Management Functions. It comprises

- An Arrangement between the Network Manager and FABEC for Network Design, Network Management and Crisis Management;
- FABEC ANSP Governance Arrangements allowing representation at FABEC level on these operational areas;
- Internal FABEC processes ensuring that a common FABEC position can be defined on all relevant operational areas. A foster ANSP must support these processes during the evaluation phase in order to involve all ANSPs to improve the overall performance of FABEC when the improvement has been demonstrated

FABEC ANSPs are obliged to implement these coordination processes within their organizations to ensure a FABEC coordinated position in the working arrangement of the NM whenever possible. They will apply this concept in their cooperation for FABEC in order to fulfil provisions of NMF IR and FAB IR as stated above. This may require active change management processes for FABEC ANSPs. As the relation with the NM will evolve over time the permanent monitoring and validation of the procedures in this concept has to take place.

An agreement specifying further details for the operational working arrangements will be laid down in a specific arrangement between NM and FABEC in a mutual support aiming to develop measures that will secure FABEC performance achievements.

TABLE OF CONTENTS

1 INTRODUCTION

1.1 Purpose / Objective

On 7 July 2011 Commission Regulation (EU) 677/2011 laying down detailed rules for the implementation of air traffic management (ATM) network functions and amending Regulation (EU) No 691/2010 (NMF IR) was adopted. The regulation details the rules for implementation of the air traffic management network functions as defined in article 6 of regulation (EC) 551/2004:

3. European Network Design
4. European Network Management (including planning and operational activities for European air traffic flow management)
5. Coordination of scarce resources within aviation frequency bands and radar transponder codes

Beyond that the regulation comprises the allocation of a responsibility for the Network Manager to respond to crisis situations affecting aviation and to coordinate the management of mitigating measurements with a regional level.

A close cooperation and coordination between the Functional Airspace Block and the Network Manager for strategic, pre-tactical planning and tactical flow and capacity management is required. The NMF IR provides for functional airspace blocks to formulate consolidated views related to the network functions. FABEC will as well have to be organised to support the monitoring task of the Network Manager by providing requested data as provided for in NMF IR annexes.

To be successful in these three areas requires to be supported by close cooperation between civil and military FABEC partners in all operational working and consultation arrangements. FABEC member States remain responsible for the approval and establishment of the structures for the airspace under their responsibility. A collective responsibility will be assumed by the Airspace Committee under the FABEC Council.

There is no immediate requirement for change within FABEC due to the creation of a European Network Functions. All requirements can initially be managed through coordination between FABEC operational partners. The FABEC ANSP structure agreed at present is able to accommodate future needs. However, the definition of such arrangements needs a FABEC operational level authority which assumes responsibility for Airspace Design, Air Traffic Flow Management and Crisis Management at FABEC level.

SC OPS established the Network Management Functions Task Force in order to develop the FABEC operational working and consultation arrangements and support SC OPS in its function as an operational counterpart to the Network Manager. The scope of the NMF TF comprises also a coordination function in regard to the input of operational matters to NMB and NDOP.

1.2 Scope

FABEC work with the NMF focuses on network design, network management and crisis management. According to the NMF IR, aviation frequency bands are managed by national frequency managers and radar transponder codes are managed by Member States and ANSPs. As such **no responsibility** is allocated **for the scarce resources function** at a FABEC level.

The concept focuses on the working and consultation arrangements for the operational area of interest between FABEC and Network Management Functions. It comprises the following deliverables:

- An Arrangement between the Network Manager and FABEC for Network Design, Network Management and Crisis Management.
- FABEC ANSP Governance Arrangements allowing representation at FABEC level on these operational areas.
- Internal FABEC processes ensuring that a common FABEC position can be defined on all relevant operational areas.

The relationship between FABEC and NMF does include further aspects, e.g. such as safety, environment, HR and finance. Activities within the operational working and consultation arrangements will include coordination with concerned FABEC groups and stakeholder, e.g. SC TECH, AFG the concept does not describe FABEC arrangements for these other areas.

1.3 Document Organization

Subsequent to this introduction, the document is organized as follows:

Chapter 2: Arrangement between the Network Manager and FABEC for Network Design, Network Management and Crisis Management

Chapter 3: FABEC ANSP Governance Arrangements allowing representation at FABEC level on these operational areas

Chapter 4: Internal FABEC processes (or rules of procedures) ensuring that a common FABEC position can be defined on all relevant operational areas.

Chapter 5: Conclusions / Outlook

The appendices include additional details:

Appendix A: JIR Models

Appendix B: EUROCONTROL team and expert working arrangements

Appendix C: Definitions

Appendix D: Abbreviations

1.4 Relationship to other documents

This concept is based on the Network Functions Implementing Rule. Therefore the following documents form the basis for the suggested working arrangements are:

- Regulation (EC) No 1070/2009 of THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 21 October 2009 amending regulations (EC) No 549/2004, (EC) No 550/2004, (EC) No 551/2004 and (EC) No 552/2004 in order to improve the performance and sustainability of the European aviation system [Official Journal L300 of 14.11.2009]
- Commission Regulation (EU) No 677/2011 of 7 July 2011 laying down detailed rules for the implementation of air traffic management (ATM) network functions and amending Regulation (EU) No 691/2010 [Official Journal L 185 of 15.07.2011]
- Commission Decision of 7.7.2011 on the nomination of the Network Manager for the air traffic management (ATM) network functions of the single European sky [Official Journal C 4130 of 7.7.2011]
- Commission Regulation (EU) No 176/2011 of 24 February 2011 on the information to be provided before the establishment and modification of a functional airspace block [Official Journal L 51 of 25.2.2011]
- Commission Regulation (EU) No 691/2010 of 29 July 2010 laying down a performance scheme for air navigation services and network functions and amending Regulation (EC) No 2096/2005 laying down common requirements for the provision of air navigation services [Official Journal L 201 of 3.8.2010]
- Commission Regulation (EU) No 255/2010 of 25 March 2010 laying down common rules on air traffic flow management [Official Journal L 80 of 26.3.2010]
- Commission Regulation (EC) No 2150/2005 of 23 December 2005 laying down common rules for the flexible use of airspace [Official Journal L 342 of 24.12.2005]
- The FABEC ANSP Organization 2012, a paper (version 0.93), 5.12.2011, FABEC AFG
- FABEC Airspace Policy version 0.7, dated 19.12.2011. FABEC Provisional Airspace Committee[1]
- FABEC SCO Airspace Strategy, working paper version 1.0, 18.01.2012
- FABEC ATFCM/ASM Future Options version 1.0, dated 17.01.2012, ATFCM/ASM Live Trial Evaluation Team
- Assessment of National/FAB Performance Plans with Performance Targets for the period 2012-2014, 20 September 2011, PRB
- FABEC Performance Plan – RP1 2012-2014, 28 June 2011, FABEC AFG/TF States Performance

2 WORKING ARRANGEMENT BETWEEN NM AND FABEC

[1] The development of this concept is based on version 0.7. The NMF TF will ensure concistency with the FABEC Airspace Policy while the documents are further developed.

The working relationship between the Network Manager and functional airspace blocks will be managed through cooperative decision-making. In order to perform its tasks of monitoring and improvement of the overall performance of the network, the Network Manager shall develop appropriate working arrangements with the operational stakeholders. For the relation with functional airspace blocks the Network Manager shall establish, in close cooperation with all the functional airspace blocks, harmonized processes, procedures and interfaces including changes on aspects related to the activities of the Network Manager. However a specific arrangement is made between NMF and FABEC aiming to mutual support to be defined in an agreement still under development.

The operational stakeholders shall ensure that the measures implemented at local or functional airspace block level are compatible with those adopted, through the cooperative decision-making process, at network level. Furthermore they shall provide the Network Manager with the relevant data in regard to listed in Annexes I to VI of the NMF IR, complying with any deadlines, completeness requirements or accuracy requirements agreed with the Network Manager for its delivery.

Air navigation service providers cooperating in a functional airspace block shall ensure that consolidated views are formulated related to operational issues of the network functions.

To allow civil-military coordination appropriate representation of the military ANSPs and military airspace user in all operational working and consultation arrangements shall be established.

2.1 Roles and responsibilities of Network Manager and FAB ANSPs

The Network Functions Implementing Rule (EU) No 677/2011 together with the FAB Implementing Rule (EU) No 176/2011 form the legal basis for future working arrangements on network level in Europe.

For the performance of the tasks necessary for the execution of the network functions the NMF IR provided for an impartial and competent body, the Network Manager. The European commission nominated EUROCONTROL as Network Manager for the first and second reference period of the performance scheme (2012 – 2019) (commission decision C(2011) 4130).

The NMF IR defines Functional Airspace Blocks and in more detail air navigation service provider as a part of functional airspace block as (operational) stakeholder to the Network Manager.

To support the execution of Network Design, Network Management and Crisis Management the NMF IR defines the following tasks and responsibilities for Network Manager and functional airspace blocks and air navigation service providers as part of FABs:

2.1.1 Planning and Performance

The Network Manager shall provide a consolidated and coordinated approach to all planning and operational activities of the network, including monitoring and improvement of its overall performance. The Network Manager shall contribute to the implementation of the performance scheme in accordance with Regulation (EU) No 691/2010.

The planning process in particular comprises

- **Network Strategy Plan**

  The Network Manager shall develop, maintain and implement a Network Strategy Plan (NSP), in compliance with the performance scheme provided for in Regulation (EU) No 691/2010 and the European ATM master plan and taking into account any relevant ICAO Air Navigation Plans. The NSP includes the Network Manager Performance Plan.

- **Network Operations Plan**

  The Network Manager shall detail the Network Strategy Plan through a Network Operations Plan, addressing in particular European Union-wide performance targets covering 3 to 5 year, annual, seasonal, weekly and daily periods.

The Network Manager will consult the operational stakeholder on a regular basis on the Network Strategy Plan, the Network Operations Plan, the progress in the implementation of the plans, reports to the commission and on operational issues as appropriate (see also chapter 2.2.1).

The Network Manager shall support the different operational stakeholders in the execution of the obligations that are placed on them, in the deployment of air traffic management and/or air navigation services (ATM/ANS) systems and procedures in accordance with the European ATM master plan.

To fulfil its tasks, the Network Manager shall ensure the following:

- the availability, operations and sharing of tools, processes and consistent data to support the cooperative decision - making process at network level, including but not limited to, flight plan processing and data management systems;
- the facilitation and coordination between operational stakeholders and support to these stakeholders in the deployment and implementation of the plans and the related network measures following cooperative decision- making;
- the appropriate operational coordination, as well as optimisation, interoperability and interconnectivity within its area of responsibility.

2.1.2 Monitoring and Reporting

The Network Manager will establish a process of continuous monitoring of inter alia:

- the operational network performance;
- the measures taken and the performance outcome achieved by the operational stakeholders and States;
- the effectiveness and efficiency of each of the functions covered by this Regulation.

The continuous monitoring shall identify any potential deviation from the Network Strategy Plan and Network Operations Plans.

The provision of the NMF IR in regard to the operational stakeholders is not very precise. It states that the operational stakeholders shall assist the Network Manager in this task by performing certain tasks including but not limited to the provision of data. A further refinement of the process and content of this task for the operational stakeholder, here the FABEC ANSPs is necessary.

2.1.3 Cooperative decision making

The network functions shall be managed through cooperative decision-making (CDM). The CDM process shall include a consultation process and detailed working arrangements and processes for operations.

The consultation process serves to organize the appropriate and regular consultation of the Member States and operational stakeholders. The process shall focus on the detailed working arrangements, the Network Strategy Plan, the Network Operations Plan, progress in the implementation of the plans, reports to the Commission and on operational issues as appropriate. The consultation process may vary depending on the nature of the individual network functions.

Where stakeholders are not satisfied with the consultation, the issue shall first be referred to the appropriate consultation arrangement at individual function level. Where resolution of the issue cannot be reached at individual function level, the matter shall be referred to the Network Management Board for resolution.

The Network Manager shall develop detailed working arrangements and processes for operations to address planning and operational aspects, taking into account, in particular, the specificity and requirements of the individual network functions as specified in Annexes I to VI of the NMF IR. The Network Manager shall ensure that the detailed working arrangements and processes for operations contain rules for notification of interested parties concerned.

Detailed working arrangement for the described relationship between the Network Manager and FABEC in chapter 2.1 might be settled through a Letter of Agreement but the proper legal instrument has to be agreed between involved parties.

2.2 Network Management Functions with relevance to FABEC

2.2.1 European Route Network Design Function

In order to achieve the safe and efficient operation of air traffic, taking due account of the environmental impact, the Network Manager with the participation of functional airspace blocks will develop the European Route Network Improvement Plan which will meet the performance targets set for the Network Manager in the performance scheme. The amendment of IR 691/2010 provides for the Performance Plan of the Network Manager to contain an environment performance target (KPI horizontal flight efficiency).

The European Route Network Improvement Plan is a rolling plan that shall reflect all the elements necessary to ensure that European airspace is designed as a single entity and meets the applicable performance targets. The plan shall include:

1. common general principles complemented by technical specifications for airspace design;
2. military airspace requirements;
3. an agreed European route network and, where feasible, free route airspace structure designed to meet all user requirements with details covering all the airspace change projects;
4. route network and free route airspace utilisation rules and availability;
5. indications on recommended ATC sectorisation in support of the ATS airspace structure to be designed, decided and implemented by the Member States;
6. guidelines for airspace management;
7. a detailed development timetable;
8. the calendar for a common publication and implementation cycle, through the Network Operations Plan;
9. an overview of the current and expected network situation, including expected performance based on current and agreed plans.

The Network Manager and the FABEC ANSPs shall ensure coherent integration of agreed airspace design projects, agreed through the cooperative decision-making process, in the European Route Network Improvement Plan. Member States and functional airspace blocks shall ensure that, prior to implementation, national and functional airspace blocks 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.

All engaged parties shall continuously review the plan to take into account new or changing demands on the airspace. Continious coordination will be ensured with the military authorities.

The development of the European Route Network Improvement Plan shall be take into account various airspace design principles as provided for in Annex I, part C of the NMF IR, in regard to

- Establishment and configuration of airspace structure;
- Present and forecast traffic demand at network and local level, performance targets;
- Vertical and horizontal connectivity;
- Possibility to operate along user required routes and flight profiles in en-route phase;
- Design of airspace structure shall be in accordance with the application of FUA;
- ATC sector design development for required route or traffic flow alignments;
- ATC sector design enabling sector configurations satisfying traffic flows and variable demand;
- Agreements on service provision for ATC sector design across national or FAB borders/FIR boundaries;

The Network Manager and air navigation service providers as part of functional airspace blocks shall ensure that the following principles apply in relation to airspace utilisation and capacity management:

- airspace structures shall be planned to facilitate flexible and timely airspace use and management with regard to routing options, traffic flows, sector configuration schemes and the configuration of other airspace structures. They should also accommodate the establishment of additional route options while ensuring their compatibility (capacity considerations and sector design limitations).

For FABEC the FABEC Airspace Policy provides leading principles to be applied in the following areas in order to improve FABEC airspace performance:

- FABEC Airspace Design,
- Airspace Management,
- Air Traffic Flow and Capacity Management,
- Airspace classification

It defines the FABEC airspace design as the positioning design. The modification of airspace structures (horizontal and vertical delineation), airspace restrictions and reservation, ATS route and sector design and airspace classification is developed regarding the leading principles provided by the FABEC Airspace Policy. The FABEC Airspace Policy is the policy document approved by the [Provisory] FABEC Council that embodies the provisions of the FABEC Treaty, SES FAB establishment requirements and European airspace and airspace management developments.

The FABEC Airspace Policy is the reference working document of the Airspace Committee and the Harmonisation and Advisory Committee of the FABEC, as well as for FABEC ANSPs when executing operational work.

In this framework several projects are developed in parallel throughout the FABEC including Free Route, XMAN/AMAN and DMAN/A-CDM. All these airspace projects are performance driven to contribute to the European Route network performance focusing in particular on the upper airspace in addition the lower airspace insofar relevant for the clearly identified major hub major airports within the FABEC. They will ensure a continuum of airspace disregarding national boundaries in order to have a seamless airspace throughout the whole FABEC.

These FABEC projects will offer the required level of safety, capacity, flexibility, responsiveness and environmental performance in the best balanced possible way. They will support military requirements regardless of national boundaries and will ensure regional interconnectivity.

FABEC airspace design projects shall be compatible with international airspace developments and the pan European Route Network. Therefore FABEC airspace change initiatives shall be closely coordinated with the Network Manager in order to ensure coherent integration of FABEC projects in the ERNIP. This integration in full compliance will be done using a cooperative decision making (CDM) process with the Network Manager. This process is appropriately covered through the working arrangements under the NetOps umbrella.

FABEC ANSPs are currently not accountable for flight efficiency. This is currently a performance requirement for the Network Manager. However, FABEC ANSPs will do their utmost to contribute to the KPI flight efficiency.

Currently there is no formalized coordination between FABEC and EUROCONTROL Network Management. The yet to be endorsed airspace policy states, that in the framework of NMF the Airspace Committee shall organise the common FABEC view and conclude an agreement on general requirements for coordination of strategic issues/planning between the FABEC airspace committee and the NM. On FABEC ANSPs side SC OPS is the responsible body for the development in the area of airspace design.

Working arrangements under development between the Network Manager and FABEC for route network design function shall comprise that the NM is to support FABEC airspace design projects.

The process of establishing FABEC airspace design projects has to be considered. This process is not yet finalized.

2.2.2 Network Management Function

The Network Manager shall execute the obligations of the Central Unit for ATFM as referred to in article 6(6) of Regulation (EC) No 551/2004 and in Regulation (EU) No 255/2010.

On the basis of the ATFCM/ASM live trial results and the existing NMF IR SC OPS will launch an ATFCM/ASM pre-operational implementation project for FABEC. The project leader will closely coordinate between ATFCM/ASM pre-operational procedure project and NMF TF to avoid duplication. SC OPS is currently discussing on future options for the development and improvement of ATFCM/ASM.

The Network Manager shall support FABEC in the coordination of ATFCM/ASM between FAB level and network level as well as support the coordination between FABs.

Considering the further step in ATFCM/ASM pre operational implementation project NM should support this implementation in all areas. The Network Manager shall support the development and implementation of ATFCM/ASM processes and tools accordingly:

- Harmonized ATFCM procedures;

- ATFCM Delay Attribution (former NDA);
- Network Extended Route Attribution (NERA);
- System support (e.g. SIMEX for FMP and FABF/ATFCM);
- Agreed rules and procedures between NM and ATFCM/ASM functions in FABEC

2.2.3 Network Crisis Management

To support the management of network crisis a European Aviation Crisis Coordination Cell (EACCC) is established. The Network Manager shall make available resources required for the establishment and the operation of the EACCC.

The Network Manager and the EACCC are responsible for the elaboration of mitigating measures at network level to secure the provision of a timely response to such network crisis situations to protect and ensure the continued and safe operation of the network.

The permanent membership of the EACCC is limited to one representative of each stakeholder group. A direct involvement of the FABEC ANSPs is therefore not envisaged in this coordination body although depending on the nature of the crisis the EACCC may be enhanced on a case-by-case basis by experts.

In respect to the EACCC activities FABEC ANSPs are in a coordinating role. FABEC ANSP working arrangements will contribute and act on request of the EACCC.

NETOPS and ODSG are the corresponding working arrangements for crisis management procedure development on team and sub group level. Although during last crisis event telephone conferences initiated by SC OPS for coordination between FABEC ANSP took place no formal operational working arrangements for crisis management in FABEC have been established yet.

NM and FABEC will develop measures and procedures to increase the awareness of all network stakeholders about disruptions in the network (e.g. severe weather) especially below the level of activation of the EACCC. FABEC SC OPS will establish a pre-coordination process amongst the FABEC ANSP members whenever possible to enable quick and effective information flows and coordination processes.

3 FABEC ANSP GOVERNANCE ARRANGEMENTS ALLOWING REPRESENTATION AT FABEC LEVEL ON THE OPERATIONAL AREAS

3.1 Governance of Network Management Functions

While the Network Manager is located within the directorate of Network Management in EUROCONTROL, the governance of the NMF and the Network Manager remain under the umbrella of the European Commission (see figure below).

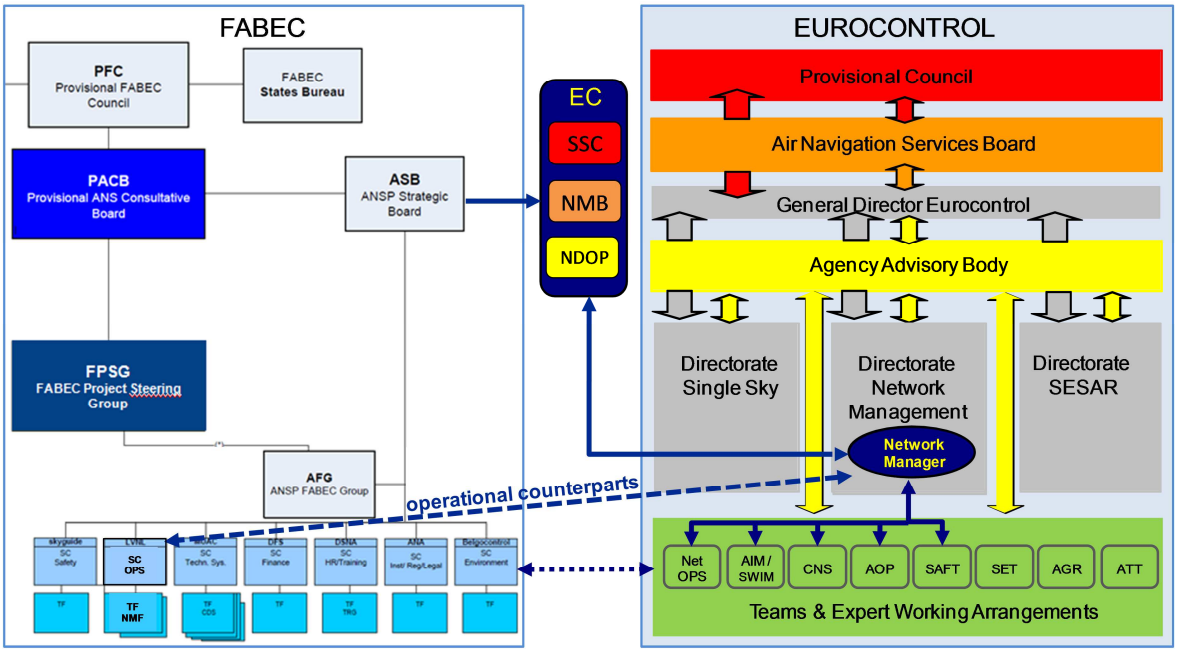


Figure 1: FABEC ANSP representation in NMF governance

3.1.1 Single Sky Committee

At member state level the Single Sky Committee (SSC) is in the first instance concerned with regulatory issues. Besides to various formal matters the SSC gives an opinion in regard to the operational area on the Network Strategy plan, in particular on the objectives of this plan at an early stage.

3.1.2 Network Management Board

Access for the FABEC ANSPs into the governance structure of the NMF is provided for in the Network Management Board (NMB). The NMB is the responsible steering body for the network management functions. It is also the escalation level when the Network Manager finds its actions hindered by one or several parties, the matter shall be referred to the Network Management Board for resolution.

The NMB is responsible for:

- endorsing the Network Strategy Plan prior to adoption;

- approving the 3 to 5 year and the annual Network Operations Plans;
- approving the cooperative decision-making processes, the consultation processes as well as detailed working arrangements and processes for operations for the network functions[2];
- approving the Rules of Procedure of the European Aviation Crisis Coordination Cell[3];
- monitoring progress in the implementation of the plans and addressing any potential deviations from initial plans;
- monitoring the consultation process of operational stakeholders;
- monitoring activities related to the management of the network functions;
- monitoring Network Manager activities related to network crises;
- approving the annual report referred to in Article 20. This report shall include, but not be limited to, the implementation of the Network Strategy Plan and the Network Operations Plan;
- assessing if the Network Manager has the appropriate competences, resources and impartiality to carry out independently the tasks assigned to it, including security, liability and contingency arrangements;

The Network Manager is a member of the NMB but has no voting rights whereas the NMF IR allows one representative of air navigation service providers per functional airspace block (altogether 4 representatives) as voting members. FABEC as one of the European functional airspace blocks is therefore a member of the NMB.

The FABEC ANSP representative is from a senior managerial level, CEO or COO, preferably an ASB member. Since the NMF IR provides only for one representative per FAB, FABEC ANSPs need to coordinate a common FABEC position and mandate the NMB representative to speak for FABEC.

3.2 Consultation Arrangements of Network Management Functions

3.2.1 Network Directors of Operation Forum

The Network Directors of Operations Forum (NDOP) is a consultation body that represents the appropriate operational interface to ensure that the debate and decisions at NMB level are properly prepared and that the guidance and decisions of NMB are effectively implemented.

The Network DOP shall provide a broad range of balanced operational advice and commitment in matters relating to the operations of the European ATM network and the Network functions.

The Network DOP has for objective to prepare for the NMB and as well to address specific operational issues and be able to action under the umbrella of the NMB short-term decisions which have a direct impact on the performance of the network.

The Network DOP shall seek to ensure the commitment of the operational stakeholders at a senior level, where appropriate for the implementation of agreed outcomes. Whilst ensuring the coherence of these actions with the strategies and plans of their respective organisations.

The Network DOP shall:

[2] after a positive opinion of the Single Sky Committee

[3] after a positive opinion of the Single Sky Committee

- ensure that current season performance is understood and managed at strategic level. To ensure that they are in a position to predict where interventions will/may be necessary and to take operational decisions;
- consolidate the Network Operations Plan and the Network Manager Performance Plan (part of the NSP) to be presented for approval to the NMB;
- review consistency and feasibility between the NOP, NMPP and NSP;
- take operational decisions based on the expert input from the Teams and on the consolidated network information provided by the Network Manager
- approved Enhanced Network procedures and ensure their application at the operational level inside each organisation;
- ensure a strategic network approach - Identifying specific risks to the performance of the network and act collectively to resolve the issues (reducing behaviours that focus on avoidance of blame and focusing on network benefit);
- identify the strategies to address systemic problems and deal with the consequences;
- develop recommendations for consideration by the NMB via the NM;
- implement actions decided by the NMB;
- supporting the different operational stakeholders, within the obligations that are put to them in the development and deployment of relevant systems and procedures in accordance with the European ATM Master Plan;
- consolidate the monitoring of the provision of the central functions for the coordination of radio frequencies and of the SSR transponder code allocation process (scarce resources).

Members of the NDOP are directors of operations or senior ops manager. The terms of reference allow 1 representative per ANSP and / or FAB. Role and processes for this body is not yet decided. To allow representation at FABEC level in NDOP there is a need for a close coordination of the FABEC ANSP members and / or a FABEC representative on operational matters which are related to the FABEC level.

3.2.2 EUROCONTROL Teams & Expert Working Arrangements

The Network Manager and NDOP via the Network Manager will task the EUROCONTROL teams for detailed expert consultation on certain items related to NMF.

The EUROCONTROL expert working arrangements comprise 8 teams; each of these teams leads one or more sub groups. An overview of these working arrangements is shown in appendix B. The members of the teams shall strive to coordinate as much as possible within their own organization their involvement in the team. All teams shall assess, on an annual basis, the satisfaction of their members with the functioning of their group. The team shall assess annually the performance of this working arrangement and the need for keeping them active, in line with the work programme.

This concept focuses on the NETOPS Team and its sub groups and the participation and coordination of FABEC members in these groups accordingly.

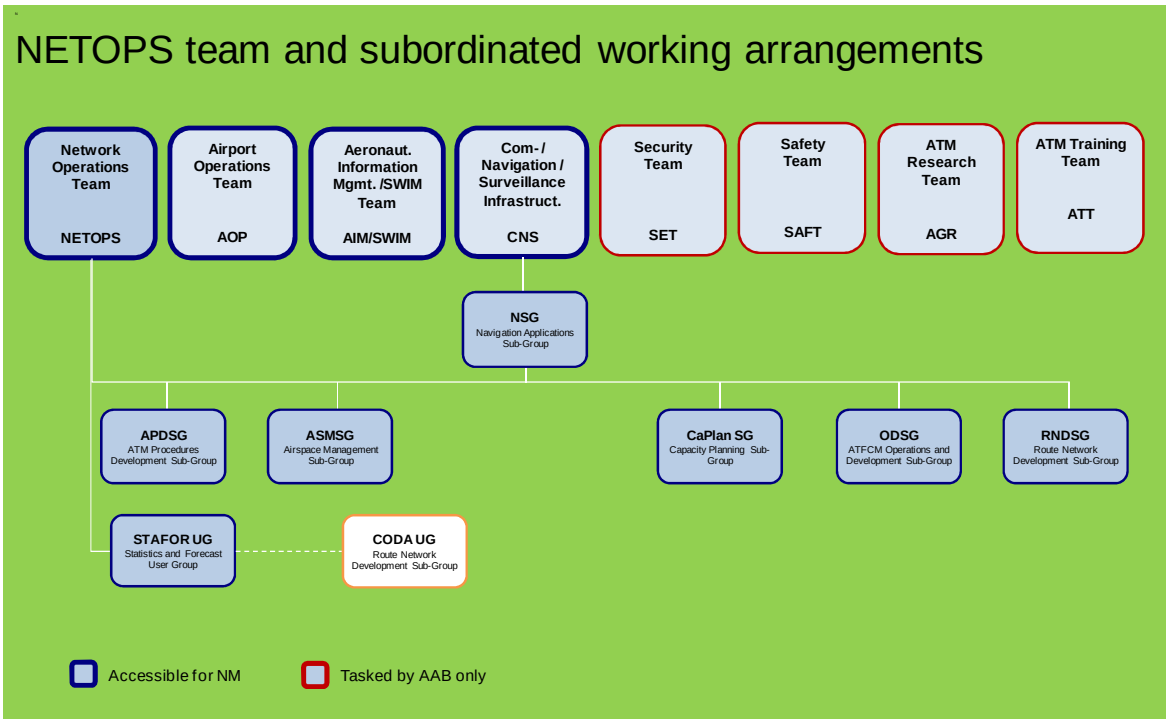


Figure 2: NETOPS team and sub groups

3.2.2.1 Network Operations Team (NetOps)

The Network Operations Team is subordinate to AAB and NMB and also part of the cooperative decision making processes required for the Air Traffic Management Network Functions of the NM. Its tasks comprise, among others:

- Contributions to the development, maintenance and implementation of the Network Strategic Plan and Network Operations Plan, and the European Route Network Improvement Plan.
- A consolidated approach to all planning and operational phases.
- Appropriate contributions to the organisation, management and operations of the functions including ATFM.
- The development of an integrated Route Network design.
- The appropriate support to operational stakeholders in deploying ATM/ANS systems/procedures and SESAR in its areas of responsibility.
- Availability, operations and sharing of tools, processes and consistent data to support the co-operative decision-making process at network level, including but not limited to, flight plan processing and data management systems.
- Facilitation and coordination between operational stakeholders and support to these stakeholders in the deployment and implementation of the plans and the related network measures following cooperative-decision making.
- Consistency and inter-connectivity between various Functional Airspace Block developments, regional, sub-regional or local developments in order to provide a complete network picture to States, ANSPs, civil and military airspace users, including aircraft operators.

The NETOPS is the corresponding working arrangements for crisis management procedure development on team level.

3.2.2.2 ATM Procedures Development Sub-Group (APDSG)

The ATM Procedures Development Sub-Group is responsible for the review, update and harmonisation of existing ASM/ATFCM procedures in compliance with the provisions given in the NMF IR. The APDSG develops and validates new procedures and asses ATS operational requirements and concepts. It aims for a holistic approach to ATM, ATS, ASM and ATFCM.

3.2.2.3 Airspace Management Sub-Group (ASMSG)

The Airspace Management Sub-Group is responsible for the development, planning and implementation of a pan-European ASM system and associated procedures and system support for civil/military coordination. It ensures the appropriate links between ASM and ATFCM taking into account emerging concepts and technologies.

ASMSG develops appropriate ASM procedures, concepts and requirements for supporting tools required for the evolution of ASM across the European ATM network.

The group is also tasked with the development, update and implementation of the 2017 FUA CONOPS and the gradual evolution towards a unified airspace management process.

3.2.2.4 Navigation Steering Group (NSG)

The Navigation steering Group plays a transversal role. It is responsible for a fully coordinate application and infrastructure activities between the Network Operations Team and the CNS Team.

In particular the NSG develops navigation applications and Navaid Infrastructure. It supports the provision of technical navigation specifications for airspace design and supports the coordinated development and deployment of navigation applications.

In its transversal role the NSG will ensures appropriate connections and integrates common technical issues across various disciplines. The group facilitates transversal coherence of navigation activities between regulatory, research and network needs.

3.2.2.5 Capacity Planning Sub-Group (CaPlan SG)

The Capacity Planning Sub-Group is tasked with the development of capacity planning methodologies, the development of capacity plans, performance forecasts and supporting tools. The group is also responsible for the continuous review and update of capacity planning processes, methodologies and tools and ensures adaptation to the emerging requirements linked to the evolution of the European ATM network and of its operational performance.

The activities of the CaPlan SG shall be in compliance with the NMF IR, the ATFM IR and the Performance Scheme IR.

3.2.2.6 ATFCM Operations and Development Sub-Group (ODSG)

The ATFCM Operations and Development Sub-Group ensures appropriate links between ATFCM processes, procedures and system support and other operational developments. It is responsible for the development, planning and implementation of a pan-European ATFCM system and associated

procedure and system support. In particular the ODSG deals with ATFCM related processes, specific operational procedures, ATFCM and flight planning system developments and continuous review and update of ATFCM processes, specific procedures and tools.

On sub group level the ODSG is the corresponding working arrangement for crisis management.

The ODSG ensures compliance in the development, planning and implementation activities with the provisions of the NMF IR, the ATFM IR and the Performance Scheme IR.

3.2.2.7 Route Network Development Sub-Group (RNDSG)

The Route Network Development Sub-Group ensures the development and availability of the European airspace structure as well as consistency and interconnectivity between various Functional airspace blocks regarding regional, sub-regional or local developments. The RNDSG organises and carries out the necessary coordination of planning and implementing activities for improving the ATS route network in the ECAC area of the ICAO EUR Region (in accordance with EANPG conclusion 36/2).

The RNDSG integrates requirements on the European Route Network Improvement Plan, the Network Operations Plan and ensures compliance of its activities with the ATFM IR and the Performance Scheme IR.

It is intended to closely link the processes of RAD and ERNIP. EUROCONTROL working arrangements might be restructured accordingly.

3.2.2.8 Statistics and Forecast User Group (STATFOR UG)

The development of forecasts and analysis, and the maintenance of the forecasting process are done by STATFOR in collaboration with stakeholders through the STATFOR User Group (SUG). Collaboration is essential for transparency, awareness and for improving quality.

The scope of the SUG includes all factors needed to address and develop air traffic forecasts and market analyses. The SUG provides advice, support and contributions to the forecast and forecasting process (maintenance). Contributions may include the (systematic) provision of statistical data.

The user group contributes to the preparation of STATFOR forecast products and the maintenance of the STATFOR forecasting process.

In addition, the NETOPS Teams will interact regularly with the Central Office for Delay Analysis (CODA) user group.

3.2.3 FABEC ANSP members

To allow representation at FABEC level in the described EUROCONTROL expert working arrangements a close coordination of the FABEC ANSP members participating in these groups has to take place.

SC OPS members are responsible to coordinate the processes listed below with their ANSP representatives in the working groups. Lists of FABEC representatives in NMF working arrangements will be maintained and updated by NetOps Team members for their respective organizations. Complete lists are made available by NMF TF electronically.

3.3 FABEC operational counterpart to the Network Manager

FABEC ANSP operational partners are required to implement coordination processes within FABEC. For this reason ASB nominated the Standing Committee Operations as the operational counterpart to the Network Manager.

In this role the SC OPS will act as a focal point of FABEC to the Network Manager on all operational area of its responsibility as defined by its ToR. FABEC SC OPS will develop an agreement with the Network Manager on this relationship.

SC OPS is responsible to trigger consolidation/coordination process (see chapter 3.4.1) with concerned groups if input from other areas, e.g. Safety, Human Resources, Performance is required for the development of a common FABEC position.

For crisis management SC OPS shall be the focal point to the Network Manager to pre-coordinate operational issues for FABEC ANSPs.

3.3.1 Network Management Functions Task Force

Network Management Functions Task Force (NMF TF) is subordinated to the SC OPS and develops and maintains the FABEC ANSP operational working and consultation arrangements for the NMF. It is responsible for addressing issues in the areas of Network Design, Network Management and Crisis Management and will develop common FABEC positions on expert level. The NMF TF will support the SC OPS in its role as the counterpart in FABEC for the In the meantime Network Manager groups, NMB, NDOP, NSP Expert Panel, and relationship to FABEC operational counterpart SC OPS have been established. The development of NMF processes and implementation are on-going, e.g. cooperative decision-making, development of NM Plans (NSP, NOP, NM Performance Plan), EACCC rules of procedures, agreement NM – FABEC.

The NMF TF has been mandated by SC OPS to assume responsibility for the following additional tasks:

- Give input to the development of NM Plans (NSP, NOP and NM Performance Plan)
- Coordination to achieve common operational FABEC positions in NM working arrangements NMB, NDOP, EUROCONTROL groups
- Prepare input to SC OPS and ASB on matters of operational interest for NMF for decision and/or external coordination
- NMF TF to ensure consistency between EUROCONTROL working groups outcome and briefing for FABEC representatives in other NM working arrangements (NMB, NDOP and EUROCONTROL)

NMF TF will ensure a close coordination with the other TF that comprise the ATFCM/ASM pre-operational implementation project (this will be presented to SC Operations for decision).

3.4 Internal FABEC Coordination

The AFG/JIR paper on FABEC ANSP Organization 2012 describes the following coordination process for NMB preparation. This process may also be applied to other groups where only one FABEC representative attends (model V). Note: Coordination process for NDOP still needs to be clarified.

According to this process coordination from NMB FABEC member is done via AFG/JIR and Standing Committees and vice versa. SC OPS will forward coordination request from FABEC representatives in NMB or other external groups to the NMF TF. The TF will inform relevant FABEC experts in order to come to a consolidated FABEC position and inform SC OPS about FABEC position on expert level and on issues initiated by TF. SC OPS will coordinate input with AFG/JIR.

Coordination/Agreement on a common position with an information flow through the different FABEC levels as proposed by AFG/JIR is acceptable for general issues, but will take too much time for quick reactionary ad-hoc coordination.

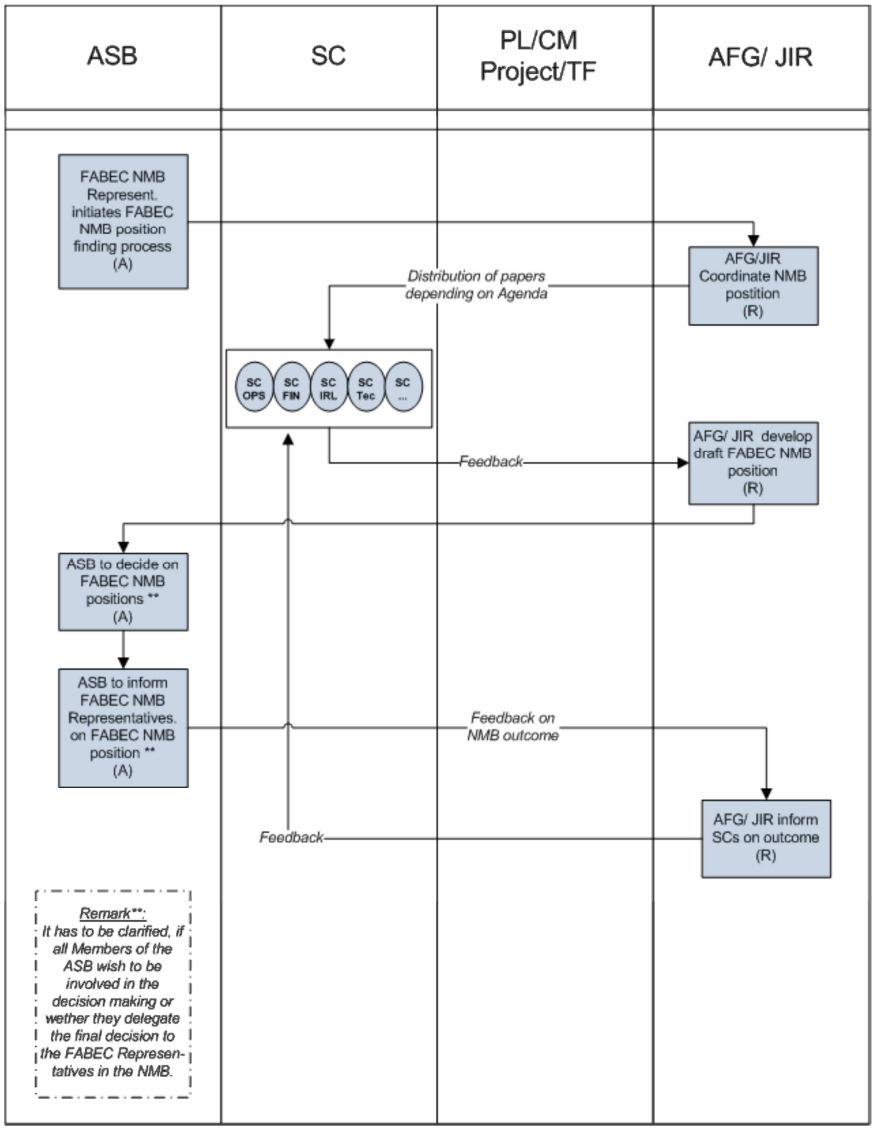


Figure 3: AFG/JIR internal coordination process

For this reason a direct coordination between the FABEC representatives in NMB but also other external groups, such as NDOP dealing with ops matters and the NMF TF is deemed helpful.

The figure below describes additional direct coordination with external FABEC representatives beside from the regular process:

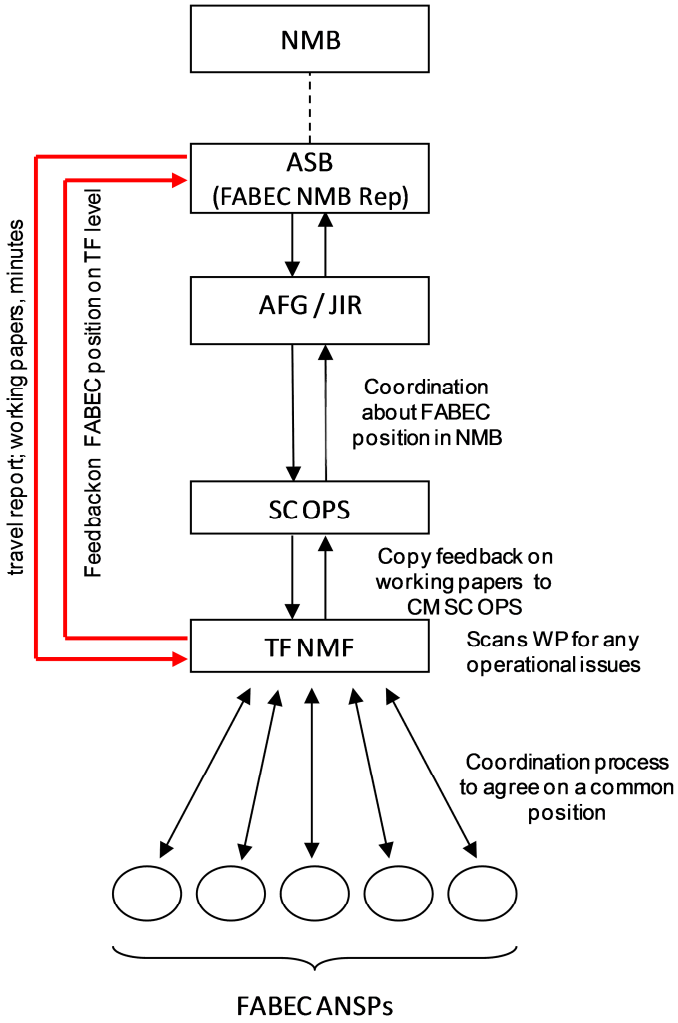


Figure 4: direct coordination between FABEC NMB representative and NMF TF

To expedite information flow FABEC representative of NMB or any other external group may engage direct coordination with the NMF TF. The NMF TF will copy SC OPS in communications whenever this shortcut is being used. SC OPS will coordinate input on operational matters to AFG/JIR.

Reasons for short cut in information flow are:

- TF merely deals with operational issues which are most significant subject area concerning NMF
- Expeditious information flow is crucial for time-critical OPS issues
- Long term / policy issues will always be coordinated via SC OPS, JIR and ASB

3.5 Escalation process if no common mandatory FABEC position can be agreed

If successful coordination is not possible between FABEC ANSP members or between the concerned groups, where a single FABEC position is mandatory, the issue shall be raised to the next level for resolution. Conflicts at task force or working group level shall in first instance be dealt with by the relevant standing committee. If necessary the issue can be raised to the ASB level for resolution.

Depending on the subject an ANSP position may also be allowed and higher groups should be informed about that.

4 INTERNAL FABEC PROCESSES FOR A COMMON FABEC POSITION ON ALL RELEVANT OPERATIONAL AREAS

4.1 Models of coordination

According to NMF IR art.10, § 4 ANSPs cooperating in a functional airspace block shall ensure that consolidated views are formulated related to operational issues of the network functions.

FABEC members therefore have to decide on how to coordinate and organise themselves internally in order to formulate such a consolidated view.

The ASB tasked the Joint International Representation Working Group (JIR) to develop FABEC joint international representation processes to achieve representation on a common FABEC position. For this purpose the JIR developed six models with advancing joint international representation, starting with coordinated written input to the representation of FABEC through a FABEC International Central Function.

4.1.1 Model I - Coordinated written input on consultations

Model I describes the coordination written input on consultations, e.g. ICAO State Letters, ENPRMs, NPAs, the NM for the management and execution of the Network functions.

The consolidation/coordination process starts with FABEC ANSPs defining issues of common interest and nominating ANSP focal points who trigger/coordinate the consolidation process. While the ANSPs hold their individual positions, ANSP focal points consolidate a FABEC position on items of common interest. In a next step ANSPs refine their individual positions accordingly (this includes a possible loop for second consolidation but not necessarily common agreement on all items). The consolidation/coordination process is a central part of all JIR models.

To the requesting addressee the focal points distribute the FABEC position/individual position and a copy to the experts.

For the implementation of model I the following prerequisites need to be applied:

- FABEC ANSPs need to define issues of common interest
- FABEC ANSPs nominate a focal point coordinating the consolidation process
- It remains within the individual responsibility of the ANSPs
  - to define the structure inside each ANSP for participation in international organisations
  - to nominate focal point and alternates. FABEC ANSPs to define issues of common interest
- mutual cognition of FP contacts

Model I is depicted in appendix A / figure 1.

4.1.2 Model II - Coordinated input on certain items

Model II provides for the individual representation of the FABEC ANSPs but a coordinated input on certain items is agreed.

The consolidation/coordination process is as described for model I but in model II with the intention to achieve common positions on most items.

For the external representation each ANSP focal point participates e.g. at meetings and presents individual ANSP‘s positions and/or common FABEC agreements on certain items.

To distribute discussion and results of the meeting a debriefing process takes place. The ANSP focal points review and conclude on the results with relevance to FABEC. The focal points promote next steps into each ANSP organization and activate experts to refine individual positions according to the output of the review. This debriefing process is part of all model II or higher.

Prerequisites for model II are:

- FABEC ANSPs to define issues of common interest
- mutual cognition of individual Focal Points representing the ANSP
- Consolidation with the intention to come to common positions on most issues

Model II is depicted in appendix A / figure 2.

4.1.3 Model III - Joint delegation represents common position

The consolidation/coordination process is as described for model I but model III includes for the ANSP focal points to consolidate a FABEC position on all issues and a negotiation tactics.

Each focal point participates at the meeting and states the common FABEC position with regard to the agreed negotiation tactics. Where and when an arrangement within FABEC is achieved, the CDM process includes the specific reference to FABs as one of the formal participants in the process, each focal point shall clearly state that the presented position is a FABEC position.

As in model II for the debriefing process ANSP focal points review and conclude on the results with relevance to FABEC. The focal points promote next steps into each ANSP organization and activate experts to refine individual positions according to the output of the review.

Prerequisites for model III are:

- mutual cognition of individual Focal Points representing the ANSP
- Common position on operational, technical and institutional issues based on the decision what is FABEC in 2012

Model III is depicted in appendix A / figure 3.

4.1.4 Model IV - Joint delegation and only one represents common position

Coordination model IV equals model III. The enhanced joint international representation is achieved through the ANSP focal points consolidating a FABEC position and selecting on representative as

speaker. Each of the focal points participates in the meeting and the nominated speaker states the common FABEC position.

Prerequisites for model IV are:

- mutual cognition of individual Focal Points representing the ANSP
- Nomination of/ Agreement on FABEC “speaker”
- Common position on operational, technical and institutional issues based on the decision what is FABEC in 2012

Model IV is depicted in appendix A / figure 4.

4.1.5 Model V - One FABEC ANSP with mandate to represent FABEC

In model V a FABEC focal point is mandated on a rotating or permanent basis to represent FABEC positions at international meetings. This focal point is known to international organisations as the single contact point.

The FABEC focal point is responsible to trigger the consolidation/coordination process. This includes the distribution of information to the ANSP focal points and the proposal of FABEC positions.

Model V provides for the single FABEC focal point to participate at the meeting representing FABEC positions on all items.

The debriefing process is accordingly to model II – IV.

Prerequisites for model V are:

- mutual cognition of individual Focal Points representing the ANSP
- Agreements on a Single FABEC Representative, a “Fallback solution” and Cost-Sharing of Travel Expend.
- Defined FABEC policies and positions on items to be discussed
- Model V only to be an temporary solution on the way to model VI
- Risk of loss of know-how if FABEC FP is nominated permanently

Model V is considered to be merely a temporary solution on the way to model VI. There is a risk of loss of know-how for individual ANSPs if FABEC focal point is nominated on a permanent basis.

Model V is depicted in appendix A / figure 5.

4.1.6 Model VI - FABEC International Central Function

In model VI the role of the FABEC focal point is replaced by the establishment of a FABEC International Central Function which represents FABEC positions at international meetings. This function is known to international organisations as the single contact point and is responsible to trigger the consolidation/coordination process. This includes the distribution of information to the ANSP focal points and the proposal of FABEC positions.

The FABEC international Central Function nominates a FABEC focal point on a rotating basis to present the common FABEC positions at the meeting.

The debriefing process is accordingly to model II – V.

Prerequisites for model VI are as follows:

- A FABEC International Central Function dealing with international issues only
- FABEC International Central Function represents FABEC positions on all items

Model VI is depicted in appendix A / figure 6.

4.2 Application of models to FABEC operational working arrangements for NMF

As already described in chapter 4.1, the NMF IR states that consolidated views shall be formulated by the ANSPs cooperating in a functional airspace block. Therefore coordination between FABEC members that is restricted to written input (model I) or that merely comprises certain but not all items (model II) falls short of the implementing rule's requirements. In respect to the described FABEC ANSP governance of NMF and the participation in NMF operational working arrangements a more advance joint international representation is deemed necessary.

FABEC ANSPs need to be aware that the need to achieve a common FABEC position requires a closer coordination between FABEC members within single groups as well as across various areas of interest and hierarchical levels. The common FABEC position shall be known to all members and shall be communicated by all FABEC ANSP representatives.

4.2.1 Implementation on FABEC level

At NMF governance level the Network Management Board composition allows for one ANSP representative per FAB as a member only. This provision given by the NMF IR therefore accounts for the implementation of the advanced model V. Since the NMB deals with matters in regard to the Network Manager and/or the Network Management Functions the FABEC ANSP representative shall get a mandate and needs to trigger the consolidation/coordination process for all items.

Working arrangements for NMF at consultation level, i.e. EUROCONTROL team and expert working arrangements allow for the participation of all FABEC ANSP and/or a FABEC representative. On this basis model III and IV present themselves to be possible choices for internal FABEC coordination and cooperation.

FABEC ANSP representatives to EUROCONTROL team and expert working arrangements or any other external group related to NMF shall

- discuss which model is applicable for their needs (the choice of the model may also depend on the kind of topic)
- implement model III as a minimum, if not already implemented higher, such as for RNDSG (model IV)

- have completed implementation of the chosen model as soon as possible but at the latest one year after the endorsement of this document
- coordinate with NATS on an information sharing basis to achieve a common approach in NMF related working arrangements
- in time continue to progress to a more advanced model of joint international representation

4.2.2 Adaptation on ANSP level

FABEC ANSP may need to adapt internal organizations to ensure implementation and provide appropriate input to the FABEC coordination processes. FABEC ANSPs

- shall inform their representatives on this new process;
- may need to adapt or create new coordination process within their organization to provide an ANSP position for discussion in FABEC;
- representatives of the NETOPS team shall maintain and make available lists of their respective ANSP organization for coordination.

4.2.3 Issues and further support

During application of the coordination models various issues may arise. The impact they have is likely to increase the more advanced the coordination model is. Available time for coordination may not be sufficient due to late distribution of working papers for meetings. In particular if issues needs to be coordinated with other concerned groups or have to be forwarded to SC level or ASB for decision preparation time may be too short. Short cuts in coordination processes may need to be used, such as NMB coordination with NMF TF (see chapter 3.4).

The development/agreement of a negotiation tactic respectively a screenplay to bring forward FABEC argumentation may support an enhanced coordinated FABEC approach in joint international representation and may support emphasize of FABEC ANSP representatives' input. The NMF TF will validate the application of the models / propose evolution as a future task.

5 CONCLUSION / OUTLOOK

With FAB IR and NMF IR in force FABEC coordination and common positioning is becoming necessary from the start on numerous operational issues such as strategic planning, ATFCM, European Route Network improvements, Airspace Design projects, and FAB operational performance. As FABs become more mature in the long term, responsibilities should shift from the individual ANSP level towards the FAB level and the FAB-level becomes the counterpart of the Network Management function.

FABEC ANSP operational partners are required to implement coordination processes within FABEC.

5.1 Application of coordination models

Consolidation/coordination models III and IV show best choice for FABEC groups and participation of FABEC ANSP members in external groups related to NMF. In the long term it is envisaged to further enhance coordination and cooperation within the FABEC to increase efficiency. After validation of the application of Model III and Model IV further assessments by the NMF TF shall be conducted if the implementation of model V and VI can be expected. These models provide for a FABEC focal point (model V) or a FABEC central function (model VI) that attends the respective working arrangement and speaks for all FABEC members. In this regard the weight of vote for FABEC has to be ensured.

5.2 Missing links in the working organizations of NM and FABEC

European Route Network Design Function

Currently there is no formalized coordination between FABEC and EUROCONTROL Network Management. The yet to be endorsed airspace policy states, that in the framework of NMF the Airspace Committee shall organise the common FABEC view and conclude an agreement on general requirements for coordination of strategic issues/planning between the FABEC airspace committee and the NM.

Working arrangements between the Network Manager and FABEC for route network design function shall comprise that the NM is to support FABEC airspace design projects.

Network Management Function

The Network Manager shall support FABEC in the coordination of ATFCM/ASM between FAB level and network level as well as support the coordination between FABs. The Network Manager shall support the development and implementation of ATFCM/ASM processes and tools accordingly:

- Harmonized ATFCM procedures;
- ATFCM Delay Attribution (former NDA);
- Network Extended Route Attribution (NERA);

- System support (e.g. SIMEX for FMP and FABF/ATFCM);
- Agreed rules and procedures between NM and FABEC ATFCM/ASM function

Network Crisis Management Function

For crisis management no formal operational working arrangements in FABEC have been established yet. For consolidation/coordination process among FABEC ANSPs needs to be developed. It is proposed that this process is initiated by SC OPS, but may also be triggered by one of the FABEC ANSPs. Coordination on management (ASB) as well as on expert level (TF and WG) is needed. Goal is to have a common FABEC ANSP position.

NM and FABEC will develop measures and procedures to increase the awareness of all network stakeholders about disruptions in the network (e.g. severe weather) especially below the level of activation of the EACCC. FABEC SC OPS will establish a pre-coordination process amongst the FABEC ANSP members whenever possible to enable quick and effective information flows and coordination processes.

Next to NMF managed through the Network Manager developments on European level are also governed by the SESAR programme and the Deployment Programme. FABEC shall ensure coordination with all of these layers.

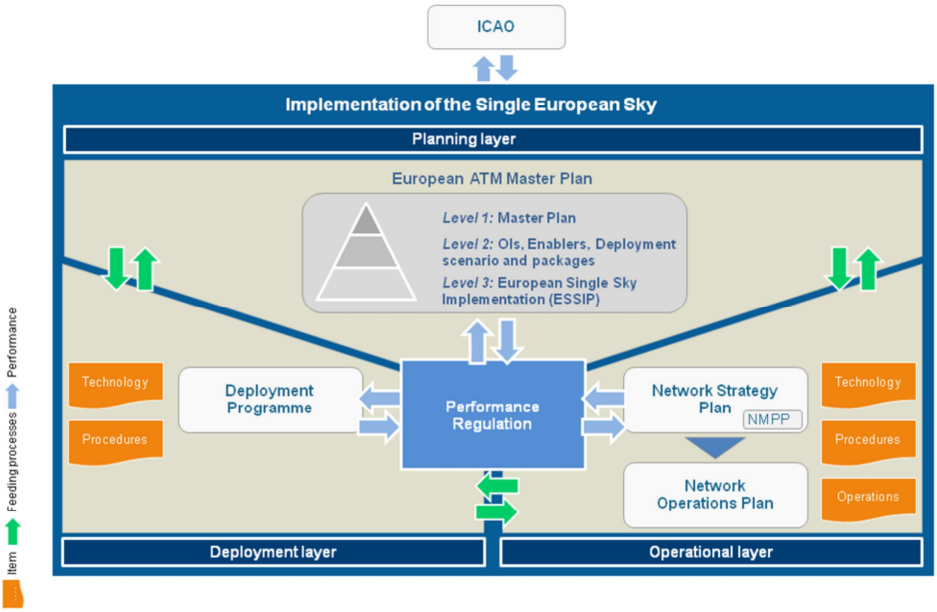


Figure 5: Key player in the implementation of SES

Further details for the operational working arrangements will be laid down in a specific arrangement between NM and FABEC.

5.3 Future role of the NMF TF

With the NMF IR coming into force in July 2011 SC OPS established the NMF TF on a temporary basis to develop operational working and consultation arrangements between FABEC and the Network Manager. In the meantime Network Manager groups, NMB, NDOP, NSP Expert Panel, and relationship to FABEC operational counterpart SC OPS have been established. The development of NMF processes and implementation are on-going, e.g. cooperative decision-making, development of NM Plans (NSP, NOP, NM Performance Plan), EACCC rules of procedures, agreement NM – FABEC. For this reason the NMF TF shall be established on a permanent basis. . This will be covered in a formal proposal on the establishment of the ATFCM/ASM project (DSNA as foster ANSP). In order to fulfill the additional tasks given by SC OPS the NMF TF the role of the future task force shall comprise:

- Give input to the development of NM Plans (NSP, NOP, ERNIP and NM Performance Plan)
- Coordination to achieve common operational FABEC positions in NM working arrangements NMB, NDOP, EUROCONTROL groups
- Prepare input to SC OPS and ASB on matters of operational interest for NMF for decision and/or external coordination
- NMF TF to ensure consistency between EUROCONTROL working groups outcome and briefing for FABEC representatives in other NM working arrangements (NMB, NDOP and EUROCONTROL WA)
- Validate the application of the models / propose evolution

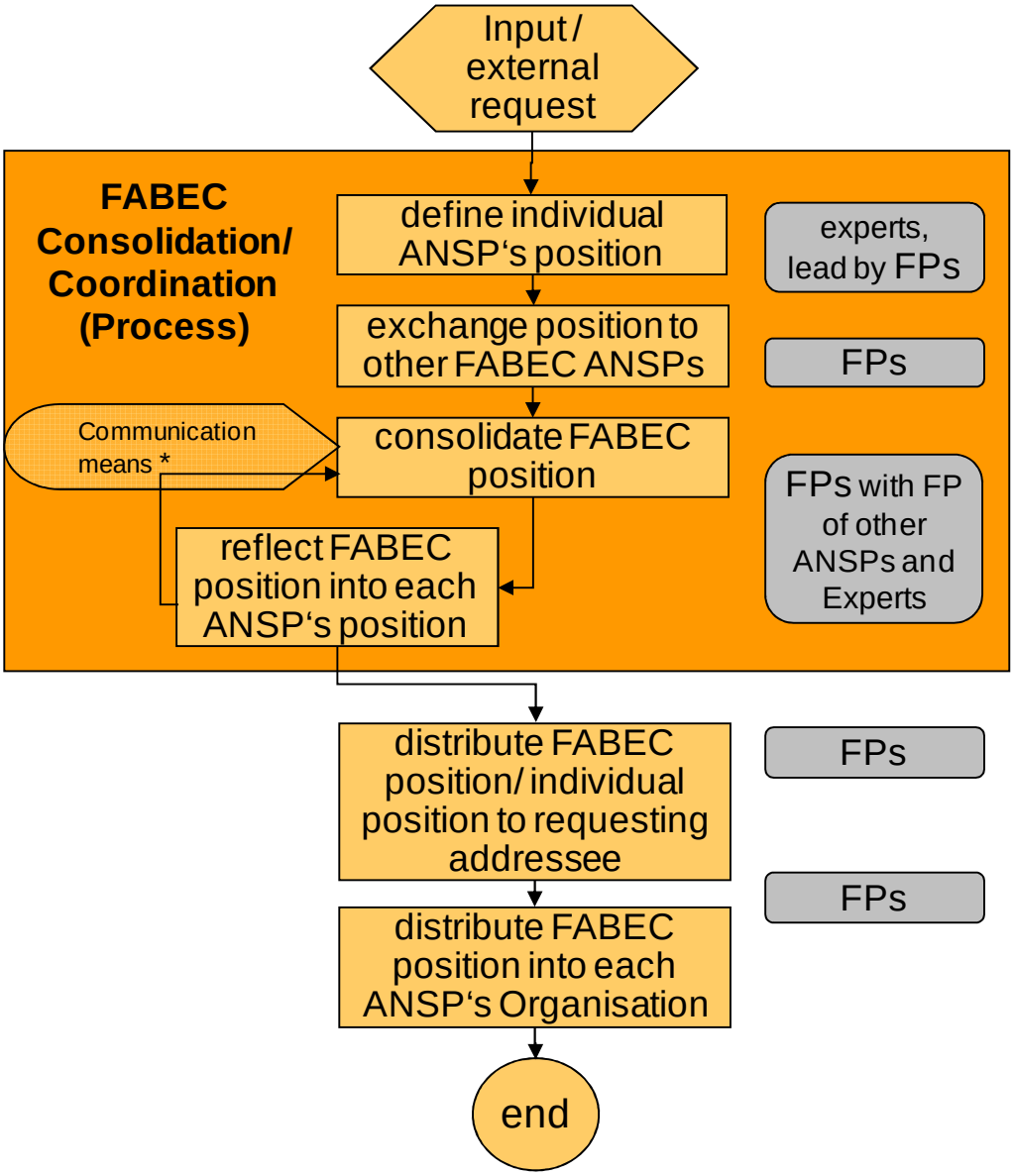
All civil and military FABEC ANSPs are invited to participate in the TF to ensure appropriate coordination.

This document describes coordination between FABEC ANSP groups concerned with operational matters. If similar processes for other areas in FABEC are implemented is not known, but it is recommended to implement ensure appropriate FABEC positions in all domains.

APPENDIX A - JIR MODELS

Model I

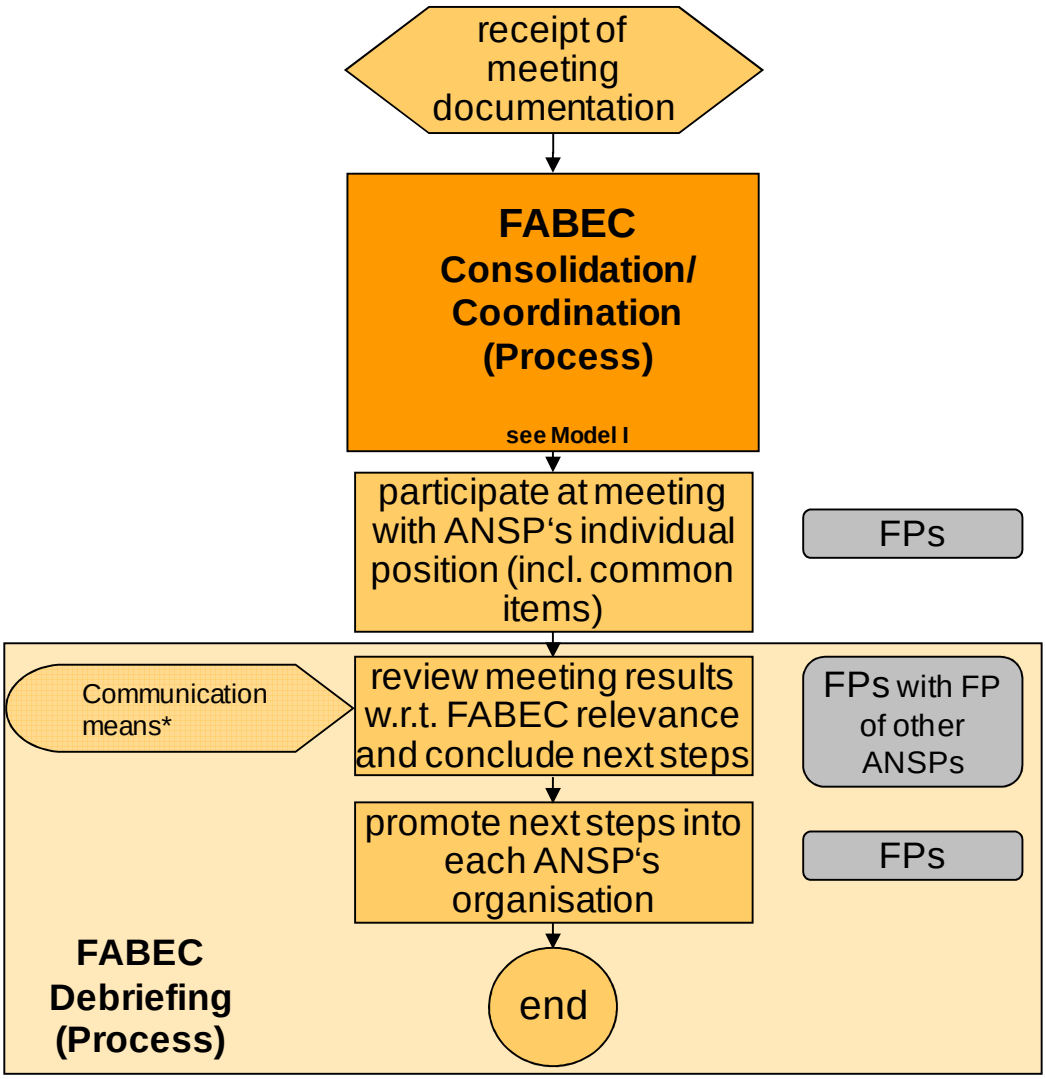
Model I depicting coordinated written input on consultations is shown in figure 1.



* via e-mail, video-/teleconference, FABEC website or meeting

Model II

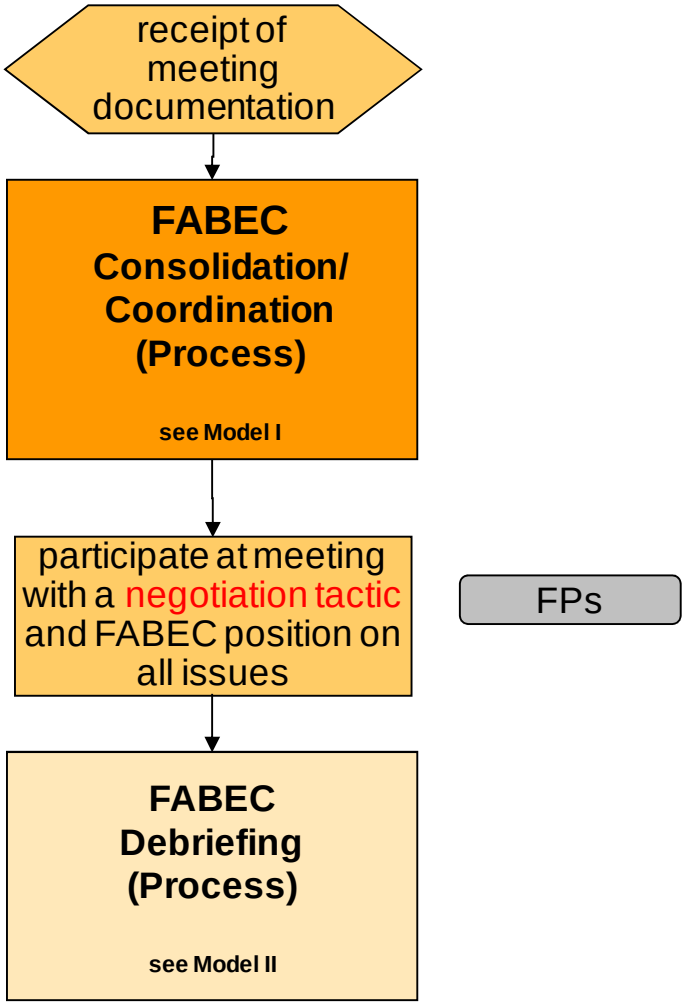
Model II depicting coordinated input on certain items is shown in figure 2.



* via e-mail, video-/teleconference, FABEC website or meeting

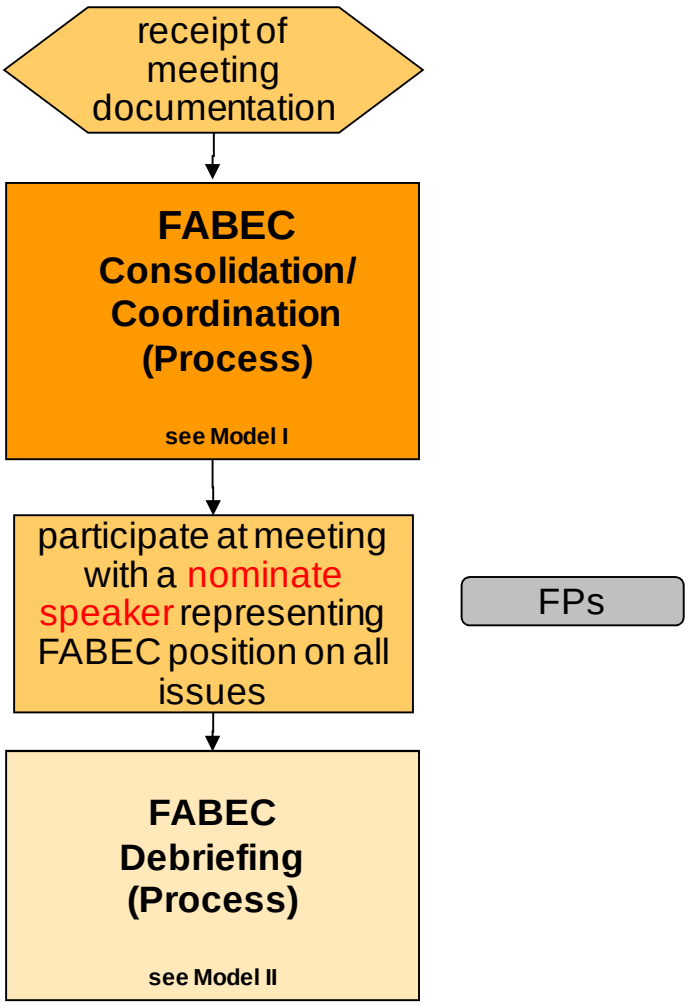
Model III

Model III depicting a joint delegation for which all represent a common FABEC position is shown in figure 3.



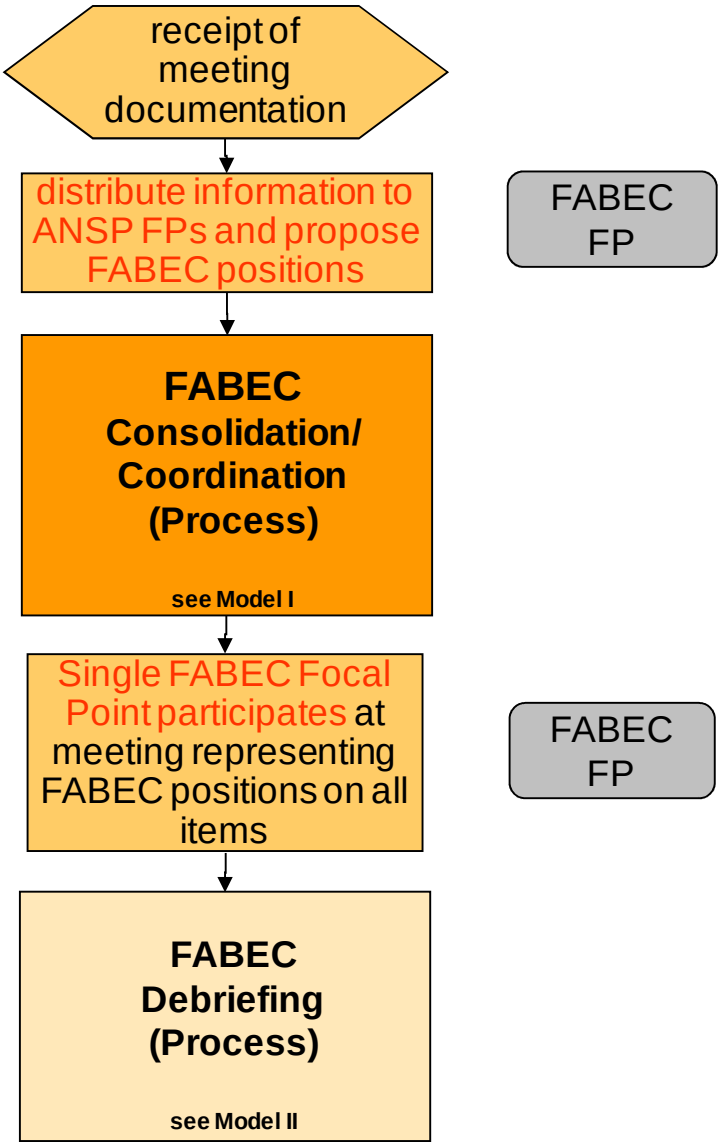
Model IV

Model IV depicting a joint delegation for which a nominated speaker represents the common FABEC position is shown in figure 4.



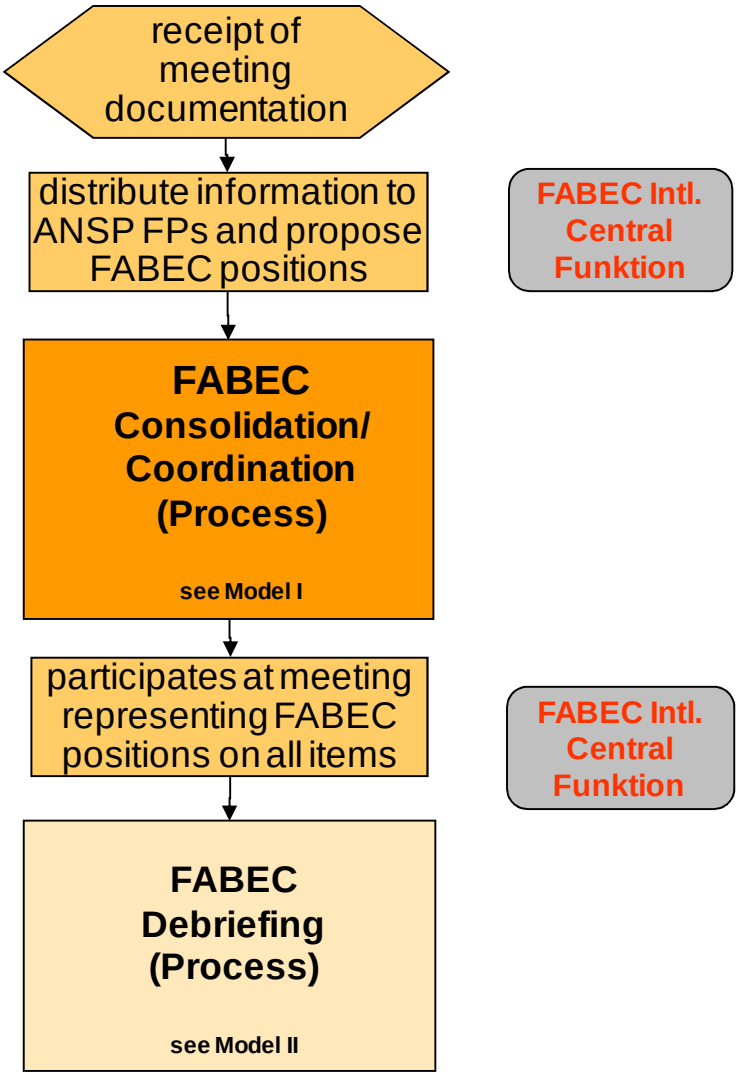
Model V

Model V depicting a mandate speaker / focal point who represents FABEC positions on all items is shown in figure 5.

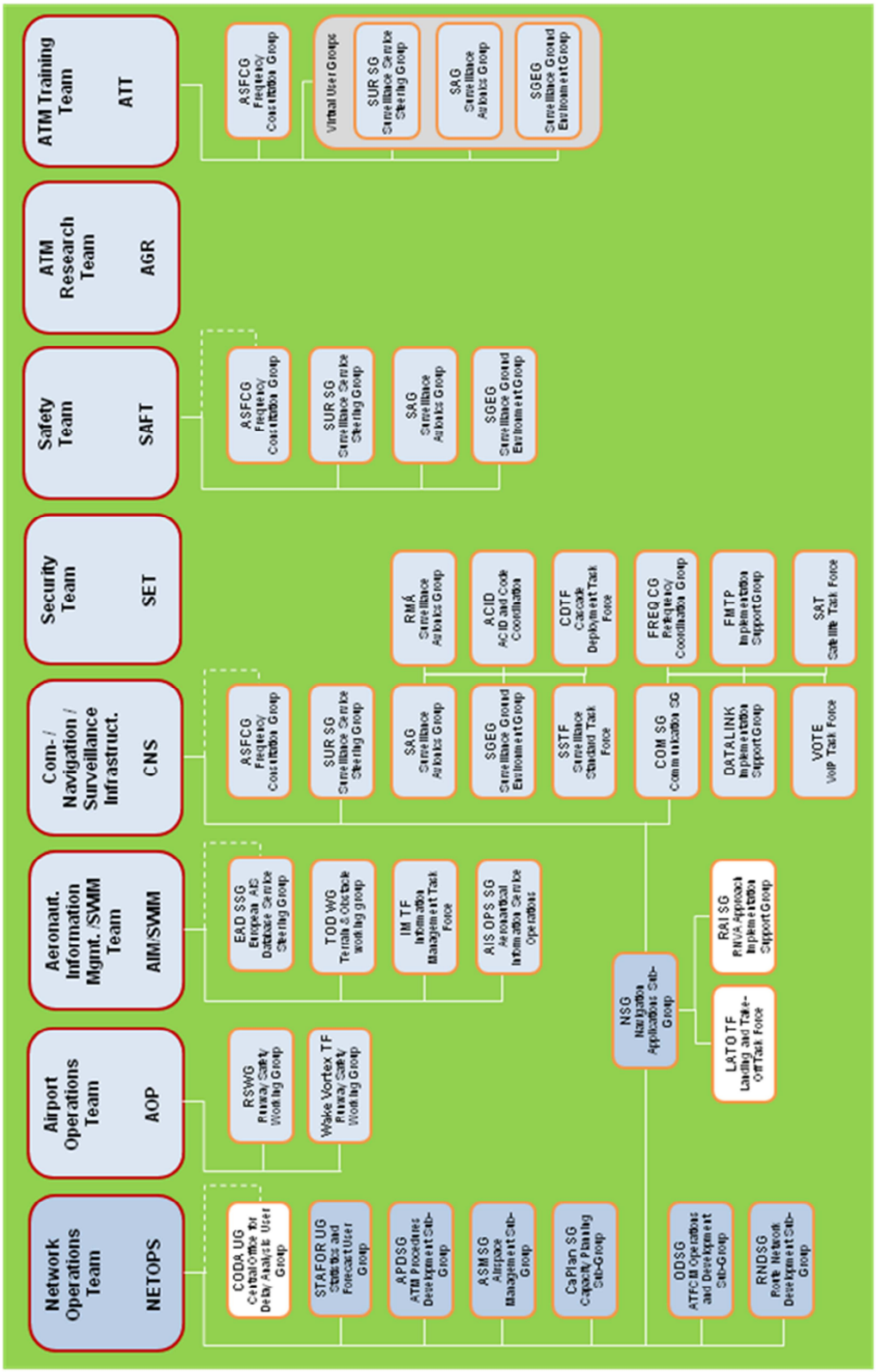


Model VI

Model VI depicting a FABEC International Central Function which represents FABEC positions on all items is shown in figure 6.



APPENDIX B - EUROCONTROL TEAM & EXPERT WORKING ARRANGEMENTS



APPENDIX C - DEFINITIONS

Airport operator	the 'managing body of an airport' as defined in point (j) of Article 2 of Regulation (EC) No 95/93 meaning the body which, in conjunction with other activities or otherwise, has the task under national laws or regulations of administering and managing the airport facilities and coordinating and controlling the activities of the various operators present at the airport or within the airport system concerned;
Airport slot operator	the function established at coordinated airports in application of Regulation (EEC) No 95/93;
Airspace design	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;
Airspace reservation	a defined volume of airspace temporarily reserved for exclusive or specific use by categories of users;
Airspace restriction	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');
Airspace structure	a specific volume of airspace designed to ensure the safe and optimal operation of aircraft;
Airspace utilisation	the way that airspace is operationally used;
Airspace user representative	any legal person or entity representing the interests of one or several categories of users of air navigation services;
Aviation frequency band	an entry in the ITU Radio Regulations Table of Frequency Allocations of a given frequency band in which frequency assignments are made for the purpose of general air traffic;
ATC sector	a defined volume of airspace for which an associated controller(s) has ATC responsibility at any given time;
Air traffic service (ATS) route	a specified part of the airspace structure designed for channelling the flow of traffic as necessary for the provision of air traffic services;

Civil-military coordination	the interaction between civil and military authorities and components of air traffic management necessary to ensure safe, efficient and harmonious use of the airspace;
Conditional route (CDR)	an ATS route that is only available for flight planning and use under specified conditions;
Cooperative decision making	a process in which decisions are made based on a constant interaction and consultation with Member States, operational stakeholders and other actors as appropriate;
Crisis Management	process to respond to crisis situations affecting aviation and to coordinate the management of mitigating measurements with a regional level;
Network crisis	a state of inability to provide air navigation service at required level resulting in a major loss of network capacity, or a major imbalance between network capacity and demand, or a major failure in the information flow in one or several parts of the network following an unusual and unforeseen situation;
European Route Network Design Function	design of the European Route Network carried out by the Network Manager comprising the development of an European Route Network Implementation Plan facilitating the development of an airspace structure offering the required level of safety, capacity, flexibility, responsiveness, environmental performance and seamless provision of expeditious air navigation services, with due regard to security and defence needs.
European Route Network Improvement Plan	the plan developed by the Network Manager in coordination with the operational stakeholders that includes the result of its operational activities with respect to route network design on short and medium terms in accordance with the guiding principles of the Network Strategy Plan;
Free Route Airspace	a specific airspace within which users can freely plan their routes between an entry point and an exit point without reference to the ATS route network;
Frequency assignment	authorisation given by a Member State to use a radio frequency or radio frequency channel under specified conditions;
Multiple route options	the availability to the airspace user of more than one routing option on the ATS route network;
Third countries	non-Member States that are members of EUROCONTROL or have concluded an agreement with the Union on the implementation of the single European sky or are participating in a functional airspace block;
Network Manager	the body established under Article 6 of Regulation (EC) No 551/2004 to perform the duties provided for in that Article and in Commission Regulation (EU) No 667/2011;

Network Management Function	The ATFM function as laid down in Regulation (EU) No 255/2010 common rules of air traffic flow management executed on the network level by the Network Manager;
Network Operations Plan	the plan developed by the Network Manager in coordination with the operational stakeholders to organise its operational activities in the short and medium term in accordance with the guiding principles of the Network Strategic Plan. For the European route network design (ERND)-specific part of the Network Operations Plan, it includes the European Route Network Improvement Plan;
Network Strategy Plan	means the plan developed by the Network Manager, consistent with the European ATM Master Plan, in coordination with Member States and the operational stakeholders defining the guiding principles for the network operation and its long term perspective;
Operating organisation	an organisation responsible for the provision of engineering and technical services supporting air traffic, communication, navigation or surveillance services;
Operational requirements	the requirements of the network in terms of safety, capacity and efficiency;
Operational stakeholders	the civil and military airspace users, civil and military air navigation service providers, airport operators, airport slot coordinators and operating organisations and any additional stakeholder groups considered relevant for the individual functions;
Scarce Resources Function	according to the NMF IR the coordination on network level by the Network Manager of aviation frequency bands used by general air traffic, in particular radio frequencies as well as the coordination of radar transponder codes;
Sector configuration	a scheme combining sectors that are constructed and best placed to satisfy the operational requirements and airspace availability;
User required route	the desirable routing that is declared by the aircraft operators at the airspace design stage to meet their needs.

APPENDIX D - ABBREVIATIONS

- AAB	- Agency Advisory Body
- AFG	- ANSP FABEC Group
- A-CDM	- Airport Collaborative Decision Making
- AMAN	- Arrival Manager
- ANS	- Air Navigation Service
- ANSP	- Air Navigation Service Provider
- ARN	- ATS Route Network
- APDSG	- ATM Procedures Development Sub-Group
- ASB	- ANSP Strategic Board
- ASM	- Airspace Management
- ASMSG	- Airspace Management Sub-Group
- ATC	- Air Traffic Control
- ATS	- Air Traffic Services
- ATFCM	- Air Traffic Flow and Capacity Management
- CaPlan SG	- Capacity Plan Sub-Group
- CDM	- Collaborative Decision Making
- CODA UG	- Central Office for Delay Analysis User Group
- CONOPS	- Concept of Operations
- CNS	- Communication Navigation Surveillance
- DMAN	- Departure Manager
- EACCC	- European Aviation Crisis Coordination Cell
- ECAC	- European Civil Aviation Conference
- ENPRM	- EURCONTROL Notice of Proposed Rule Making
- ERND	- European Route Network Design
- ERNIP	- European Route Network Implementation Plan
- FAB	- Functional Airspace Block
- FABEC	- Functional Airspace Block Europe Central
- FABF	- Functional Airspace Block Function
- FIR	- Flight Information Region
- FP	- Focal Point
- FRA	- Free Route Airspace
- FUA	- Flexible Use of Airspace
- HR	- Human Resources

- IR	- Implementing Rule
- ITU	- International Telecommunication Union
- JIR WG	- Joint International Representation Working Group
- KPI	- Key Performance indicator
- NDA	- Network Delay Attribution
- NDOP	- Network Directors of Operations Forum
- NetOps	- Network Operations Team
- NM	- Network Manager
- NMB	- Network Management Board
- NMF	- Network Management Function
- NM PP	- Network Manager Performance Plan
- NOP	- Network Operations Plan
- NPA	- (EASA) Notice of Proposed Amendment
- NSG	- Navigation Sub-Group
- NSP	- Network Strategy Plan
- ODSG	- Operations and Development Sub-Group
- RMG	- RAD Management Group
- RNDSG	- Route Network Development Sub-Group
- SSC	- Single Sky Committee
- SC OPS	- Standing Committee Operations
- SC TECH	- Standing Committee Technical Systems
- SES	- Single European Sky
- SSR	- Secondary Surveillance Radar
- SIMEX	- Simulation Experiment
- STATFOR UG	- Statistics and Forecast User Group
- ToR	- Terms of Reference
- XMAN	- Cross Border/Center Arrival Management

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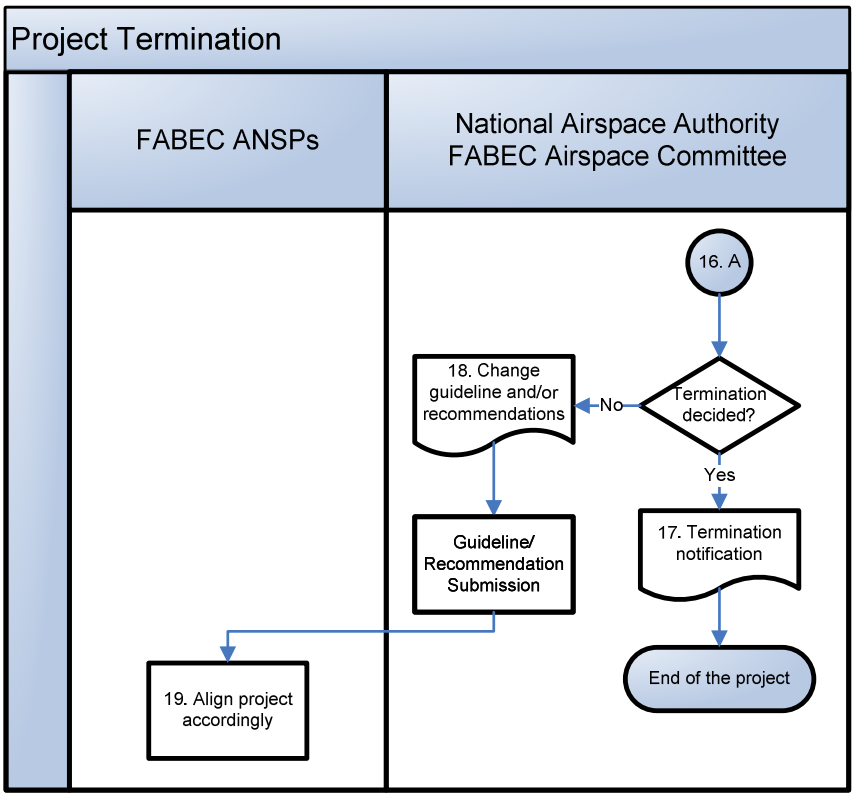

#	Activity	Output
16	In case of disapproval, the body having rejected the proposal has to decide on the termination of the project.	
17	When termination is decided, the body notifies the termination to the CM SC OPS	Termination notification
18	When termination is not decided, the body give guidance and/or 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	

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