9th December 2011

INFORMATION TO THE COMMISSION, THE EUROPEAN AVIATION SAFETY AGENCY (EASA), OTHER MEMBER STATES AND INTERESTED PARTIES ON THE ESTABLISHMENT OF NEFAB

1 INTRODUCTION

During summer 2007, the North European Strategy Committee (NESC) composed of the Chief Executives (CEOs) of the North European ANS providers (NEAP) initiated a pre-feasibility study regarding the viability of establishing a Functional Airspace Block in the northern part of Europe. States committed in the NEFAB inception phase were initially Sweden, Denmark, Norway, Finland, Estonia and Iceland. Latvia became a NEFAB partner during autumn 2009. In January 2011, Sweden and Denmark decided to withdraw from the project. In June 2011 also Iceland withdrew from NEFAB. Due to the changed composition of the project, the feasibility study had to be updated accordingly.

Based on the final NEFAB Feasibility Study, Estonia, Finland, Latvia and Norway have decided to create North European Functional Airspace Block (NEFAB). The mission is to create an airspace block that is operated optimally for its customers and stakeholders.

1.1 Purpose of this document

The purpose of this document and its Annexes is to provide information on the establishment of NEFAB as required by Commission regulation (EU) No 176/2011. It provides information of legal framework, governance and initiatives within NEFAB.

1.2 Overview of this document

- Section 1: Background and overall description of NEFAB
- Section 2: NEFAB with respect to requirements in Annex I, Part I of Regulation (EU) 176/2011
- Section 3: NEFAB with respect to requirements in Annex I, Part II of Regulation (EU) 176/2011
- Annexes: A list of Annexes is provided in the end of this document and throughout this document references are made to these relevant Annexes.

1.3 Legal framework and governance

The joint declaration of intent for the creation of the NEFAB was signed by the Ministers of Estonia, Finland, Latvia and Norway on 30 August 2011. The State level agreement was initialed on 9th December 2011. The NSA cooperation agreement has been initialed on 22nd December 2011. The ANSP agreement has been drafted and is expected to be finalised in the first quarter of 2012 (Annexes 1, 2, 3 and 4).

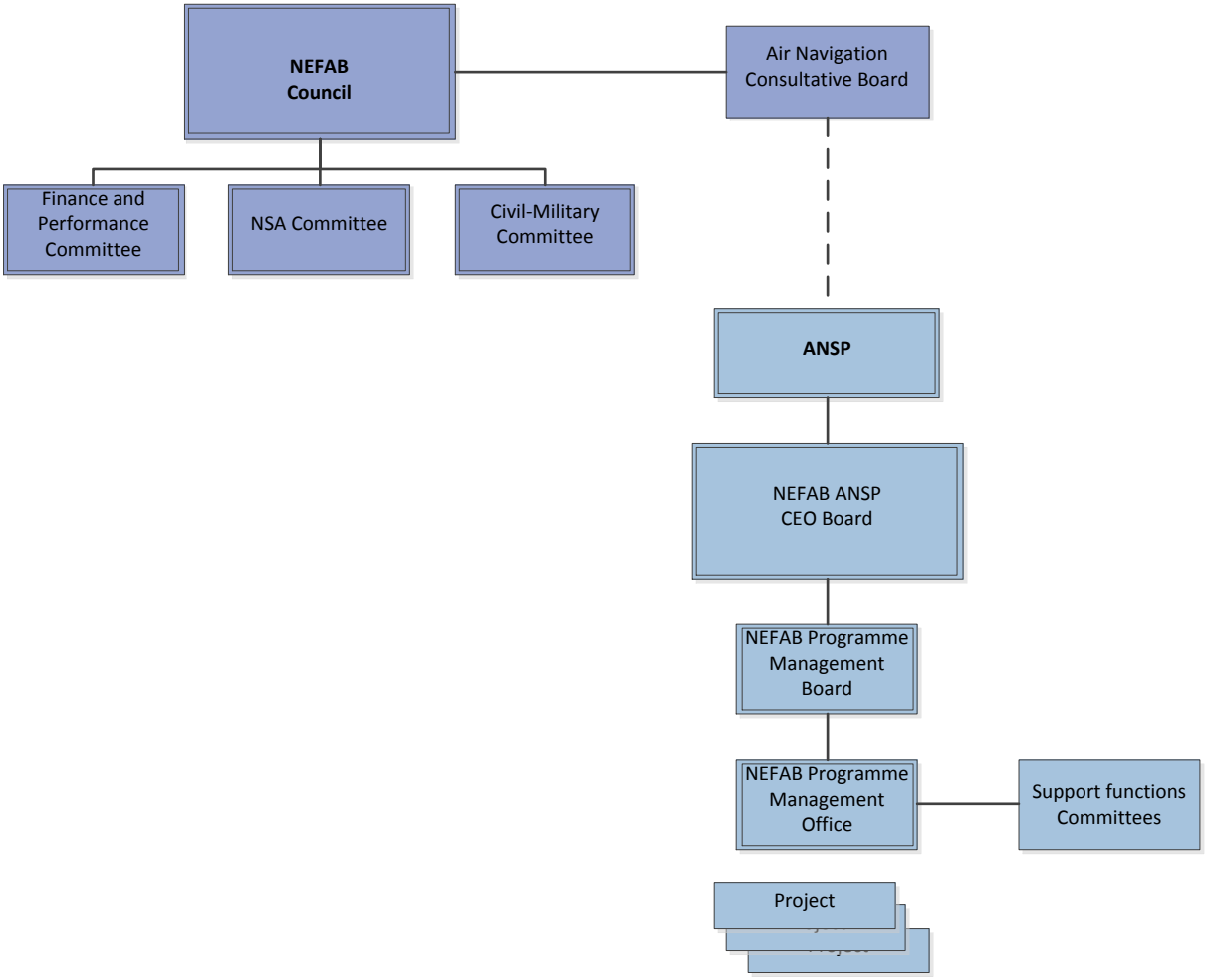
The processes for national approvals will start after consultations with the Commission, the European Aviation Safety Agency (EASA), other Member States and Interested Parties. The State Level Agreements of the NEFAB States will be taken to the national parliaments for approval and will be ratified in autumn 2012 at the latest. Ministries of the NEFAB-countries will be in close co-operation and have regular meetings to ensure the establishment of the NEFAB in time.

In the State level agreement, the NEFAB Council is established for the governance of NEFAB. Assisting the NEFAB Council, the National Supervisory Authorities Committee, the Civil- Military

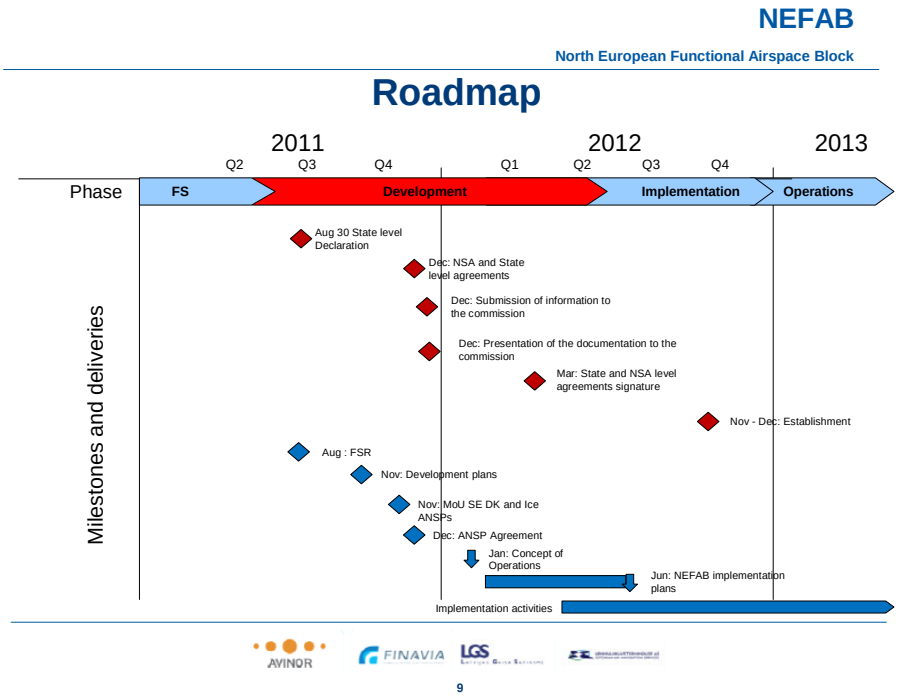
Committee and the Financial & Performance Committee are established. Other committees and bodies may be established by the NEFAB Council.

In addition to this, the Air Navigation Services Consultative Board is established to ensure the consultation of the air navigation service providers on matters relating to the provision of services within the NEFAB.

The NEFAB governance structures are presented below:



The main milestones to establish NEFAB are presented in the roadmap below:



1.4 Operational concept

The Operational Concept is a core element in the establishment of the NEFAB and is a core driver in reaching the performance targets in the areas of safety, capacity, cost effectiveness, flight efficiency, mission effectiveness and environment. The NEFAB region will be considered to be one continuum of airspace with seamless transitions between the ATS–units. The concept will contribute to meeting the needs of the airspace users by delivering enhancements in flight efficiency, military mission effectiveness and capacity in a safe, environmentally sustainable and cost-effective manner for all airspace users and service providers.

The elements of the Operational Concept are interrelated. The concept represents major changes from today's environment and takes advantage of joint efforts in a FAB context to provide a comprehensive service and accommodate all stakeholders.

In the context of the NEFAB Feasibility Study the envisaged Operational Concept has been developed around four main elements:

1. Airspace Design;

- ATS Routes and Free Routes
- Sectorisation
- Airspace classification and delineation
- Military Areas/Flexible Use of Airspace structures.

2. Air Traffic Services (ATS);

- Demand and capacity management

- Sector Configuration Management (SCM)
- Trajectory and conflict management
- Operational rules and procedures

3. Airspace Management (ASM)/Air Traffic Flow and Capacity Management (ATFCM);

- Strategic
- Pre-tactical
- Tactical

4. Enablers;

- Regulatory framework
- Training
- Functionality and interoperability of systems
- Common information management
- AIM.

The NEFAB-project will deliver further defined concept of operation early 2012 and the implementation plans will be ready in June 2012. There will be close cooperation between the project and NSA during this process. The NSA group will meet monthly during the implementation phase concentrating on the assessment of the projects suggested consept of operation and on details regarding cooperation between NSAs, including division of tasks.

Further information on Operational concept is included in Feasibility Study Report, Appendix 1, Operational Concept (Annex 12 of this document).

1.5 Initiatives

The NEFAB project has identified 12 individual improvement initiatives related to airspace, service provision, support functions as well as systems. The initiatives are listed below and a full description of each initiative is provided in separate document. (Annexes 13-28 to this document)

1. ATS Routes and Sectorisation (Annexes 13-16)
2. Optimisation of ATS (Annex 18)
3. Optimisation of ASM and ATFCM (Annex 19)
4. Optimisation of Ancillary Services (Annex 20)
5. Harmonisation of Operational Rules and Procedures (Annex 21)
6. Optimisation of Training (Annex 22)
7. Supervision and Monitoring of CNS Infrastructure (Annex 23)
8. Commonality of CNS/ATM Systems (Annex 24)
9. Joint Evaluation of Technology within CNS and ATM (Annex 25)
10. Common System Maintenance (Annex 26)
11. Joint Procurement (Annex 27)
12. Safety Management Systems (Annex 28)

1.6 Cooperation with the neighbouring states

To achieve maximum benefits to the airspace users it is of high importance to work in close cooperation with the neighboring states especially on the airspace related issues. State level declaration on cooperation between the NEFAB and Danish-Swedish FAB and Iceland is in process. NSA level cooperation is going on and was further defined in a meeting which was organized in Reykjavik in October 2011. In Reykjavik it was agreed that the main focus on NSA level cooperation should be in the harmonised airspace strategy in the region. Also other areas of cooperation were identified e.g. harmonized and synchronised regulatory processes and

coordinated actions in crisis situations (volcanic ash etc.) Next cooperation meeting will be arranged by the Danish NSA in Copenhagen during spring 2012. Cooperation agreement between Air Navigation Service Providers concerning the development of airspace has been signed by Avinor A/S, Finavia Corporation, Isavia, VAS Latvijas Gaisa Satiksme, Lennuliiklusteeninduse AS, Luftfartsverket (LFV) and Naviair on 1st December 2011 (Annex 5 to this document)

2. STATE OF PLAY

This section provides information on the current status of NEFAB in respect of the regulation (EU) 176/2011 and is divided in two subsections. The first subsection covers part I of the Annex to regulation and the second subsection part II.

2.1 GENERAL INFORMATION, PART I OF THE ANNEX TO REGULATION (EU) 176/2011

2.1.1 Point of contact

The point of contact will be named at declaration phase.

For the consultation period the contact persons are:

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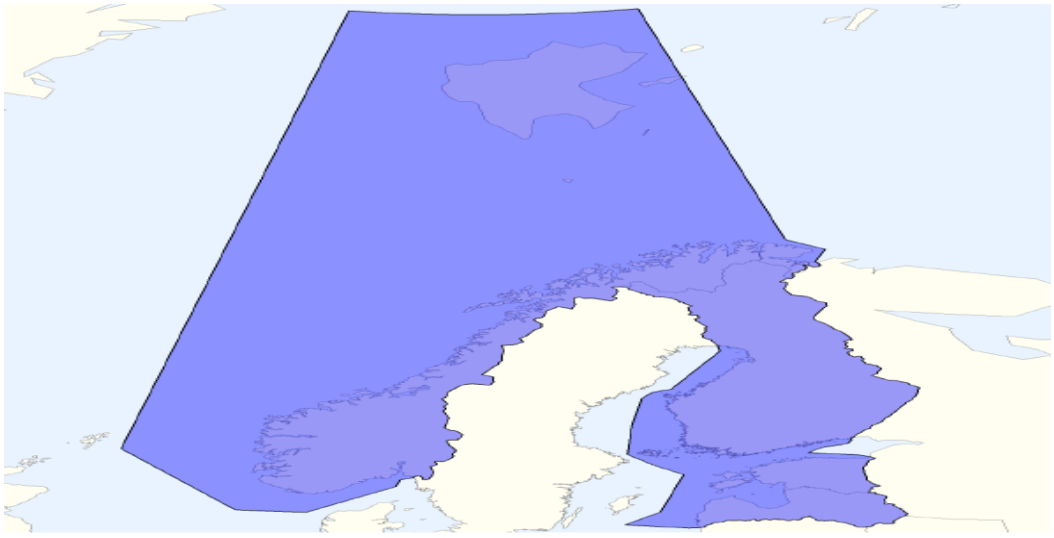
2.1.2 Defined dimensions of NEFAB

The NEFAB encompasses all airspaces in the contracting states Finland, Estonia, Latvia and Norway including Bodø Oceanic FIR and service provision in all en-route airspace and all TMA's. The NEFAB declaration and establishment will not cause any changes in the existing flight information regions in the area.



2.1.3 Jointly designated air traffic service providers

The joint designation will be facilitated by the NEFAB Council and will be notified to the European Commission. The service providers to be designated in connection with the

establishment of NEFAB are Avinor A/S, Finavia Corporation, VAS Latvijas Gaisa Satiksme, Lennuliiklusteeninduse AS.

2.1.4 The providers of air traffic services providing services without certification in accordance with article 7(5) of regulation (ec) 550/2004 and their respective areas of responsibility

There are no uncertified Air Traffic Service Providers within the NEFAB area.

2.1.5 Agreement of the Member states

A copy of the State Level Agreement (initialled 9the December) is included as Annex 2 to this document.

2.1.6 Arrangements between the National Supervisory Authorities

A copy of the Cooperation Agreement between National Supervisory Authorities (to be initialled by 31st December 2011 latest) is included as Annex 3 to this document.

2.1.7 Arrangements between the Air Traffic Service Providers

A copy of the draft Cooperation Agreement on the Operation of the North European Functional Airspace Block between Air Navigation Service Providers is included as Annex 4 to this document.

2.1.8 Arrangements between competent civil and military authorities

Arrangements for civil-military cooperation are described in state level agreement: Chapter 1, articles 4, 5 and 6 and Chapter 2, articles 8, 9 and 10.

3. REQUIREMENTS OF ARTICLE 9a(2) OF REGULATION (EC) No 550/2004, PART II OF THE ANNEX TO REGULATION (EU) 176/2011

3.1 Safety case

a) The common safety policy or plans to establish a common safety policy:

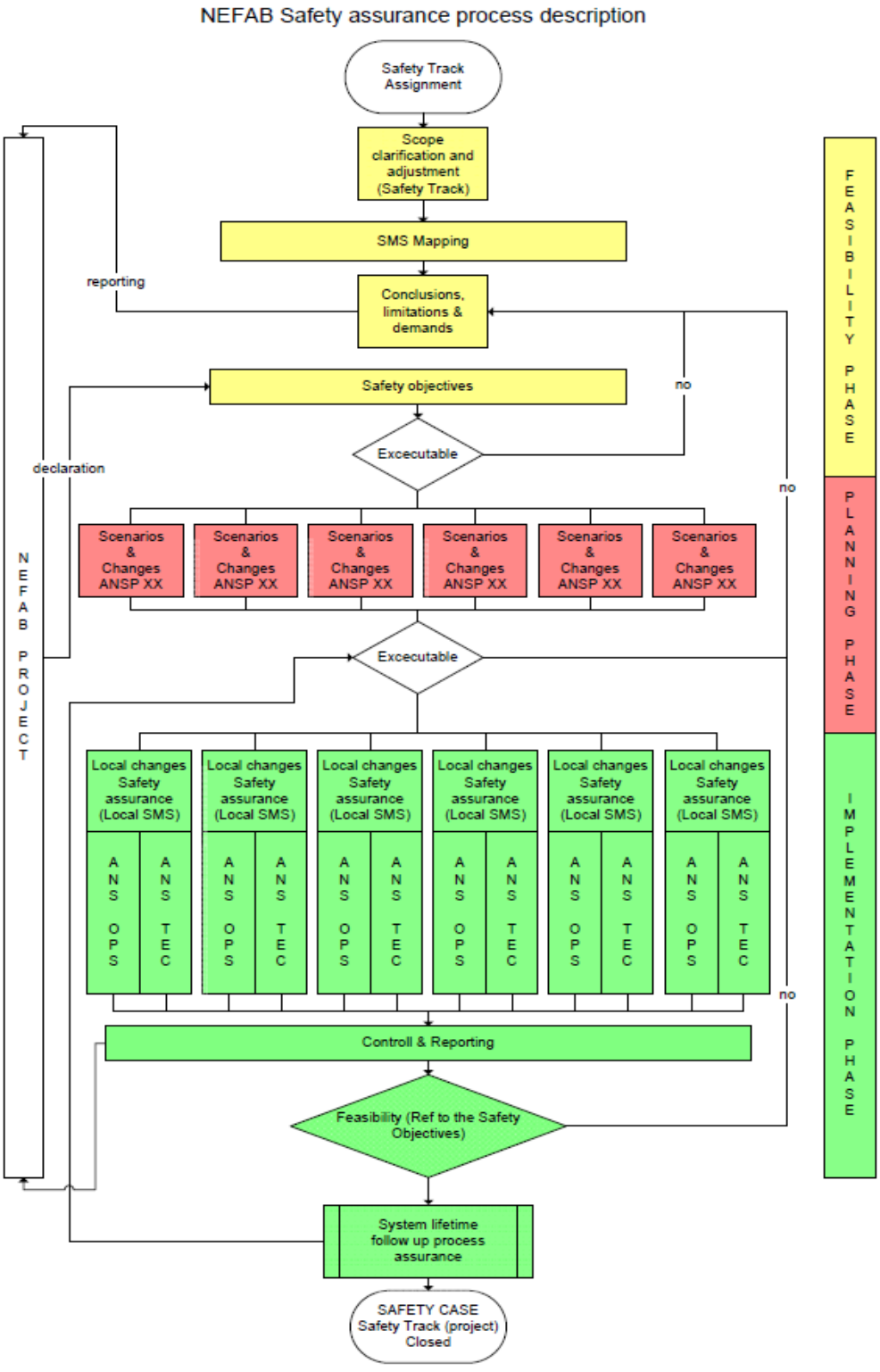
The Member States have agreed to establish a common safety policy and support the development and the implementation of a common Safety Management System by the Air Navigation Service Providers (article 9 of State level agreement).

b) A description of the arrangements dealing with accident and incident investigation and plans on how to address safety data collection, analysis and exchange:

Investigation of accidents serious incidents will be conducted in accordance with the Regulation No 996/2010 of the European Parliament and of the Council on the investigation and prevention of accidents and incidents in civil aviation and repealing Directive 94/56/EC, which is applied in all NEFAB states including Norway (already prior its inclusion to the EEA agreement) and ICAO Annex 13 of Chicago Convention. For occurrence investigation the NEFAB plans to establish a common classification of occurrences in line with KPIs. Same causal factors scheme is planned to use across NEFAB -area. The harmonisation requirement at this stage includes also commonly agreed safety data exchange arrangements (minimum at KPI level).

c) A description of the way in which safety is being managed to avoid degradation in safety performance within NEFAB:

Safety Assurance process is described in the process chart below:



d) A description of the arrangements clearly identifying and allocating the responsibilities and interfaces with relation to the setting of safety targets, safety oversight and accompanying enforcement measures in regard to the provision of air navigation services within NEFAB:

The NSAs will propose the safety targets and KPIs to Council for adoption as part of the NEFAB performance plan. The Council will also decide on corrective measures when needed.

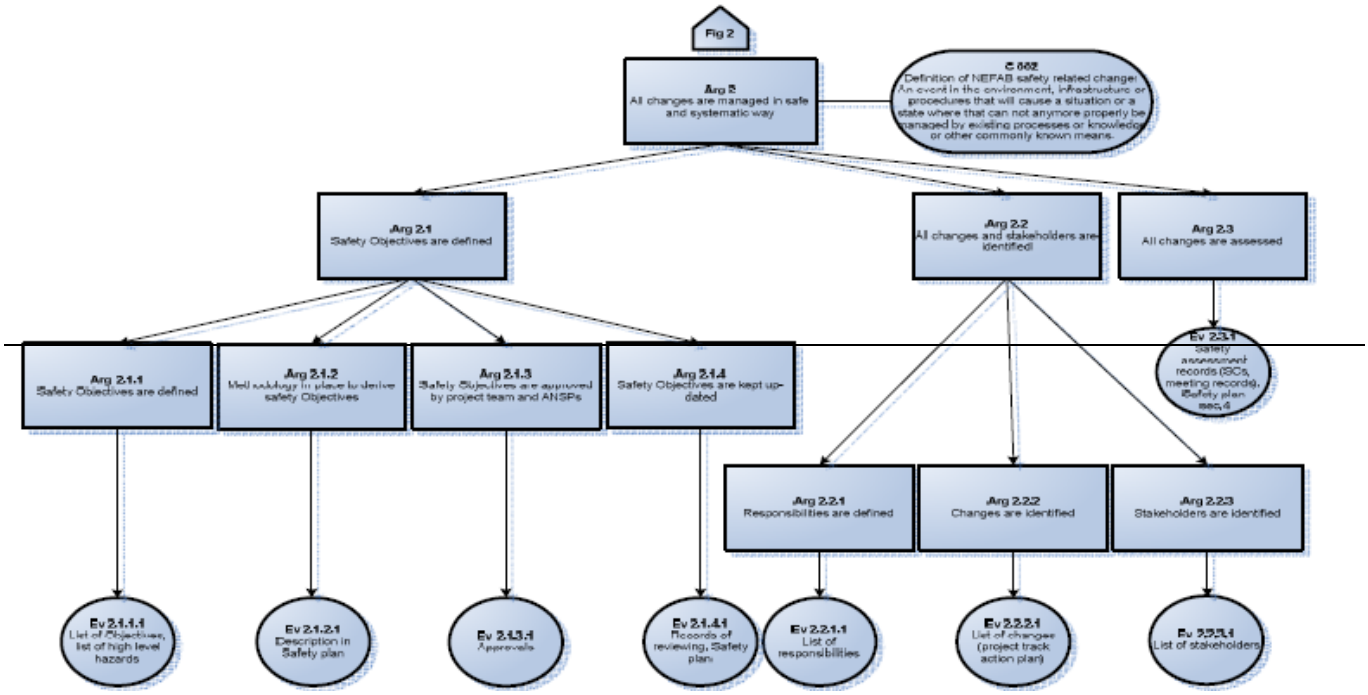
The safety oversight arrangements and cooperation is described in chapter 7 of the State level agreement and article 6 of the Cooperation Agreement between National Supervisory Authorities.

e) Documentation and/or statements that the safety assessment including hazard identification, risk assessment and mitigation has been conducted before introducing operational changes resulting from the establishment of NEFAB:

The NEFAB project plans to agree on common methodology for assessment of changes that affects NEFAB, during the phase "NEFAB operations 2012", as described in FSR Appendix 13. The common understanding of the term "change" will also be established and agreed.

The Safety Plan gives a description of the safety assessment activities or processes to be conducted in each of the major project phases.

Safety Case argument 2 below describes which evidences the NEFAB will use to demonstrate that changes are managed in a safe and systematic way.



Safety Plan, Safety Case report and Change Management Manual are provided as Annexes to this document (Annexes: 9, 10 and 11)

3.2. Optimum use of airspace

Statistics and benchmarking documentation developed by the EUROCONTOL Performance Review Unit indicates that the North European airspace is efficiently managed already today, however SAAM simulation conducted for the NEFAB project indicated additional improvement opportunities. The NEFAB 2015 Vision - based on regional capacity management and airspace design – will implement

integrated management of the airspace supported with technical and operational data sharing, as required by the FAB IR.

Since 2007, as part of an overall network development approach EUROCONTROL (RNDSG) has worked in close cooperation with all FAB initiatives. This close cooperation is demonstrating the compliance with the FAB IR requirements regarding items a) and b) of point 2 in Part II of the Annex. All the FAB initiatives utilized the Advance Airspace Scheme (AAS) and the Dynamic Management of European Airspace Network (DMEAN) operational concepts. The airspace development with EUROCONTROL included a NEFAB-wide assessment of the existing Civil-Military coordination based on FUA. The NEFAB project will address, in close cooperation with the military partners, the validation of the NEFAB Operational Concept in 2011-2012 during the NEFAB Development phase when additional simulations and validation activities are foreseen. The EUROCONTROL Guidelines on Generic Military requirements - together with national requirements – shall provide the guiding principles for the establishment of NEFAB. FUA within NEFAB will be carried out in accordance with the principles laid down in Commission Regulation (EC) No 2150/2005 of 23 December 2005.

The implementation of the initiatives included in the Feasibility Study report ensures optimum use of airspace, taking into account air traffic flows. There will be a more integrated management of the airspace within NEFAB. The airspace management data will be shared within the FAB. This will ensure a more effective and enhanced civil – military cooperative decision making as well as military - military cooperation.

Detailed information of the initiatives on this area is found as follows:

Initiative 1, ATS routes and sectorisation (Annexes 13-17 to this document)
Initiative 3, Optimisation of ATS (Annex 18 to this document)
Initiative 4, Optimisation of ASM and ATFCM (Annex 19 to this document)
Operational Concept document (Annex 12 to this document)

3.3 Consistency with the European route network

Building on the RNDSG airspace improvements Catalogue, EUROCONTROL supported the NEFAB airspace design as part of a coordinated development and deployment FAB support activity. This ensured that airspace modeling was fully in line with the overall pan-European network. The common work with EUROCONTROL also ensured consistency and interconnectivity inside NEFAB and in the interface with neighbouring FABs and third States, a uniform application of ASM/ATFCM procedures, a synchronized implementation of new airspace projects and operational concepts.

According to EUROCONTROL (RNDSG/71 WP13) to providing NEFAB data for the Route Planning Data Base of RNDSG can be considered as a formal reference on the inclusion of NEFAB development activities into the European route network.

The detailed description of the NEFAB airspace design and implementation plan for the free route operations is attached in Initiative 1 (Annexes 13-17 to this document). Further simulations are planned in the NEFAB Development phase for validation of the initial SAAM sectorisation model and for the development of real-time capacity management function for NEFAB. These simulations will include the development and validation of a NEFAB-wide Contingency Plan in order to ensure service recovery arrangements.

Airspace users and group of airspace users are represented at the RNDSG meetings, thus they are aware of FABs development and part of the consultation process. In addition, the NEFAB project has made presentation/consultation with North European airspace users.

3.4 Overall added value

The attached NEFAB Socio-economic analysis and internal ANSP CBA provide detailed documentation that all criteria in SES regulations have been met. In particular, NEFAB will contribute to reduction of aviation environmental impact and the CBA demonstrates an overall positive financial result of the NEFAB airspace. A discount rate of 10% has been used for the NPV calculation (according Standard inputs for Eurocontrol CBA)

The internal Cost Benefit Analysis (CBA) indicates that the minimum scenario gives a negative internal net present value in 2020 i.e. the Internal Rate of Return (IRR) is less than the 10% discount rate. The performance scenario has a positive internal net present value for 2020, with a significant higher IRR than the discount rate. The performance scenario is also expected to have a shorter pay-back time (2017) than the minimum scenario (2021). The Socio-Economic study where the internal CBA is integrated gives a positive overall net present value for both the Minimum and Performance scenario for the periods from 2012 to 2020 and to 2025. The Socio-Economic study also gives an indication on high IRR, i.e. a high return on investment (ROI) for both scenarios.

More detailed information can be found in Socio-Economic Study main report and Cost Benefit Analysis (Annexes 7 and 8 to this document)

Overall results of the Socio-economic analysis of the NEFAB Feasibility Study

	Minimum scenario		**Performance scenario**	
External cash effects per year (in mill. Euro)	2015	53,7	2015	53,7
	2020	73,0	2020	76,8
	2025	92,8	2025	97,6
Internal cash effects per year (in mill. Euro)	2015	0,6	2015	-1,9
	2020	4,3	2020	12,6
	2025	4,3	2025	12,6
Total external and internal cash effects per year (in mill. Euro)	2015	54,3	2015	51,7
	2020	77,3	2020	89,4
	2025	97,1	2025	110,2
NPV of internal and external effects	2012-2025	304,0	2012-2025	341,3

Other effects of NEFAB for the Airlines and the Society based on airspace analyses in the Feasibility Study

	2015	2020
Airline	22,7m€	32,m€
Reduced flight time	6202hrs/y	8423 hrs/y
Reduced fuel burn	13 843 t/y	18 780 t/y
Reduction in CO_2 emission	46 145 t/y	62 666 t/y

3.5 Ensure smooth and flexible transfer of responsibility for air traffic control between air traffic service units

In the NEFAB, sector boundaries will be established according to traffic flows and regardless of FIR boundaries in order to be free of flight level constraints or coordination points constraints. The procedures for smooth and flexible transfer of responsibility have been assessed in Initiatives 1 (Annex 13 to this document) and 3 (Annex 18 to this document) and will be further refined in the NEFAB Development phase.

The air traffic service providers in the NEFAB are committed to apply procedures that ensure seamless transfer between their sectors. These procedures are already in place and they will be harmonised in order to ensure a safe, smooth and flexible transfer of responsibility in the NEFAB environment.

By December 2012 NEFAB expects that all adjacent air traffic service providers have installed necessary functionality in their ATM systems to ensure compliance with EC 1032/2009.
Further enhancement of the coordination procedures will be examined in the NEFAB Development phase.

The procedures will be documented in Annexes to Letter of Agreements. Further enhancement may be developed in the NEFAB Development Phase and will be the subject of negotiation with the adjacent air traffic service providers in the time span 2013 to 2015.

In the development phase of NEFAB, analysis of existing and already planned Medium Term Conflict Detection systems (MTCD) will be evaluated in order to assess if these systems can provide sufficient safe support to ATCOs in connection with smooth and flexible transfer between ATS units.

3.6 Ensure compatibility between the different airspace configurations, optimising, inter alia, the current flight information regions

During the NEFAB Feasibility study phase both the principle for airspace classification and airspace organization as well as changes of airspace configuration resulting from the harmonization have been thoroughly assessed by initiatives 1 and 4. It was found that principles used for airspace classification (ICAO) are the same in each NEFAB State. The organisation of the national airspace is based on operational requirements. However, different applications of airspace classification and different organisation of air traffic services do exist within the NEFAB area. The current airspace design (including the differences in the application of airspace classification) is the result of national priorities and needs. To overcome these differences, during the FAB development phase, optimisation of sector alignments and TMA-/en-route interface as well as common application and access rules of class C airspace above FL 95 in continental en-route airspace is envisaged.

Harmonisation of airspace classification will facilitate cross-border sectorisation and thereby avoid complexities involved with applying different rules and procedures.

Some of the NEFAB states are involved in preparation of common Transition altitude. The results of this activity will be included in NEFAB development.

More detailed technical information on airspace configurations and the proposed way forward can be found in initiatives 1 and 4 (Annexes 13-17 and 19 to this document).

3.7 Regional agreements concluded within the ICAO

The existing regional agreements concluded with ICAO, which are of relevance with respect of NEFAB, are the following:

1) State level agreement between Kingdom of Norway and ICAO in respect of Air Navigation Service provision in the ICAO North Atlantic (NAT) region in Bodø Oceanic FIR

2) European Air Navigation Plan

The SES initiative has been developed in line with the obligations stemming from the membership of the Community and its member States of EUROCONTROL and ECAC and it is in line with the principles laid down by the 1944 Chicago Convention on International Civil Aviation (EC 549/2004 item 4)

The establishment of NEFAB in accordance with SES regulations will thus be in conformance with the ICAO provisions. Existing regional agreements (as listed above) will be fully respected and compliance between NEFAB and NAT will be ensured. NEFAB interface activities are included in the proposed initiatives to be conducted during the NEFAB Development phase.

3.8 Regional agreements in existence

The existing regional agreements, which are of relevance with respect of NEFAB are the following:

- Existing bilateral State level agreements and LoAs between the NEFAB states and other neighbouring third countries (e.g. Russian Federation).

All of the participating States of the NEFAB initiative are members of ICAO, but not all are member of the European Community. However, on 1st of October 2008, the European Commission adopted a Communication taking stock of the progress made in the development of a broader Common Aviation Area with the neighbouring countries by 2010. Norway is a signatory to the ECAA and is therefore committed to implement the SES regulations.

Other existing agreements concluded with third countries will be fully respected. The NEFAB project will during the next phase establish close cooperation with neighbouring FABs and third countries which are of relevance for the establishment and operation of NEFAB. Proposed interface arrangements will be developed and included in the NEFAB Operational Concept document.

3.9 European Union wide performance targets

The European wide performance targets for the first reference period (2012 – 2014) have been approved by the Single Sky Committee at their meeting on 3rd December 2010. The targets are defined for 3 areas: Environment, Capacity and Cost efficiency (safety targets are not defined for the first reference period).

The ANSPs of NEFAB as from 2011 shall produce annual reports to their respective NSAs, demonstrating compliance with the European performance targets. NEFAB Member States therefore refer to these reports as means of compliance, until the second reference period when performance targets are established at NEFAB level. For the North Atlantic airspace (Bodø Oceanic FIR) it may be required to adopt performance targets set by ICAO which may be different from EU-wide targets.

LIST OF ANNEXES:

ANNEX 1, NEFAB Political Declaration 30 August 2011
ANNEX 2, State Level Agreement (Initialled 9th December 2011)
ANNEX 3, Cooporation Agreement between National Supervisory Authorities (Initialled 22nd December 2011)
ANNEX 4, Cooperation Agreement on the Operation of the North European Functional Airspace Block between Air Navigation Service Providers (DRAFT)
ANNEX 5, Cooperation Agreement between Air Navigation Service Providers Concerning the Development of Airspace (Avinor, Finavia, Isavia, LGS, EANS, LFV and Naviair)
ANNEX 6, NEFAB Feasibility Study Report
ANNEX 7, NEFAB Socio-Economic Study, Volume 1: Main Report
ANNEX 8, NEFAB Cost Benefit Analysis
ANNEX 9, NEFAB Safety Plan
ANNEX 10, NEFAB Safety Case Report
ANNEX 11, NEFAB Change Management Manual
ANNEX 12, Operational Concept
ANNEX 13, Initiative 1, ATS Routes and Sectorisation
ANNEX 14, ATS Routes and Sectorisation, RNDSG RDGE route cataloque
ANNEX 15, ATS Routes and Sectorisation, NEFAB ATS Route proposals
ANNEX 16, ATS Routes and Sectorisation, NEFAB sector loads
ANNEX 17, ATS Routes and Sectorisation, 2015 Improvement Areas
ANNEX 18, Initiative 3, Optimisation of ATS
ANNEX 19, Initiative 4, Optimisation of ASM and ATFCM
ANNEX 20, Initiative 5, Optimisation of Ancillary Services
ANNEX 21, Initiative 6, Harmonisation of Operational Rules and Procedures
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ANNEX 26, Initiative 11, Common System Maintenance
ANNEX 27, Initiative 12, Joint Procurement
ANNEX 28, Initiative 13, Safety Management Systems
ANNEX 29, NEFAB Military Requirements