NEFAB

north european functional airspace block

NEFAB Benefits

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Objective of NEFAB

The overall objective of NEFAB is to improve performance and contribute to European wide performance in areas of

- Economic
- Capacity
- Environment
- Operational
- Safety

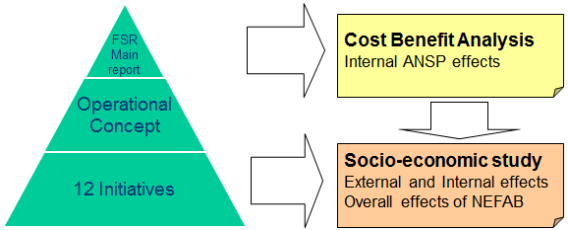
NEFAB will deliver benefits to airspace users through optimal airspace solutions and service provision arrangements – in coordination with neighbouring FABs and Third States.

Benefits will incur through internal ANSP synergy effects, more cost efficient operations, as well as improved airspace structure and sectorisation, according to traffic flows and demands.

Feasibility

Benefits of NEFAB will be stemming from:

- internal ANSP effects (cooperation, harmonization, integration, sharing of resources and data, joint development and procurement) demonstrated in the Cost Benefit Analysis,
- and through improvements in airspace and service provision (FRA, optimized route structure, cost efficient operations) demonstrated in the Socio-economic analysis.



The financial and operational improvement potential in NEFAB is demonstrated in the NEFAB Feasibility Study Report.

Expected benefits

Main airspace users benefit drivers

- Reduced route extensions, flight time, fuel burn, emissions and costs as a result of improvement in airspace structure and sectorisation by implementation of Free Route Airspace, optimisation of ATS route network and ATS provision

Main ANSP benefit drivers

- Optimised use of ATCOs as a result of airspace and sectorisation improvements. Foreseen capacity increase until 2020 can be managed with a reduced future recruitment of ATCOs
- Possible integration and centralisation of tasks and functions, reducing overhead. This is a main benefit area that drives savings.
- Common procurement of services, increasing the bargaining power and enabling lower procurement costs.
- Rationalisation of CNS infrastructure.

2015 Scenario	Effect category	Per day (all flights)	Per year (all flights)
	Reduced route extentions	6 321 NM	2 307 256 NM
	Reduced flight time	1 020 Minutes	372 139 Minutes
	Reduced fuel burn	37 928 kg of fuel	13 843 358 kg of fuel
	Reduction in CO_2 Emission	126 425 kg of CO2	46 145 125 kg of CO2

2020 Min Scenario	Effect category	Per day (all flights)	Per year (all flights)
	Reduced route extentions	8 584 NM	3 133 317 NM
	Reduced flight time	1 385 Minutes	505 375 Minutes
	Reduced fuel burn	51 507 kg of fuel	18 799 901 kg of fuel
	Reduction in CO_2 Emission	171 689 kg of CO2	62 666 339 kg of CO2

2020 Perf Scenario	Effect category	Per day (all flights)	Per year (all flights)
	Reduced route extentions	9 112 NM	3 325 712 NM
	Reduced flight time	1 470 Minutes	536 404 Minutes
	Reduced fuel burn	54 669 kg of fuel	19 954 273 kg of fuel
	Reduction in CO_2 Emission	182 231 kg of CO2	66 514 242 kg of CO2

	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

Benefit realization

Activities giving and supporting benefit improvements:

- Kick off Airspace 2015 Project April 2012
- Kick off ATS Provision 2015 Project April 2012
- Sharing of radar data between Norway and Finland for implementation Q3 2012
- Enhanced SYSCO/OLDI coordination between Estonia and Finland Q2 2012
- Sharing of radar data between Finland, Estonia and Latvia, implementation Q4 2012
- Common development and procurement of data link systems and services for implementation in February 2015

Benefit realization

Airspace 2015 and ATS provision **2015** design criteria

- Sectorisation unconstrained by state boundaries and/or FIR/UIR
- Optimised ATS route network
- Free Route Airspace
- Modular FUA-structures
- TMA interface included
- Stepwise evolutionary approach towards performance driven airspace
- Optimised interface arrangements with neighbouring third states and other FAB's
- Accommodate the forecasted traffic growth

Benefit realisation

Airspace 2015

Free Route Airspace project started April 2012 and is a key driver for NEFAB benefits

The successful implementation of the NEFAB airspace 2015 solution shall contribute to the achievement of the ANSP performance targets for reference period 1, as well as to the achievement of the FAB targets for reference period 2.

Objectives	Success criteria
Flight efficiency and environment	Reduction in additional route length and emissions in NEFAB airspace.
Capacity	Accommodate forecasted 2020 traffic levels.
Service delivery	Improve demand-capacity balancing and increase controller productivity through sectorisation improvements. Enable the optimisation of the use of human resources while facilitating both fixed ATS-route and Free Route operations
Military requirements	Accommodate the network functionality and military mission requirements in support of the route network and sector design with the use of optimised and network compatible military airspace structures.
Safety	Maintain or enhance ATM related Safety Levels.

Activities to give benefits

Airspace 2015 main elements

- **ATS Route Network -** Implementation of Free Route Airspace above FL285 (baseline) in defined portions of NEFAB and optimisation of the ATS Routes within the FAB.
- **Sectorisation –** Realignment of sectors unconstrained by national borders and FIR boundaries to support the ATS route network, including Free Route traffic flows. Cross-border sectors instead of delegation of ATS as a principle.
- **Airspace Classification –** Common application and access rules of class C airspace above FL95 in continental en-route airspace.
- **Flexible Use of Airspace Structures -** Collaborative CIV/MIL airspace design. Military areas will be realigned where required to allow increased flexibility in their pre-tactical and tactical use. Increased modularity in area design.

Activities to give benefits

ATS provision 2015

The project started April 2012 and is a key driver for NEFAB benefits

The successful implementation of the ATS provision 2015 solution shall contribute to the achievement of the ANSP performance targets for reference period 1, as well as the to the achievement of the FAB targets for reference period 2.

Objectives	Success criteria
Flight efficiency and environment	ATS which supports and accommodates user preferred trajectories.
Capacity	Accommodate forecasted 2020 traffic levels.
Service delivery	Improve demand-capacity balancing and increase controller productivity through optimised ATS/ASM/ATFCM processes and procedures and collaborative decision making.
Military requirements	Improve airspace utilisation by applying enhanced FUA concept and optimised ASM procedures
Safety	Maintain or enhance ATM related Safety Levels.

Activities to give benefits

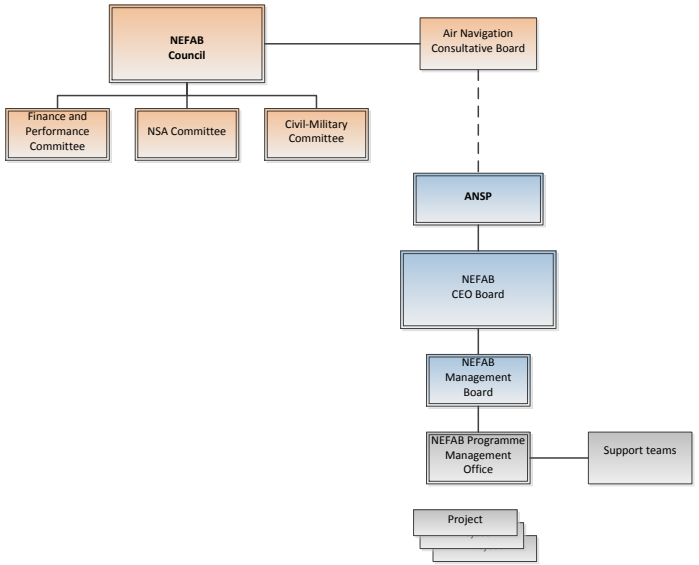
ATS provision 2015 main elements

- Provision of cross-border ATS based on cross-border sector design
- Provision of ATS in Free Route Airspace
- Provision of ATS using data link services
- Provision of ATS in common enhanced FUA environment
- Provision of ATS using enhanced CDM processes
- Enhanced traffic synchronisation services
- Contingency arrangements

Continued pursuit for benefit realization

NEFAB will be operational from Dec 4th at the latest.
NEFAB programme will continue the work to obtain improvements

- State level agreement signed June 2012
- ANSP agreement signed June 2012
- Business model, Financial arrangements and Communication strategies signed with ANSP agreement
- NEFAB CEO Board established August 2012
- NEFAB Management Board established August 2012
- NEFAB Programme Management Office establishment in October – November 2012
- NEFAB Business Plan 2013 – 2017 in development



Continued pursuit for benefit realization

NEFAB Key performance areas – strategic objectives

- **Safety**: Incidents induced by ANSP´s shall be at current level or lower
- **Cost efficiency**: NEFAB and the ANSP´s shall deliver services consistent with the EU-wide targets, or better, for cost-efficiency
- **Capacity**: Services shall be provided in accordance with the EU-wide targets, or better, for capacity; with a NEFAB-wide capacity target established from 2015
- **Environment**: NEFAB contribution to improved flight efficiency is visible and well documented.

Thank you for the attention

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