NEFAB

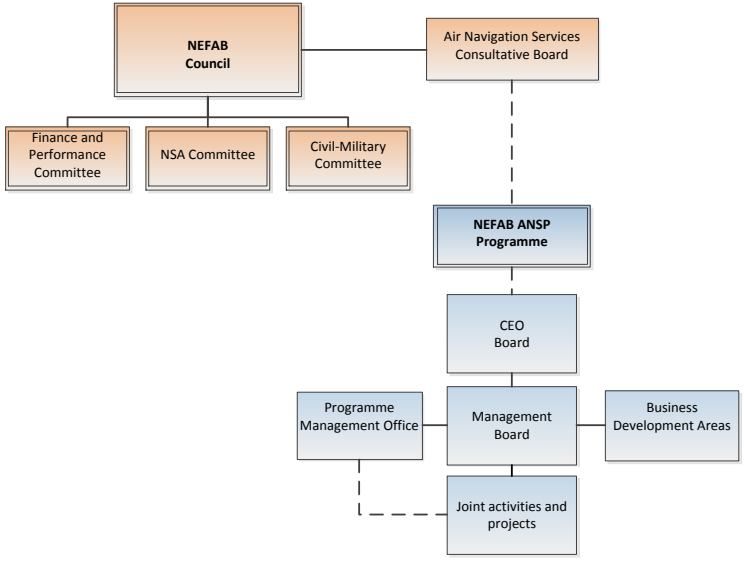
north european functional airspace block

NEFAB Programme - NEFAB ANSCB 26/11/2014

Introduction

NEFAB: North European Functional Airspace block:

- SES requirement
- NEFAB member states: Estonia, Finland, Latvia and Norway
- Air Navigation Service Providers: Avinor, EANS, Finavia and LGS
- Formally established 22nd December 2012
- NEFAB Governing body: NEFAB Council (States ministries)

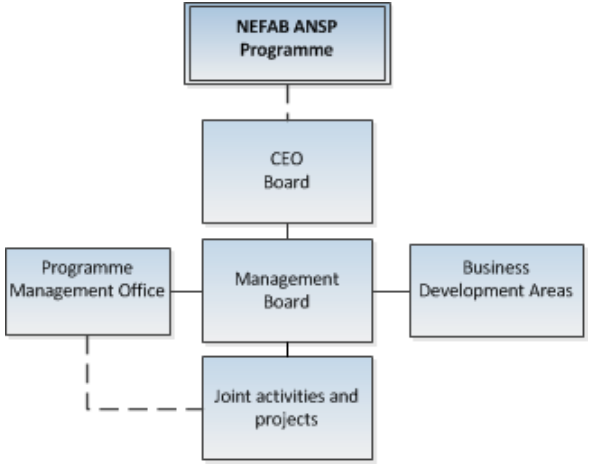


NEFAB Objective:
to achieve optimal performance in the areas relating to safety, environmental sustainability, capacity, cost-efficiency, flight efficiency and military mission effectiveness, by the design of airspace and the organisation of air traffic management in the airspace concerned, regardless of existing boundaries

Main activities NEFAB programme

NEFAB Programme - main activities:

- Airspace and Services optimization
- Business development for improved cost efficiency



NEFAB – The programme

- Airspace and Services optimization
  - Target Concept 2015
  - Target Concept 2020+
  - North European Free Route Airspace (NEFRA)

- Business development for improved cost efficiency
  - Training
  - Safety
  - AIS and AIM
  - CNS
  - Operations

NEFAB business development

NEFAB Business plans describes the common strategies and activities to realize the benefits in NEFAB

ANSP Strategies:

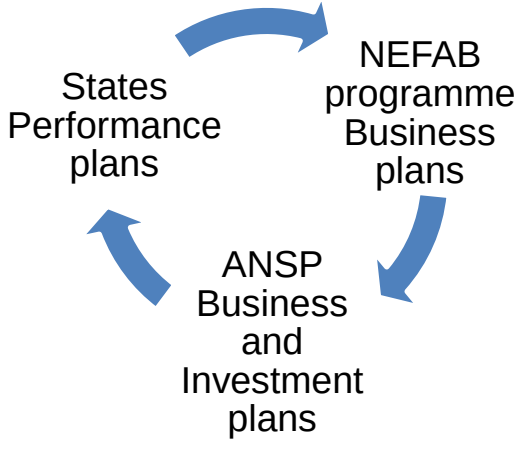
- Business Plan 2015
- Business Plan 2015 – 2019

Key activities 2014 - 2015:

- Target Concept 2015 implementation
- NEFRA

Kick offs 2015:

- Target Concept 2020+
- Harmonisation of Safety Management Systems
- Initiatives from Business Development Areas (Training and AIS/AIM)



NEFAB Target Concept

- **Target Concept 2015 (NEFAB CONOPS)** an essential element of Scenario 2015 described in Feasibility Study Report
- 2015 is a **step towards** performance scenario in **2020 and beyond**
- The NEFAB 2015 Target concept is **in line with European development strategies** and will fulfill a number of SES requirements stated in:
  - ATM Master Plan
  - ESSIP/LSSIP Plan
  - Network Strategy Plan
  - Interim Deployment Programme

NEFAB Target Concept

- **User preferred** trajectories in **Free Route Airspace** (FRA)
- ATS-route network **maintained**
- **Common** NEFAB FRA flight planning rules
- Sectors will be adapted to **accommodate the changes in traffic flows.**
- The military airspace structures designed to **accommodate the military user requirements**.
- ATFCM processes through national FMP`s will be **maintained**
- Automated flight coordination and **ATM-system interconnectivity enhancements**
- Rules, regulations and ATC-procedures to **support the FRA operations**

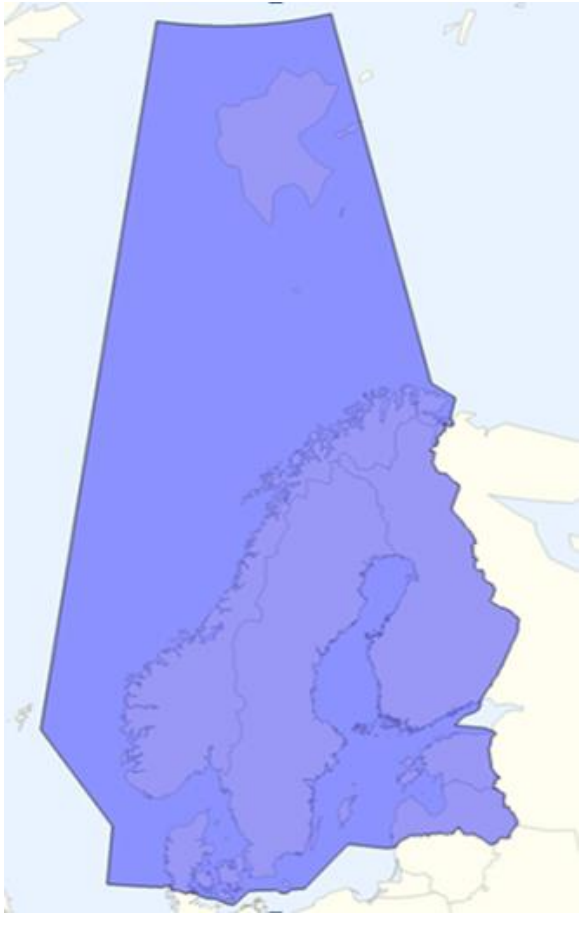
NEFAB Network plan

- The Network Plan provides an elaboration and adaption of the **NEFAB 2015 target concept**
- The NEFAB Network Plan shall secure a **harmonized, synchronized and timely implementation of the FAB concept of operations** to be implemented and fully functional in November 2015.
- The target concept is built on **individual modules** as shown in illustration.

North European FRA – NEFAB and DK-SE FAB (NEFRA)

NEFAB and DK-SE FAB cooperation to establish **seamless FRA** across the two FABs by **November 2015**

NEFRA is the **interface** between **FRAs in NEFAB and DK-SE FAB above FL285**

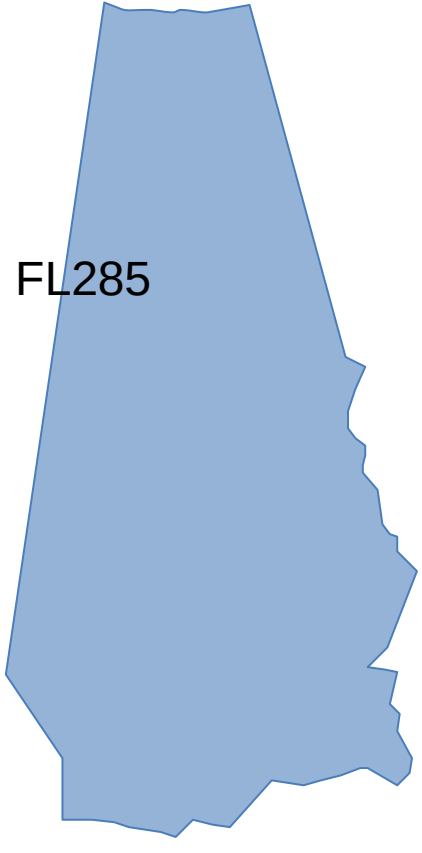


Free Route Airspace –NEFAB and DK-SE FAB (NEFRA)

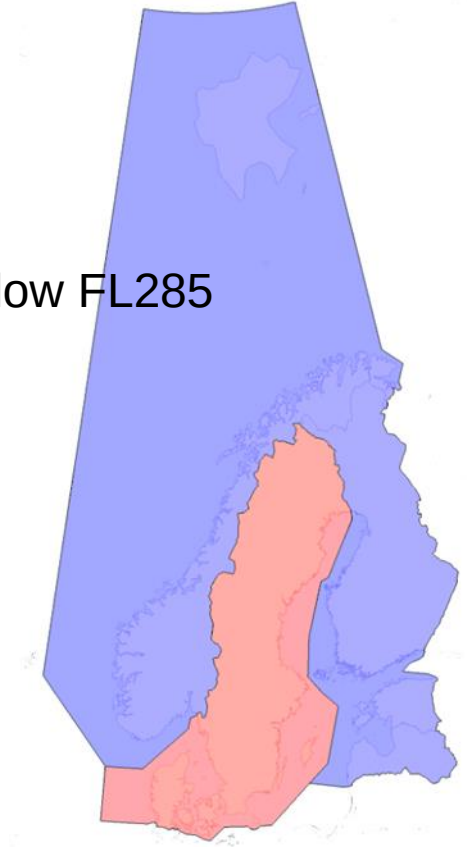
Free Route Airspace

Fixed Route Network

Above FL285

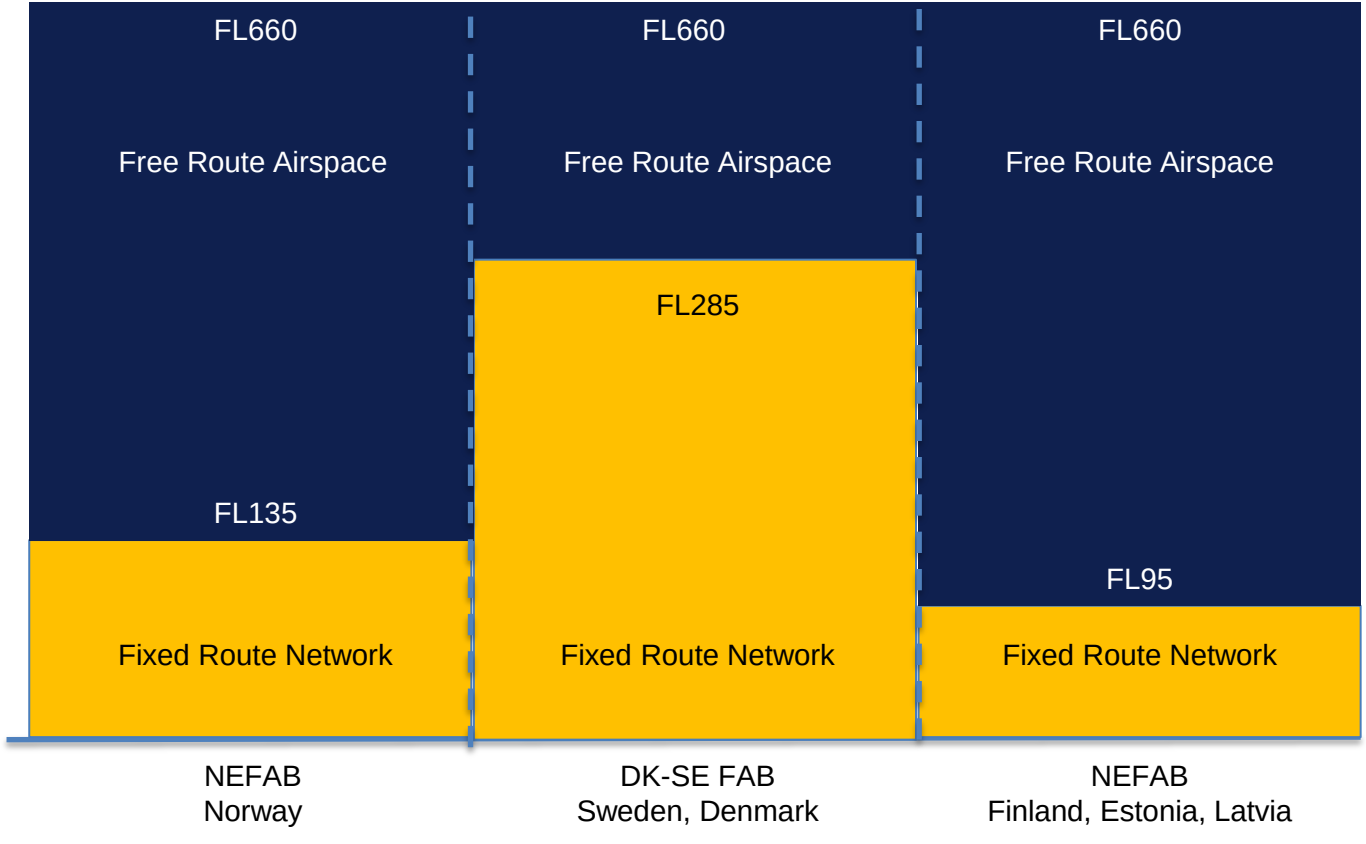


Below FL285



Free Route Airspace – Extension NEFAB and DK-SE FAB(NEFRA)

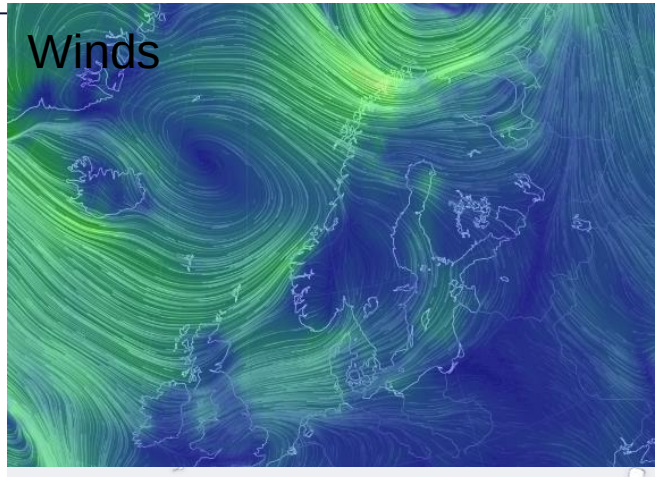
NEFRA is the **interface** between FRAs in NEFAB and DK-SE FAB **above FL285**

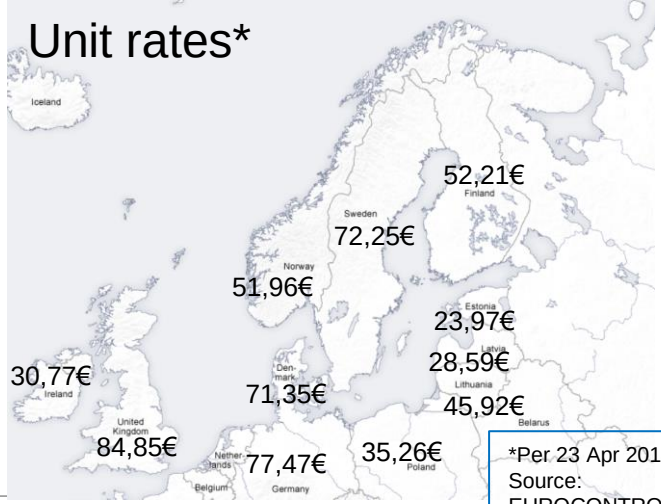


Effects – Where to fly

In a FRA operators have the option to plan their flight trajectories with optimum cost effects based on several variables, including:

- Route length and time flown impacting fuel costs and route charges for air navigation services (unit rates)
- Winds affecting flown length and time in air and amount of fuel
- Unit rates impacts costs per flown NM.





*Per 23 Apr 2014
Source: EUROCONTROL and EANS

Effects - economics:

	Per day	Per year (*365)
Flights	4 785	1 746 525
Route length	-5 030 NM	-1 835 895 NM
Flying time	-828 min	-302 220 min
Fuel	-28 359 kg	-10 351 185 kg
Fuel cost	-19 446 €	-7 097 808 €
CO2	-89 620 kg	-32 711 475 kg
NOx	-393 kg	-143 463 kg

* Route length reduction
Decrease for 2022 flights
Increase for 107 flights (modelling errors)
No change for 2656 flights (mainly those below FL285 and FRA in DK SE FAB)

** Fuel cost reduction
Fuel cost based on IATA
Rate 949$ per metric ton (4 Apr 2014)
949$ = 685,7 € (16 Apr 14, Coinmil.com)

Further cooperation

NEFAB ANSP partners cooperating with:

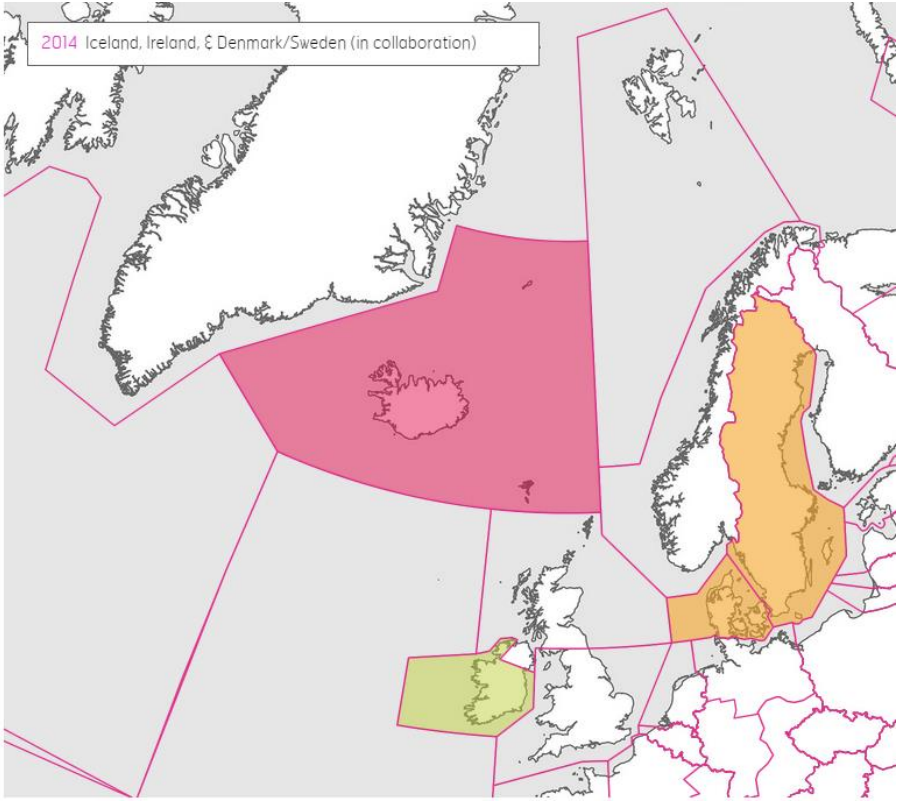
- LFV and Naviair in DK-SE FAB
- IAA and NATS in UK-Ireland FAB
- Isavia, Iceland:

the **Borealis** alliance.

Key focus in the alliance is the Borealis FRA vision

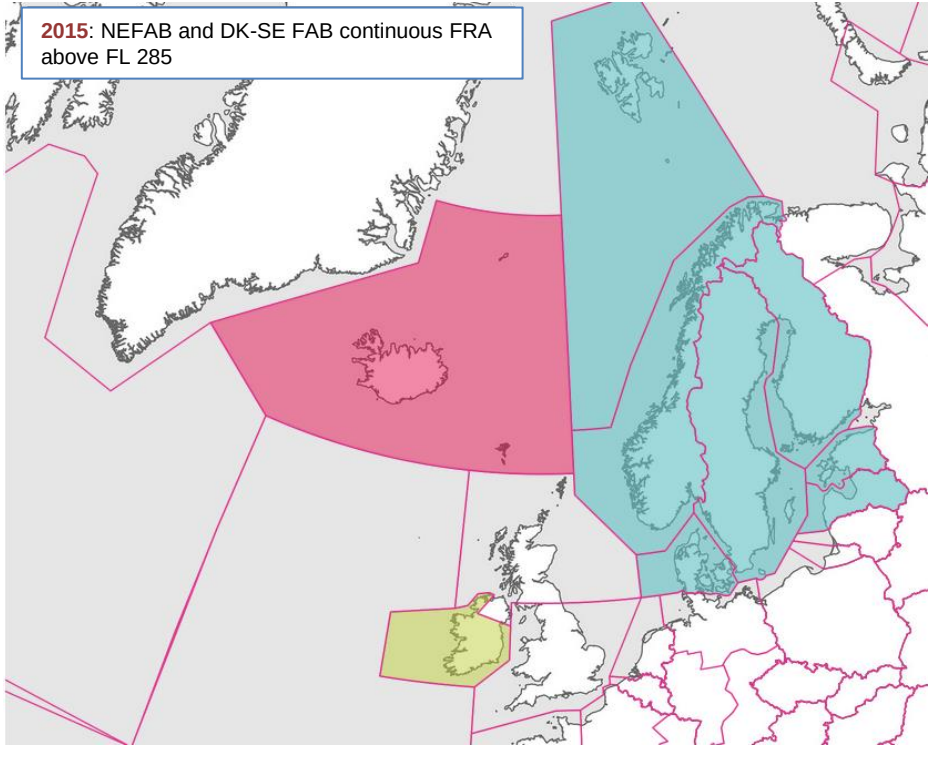
Status 2014:

- DK/SE FRA implemented
- IRE FRA Implemented
- FRA night time Finland
- Icelandic airspace FRA compliant



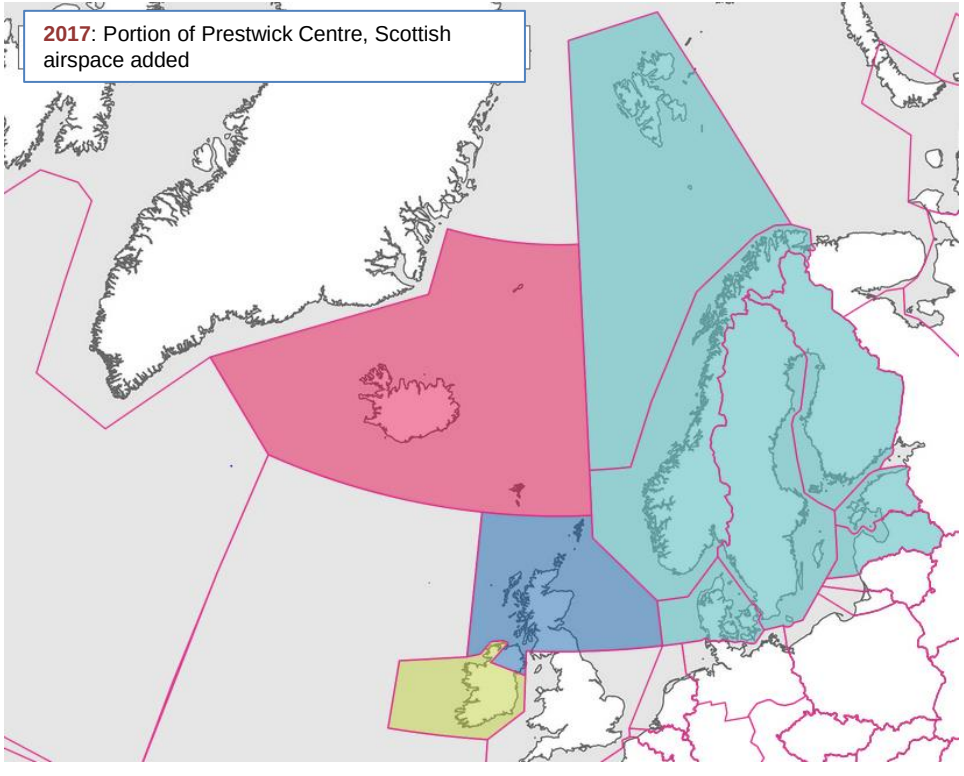
2015 In progress

- NEFAB implement FRA
- DK/SE FAB and NEFAB seamlessly connected above FL 285 (NEFRA)



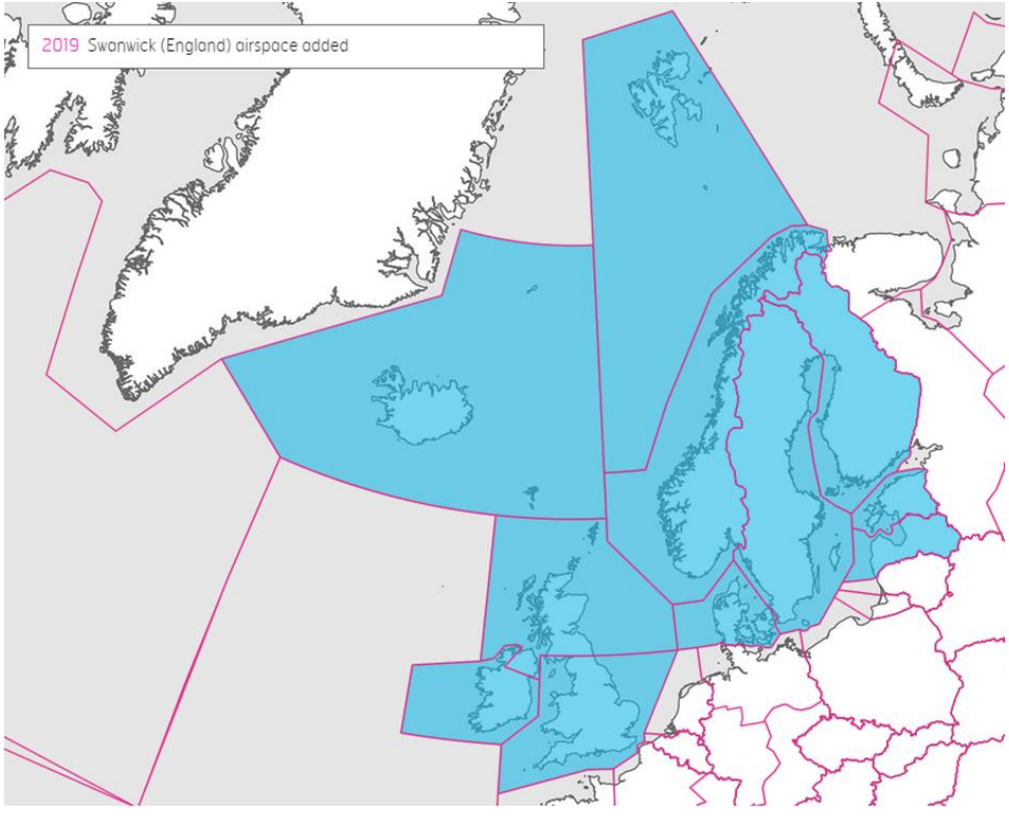
2017 planned

- UK Prestwick Airspace implements FRA



2019 The Borealis vision

- UK London FIR implements FRA
- Seamless FRA in Northern Europe



Thank you for the attention