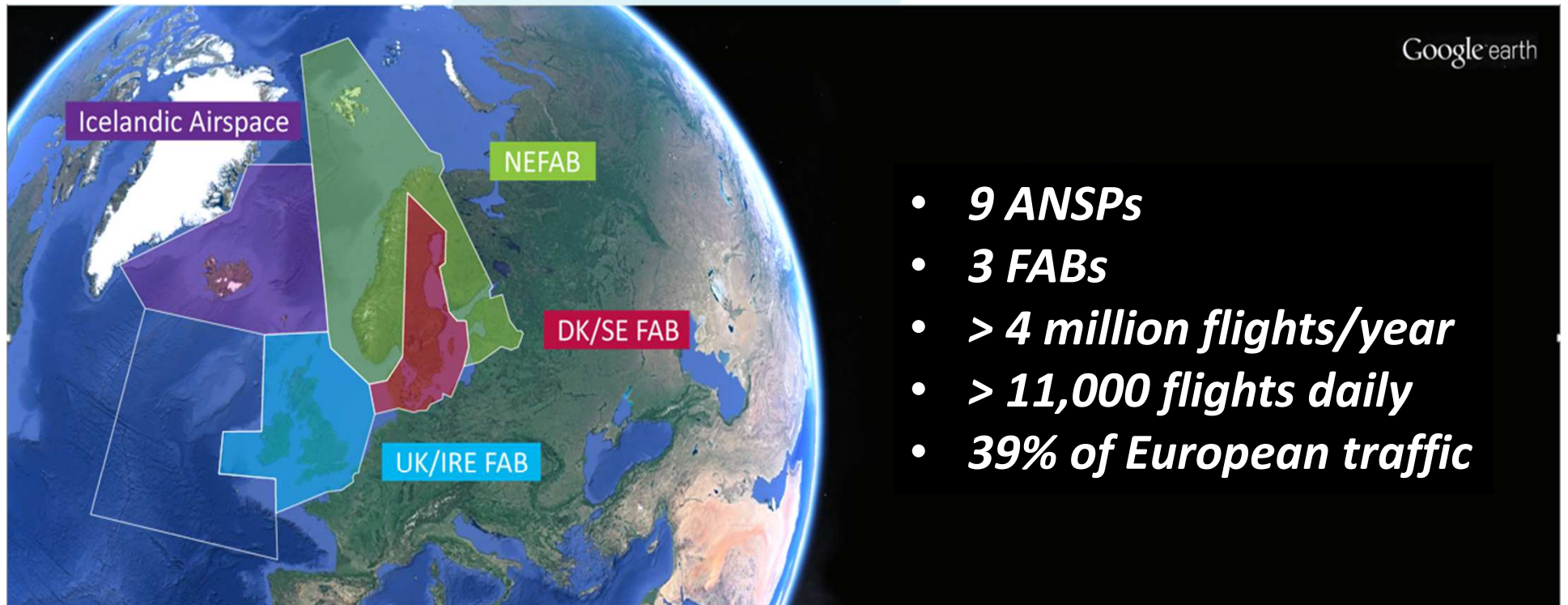




Borealis Alliance Free Route Airspace

EUROCONTROL NM FRA Workshop

Borealis Alliance – an overview



Borealis Alliance FRA Programme

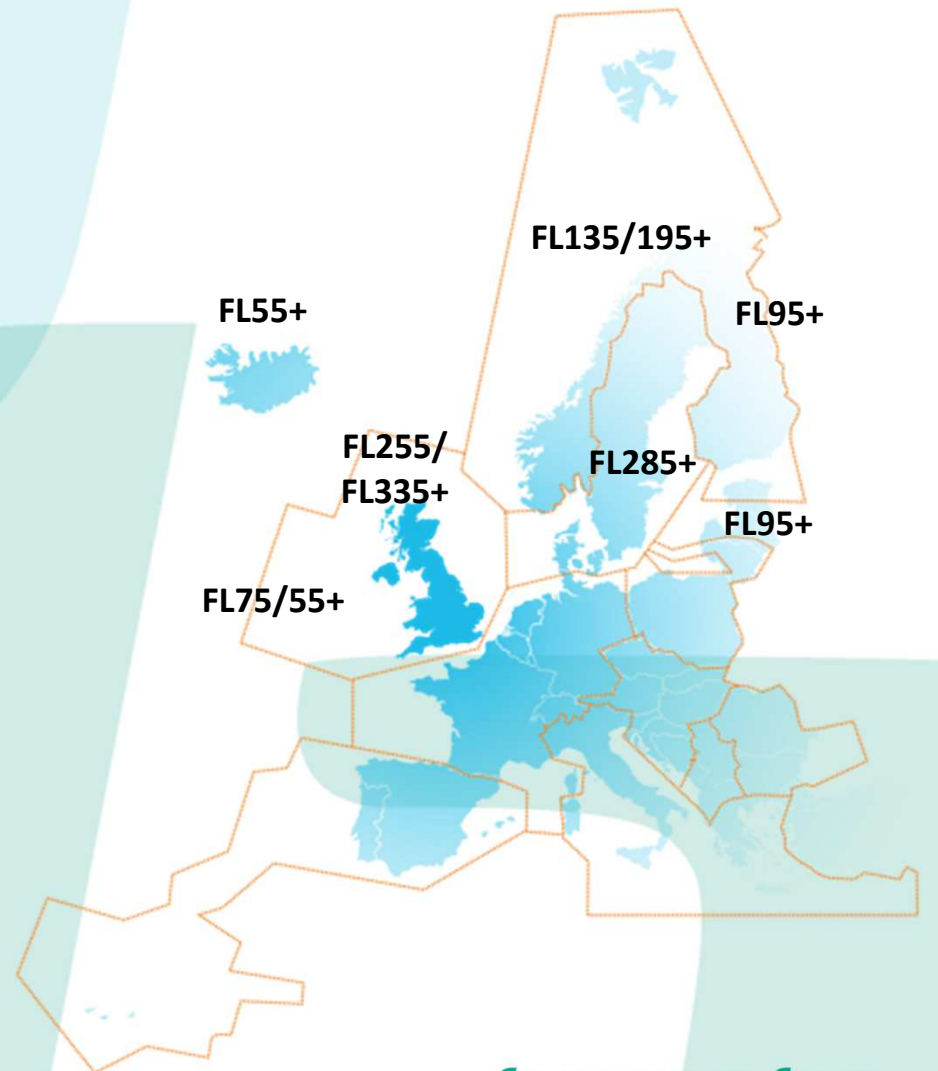
- ***Commenced on 1st January 2015 and is expected to run until 2022, when the vision will be realised***
- ***Overall aim of our Concept of Operation (CONOPS) is to provide a framework for the implementation of seamless interfaces between Free Route Airspace volumes of DK/SE FAB, NEFAB, UK/IRE FAB & Iceland.***

Key objectives:

- ***FRA shall be available to the airspace users at all times of the day***
- ***To enable user preferred trajectories across a very large area regardless of FIR boundaries***
- ***Users will be able to flight plan their preferred trajectories based on harmonised flight planning rules across the nine states***

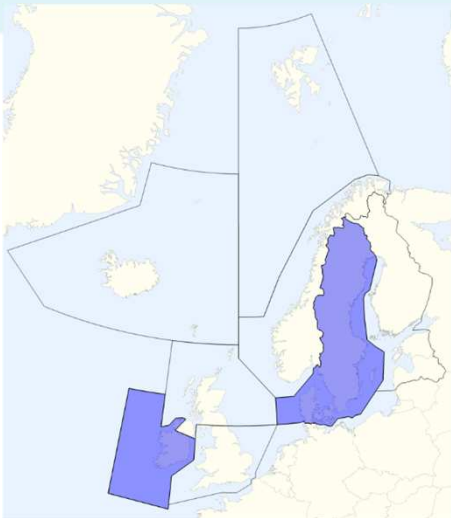
Scope of Borealis FRA CONOPS

- *Eligible flights are those with trajectory above FL listed*
- *Defined set of Borealis FRA Entry and Exit points*
- *Transition rules between Free and Fixed Route*
- *Maintain connectivity to adjacent areas (e.g. FABEC, Baltic FAB)*
- *Airspace users shall be able to access relevant information related to operations in FRA by using the Aeronautical Information Publications (AIPs) and Route Availability Document (RAD)*

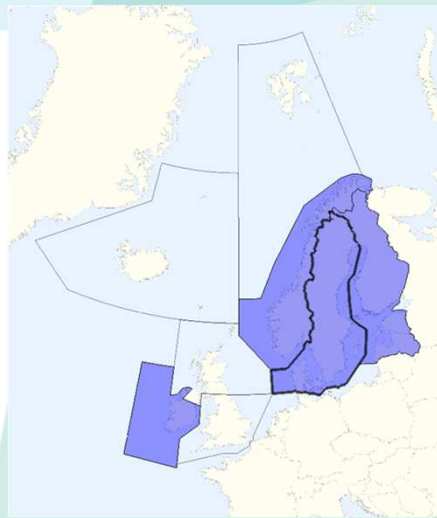


Incremental Steps to Borealis FRA

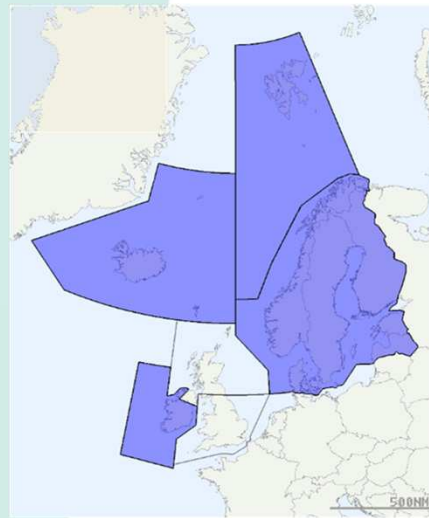
Existing
FRA in
Ireland
and DK-SE
FAB



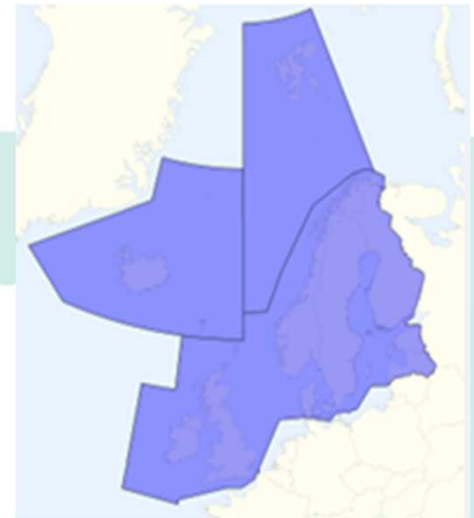
NEFAB in
2015



Bodø
Oceanic
and
Reykjavik
FIR in
2017



UK joining
from 2020



7 Borealis FRA Implementation Steps

| ID | Step Lead | Step | Affected ANSPs | Planned |
|----|-----------|---|---|-------------|
| S1 | IAA | Extension of FRA in Shannon FIR down to FL75 | None | Done - 2017 |
| S2 | Isavia | FRA for flights between Reykjavik FIR and Norway FIR | Avinor Implementation projects | Done - 2017 |
| S3 | Isavia | FRA for flights between Reykjavik FIR and Scottish FIR | NATS Implementation projects | Done - 2017 |
| S4 | NATS | Implementation of FRA in eight Scottish FIR sectors | Avinor/IAA/Naviair/Isavia Implementation projects | 2020 |
| S5 | Isavia | FRA for departures/arrivals at airports in BIRD FIR flight planned from/to/via Norway and Scottish FIRs | Avinor/NATS Implementation projects | 2018 |
| S6 | NATS | Full implementation of FRA in Scottish FIR and in parts of London FIR | IAA/Naviair Implementation projects | 2021 |
| S7 | NATS | Full implementation of FRA in London FIR | IAA Implementation project | 2022 |

Done

Step 1 (IAA)

- **Step 1 - Extension of FRA in Shannon CTA down to FL75**
- **Implemented in October 2017**
- **As Shannon upper airspace was already free route, this project expanded the concept throughout the whole airspace (excluding Dublin CTA)**
- **Gives operators the chance to file their preferred routes in order to gain maximum flight planning efficiency in Shannon airspace**

Step 2 and 3 (Isavia)

- **Step 2 - FRA for flights between Reykjavik FIR and Norway FIR**
 - **Implemented in Q2 2017**
 - **Interface enhanced for lateral flexibility in transiting between the two FRA airspace volumes**
- **Step 3 - FRA for flights between Reykjavik FIR and Scottish FIR**
 - **Implemented in Q2 2017**
 - **Interface enhanced for flexibility in transiting between the two FRA airspace volumes. The change increased the number of available DCT within the Scottish FIR**

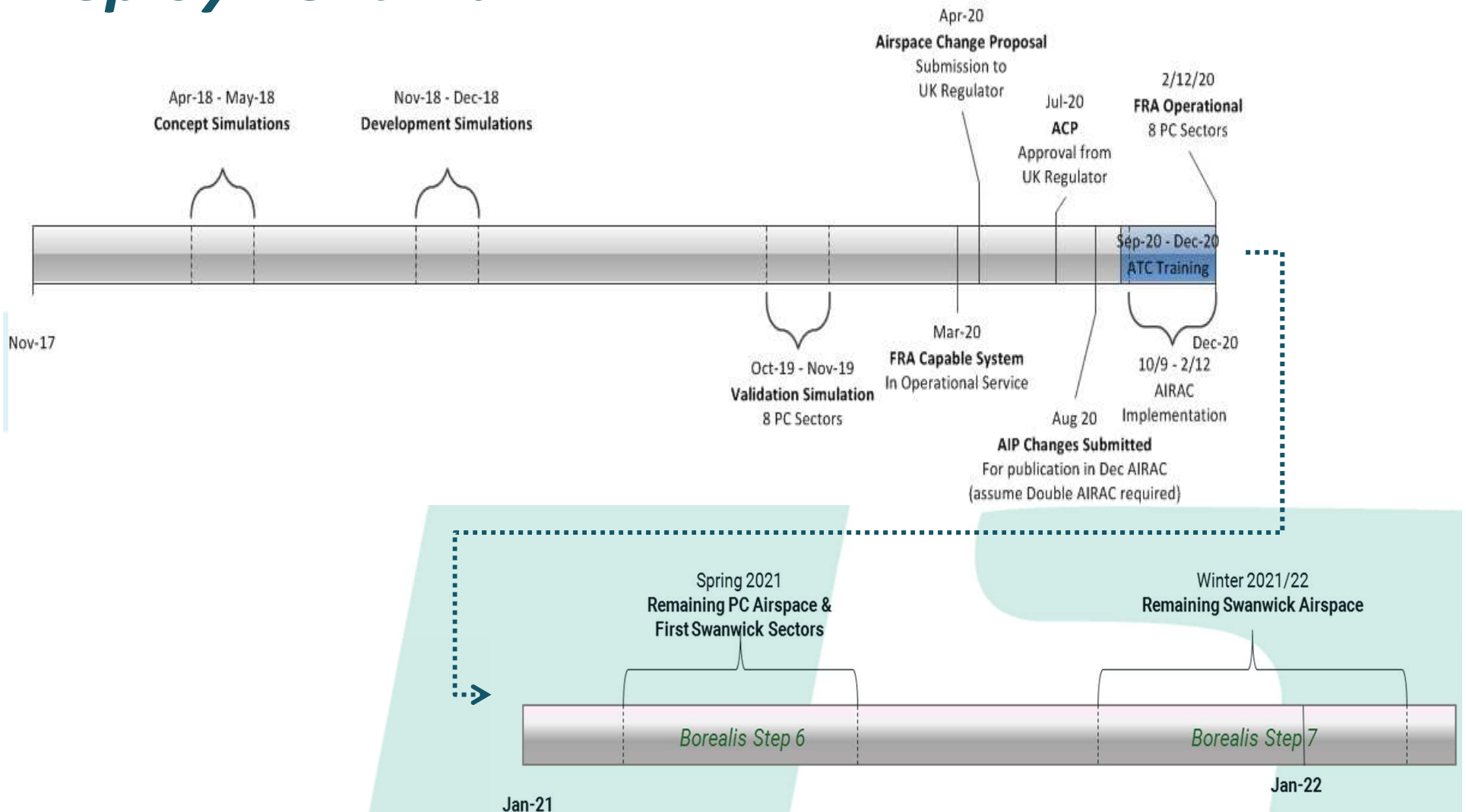
Step 5 (Isavia)

In Borealis Free Route Airspace, Isavia intends to propose the following changes to the flight planning requirements:

- ***Flights operating to and from airports within BIRD may flight plan DCT between TMA and Oceanic entry/exit into the EUR Borealis FRA (This excludes flights entering Shanwick Oceanic FIR)***
- ***The final aim is to have FRA between TMA entry/exit in BIRD to Oceanic exit with Bodo, Stavanger and Scottish***
- ***The change in the flight planning rules for NAT will be presented to relevant NAT SPG subgroups and finally approved at the NAT SPG meeting in June 2018 with the aim to implement the change in Q4 2018***

Steps 4, 6 and 7 (NATS)

Deployment Plan



Use of ATS Routes in FRA

- ***Ongoing discussion in the RNDSG forum regarding ATS routes***
- ***Should they be kept in FRA environment or not?***
- ***Some countries (such as Ireland, Portugal, Hungary etc.) have already removed all or part of their route network in FRA***
- ***Would removal of ATS routes promote increased usage of FRA by airspace users?***

Is there a specific requirement for an ATS Route Structure in Free Route Airspace (including over the High Seas)?

Thank you very much for your participation!

Any questions?

For further information please visit <http://www.borealis.aero> or contact:

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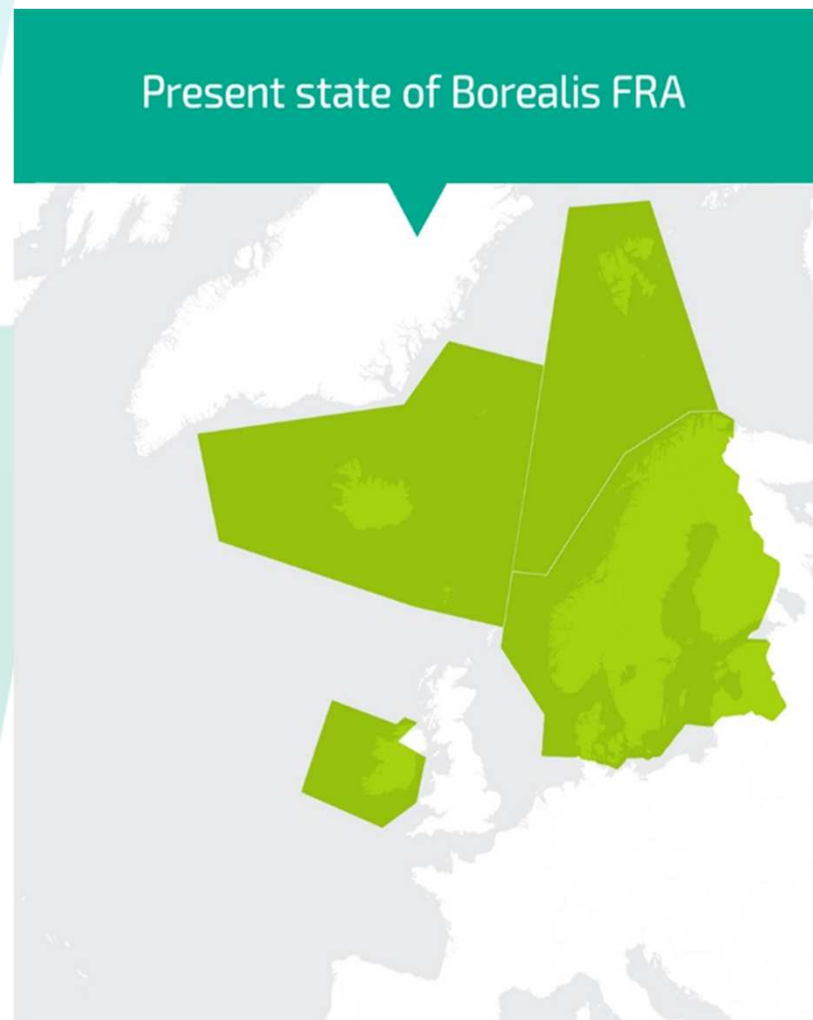
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Present state of Borealis FRA



borealis
ALLIANCE