



TOGETHER by **ATLANTIC  
AIRWAYS**

# the atlantic challenge

- aviation in a hostile environment

**Magni Arge, Chief Executive**

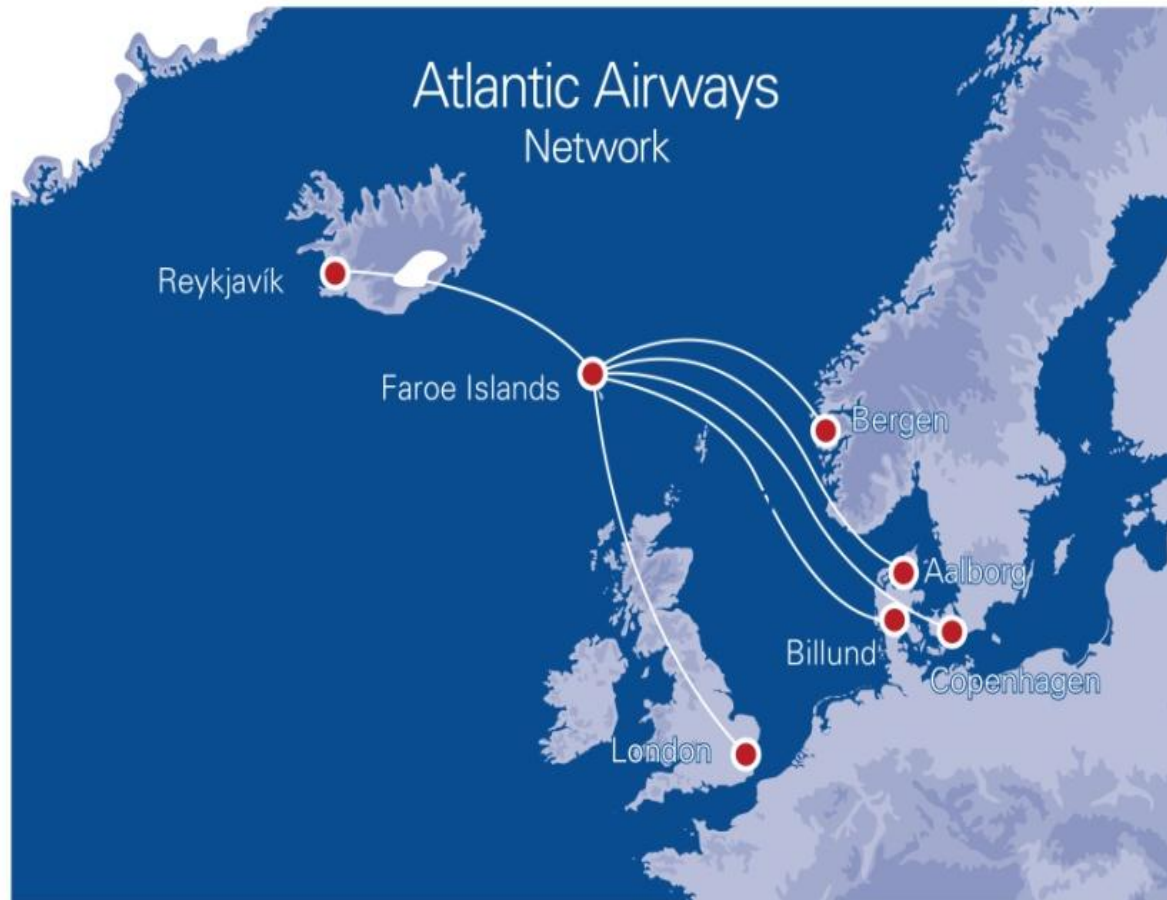
European Airlines Association Presidents' Meeting, Rome 2011

# who we are

- **National carrier of the Faroe Islands**
  - Founded in 1987
  - Listed on OMX NASDAQ, in CPH and REK since 2007
    - *Currently two thirds state owned, one third private capital*
  - Scheduled services to and from the Faroe Islands
    - *Main route to Denmark plus connections to neighbouring countries of Iceland, Norway and UK*
  - ACMI and charter in niche markets
    - *Airlines, tour operators, corporate and ad hoc in Europe*
  - Providing helicopter services in Faroe Islands
    - *SAR service, domestic flights, offshore, aerial work*



# where we are



# The Faroe Islands

- **18 spectacular islands rising sheer from the Atlantic Ocean**
- **Home to millions of birds and nearly 50,000 people with their own language and distinctive culture, and...**
- **Named world's favourite unspoiled island destination in National Geographic Traveler Magazine**
- **A truly great football team!**
  - Strongest at home, recently shaking Italy
  - Above Wales and Iceland in UEFA rankings!



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# **operational challenges**

- **Small home market – 50,000 people**
- **Short runway – 1,250 metres**
- **Long distance to alternates – one hour flight time**
  - In different countries: Norway, Iceland, Scotland
- **Challenging mountain topography**
  - Terrain induced turbulence in crosswinds
- **Challenging weather system**
  - Low cloud ceiling and frequent fog in summer
  - Island climate exposed to storm, snow and “slush” in winter
- **Airport was, until recently, remote from main population**
- **Avro RJ type has been well suited**





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**fjord approach**





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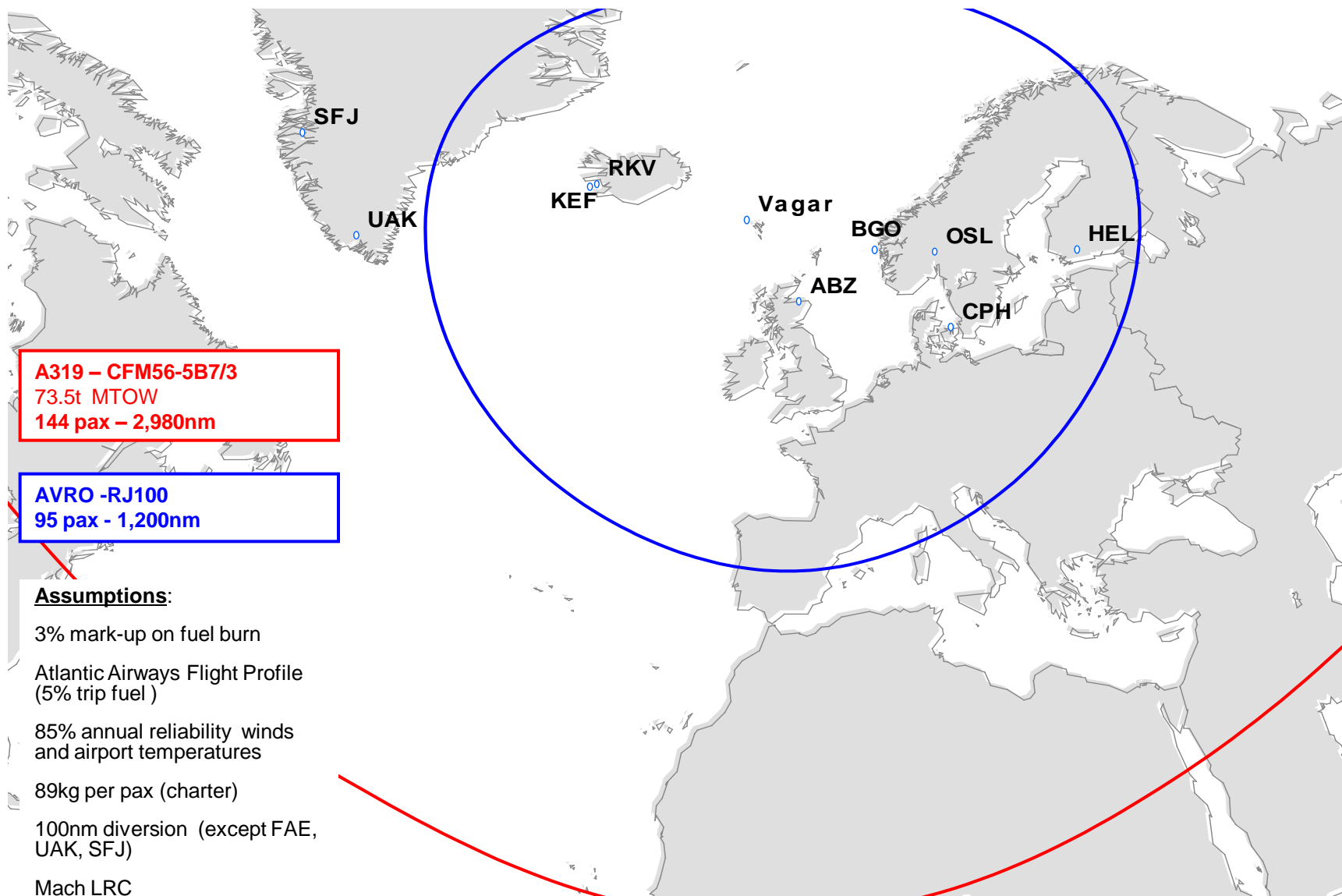
**waterfall approach**



# recent and ongoing developments

- **Subsea tunnel**
  - Day-long operations possible since 2002
- **Runway extension**
  - To 1,799 metres, available by end 2011
- **New A319 aircraft**
  - First aircraft delivered March 2012
  - Standard aircraft, but customised for challenging environment
  - High powered engines – CFM 27,000 pound
  - Multiple MTOW variant
- **We wanted more out of new aircraft and longer runway**
  - First airline in Europe to introduce RNP AR 0.1 concept, now in development

# Comparative range RJ and A319



## Assumptions:

3% mark-up on fuel burn

Atlantic Airways Flight Profile  
(5% trip fuel )

85% annual reliability winds  
and airport temperatures

89kg per pax (charter)

100nm diversion (except FAE,  
UAK, SFJ)

Mach LRC

5% track allowance



## **new concept based on new technology**

- **RNP AR 0.1**

- Required Navigation Performance, Authorisation Required
- PBN technique enables the optimisation of instrument procedures through the aircraft navigation performance, without the need for ground aids
- Designing narrow corridors (digital air ‘tunnels’) to enable approaches and departures in IMC conditions, as if in VMC – positional accuracy to 0.1 nm



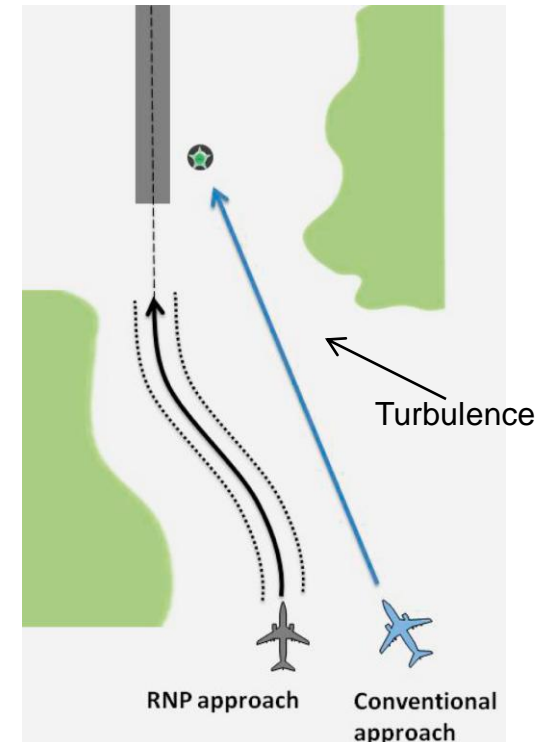
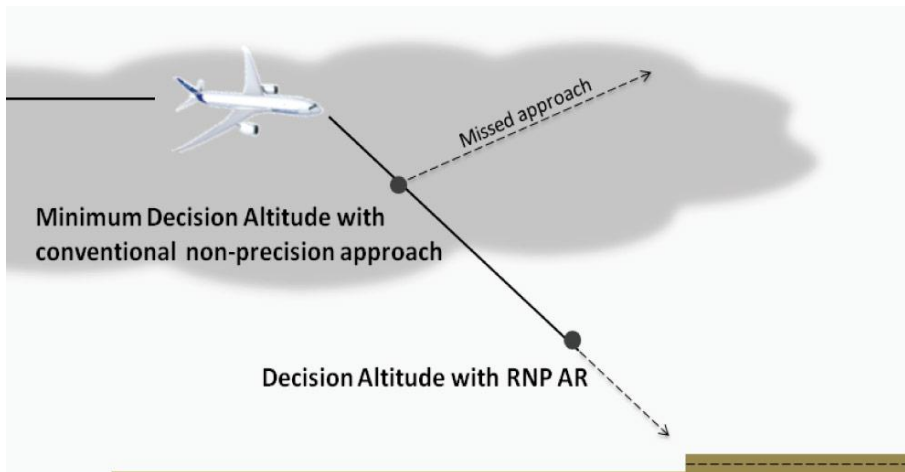
# RNP objective for Faroe Islands

- **Improve airport access and reliability**
- **Current situation**
  - Non-precision approach on both runways
  - High minima required
    - *High rate of diversion*
  - Approach trajectory offset on both runways, by up to 14° on one
    - *Visual manoeuvre has to be performed at low altitude*
  - Strong turbulence from wind over terrain
    - *Pilots have to avoid flying into some areas*



# benefits of RNP AR procedures

- Operators can obtain lower minima and fly curved paths, compared with conventional approaches
- Reduce number of diversions due to low ceiling and visibility
- Reduce minima in FAE by 100-250 feet
- Reduce diversion rate by 50%



- Reduce offset from runway from  $14^\circ$  to  $3^\circ$
- Reduce impact from terrain-induced turbulence

# RNP benefits

- Reduced fuel burn
- Reduced CO2 emissions

## CONVENTIONAL APPROACH

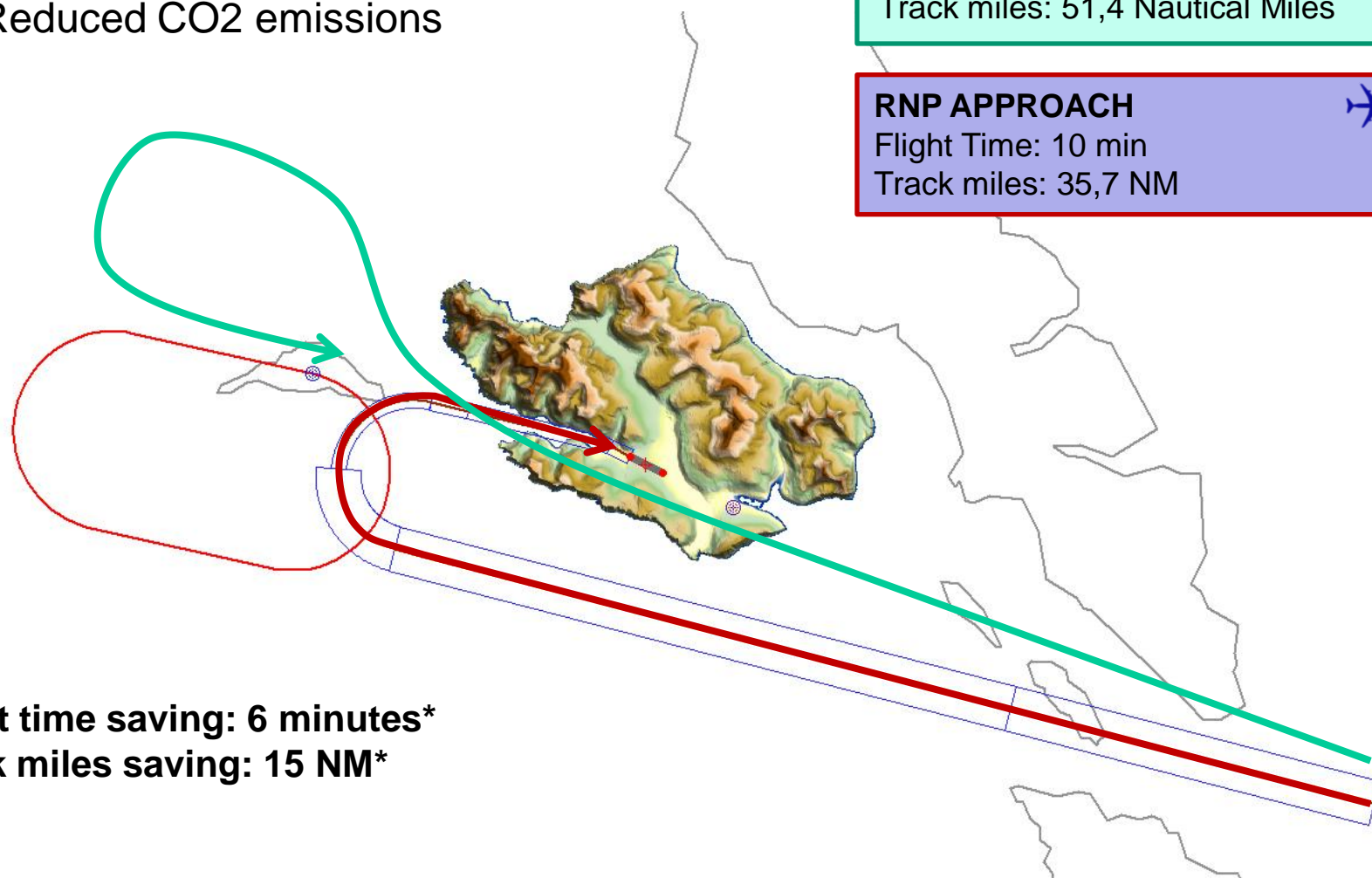
Flight Time: 16 min

Track miles: 51,4 Nautical Miles

## RNP APPROACH

Flight Time: 10 min

Track miles: 35,7 NM



Flight time saving: 6 minutes\*

Track miles saving: 15 NM\*



# RNP benefits

- **RNP procedures enhance operational safety**
  - Fully managed (stabilised) approaches down to lower minima
  - Fully tailored procedures based on operator's knowledge
  - RNP approaches aligned with both runways
    - *Visual segment easier to fly*
  - Reduced pilot workload
  - Removal of offset procedures
  - Reduction of minima in challenging environments

# implementation

- **Close cooperation with Quovadis - an Airbus subsidiary**
  - Procedure, design, testing, training, safety analysis, implementation
- **Close cooperation with transport authorities**
- **Key input based on accumulated local experience**
  - 24 years of experience and an average of 1,500 landings a year
- **Support from Air New Zealand**
  - Line training key people for both A 319 and RNP AR in New Zealand



## the future

**New aircraft, RNP AR concept and runway extension together enable us to:**

- Reduce seat costs and CO2 emissions
- Extend our range
- Enhance safety -- tailored procedures and fully managed approaches
- Improve regularity and operational reliability
- Reduce minima and diversion (and related cost, by 50%)
- Reduce uncomfortable turbulence
- Save flight time and fuel burn
- Offer a highly competitive product – also in niche markets

**Increased airport access a benefit to Faroe Islands**

## in summary...

- **Atlantic Airways is the classic regional airline**
  - We ARE the Faroe Islands and a lifeline for their people
    - *We have a responsibility towards our publics and must do everything possible to improve regularity and reliability*
    - *RNP AR shows how our investment will bring wider community and economic benefits*





**thank you**