



# **FAB Europe Central**

# **FABEC**

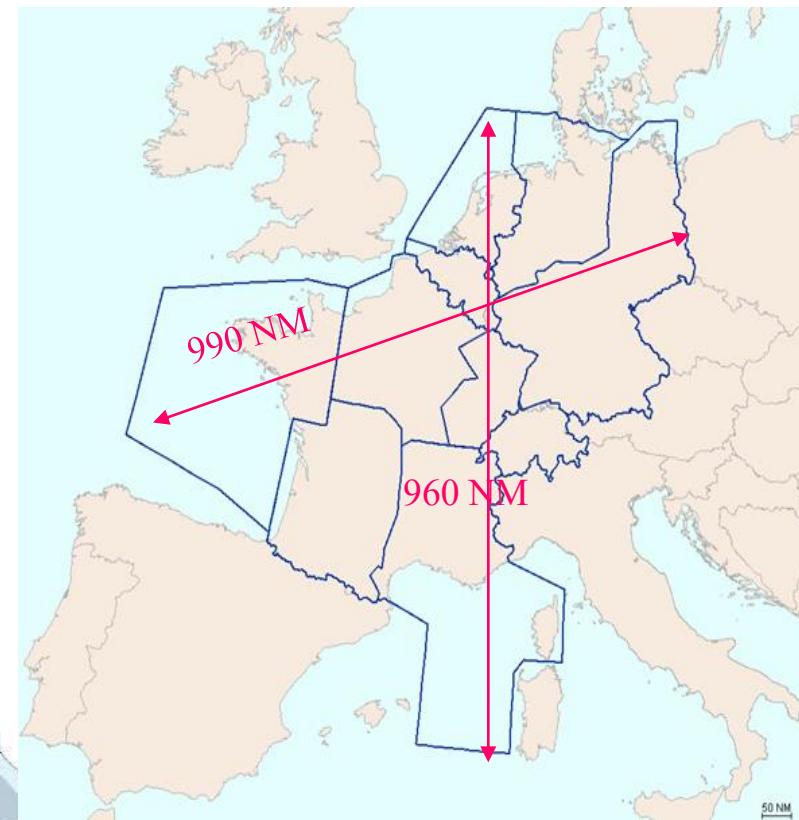
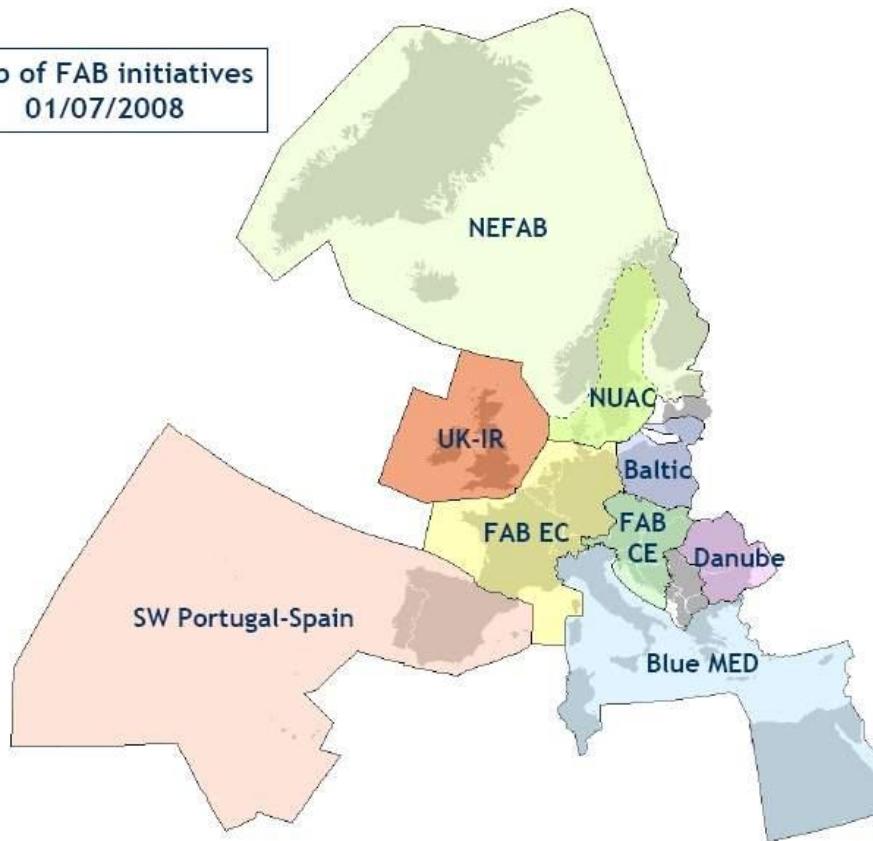
# **Safety Roadmap & Safety Case**

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**18 May 2011**

# FABEC Description

Map of FAB initiatives  
01/07/2008

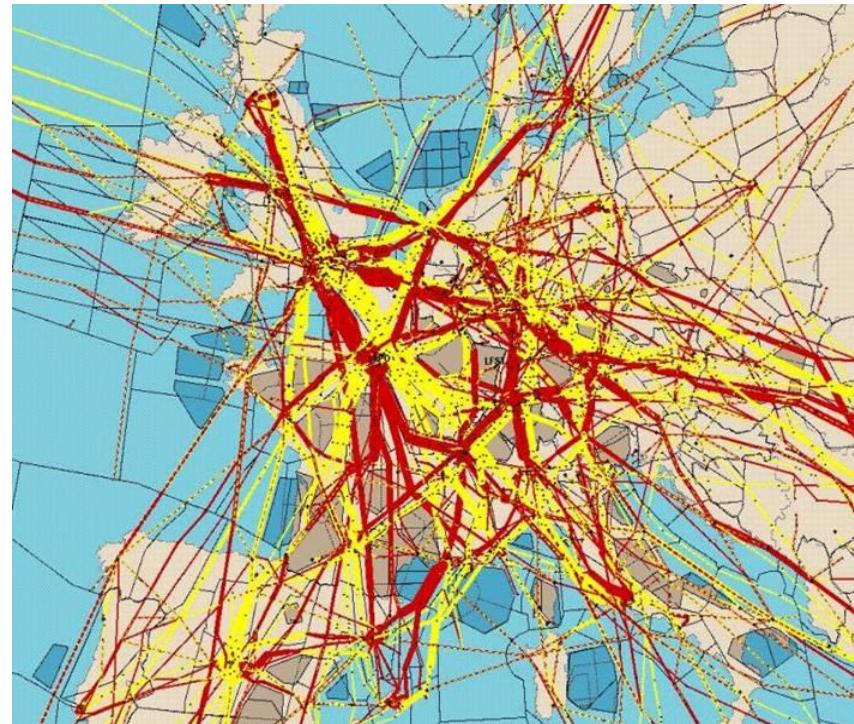


# FABEC Description

- Dimension of **1.7 million km<sup>2</sup>**
- **6 million flights** per year, equating to **55%** of all European air traffic
- a forecast **traffic growth of 50%** between 2006 and 2018, resulting in **close to 8 million flights by 2018**
- about **410 military/special areas**
- some **370 control sectors**
- **14 air traffic control centres**
- **some 240 airports** operating instrument flight rules (IFR)
- **3 major intercontinental hub airports** (Paris, Amsterdam, Frankfurt) **and proximity to the London airports**

# FABEC Description

The core area of Europe has one of the highest air traffic densities in the world and is characterised by closely interlaced civil and military routes.



# FABEC Description

## FIRS and UIRs

**FIRs of Bremen, Langen, Munich, Amsterdam, Brussels, Paris, Reims, Marseille, Bordeaux, Brest, the upper information regions (UIRs) of Hannover, Rhein, Brussels, France and the FIR/UIR of Switzerland**



# **FABEC Description**

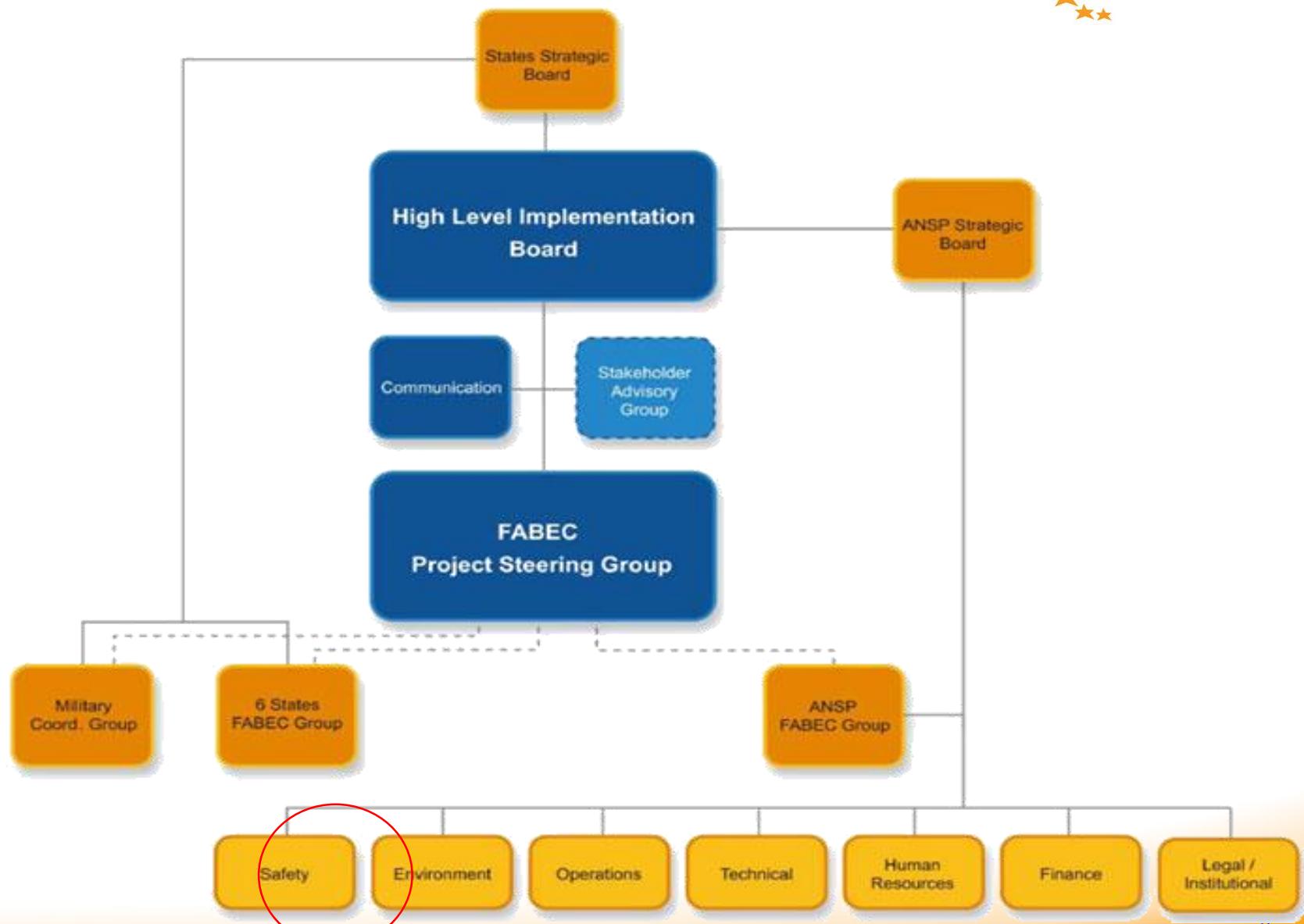
- The FABEC air navigation services include:
  - Air Traffic Services
  - Communications, Navigation and surveillance services
  - Aeronautical Information Services
  - Meteorological services

# FABEC Partners

Belgocontrol, **Belgium**  
Direction des services de la  
Navigations aérienne (DSNA),  
**France**  
DFS Deutsche Flugsicherung,  
**Germany**  
Administration de la Navigation  
aérienne (ANA), **Luxembourg**  
Luchtverkeersleiding Nederland  
(LVNL), the **Netherlands**  
**EUROCONTROL** Maastricht  
Upper Area Control Centre  
(MUAC)  
Skyguide, **Switzerland**.

**Luxemburg:** *Direction de l'Aviation Civile*  
**Germany:** *Bundesaufsichtsamt für Flugsicherung*  
**Belgium:** *Belgium Civil Aviation Authority*  
**The Netherlands:** *National Supervisory Authority the Netherlands*  
**Switzerland:** *Federal Office Of Civil Aviation (FOCA)*  
**France:** *Direction de la Sécurité de l'Aviation Civile (DSAC) Direction du Transport Aérien (DTA)*

# FABEC Organisation



# FABEC Safety Organisation

- Standing Committee of Safety
  - Membership provided by Safety Managers/Directors from each ANSP
  - Meets Monthly
  - Reports to ANSP Strategic Board
  - Highly intellectual, cooperative group of people.
  - Cooperating since 2008.

# FABEC Safety Organisation

## Standing Committee for Safety



- Drive the safety objectives for FABEC 2012 and beyond
- Establish Minimum “FABEC SMS for 2012” and strategy after 2012
- Provide FAB Overall Safety Case.
- Ensure FABEC Safety Management Functions
- Assist the FABEC project(s) with operational or system changes

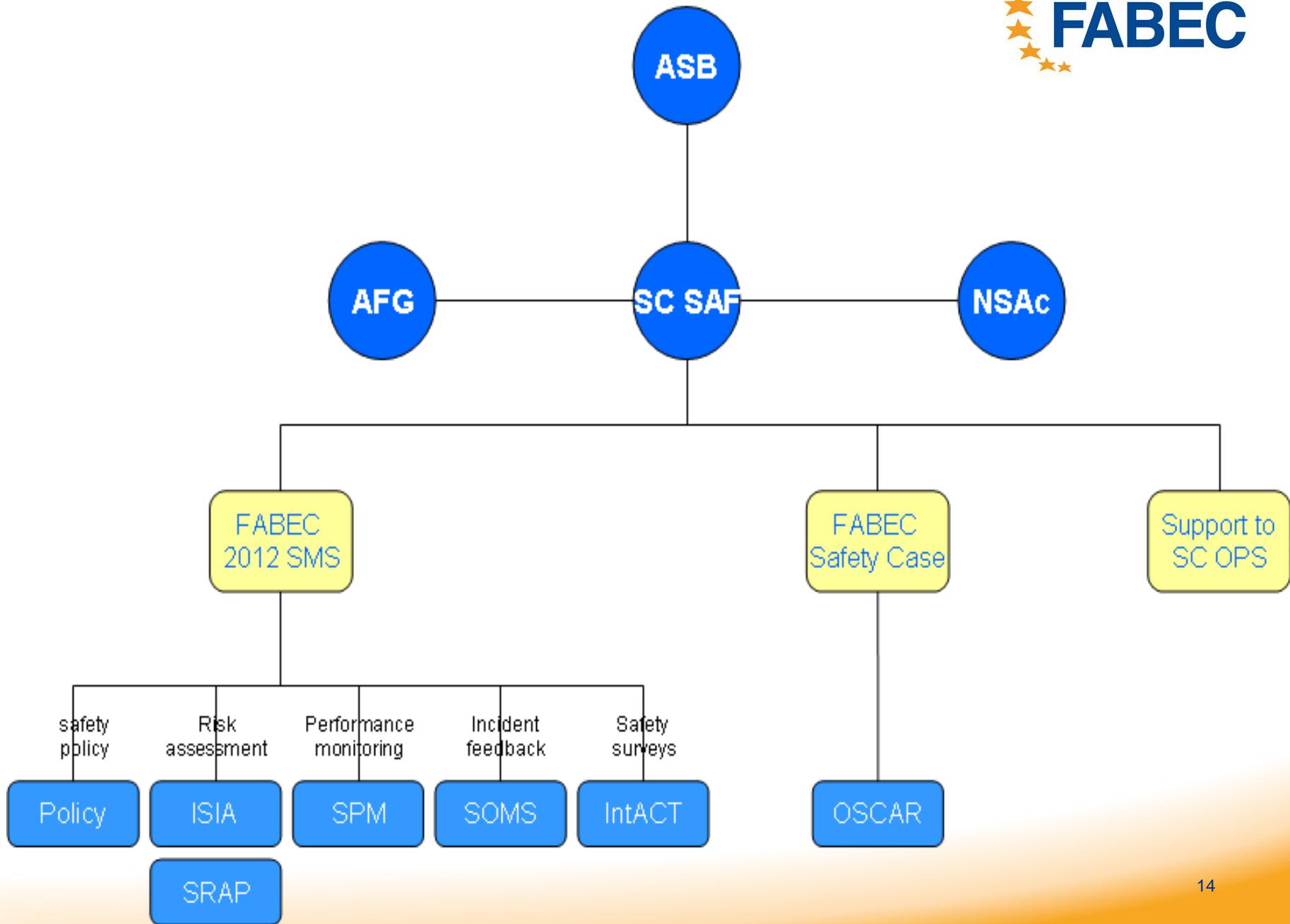


# ANSP Certification

- Each ANSP within FABEC is certified under 2096 to provide Air Traffic Services
- By 2012, FABEC will not be a certified Air Traffic Services Provider
- The legal institutional arrangements for FABEC are under development
- At 2012, FABEC will consist of a cooperative arrangement between the ANSPs and likewise between the NSAs

# Safety Roadmap

- To 2012
  - Establish FABEC Safety Policy
  - Establish risk assessment methods for FABEC changes
  - Establish common NSA review of FABEC changes
  - Establish common handbook for occurrence reporting
  - Establish FABEC safety reporting scheme (inc Performance Indicators)



# Safety Roadmap

- Beyond 2012
  - Proposals for organisation of safety dependent on FABEC institution
  - Harmonisation/integration of safety management processes
  - Common safety management training
  - Safety improvement established at FABEC level with sharing of information and improvement methods and activities

# FABEC Overall Safety Case

- OSCAR Sub-Group established in 2010
- Consists of members from each ANSP, plus NSAs & AFG
- Terms of Reference Developed

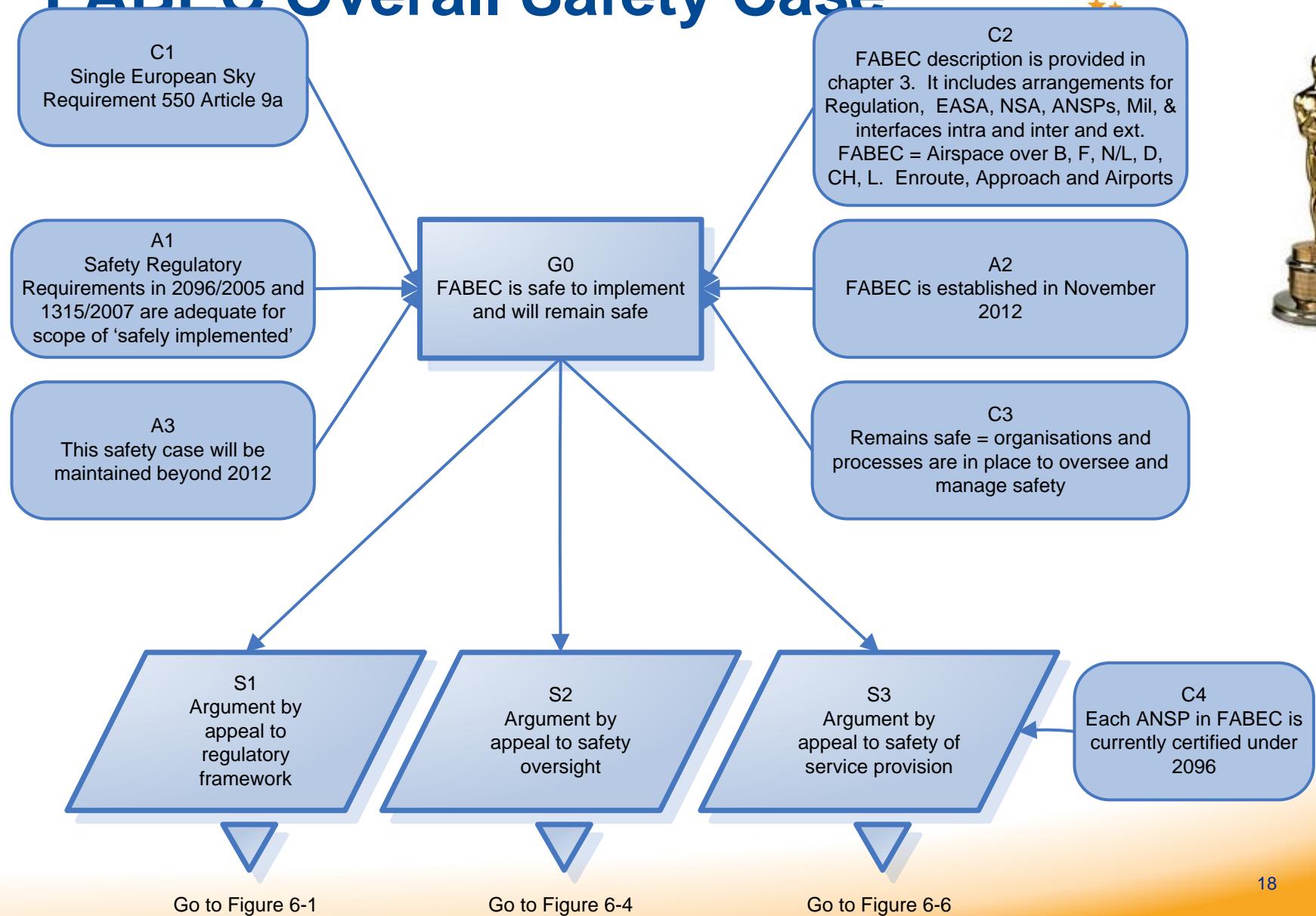




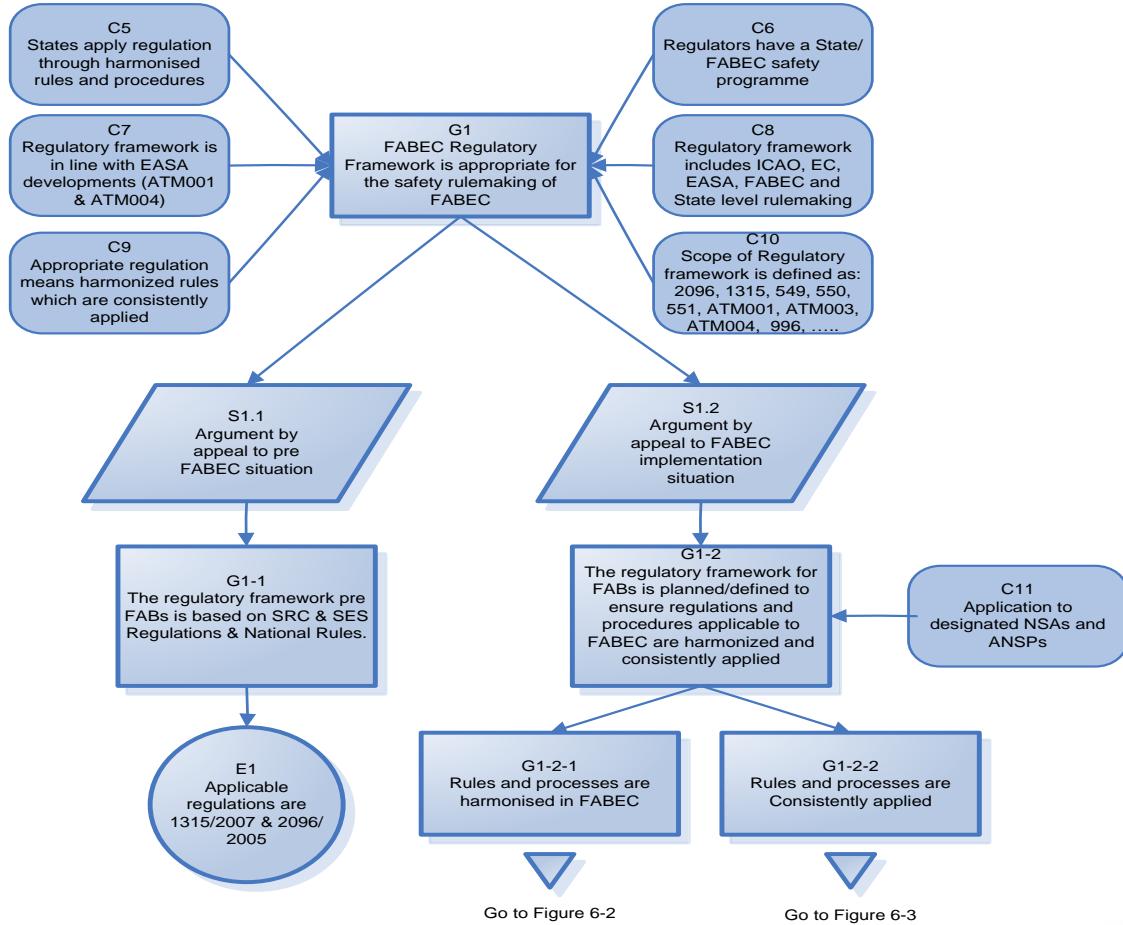
# FABEC Overall Safety Case

- FABEC is not a change to the ATM Functional System
- Provisions of 2096 safety risk assessment do not apply
- 176/2011 does apply, but needs interpretation

# FABEC Overall Safety Case



# FABEC Overall Safety Case



Go to Figure 6-2

Go to Figure 6-3

Figure 6-1

# FABEC Overall Safety Case

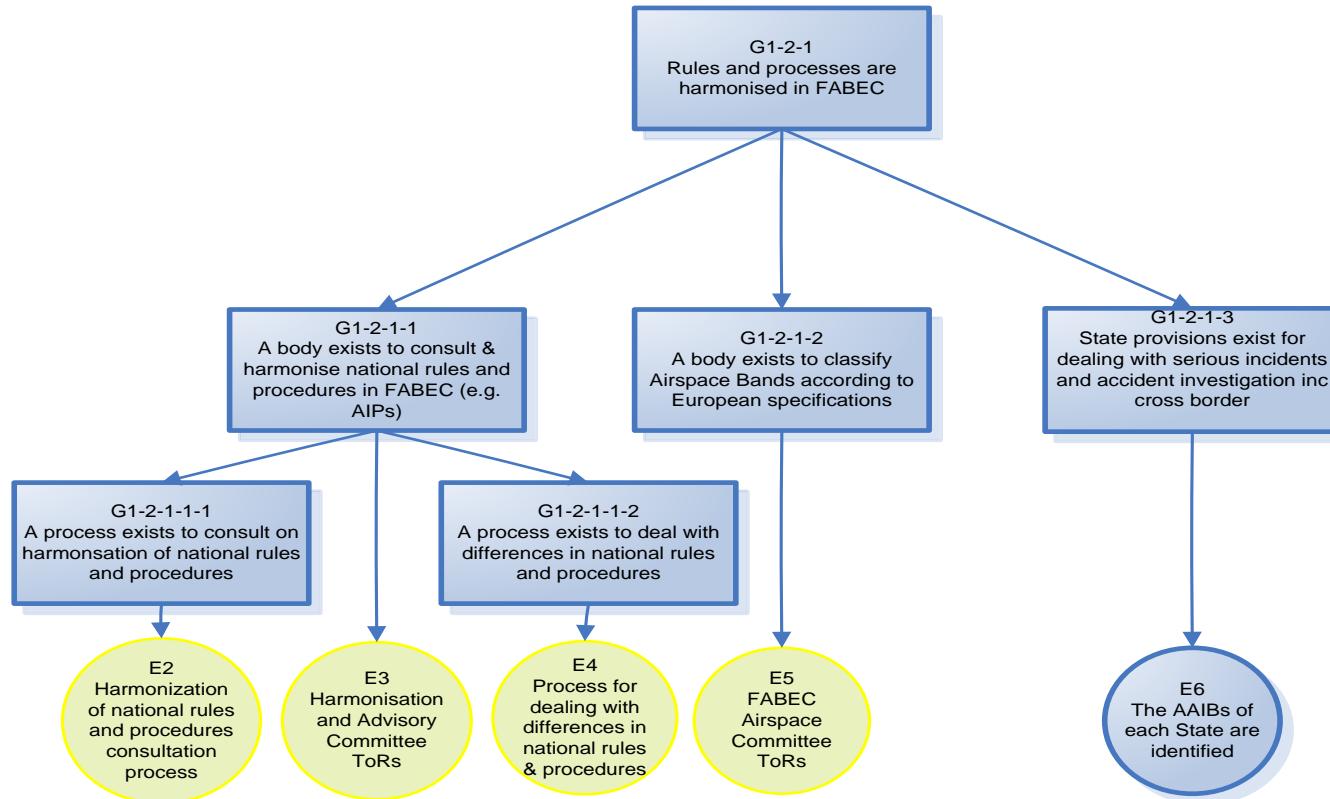


Figure 6-2

# FABEC Overall Safety Case

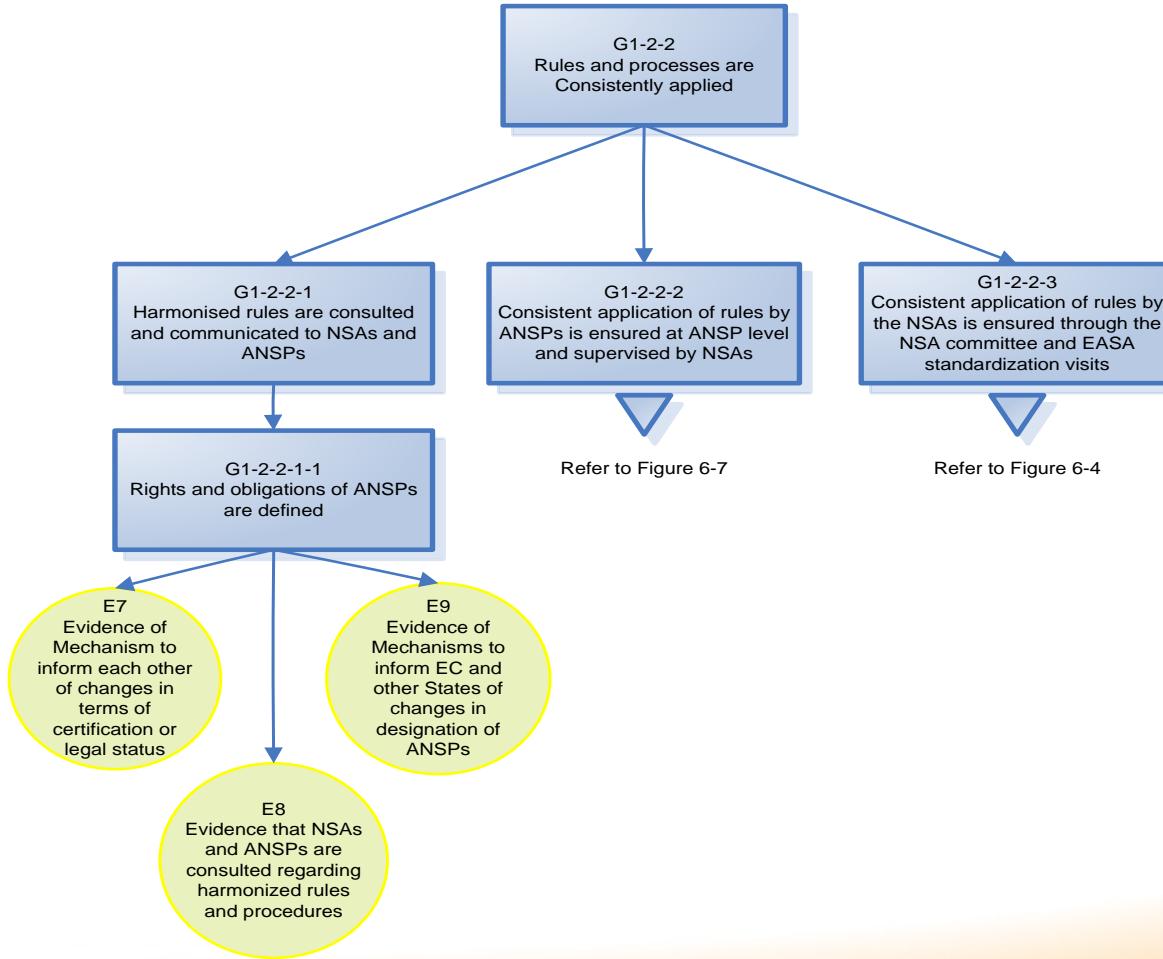
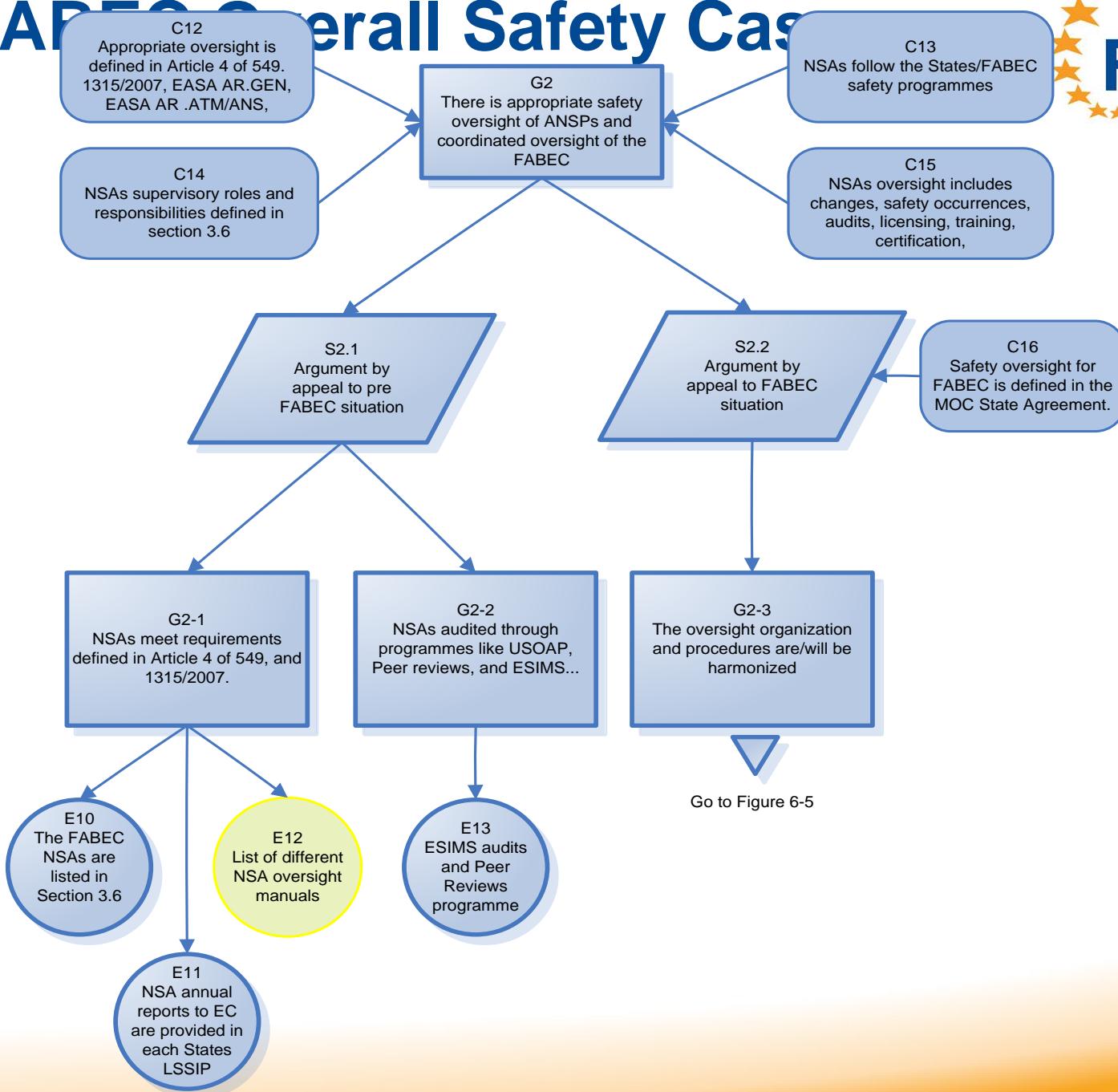


Figure 6-3

# FABEC General Safety Case



# FABEC Overall Safety Case

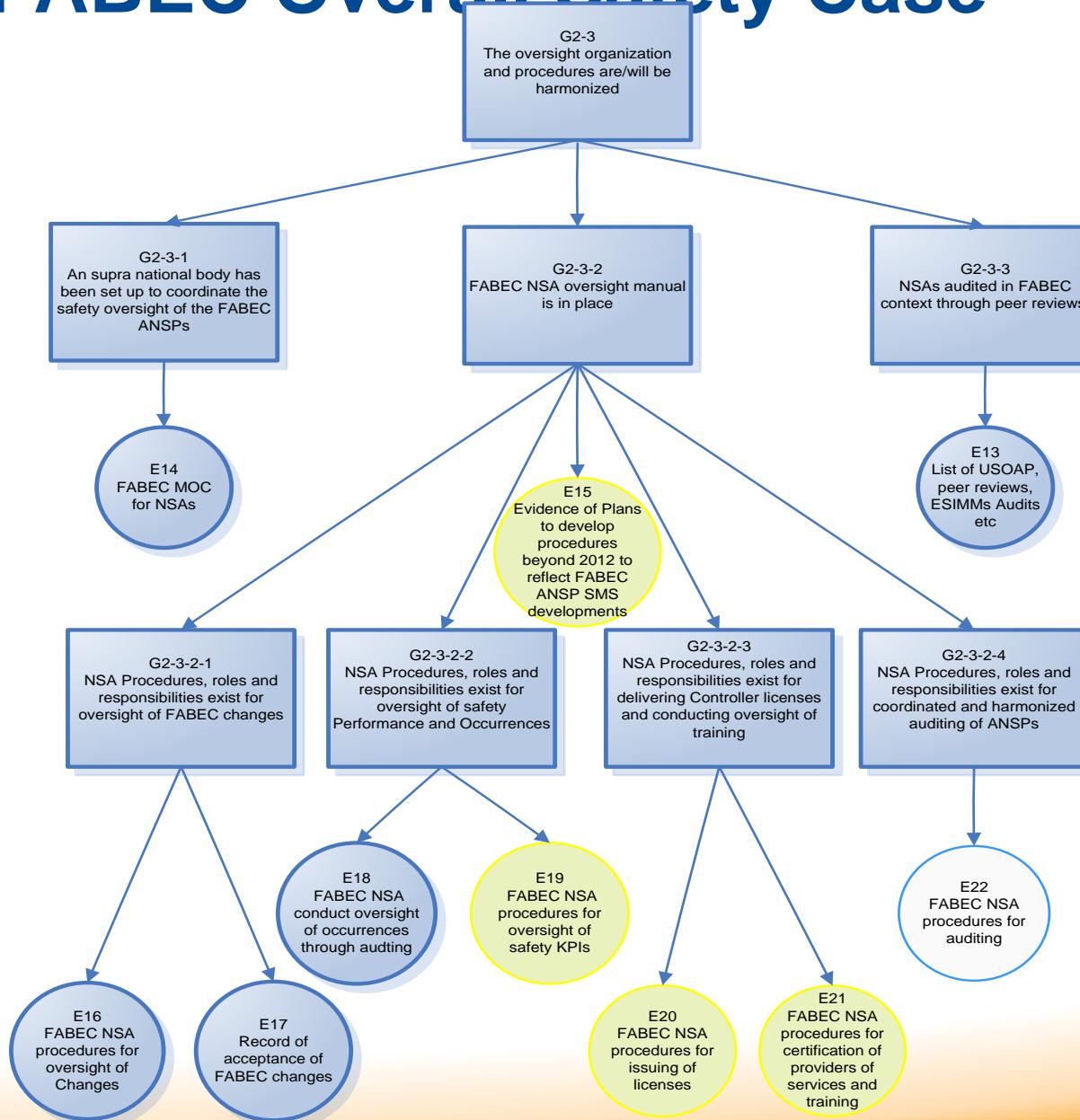


Figure 6-5

# FABEC Overall Safety Case

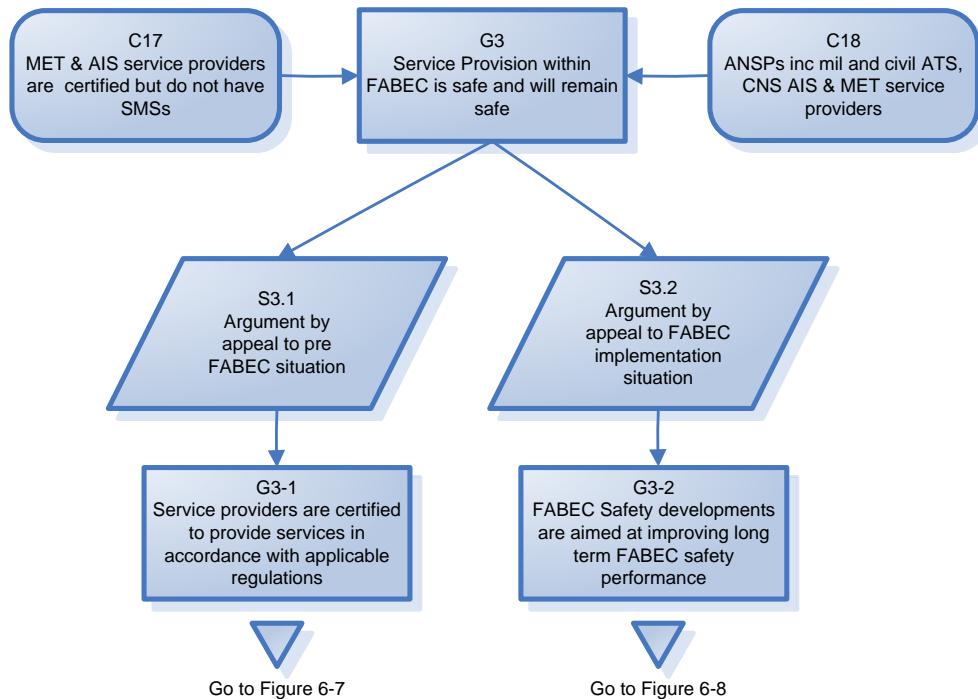


Figure 6-6

# FABEC Overall Safety Case

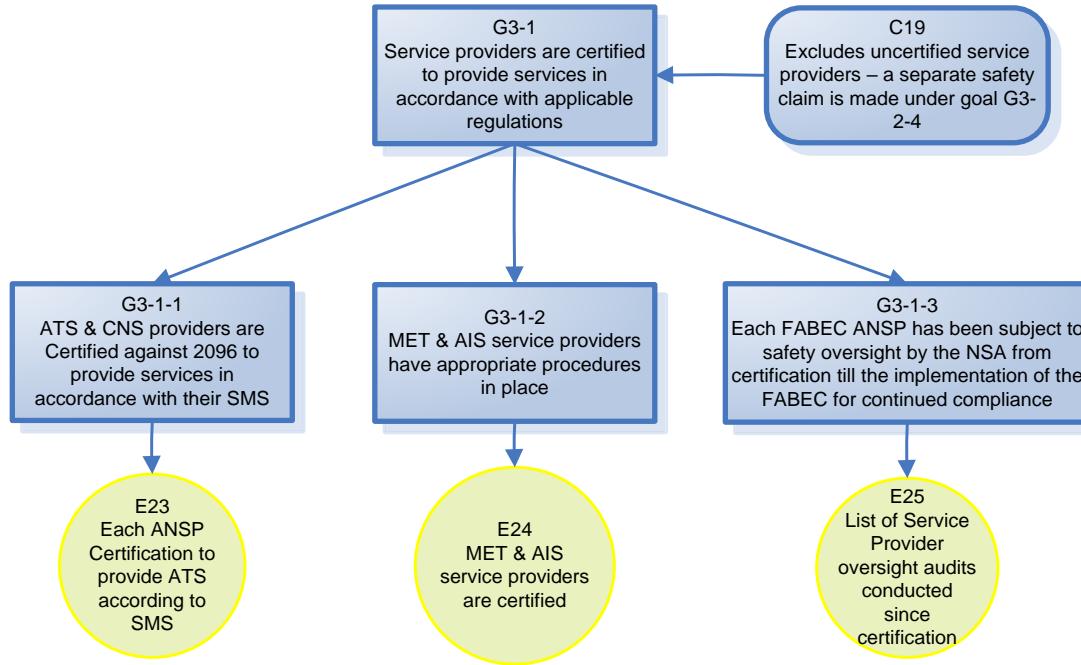
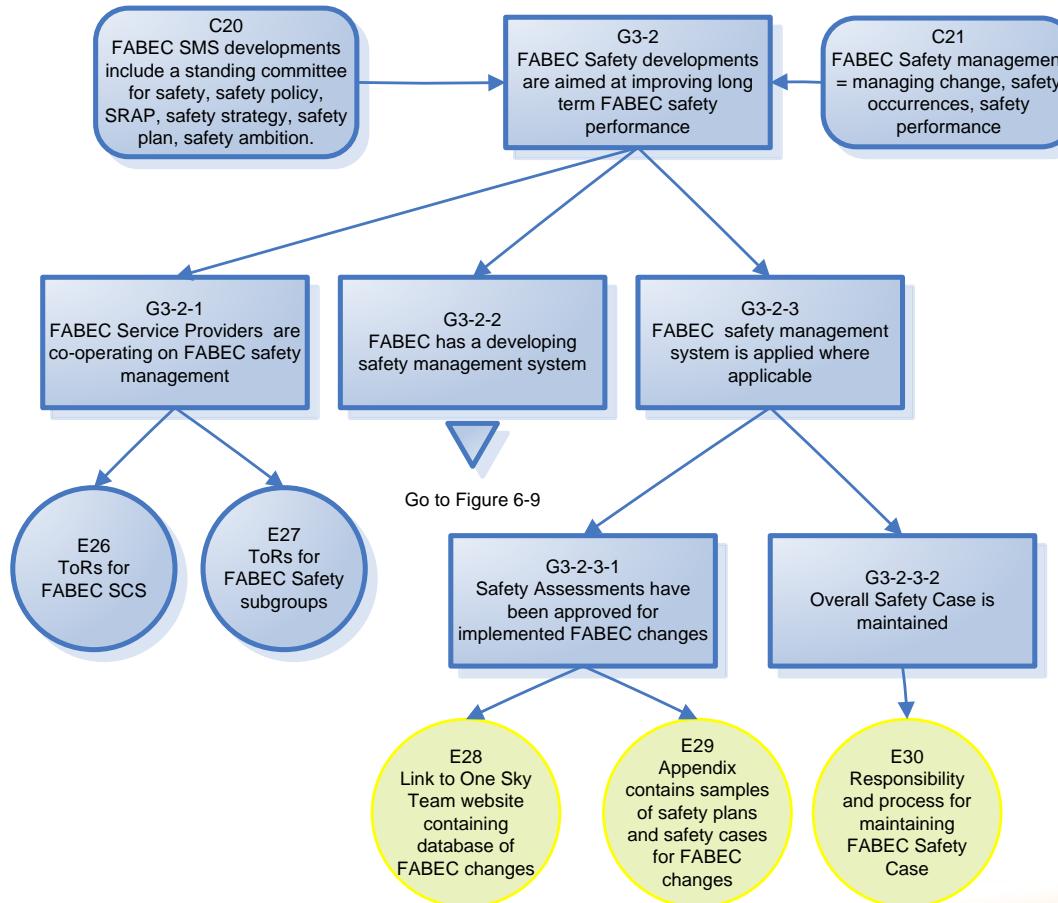


Figure 6-7

# FABEC Overall Safety Case



**Figure 6-8**

# FABEC Overall Safety Case

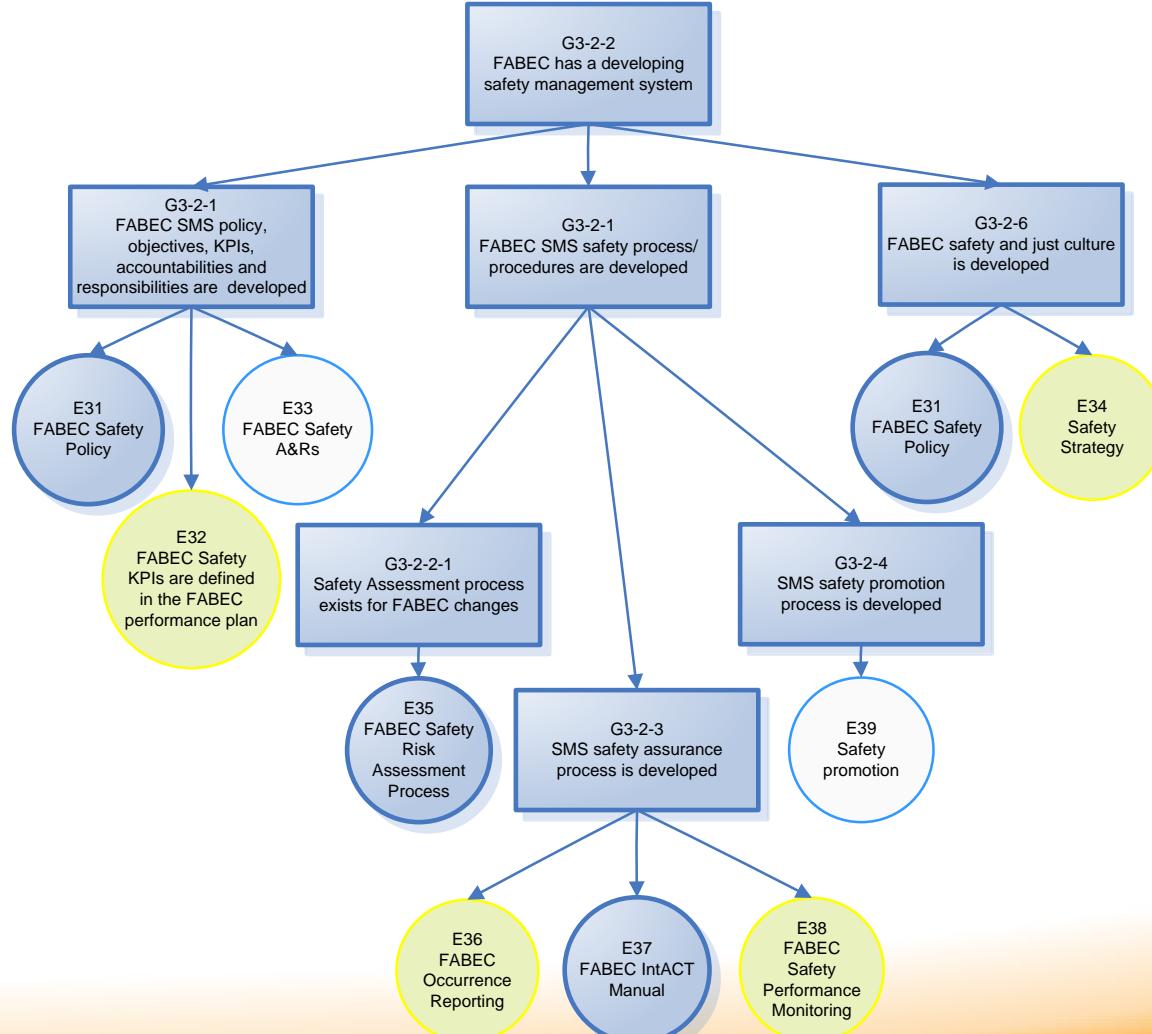


Figure 6-9

# FABEC Overall Safety Case

- Summary:
  - Safety case argument structure based on 3 pillars – Regulation, Supervision, Service Provision
  - All evidence items have been identified & Planned
  - Traceability from evidence to 176/2011 requirements provided
- Stakeholder reviews underway
- Schedule of incremental up-issues of safety case agreed



# Overall Summary

- Safety Roadmap to 2012 established
- Safety organisation to 2012 established
- Beyond 2012 safety roadmap and organisation still being worked on – dependent on FABEC Institution
- Overall Safety case evidence identified and planned
- Sarajevo issue is available for you to take away

# Questions to you

- Safety Case consistency across FABs
  - What is EU expecting?
- Acceptance criteria for safety case
  - Who approves/endorses/accepts?
- Which FABs will be ANSP per 2012 (and cf 2096)
- Ohutusjuhtimissysteem
  - Which character is misspelled
  - Ohutusjuhtimissüsteem