EUROPEAN Air Traffic Management

Where is the roadmap?
Specificities of ATM sector

- States are in charge → Chicago convention
  - NATIONAL ATM SYSTEMS → Fragmented service provision
- Heavy regulatory process
- Systems life cycle → 20 years
- Technology is expensive
- Highly skilled/trained/pro-active people
- Negotiation power

→ STRUCTURAL CHANGE IS A DIFFICULT JOURNEY
13 December 1960
EUROCONTROL International Convention relating to Cooperation for the Safety of Air Navigation is signed by the 6 founding States.

„The original aim of EUROCONTROL was to achieve the complete integration of air traffic services in Europe.‖

Source: Eurocontrol webpage
HIGH LEVEL OBJECTIVES – the BIG MISMATCH

Initial objectives 2008 – 2020+ before financial crisis

- 10x increase in safety
- 3x increase in capacity (forecasted doubling of air traffic)
- 10% reduction on environmental impact
- 50% cost reduction (traffic predictions of 2008)

→ UNREALISTIC in 2008
→ DANGEROUS in 2013 (after econimical crisis)
Where is Single European Sky (SES) after 15 years (1999-2014)

- Institutional & regulatory fragmentation
- SES ATM research (SESAR) program at risk because of cost cutting programs
- Systems and interfaces still fragmented
- Functional airspace blocks – failing to deliver
  - 39 service providers → 39 service providers + their FAB structures
  - No service provision integration so far

→ WHY ARE WE FAILING
No Shared vision - model

• COMPETITION – MARKET- PRIVATE INVESTORS? ➞ UNDERLYING IDEA OF E.C.

• REGULATED MONOPOLY INSTEAD!

• NO POLITICAL WILL FOR E.U. wide public service

• FRAGMENTATION REMAINS/ SERVICE PROVIDERS COMPETE ACTUALLY
PERFORMANCE FRAMEWORK:
COST EFFECTIVENESS FOCUS CAN RUIN SES OBJECTIVES

- INTERDEPENDENCIES BETWEEN COST EFFECTIVENESS AND OTHER PERF TARGETS
  - Safety measuring European-wide is not mature!!
- LACK OF FINANCIAL RESOURCES FOR TECHNOLOGY - SESAR DEPLOYMENT
- BLOCKAGE OF FUNCTIONAL AIRSPACE BLOCKS DUE TO REVENUE SHIFTS BTW STATES
Performance balance

Income

safety

National mandate

capacity

Environment

REVENUES ARE COLLECTED ACCORDING NATIONAL boundaries
THE ABSOLUTE NECESSITY FOR PROVIDERS IS TO KEEP AIRSPACE AND TRAFFIC → KEEP things as they are and you can survive
Safety Management has effectively become risk management. The concept of a “safety margin”, which is the safety buffer above the calculated risk, seems to have been forgotten. In a system such as ATM where not all events are controllable, safety margins (that is capability above the requirement) should exist and changes to the margin be monitored.

WE NEED TO MEASURE SAFETY BEFORE IT’S TOO LATE

Loss in revenue linked to C.E. KPI can lead to reduction beyond calculated risk
EXAMPLE 2
SESAR deployment

RP1 CAPEX monitoring report of PRB:

→ 340,7 millions underspending in/186,5 for main projects

→ 55% of this concerns South Europe (SP,I,P,GR)

→ SESAR will fail if providers can’t invest in new technology → risk of missing all targets
EXAMPLE 3: Functional airspace blocks

Initial route/200 flights a day  ➔ 20 millions/year for ANSP Belgium

Move 200 flights on new route ➔ shift of 20 millions to NL

PROJECT IS STOPPED
5 years of development at risk
3.2.29 Although some cooperation initiatives through e.g. FABs are observed, ANSPs currently tend to operate in silos, independently from others to a large extent. Structural change would be needed to address the high level of inefficiency that appears to arise from the current fragmentation of European ANS.
3.2.32 There is a potential for major improvements in European ANS efficiency over time through rationalisation of local regulation, operations, and support including infrastructure, maintenance and administration.

3.2.33 Rationalisation of regulation, operations and support can use many approaches such as virtual centres, centralised services, shared services, joint procurement, consolidation of facilities, NSAs and ANSPs, etc. Fostering rationalisation is one of the main goals of FABs.

3.2.34 Such rationalisation will require significant structural changes in European ANS, in the same way as the aircraft manufacturing industry underwent structural changes when Airbus was created. This is the only way for European ANS to reach excellence in ANS performance and meet the SES policy objectives.
8.2.15 Over the past decade, at a European system level, no significant structural and organisational changes in the way that ANS are delivered could be observed. Moreover, the genuine operational benefits and cost savings achieved through Functional Airspace Block (FAB) initiatives have been negligible to date.
Which way ahead?

- FURTHER PRESSURE ON COST REDUCTION WILL NOT PROVIDE THE REQUIRED STRUCTURAL CHANGES
- IT WILL ONLY DELAY REQUIRED INVESTMENTS IN PEOPLE AND TECHNOLOGY

→ AVIATION COMMUNITY NEEDS TO AGREE ON A MODEL to DEVELOP a European solution
PERFORMANCE SCHEME – A few observations by PRB

• “The interests of the European aviation system will be best served if expectations are realistic and a realistic balance is struck between costs and returns”.

• “In making that judgment it will also consider the important role of ANSPs and all the staff that work within it”

→ Mr. Peter Griffith, chairman PRB
A staff proposal

- Proposal on a possible model for service integration: MOSAIC regional ATM concept

ONE PROVIDER for 7 countries
- Nucleus for EU ATM services
- ATM Operational, technical, social integration model
MOSAIC : What’s in a word

- Institutional evolutions
- Operational evolutions
- Technological evolutions

MOSAIC

- H.L.G
- FAB
- SESAR
- SOCIAL
JFK once said, on the 12th September 1962

« We choose to go to the Moon. We choose to go to the Moon in this decade and do the other things, not because they are easy, but because they are hard, because that goal will serve to organize and measure the best of our energies and skills, because that challenge is one that we are willing to accept, one we are unwilling to postpone, and one which we intend to win, and the others, too. »
THANK YOU