



DFS Deutsche Flugsicherung

FAB EC
DFS goes Europe

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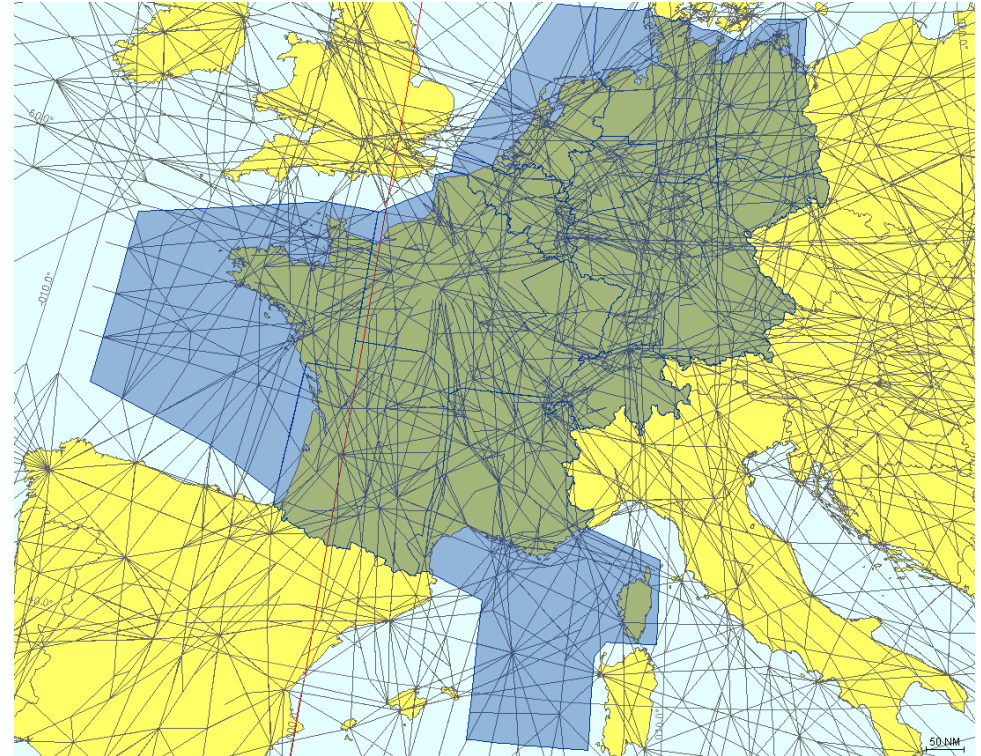
Berlin, October 19th 2007

Content

SES view to FAB EC

DFS strategic issues

conclusions





Single European Sky

SES Objectives

- Increase safety, efficiency, capacity of ATM in Europe
 - *Reduce fragmentation / complexity*
 - between States
 - within States (civil/military)
 - between air and ground
 - between different systems and procedures
 - Implement a Flexible Use of Airspace regardless of national borders
 - Provide a framework for modernisation of systems (SESAR)
 - Contribute to the reduction of the environmental effects
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Single European Sky

Functional Airspace Blocks (FABs) criteria

Member States have to develop FABs according to:

- safety case;
 - optimum use of airspace, taking account of traffic flows;
 - overall added value, including optimal use of technical and human resources, on the basis of cost-benefit analyses;
 - ensure compatibility between upper and lower airspace;
 - comply with regional agreements concluded within ICAO;
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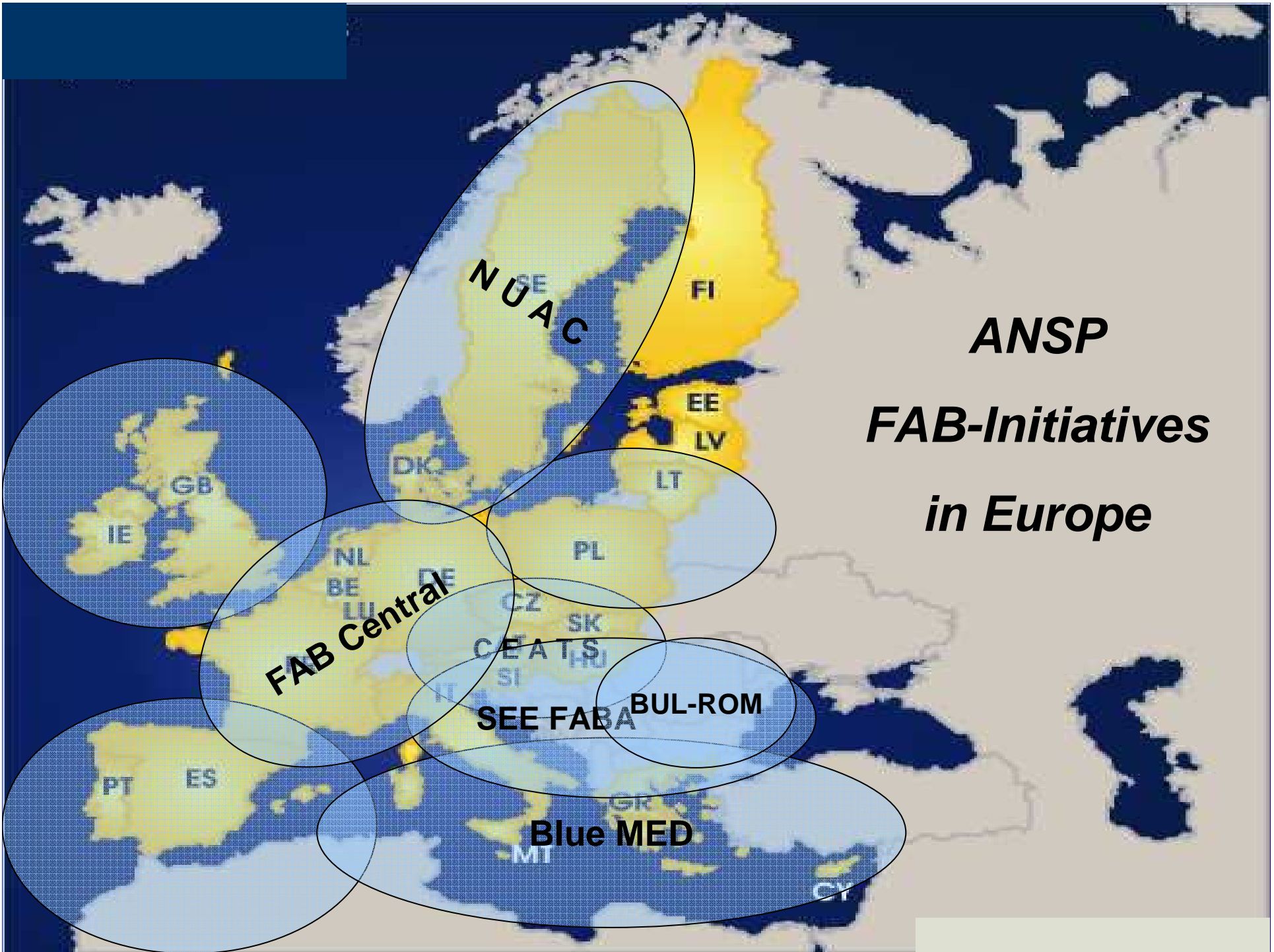


Single European Sky

FAB Development

Currently FABs are developed with a ***Bottom-up approach***:

- States are fully responsible to initiate and set-up FABs,
 - FABs can include all or parts of a State's Airspace,
 - For FABs, all States involved must agree on the respective FAB,
 - No single "blueprint" for FABs will be acceptable,
 - But, these FABs shall meet the criteria of the regulation.
 - The Commission will review in 2009
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ANSP

FAB-Initiatives

in Europe



Single European Sky

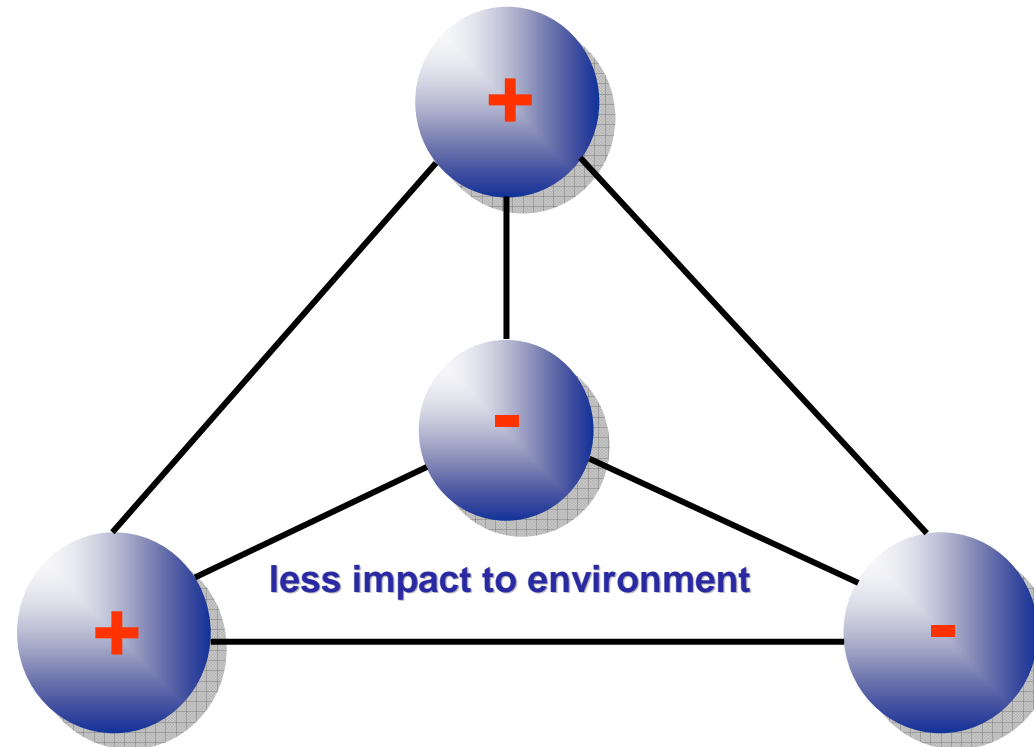
Conclusions

1. In the context of rapidly changing environments and globalisation that lead to further traffic increase **Europe can not remain static.**
 2. **The goals** in terms of performance, safety and continuity **have to be met.**
 3. **Europe is established on track**, but EC is not satisfied with the pace of change to reduce the fragmentation and efficiency problems.
 4. The EC is considering the review of the SES to **accelerate the change.**
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Balanced Performance Model for FAB EC

Area of conflict

increased safety & sufficient capacity



increased flight efficiency & mission effectiveness

reduced cost

The SES „bottom up“ – approach to implement Functional Airspace Blocks (FABs) is the chosen „methodology“ to describe the model in detail

1. DFS is convinced that fulfilling the EC Requirements will lead to the **future of ATC in Europe**

2. “More important”

DFS believes that the future of ATC will **not** be any longer **a national “business”** but a consolidated European one.

Customers view:

34 ANSPs -> 5 “Alliances”

66 Center -> 25 Center

20 ATM-Systems -> 3/4 interoperable, modular systems

We have started our way to Europe since many years:

1. Active involvement in the SESAR-Project
We like to contribute to the SESAR Joint Undertaking
 2. Active involvement in FAB-EC Feasibility Study
 3. Cooperation with AENA and INDRA (iCAS - Project)
 4. Cooperation with Austrocontrol and skyguide (Flight Calibration Services)
 5. Cooperation with AENA and Frequentis (EAD)
 6. EGNOS (European Sat-System) with 6 partners
 7. Consulting in many European/Non-European areas)
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Harmonization

- The existing high levels of safety shall be maintained or even increased.
 - Harmonized safety requirements and methodologies shall be consistently applied to the FAB.
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Air Traffic Service Provision has to significantly contribute:

- **to reduce CO₂ emission through**
 - Reduction of flight distances flown
 - Provision of optimum flight profiles
 - **to reduce noise through**
 - Optimization of arrival and departure routes
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- One performance-orientated operational ATM concept for the airspace of the 6 States shall be implemented.
 - A common single ATM manual valid for the whole airspace of the 6 States shall apply so that civil and military users enjoy the same optimal conditions of service.
 - A common contingency concept will be developed.
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- The airspace must be designed as one unified entity to support the optimum use of the available capacity regardless of national borders.
 - Military training airspace for the armed forces shall be designed as common modular Temporary Reserved Areas (TRAs) as far as practical and will be established as far as possible outside the main GAT flows, regardless of national borders.
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- Multinational co-operation on all FUA levels shall take place in addition to internal national civil-military co-operation.
 - Therefore, common bodies from the States shall be established at FUA level I and II. The establishment of a FAB Airspace Management Cell collocated with ATFCM is expected to be favourable to seamless operation and to make use of the available capacity.
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- In order to increase safety, capacity, cost-effectiveness and efficiency (incl. mission effectiveness) for civil and military customers, the optimum degree of cooperation, between military and civil ATM shall be applied within the entire FAB.

Note: *Co-operation ranges from joint use, collocation to integration as well as consolidation.*

- Common systems and services for AIS, MET and ATCO training shall be established.
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Common Technical System

- Co-ordinated technical development planning shall lead to common systems to support a longer term operational roadmap.
- On the way to this longer-term perspective, a plan shall be in place, based on efficiency and effectiveness criteria, to accelerate the commonality of systems.

Common Technical Services

- Common technical systems, supported by a common set of technical services*, which meet safety and capacity requirements shall be acquired and maintained.
- Bundling of services per function, per product or a combination of both shall be considered.

*Staff from different FAB partners could contribute to one service.



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Ambition level „Cost Benefit“

- The outcome of the cost-benefit analysis must be positive.
 - The establishment of the FAB shall lead to savings for the airspace users. The costs and benefits of the establishment of a FAB for the whole airspace shall be calculated as well as their effects on individual civil and military service providers.
 - One charging volume shall be established and a convergence of the cost-structure of the different service providers shall be achieved.
 - A win-win situation for every service provider shall be realised. Financial principles and agreements on cost sharing and revenue distribution shall be used, which support the common charging mechanism and the redesign of the airspace and routes. Compensation shall need to be addressed if costs are unequally distributed between service providers.
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ANSP Co-operation

- Appropriate organisational structures shall support common services and functions in the FAB.

Regulatory Regime

- One regulatory regime shall be established and maintained (one set of rules and a common supervisory mechanism).
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Based on the DFS experience in consolidating ATC – Services we are pretty sure:

- Improvement of ATC-Services can **not** be obtained by **national activities** only
 - Much closer international **cooperation** and **integration** between States and ANSPs will be necessary
 - The FAB EC initiative is **one possible way ahead** to the future
 - With the **bottom up approach** all ANSPs have the chance to design the future and their future
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FAB Central Europe

Berlin 19.10.2007



- Changes to the working conditions shall be kept to a minimum without jeopardizing flexibility and the efficient allocation of staff.
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