



# FUA FRANCE

Jeddah (Saudi Arabia)

September 16<sup>th</sup>, 2012



# Agenda

- Institutional Arrangements
- Structures
- Procedures
- Example of TSA200
- FUA at Regional Level



Ministère  
de l'Écologie,  
du Développement  
durable  
et de l'Énergie



# Civ-Mil Relationship

- In France, GAT and OAT are handled by distinct ANSPs :
  - DSNA is a directorate of the DGCA which administrates civil aviation under the direct authority of MoT.
  - DIRCAM is a directorate of the Air Force under the direct authority of MoD.

# Civ-Mil Relationship

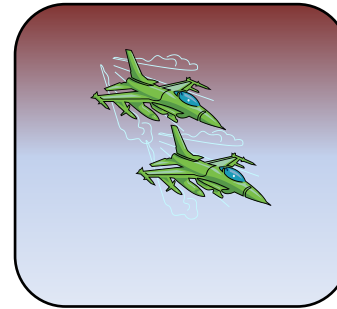
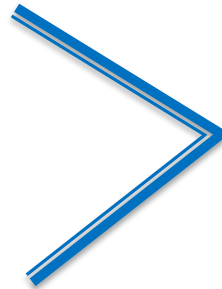
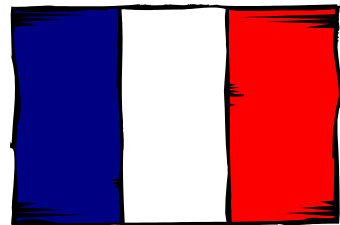
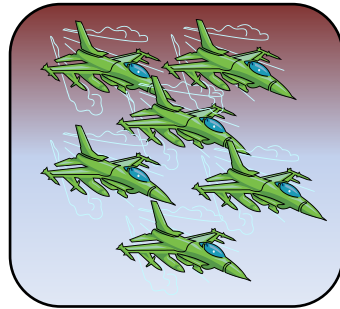
DSNA	DIRCAM
<ul style="list-style-type: none"><li>• #3,000,000 flights/year</li></ul>	<ul style="list-style-type: none"><li>• #75,000 missions/year</li></ul>
<ul style="list-style-type: none"><li>• GAT traffic</li><li>• 1,000,000 Km<sup>2</sup></li><li>• 5 ACCs (#90 sectors)</li><li>• 12 major APP/TWRs</li><li>• 67 TWRs</li></ul>	<ul style="list-style-type: none"><li>• OAT activities</li><li>• GAT in APP/TWRs on some military aerodromes open to public.</li></ul>



# Civ-Mil Relationship

- The position occupied by the French Air Forces is historically quite strong.
- The needs for training are much more important there than everywhere else in Europe.

F  
R  
A  
N  
C  
E

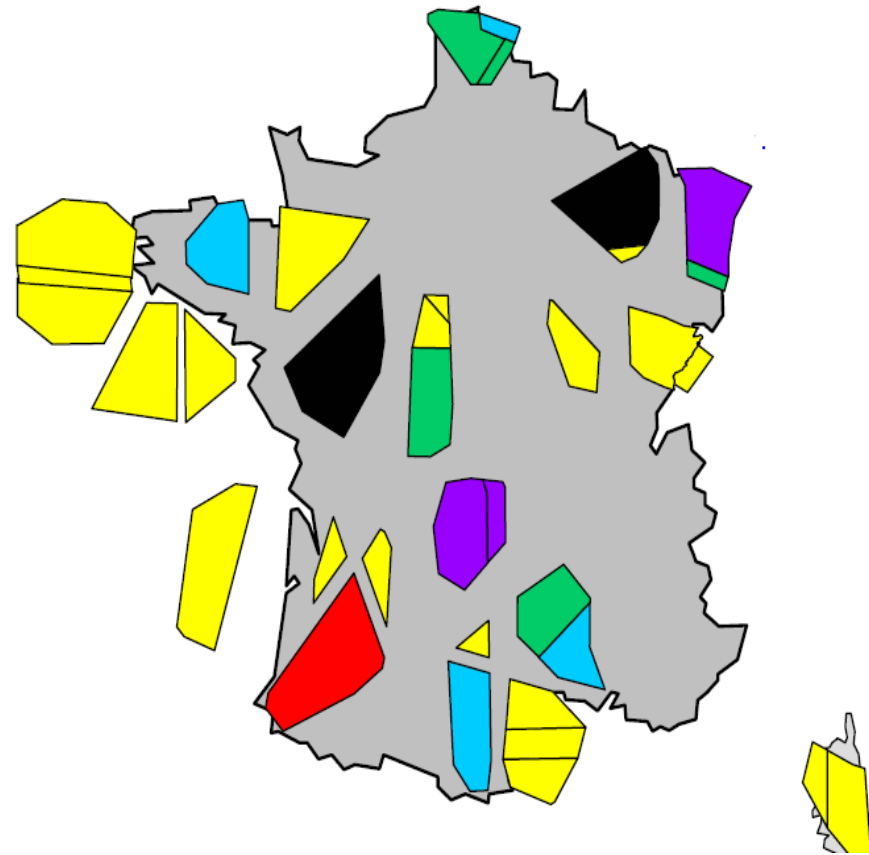


Other Members  
of FABEC

GERMANY,  
SWITZERLAND,  
BELGIUM,  
NETHERLANDS  
LUXEMBOURG



# Civ-Mil Relationship



Average Daily Reservation in TSA/CBA ( Hours )

# Flexible Use of Airspace

In that context,  
**Flexible Use of Airspace**  
implementation is a  
prerequisite to  
**Capacity Management**



# FUA : step by step

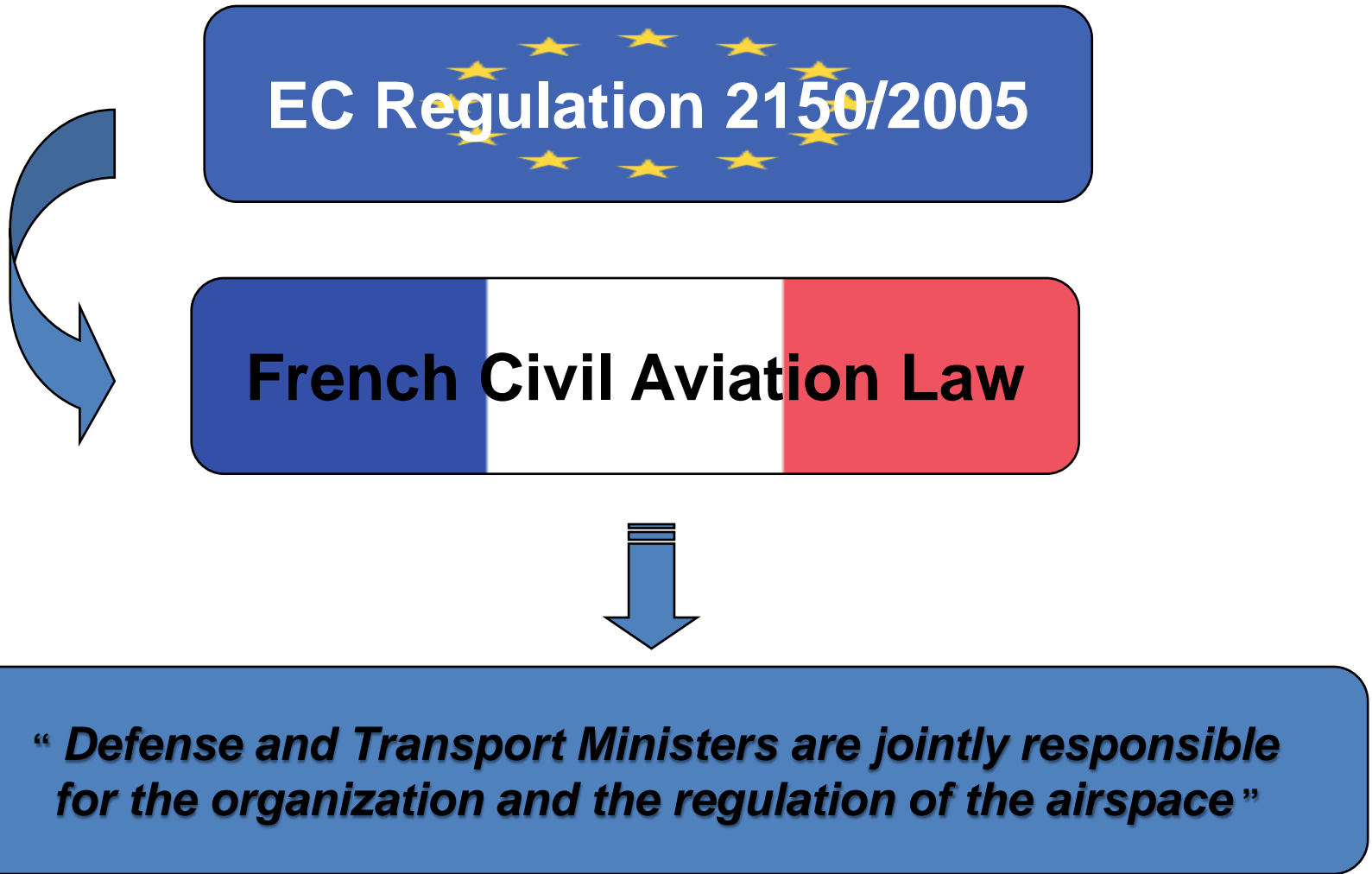
- **70's** : Airspace is mostly military, coordination is mandatory to move any GAT off the network
- **80's** : Basic first steps of Mil On/Mil Off differentiated capacities
- **90's** : Military activity is announced at D-1
- **2000's** : Full FUA concept implementation ... military activity is organized regarding peak hours of GAT
- **2005** : Military activity is negotiated with civil partner regarding the sector capacity
- **2010** : Military activity is negotiated with civil partner regarding traffic complexity



# FUA : Concept

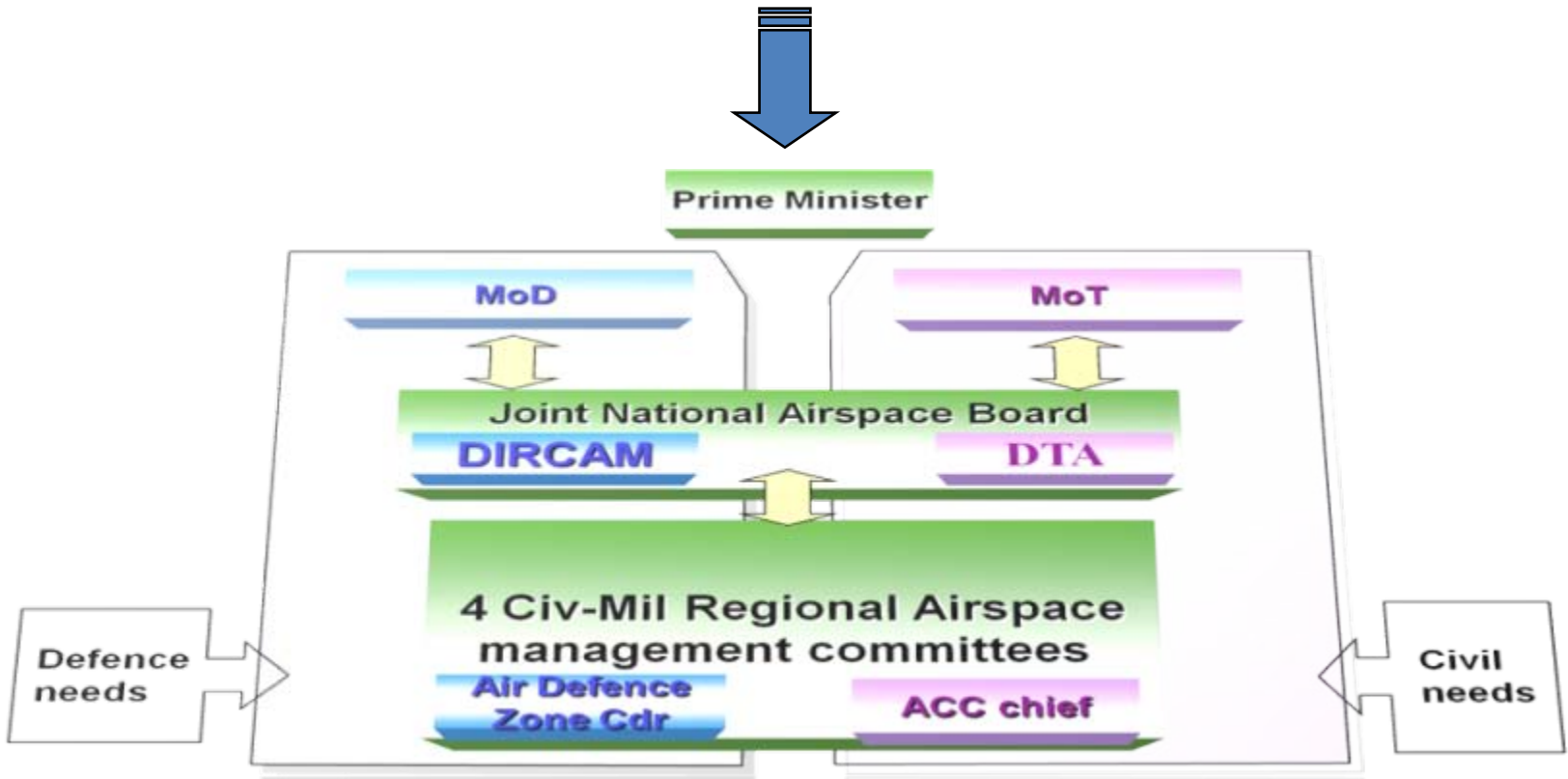
- The effective application of the FUA concept requires a **high level political commitment** which will ensure that civil and military partners work in a collaborative environment.

# Civ-Mil Institutional Arrangements



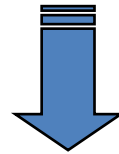
# Civ-Mil Institutional Arrangements

## Joint National Airspace Board



# Civ-Mil Institutional Arrangements

## Joint National Airspace Board

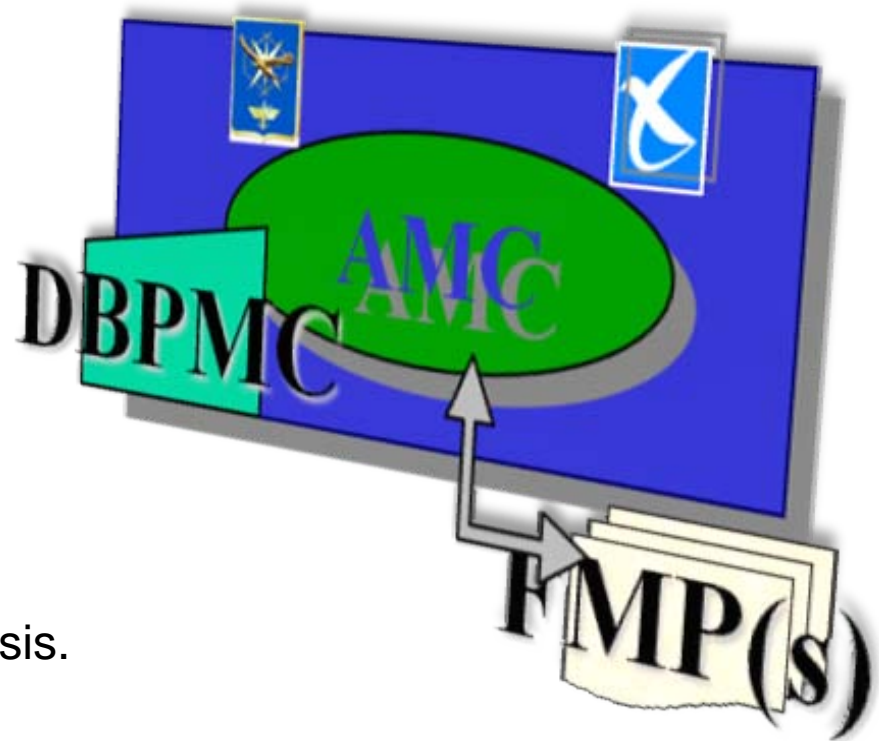


- Airspace and Network Design, AIS Dissemination
- OAT & GAT Flight Rules and Compatibility
- Rules for FUA Level 2 and Level 3
  - Rules for negotiation procedure
  - Priority Rules
- Strategic Planning of major military exercises



# Airspace Management Cell

- Gathering Civ & Mil needs
- Applying negotiation procedures
- Pre tactical coordination
- Allocating temporary airspaces
- Deciding availability of CDR
- Disseminating the Airspace Use Plan (AUP)
- Real time follow-up
- Running airspace use post analysis.



**The AMC is the core of FUA**

# Negotiation Procedure

## Joint National Airspace Board



### Memorandum of Understanding

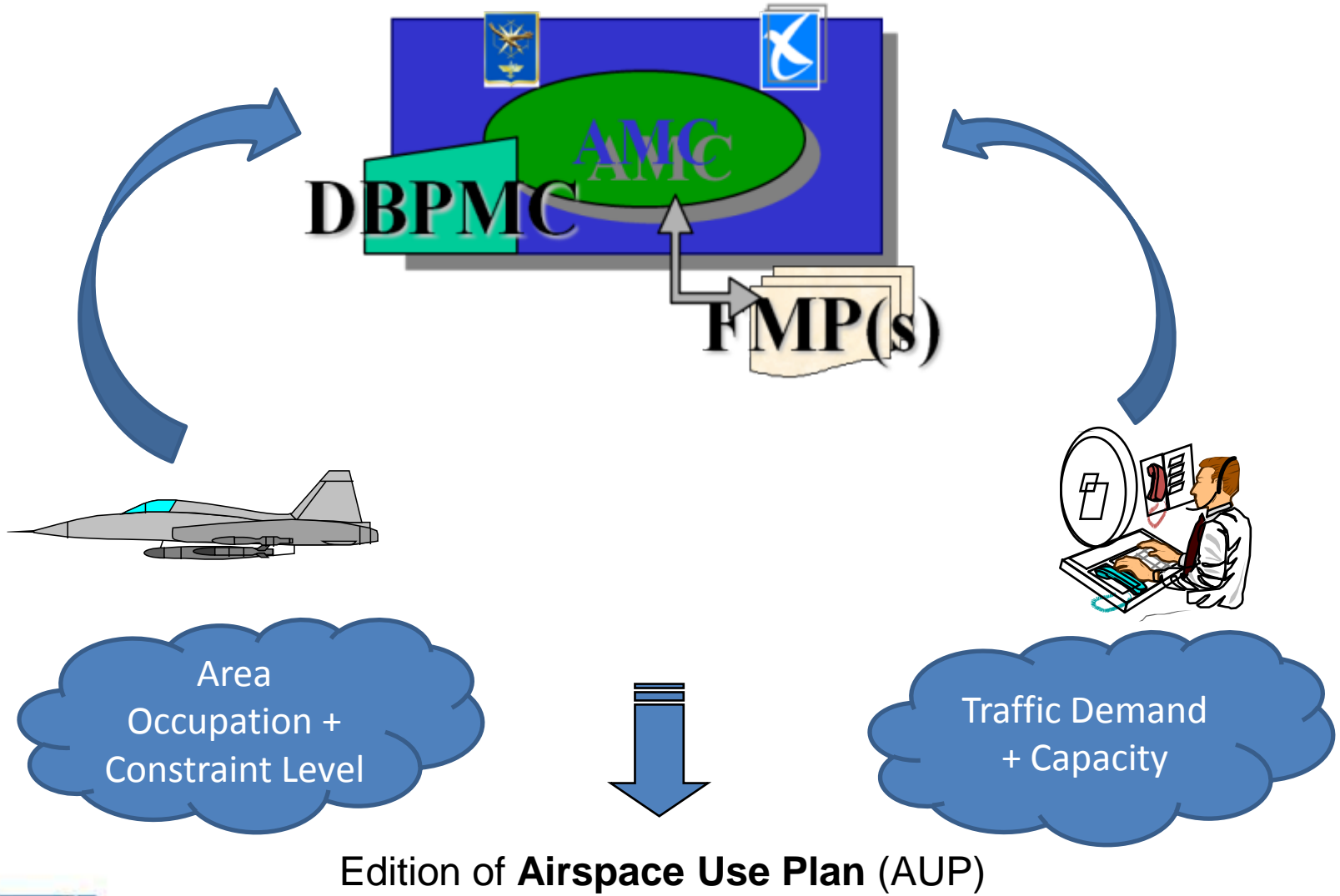
- In peace time, priority to GAT during peak hours
- Safeguard clauses to limit restriction to OAT training

# Priority Rules

- To improve Air Traffic Flow and adapt airspace capacity to GAT demand
  - Giving exclusive priority to GAT when very heavy traffic.
  - Taking account of a limited number of civil requests concerning specific flows in identified traffic volumes.
- To ensure military training thanks to the
  - Limitation of exclusivity to GAT period to the most penalizing ;
  - Lateral and vertical partitioning of the military areas;
  - Limitation of simultaneous partitioning.



# Information Sharing





# Information Sharing

## Civil Constraints

### Level of Constraint

Green Slot
Yellow Slot
Red Slot
Black Slot

### Traffic Demand versus Capacity

Demand < 90% Capa

90% Capa < Demand < 110% Capa

110% Capa < Demand < 130% Capa

Demand > 130% Capa

## Military Constraints

### Level of Constraint

Level 1

Level 2

### Internal Military Criteria

Absolutely necessary mission

Non priority mission

# Negotiation Procedure

## How can we help?

### Green Slots

There's no GAT constraint, all Defense requests can be satisfied.

### Yellow & Red Slots

Defense	Civil aviation
<ul style="list-style-type: none"> <li>• Time shifting</li> <li>• Reduction in the time length</li> <li>• Reserved area partitioning</li> <li>• Area shifting</li> </ul>	<ul style="list-style-type: none"> <li>• Sector Capacity closely linked with military activity level</li> <li>• Adaptation of the ACC sector configuration</li> <li>• ATFCM regulation measures</li> </ul>

### Black Slots

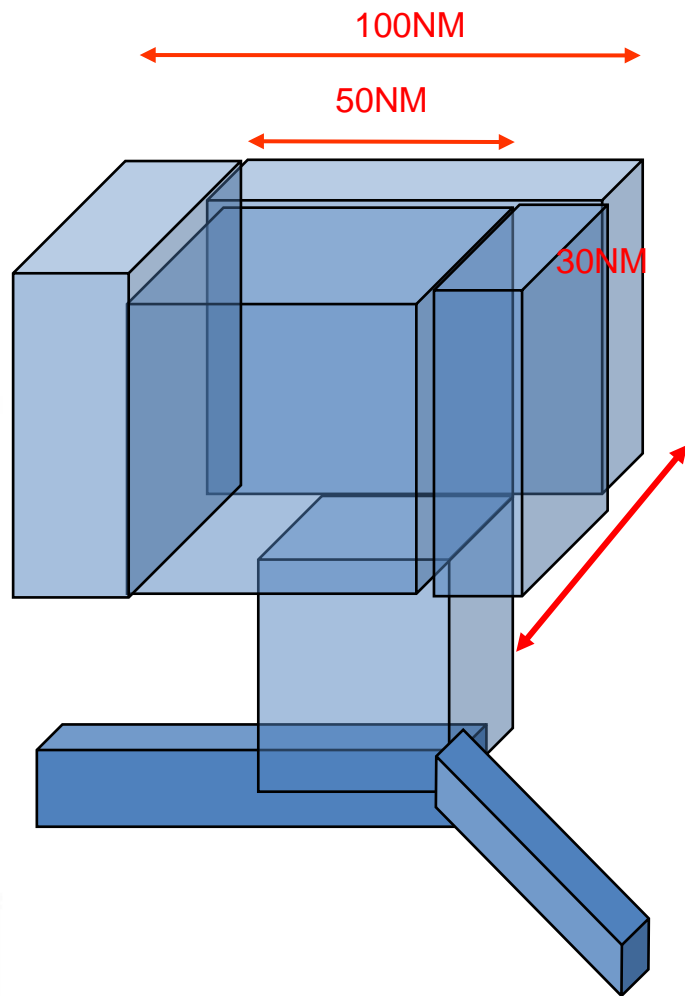
Defense	Civil aviation
<ul style="list-style-type: none"> <li>• Yellow &amp; Red Slots options</li> <li>• Mission Cancelation</li> </ul>	<ul style="list-style-type: none"> <li>• Yellow &amp; Red Slots Options</li> <li>• Nominal capacity applied as soon as there's no military activity</li> </ul>

# Priority Rules

- When military constraint is of Level 1 during standard time period, the area is allocated to the Defense.
- When a black slot has been identified for GAT, airspace is allocated to the civil aviation taking due account of the safeguards defined for each area.

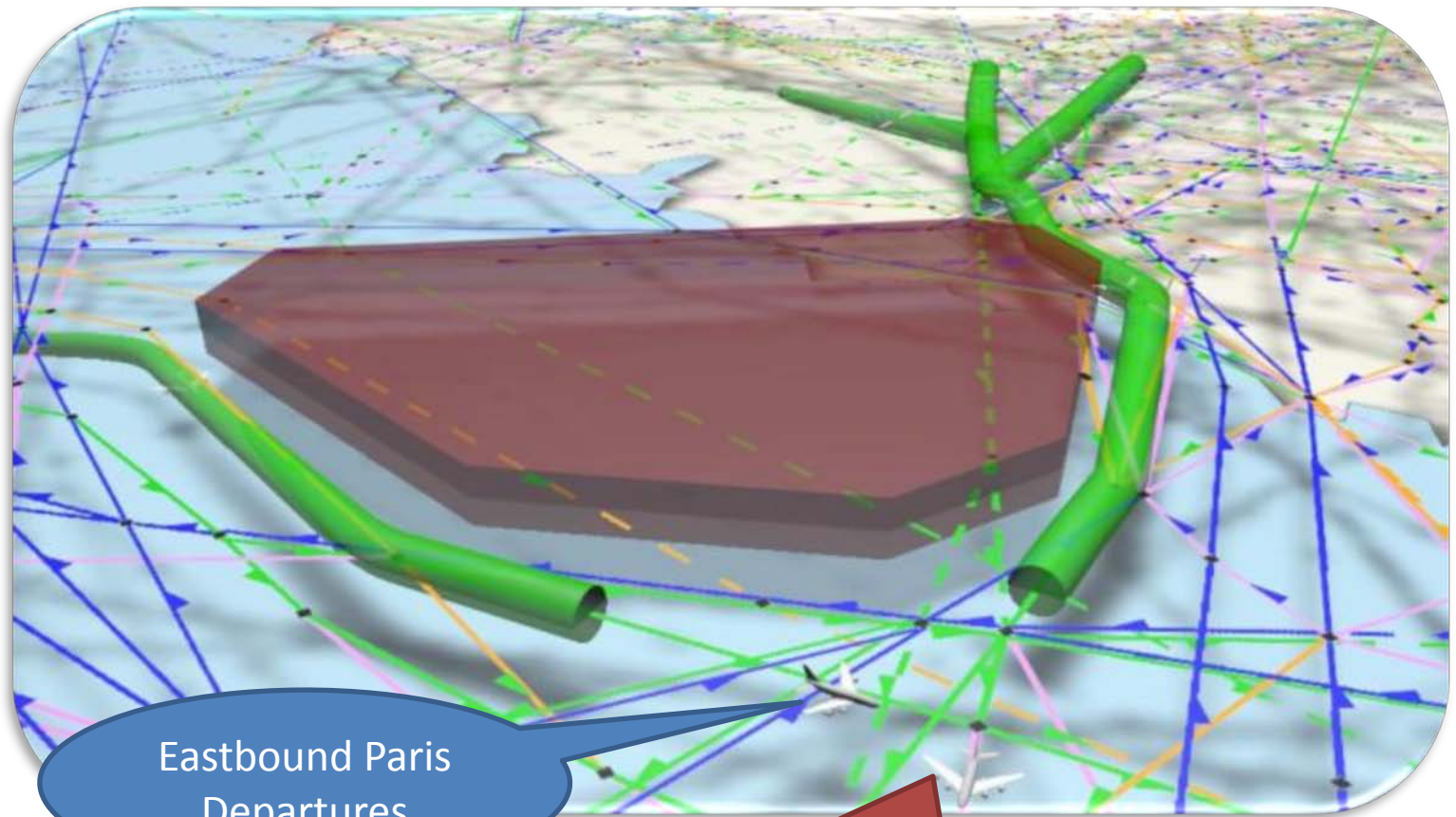


# Enhanced Rules and Analysis



- Increasing modularity of temporary segregated area
- Analyzing constraints regarding complexity

# Application in TSA 200



Eastbound Paris  
Departures

Southbound Brussels,  
Amsterdam  
Departures

# FUA at FABEC Level

- FUA at National level have proven efficiency but lack of cooperation at Regional level is still an issue
- Within the FABEC Airspace Strategy : ATFCM/ASM Project
  - DSN is foster ANSP
  - ATFCM/ASM Function : entity at FAB level to keep on the good work done by the national AMC, increase cooperation between FMPs.
  - Harmonizing Booking Principles
  - Harmonizing Civ-Mil Priority Rules
- Trial last summer during the London OG
  - FOX Cell located in Maastricht UAC
  - Participation of FMP involved in the FABEC/London Interface
  - Enhanced Pre-tactical work done from D-1 until H-3

# Questions?



## The floor is yours!

