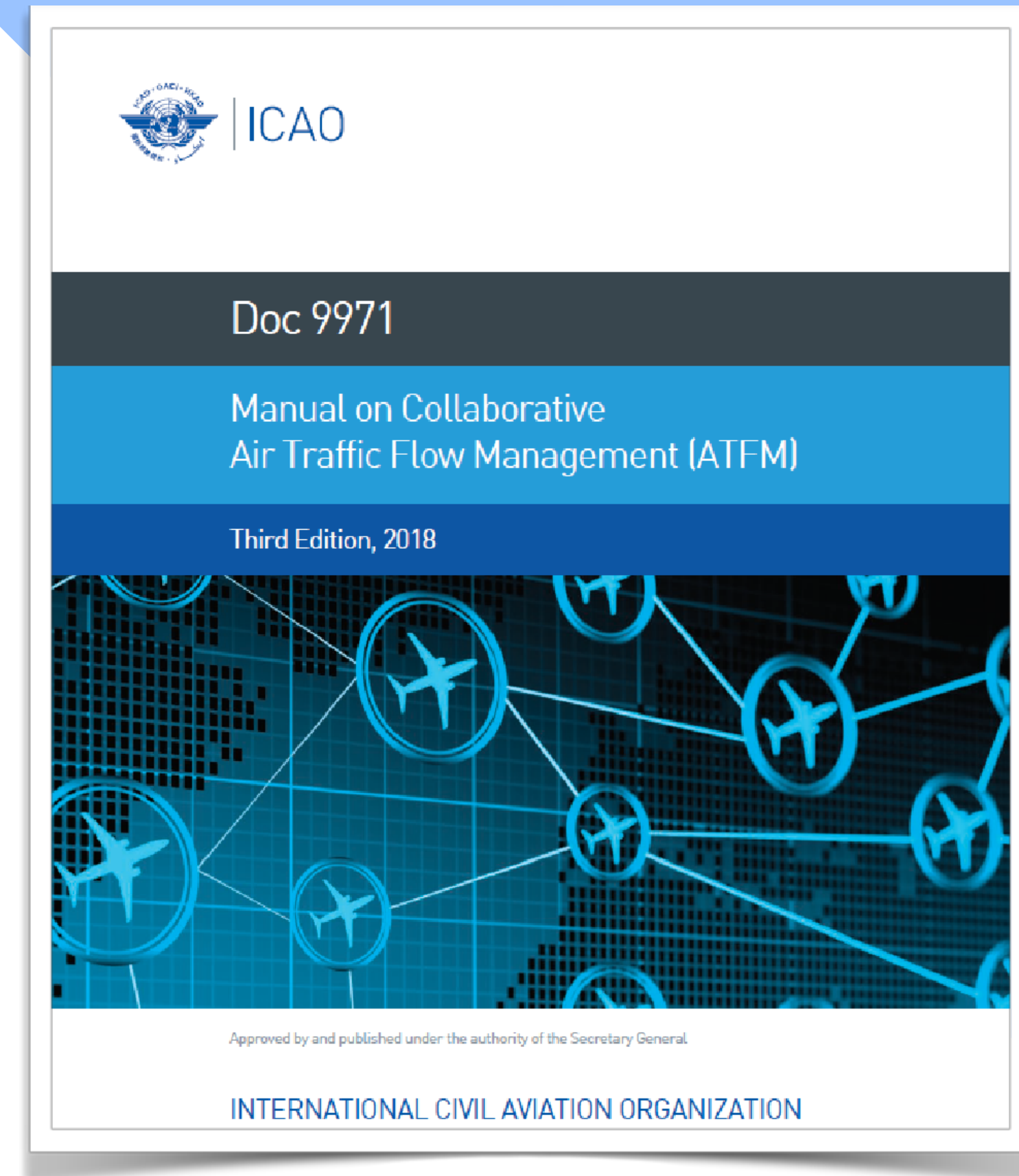


# CDM : a New Way of Working for ATFCM and Airport Operations



## Golden Rules

- ▶ CDM procedures and rules to ensure that collaborative decisions are made rapidly and equitably
- ▶ CDM ensures decisions are taken transparently based on the best information available as provided by the participants
- ▶ CDM can be applied from strategic planning to real-time operations



*ICAO Manual (January 2018)*

**Extended CDM :**

**short term solutions  
to capacity challenge**

**Erwan PAGE**

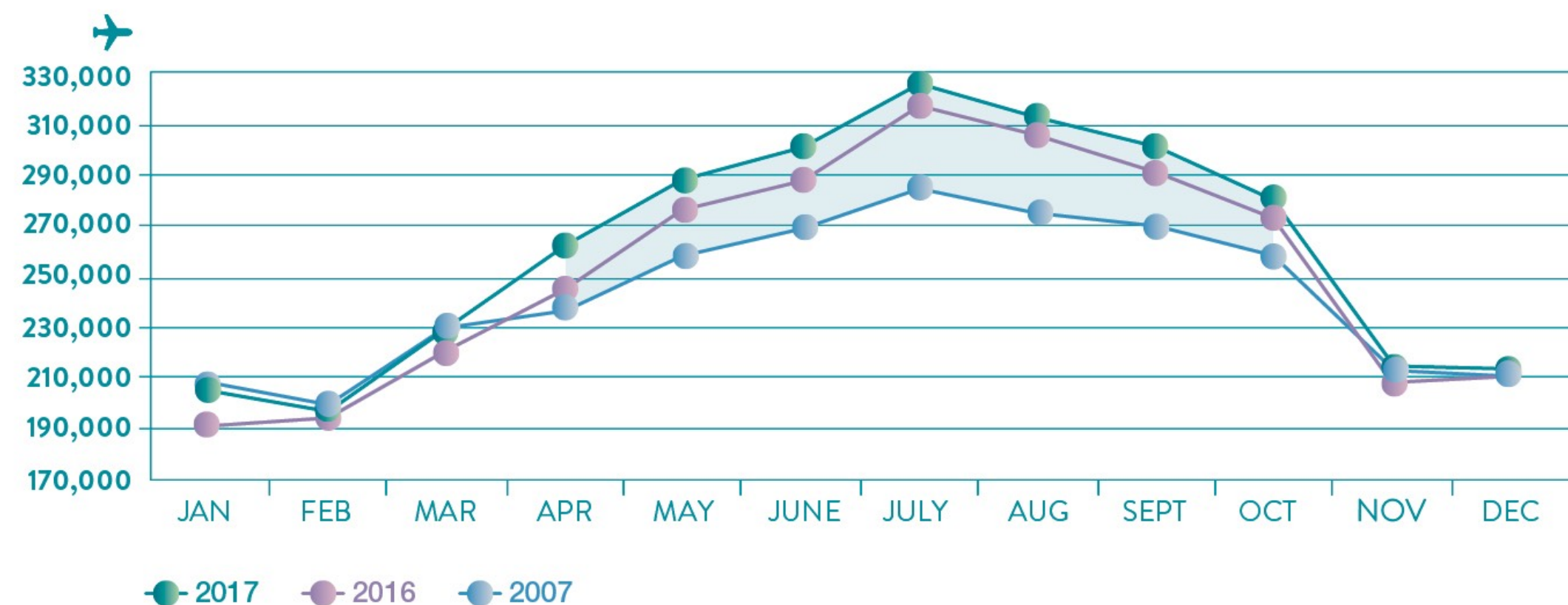
*Extended CDM Programme Manager*





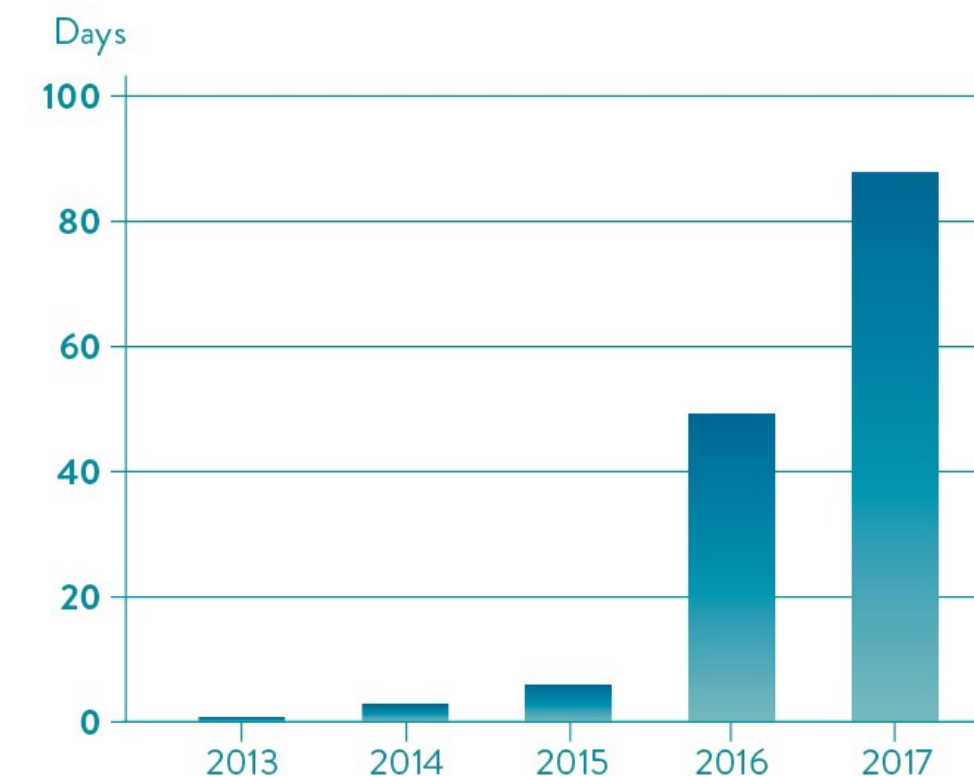
# Demand and Capacity Challenge

Monthly breakdown of IFR traffic controlled in France — Source: DSNA



**Traffic seasonality :**  
**+ 6% per year**

Number of days with a traffic > 10,000 flights per day — Source: DSNA



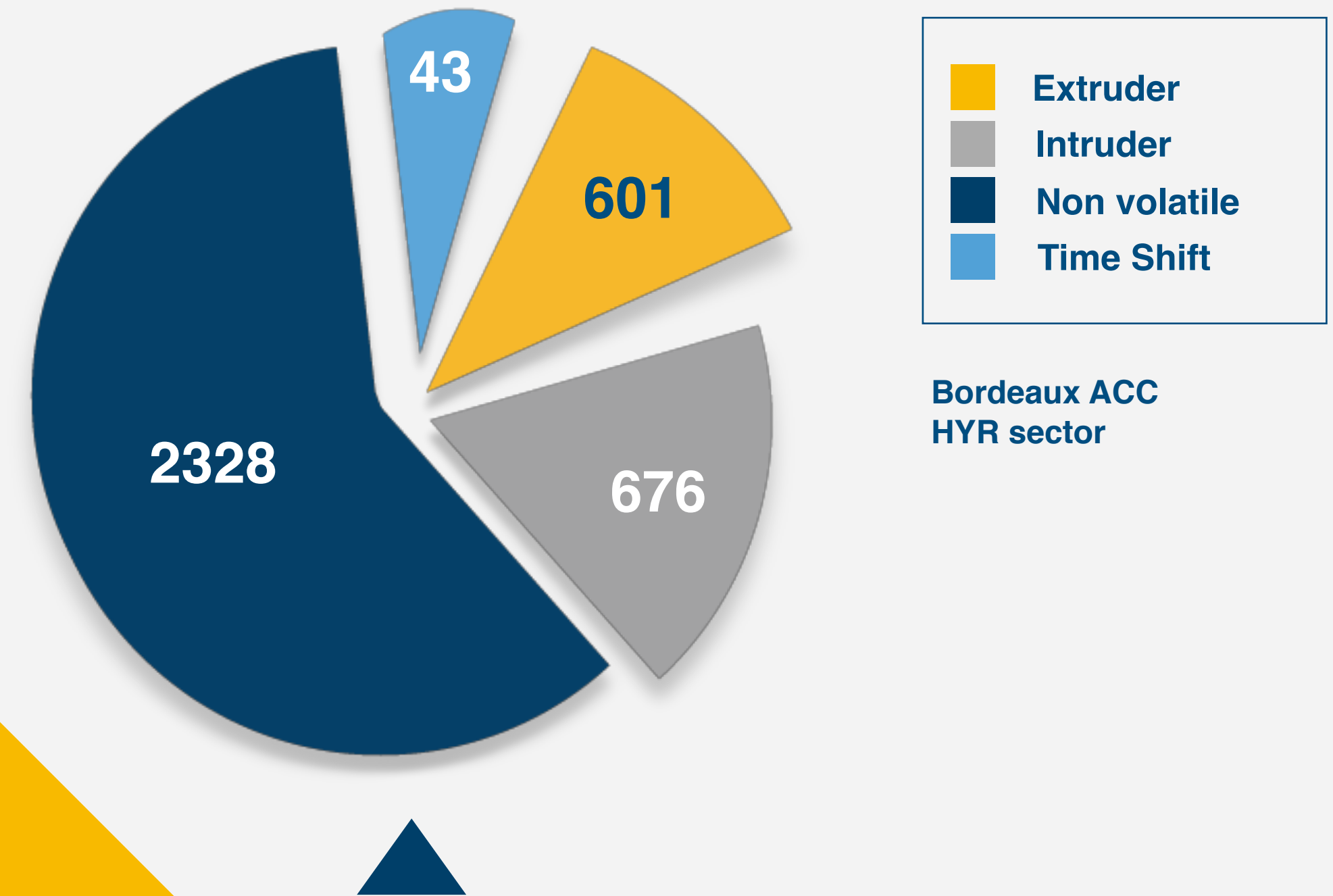
**Traffic peak days > 10 000 :**  
**↗ 1 to 100 in just 6 years**

# Demand and Capacity Challenge

AFTCM delay due to air navigation — Source: DSNA



**Delays ↗**

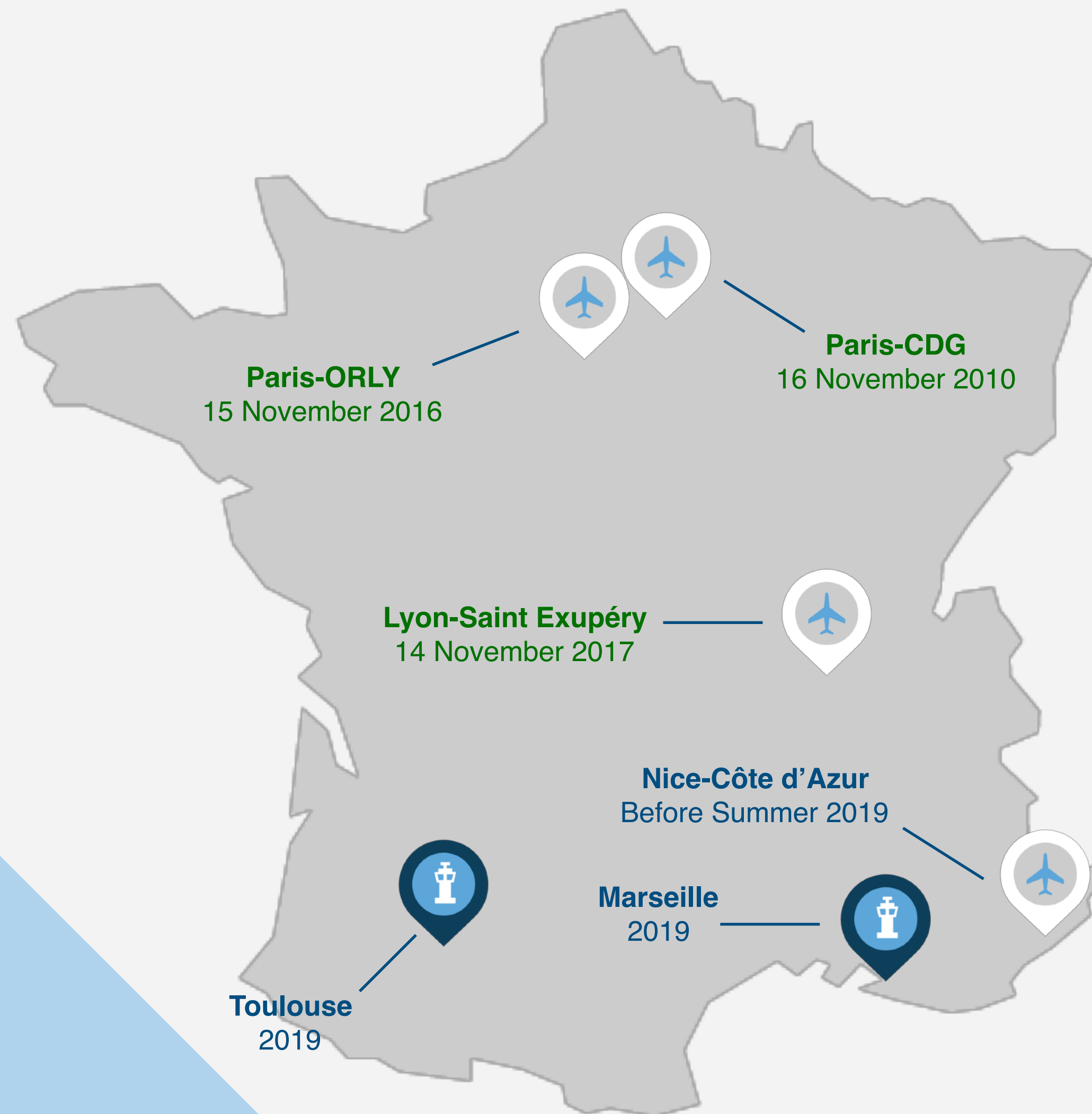




**Side concern : +40% traffic volatility**  
 > Poor predictability, wasted capacity

Optimising the use of existing capacity is a must to minimise costs

▶ **CDM can deliver some short term solutions to improve flow management**

# CDM@DSNA : Airport Operations



-  Airport CDM
-  Advanced ATC Tower (Project)

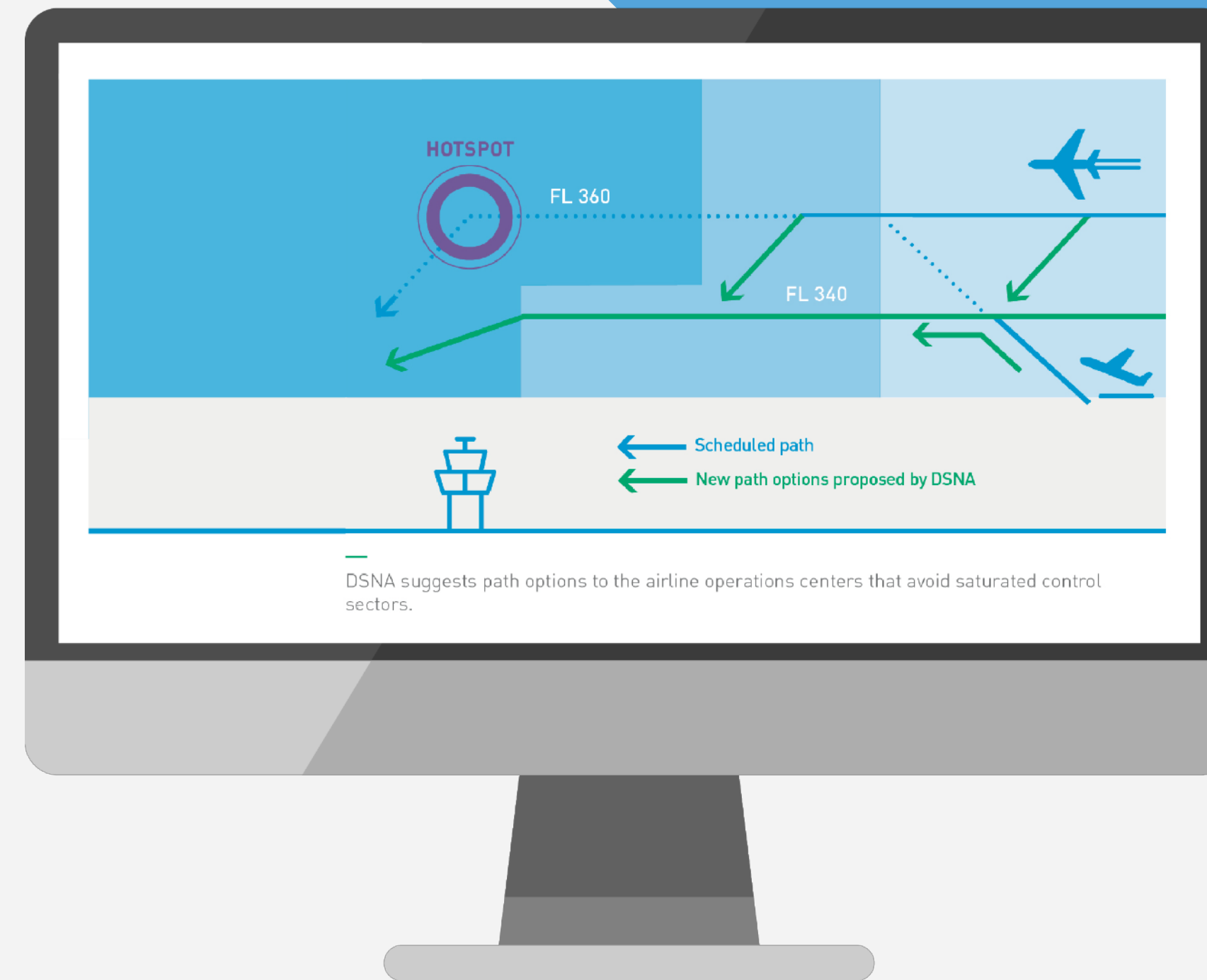
Increasing number of airports connected to the Network

▶ CDM can improve traffic predictability and optimise local operation

# CDM@DSNA : En Route



- ▶ **CAP : Collaborative Advanced Planning**  
collaborative process and tool to balance traffic demand and reduce the need for regulations in overloaded sectors

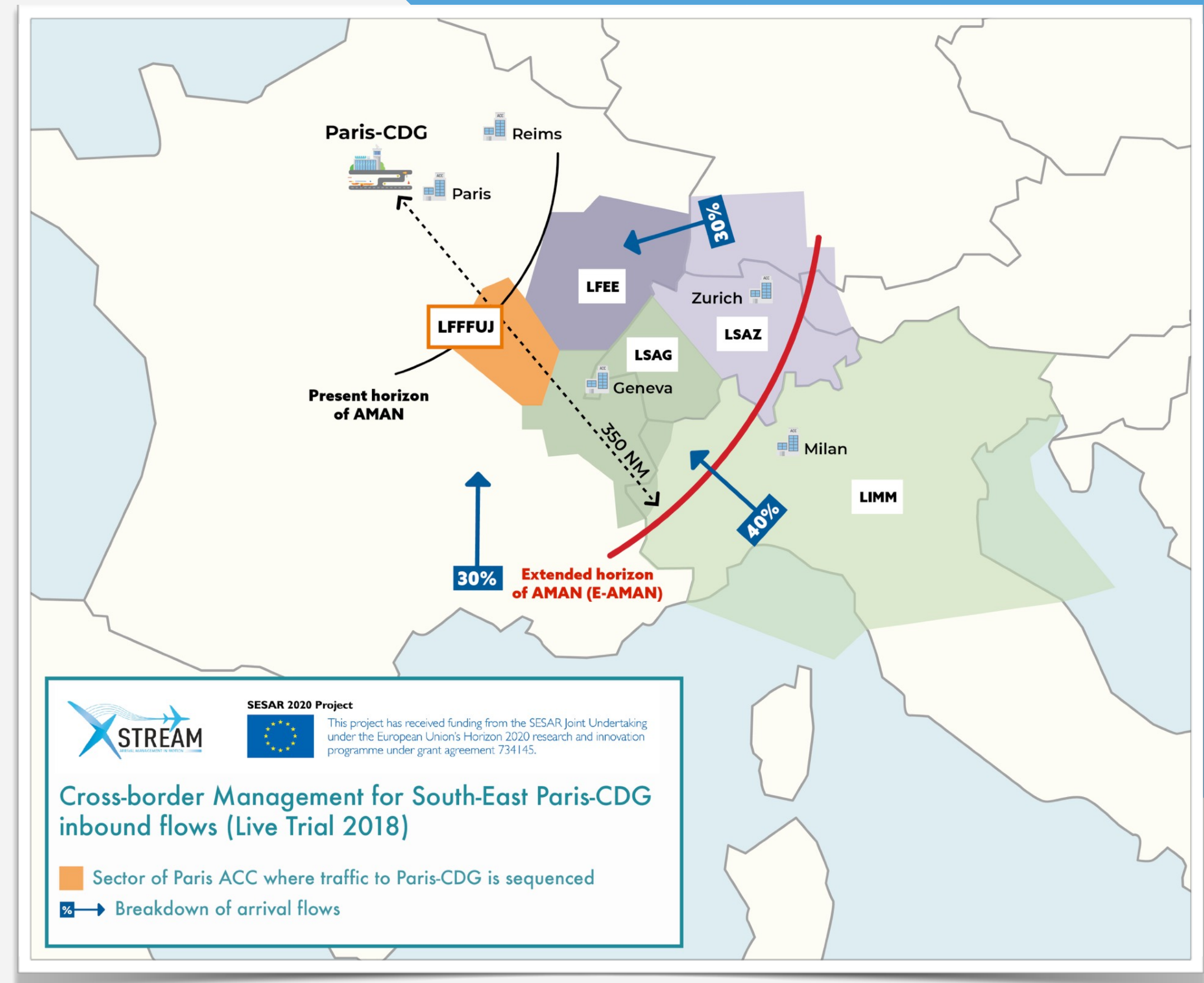




# CDM@DSNA : En Route



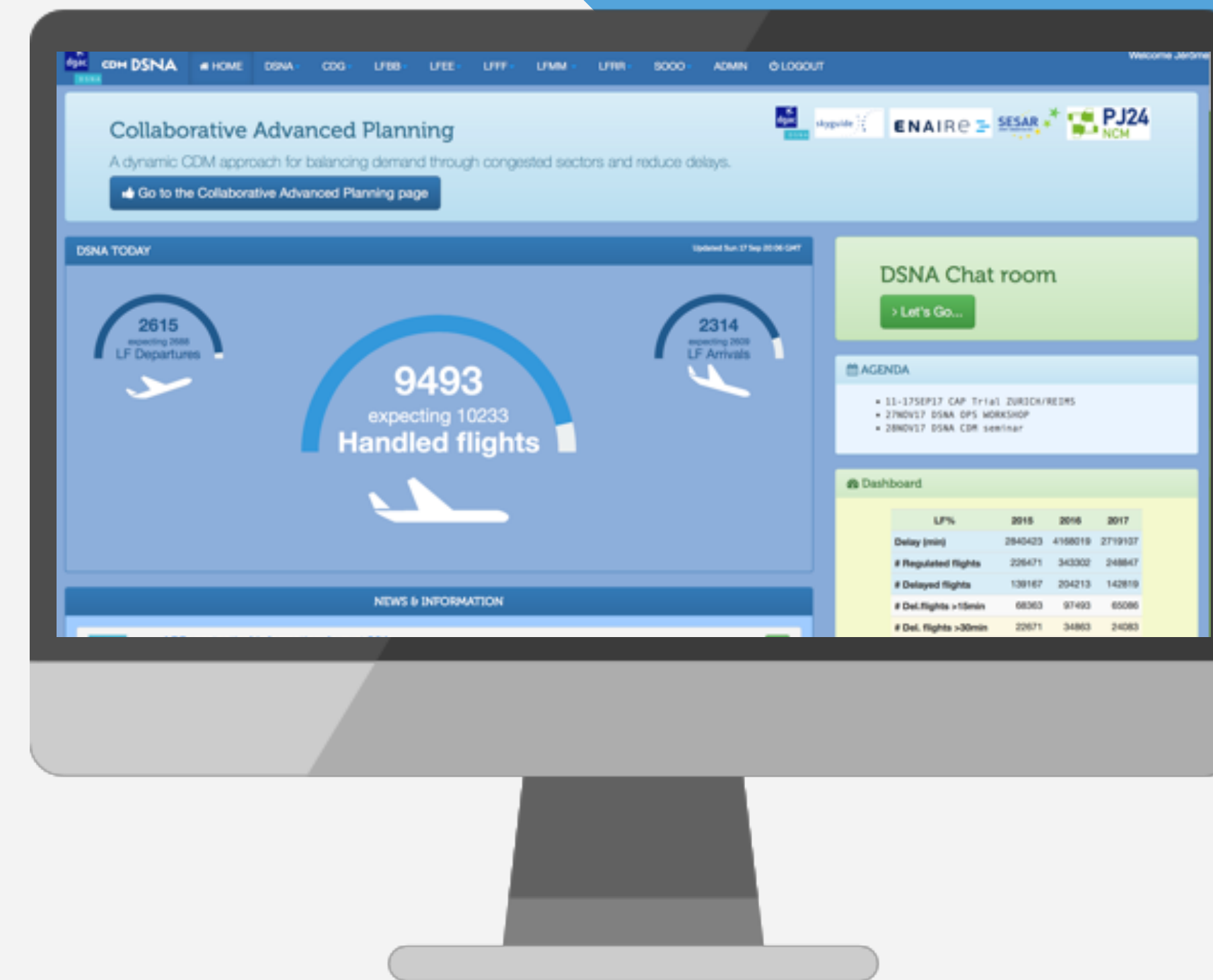
- ▶ **CAP : Collaborative Advanced Planning**  
collaborative process and tool to balance traffic demand and reduce the need for regulations in overloaded sectors
- ▶ **Extended Arrival Management (xStream) :**  
acting on a small number of aircraft to optimise arrival management for Paris airports and taking into account users' needs



# CDM@DSNA : En Route



- ▶ **CAP : Collaborative Advanced Planning**  
collaborative process and tool to balance traffic demand and reduce the need for regulations in overloaded sectors
- ▶ **Extended Arrival Management (xStream) :**  
acting on a small number of aircraft to optimise arrival management for Paris airports and taking into account users' needs
- ▶ **CDM@DSNA Portal :**  
for sharing information and supporting early mitigation action : Orly curfew monitoring, dashboards...



Sharing information and decisions with neighbouring ACCs, airports and airlines about En Route hotspots and arrival flow management for Paris

▶ **CDM can minimise ATFM delays**



# CDM@DSNA : Strategic Level



## Strategic investments level of CDM

- ▶ Airport-CDM Roadmaps
- ▶ The French ATM Strategy
- ▶ Operational Working Sessions, ATFCM Collaborative Measures
- ▶ Seminars CDM@DSNA

A roadmap of projects to enhance infrastructure, tools and processes

- ▶ **CDM can define frameworks to share strategic targets in order to improve performance and capacity in the medium and long term**

# Europe : Emerging Concept of Collaborative Network Management

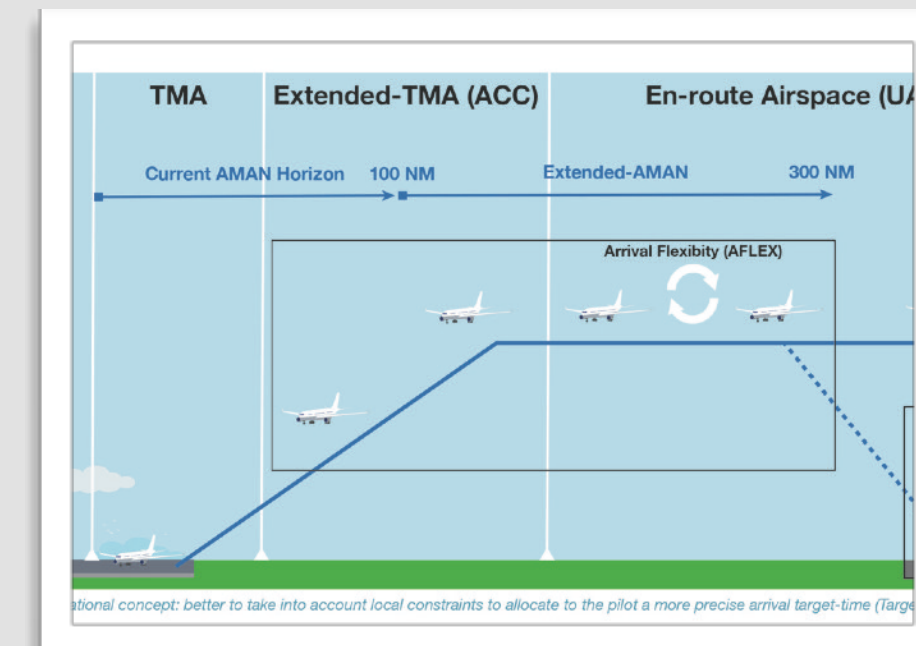
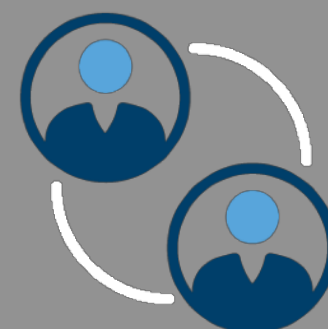
Objectives : more reactivity, more coordination

UDPP  
AFLEX  
DFLEX



Taking user priority into account

## Collaborative Network Management



AOP  
NOP  
XMAN



Integrating Airport and Network Plannings

AIRPORT  
CDM



CDM concepts at airports

STAM  
dDCB  
TTA FUA



Enhanced flow measures



# Europe : Way Forward

## How to reach these objectives ?

- ▶ Through technical infrastructure of data sharing :  
**SWIM as a main enabler**
- ▶ Through operational consistency, transparency and equity :  
**Network Manager as a central coordinator**
- ▶ Through synchronised deployment  
**ATM roadmap and CEF fundings as facilitating frameworks**



Co-financed by the European Union  
Connecting Europe Facility

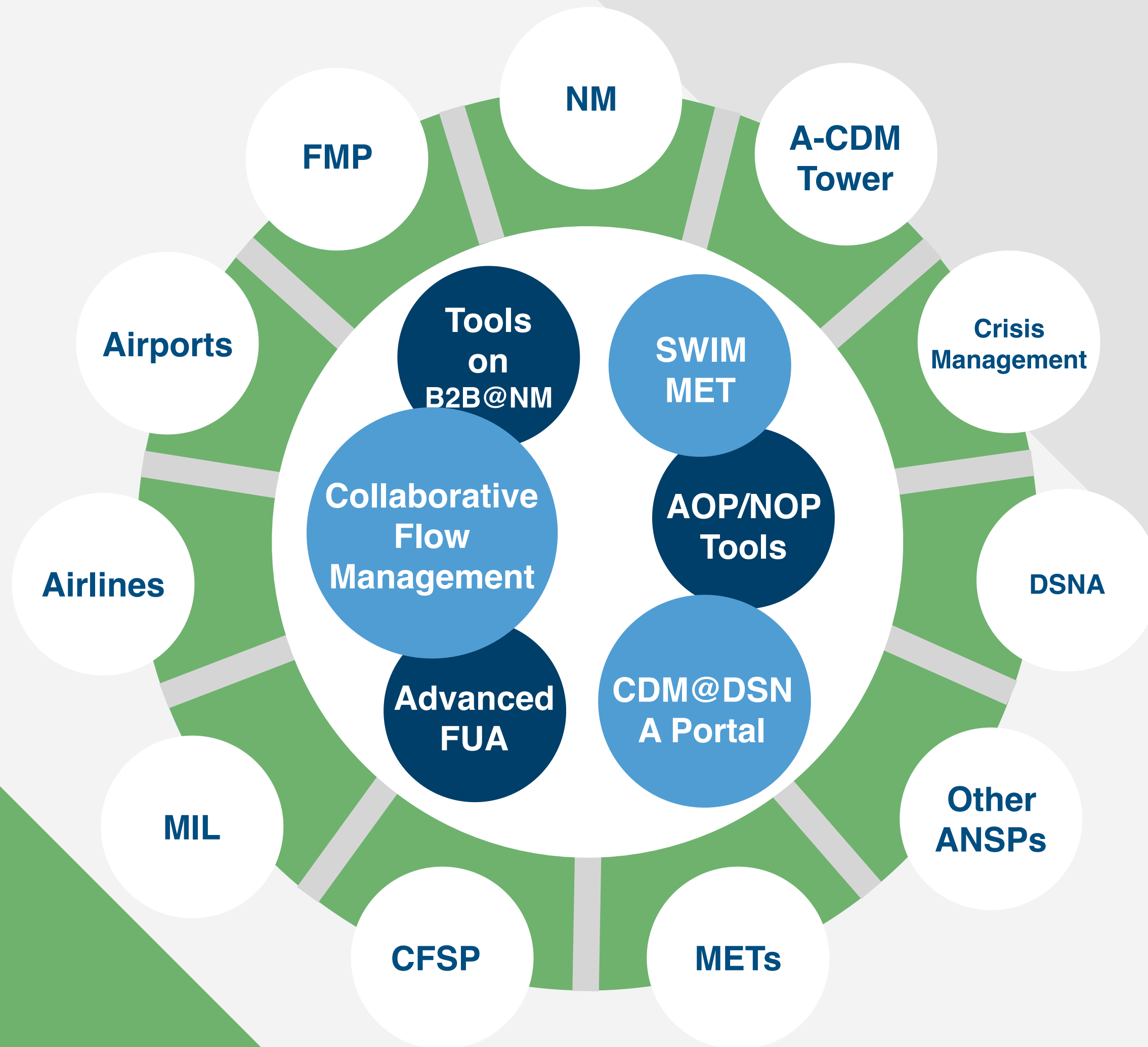
Shared objectives + common co-financed projects

▶ More CDM projects can be deployed in the near future





# Areas for CDM Improvements



- Collaborative Processes with different actors that have sometimes conflicting needs
- CDM Improvements targets Operational issues, tools and processes to improve

# Conclusion



**Our ambition : to extend further CDM within a shared strategy with all concerned partners**

## **How to enhance CDM@DSNA ?**

Let's identify possible ways forward and opportunities to collaborate on CDM toolbox enhancement for a more efficient service



# Debate

- How aligned are our views ?
- What are the airspace users' needs and expectations ?





# Workshops : some items for discussion

1. **UDPP to minimise cost impact**
2. **Improved predictability with airlines' support**
3. Collaborative flight planning with airlines and CFSP
4. Enhanced MET support for ATM
5. **AOP/NOP integration and APOC concept**
6. **Crisis management tools**
7. Collaborative ASM with Air Defence
8. Sub regional collaboration of dDCB measures / global optimum vs local optimum
9. **Post-Operations services**

▶▶ What else would you like to address ?