



Network Manager
nominated by
the European Commission



Network Manager Review

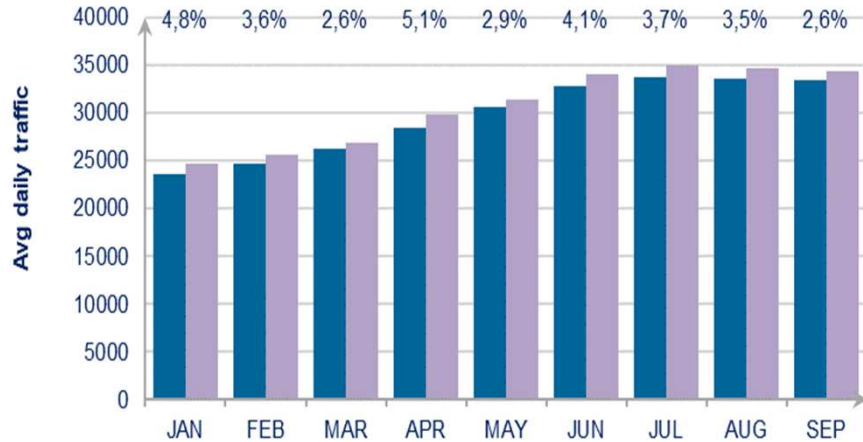
CDM@DSNA Seminar

26th November

Joe Sultana
Director Network Management
EUROCONTROL

Network Performance in 2018

Average daily traffic Jan – Sep 2018



3.6%
Traffic Increase
(Jan-Sep)



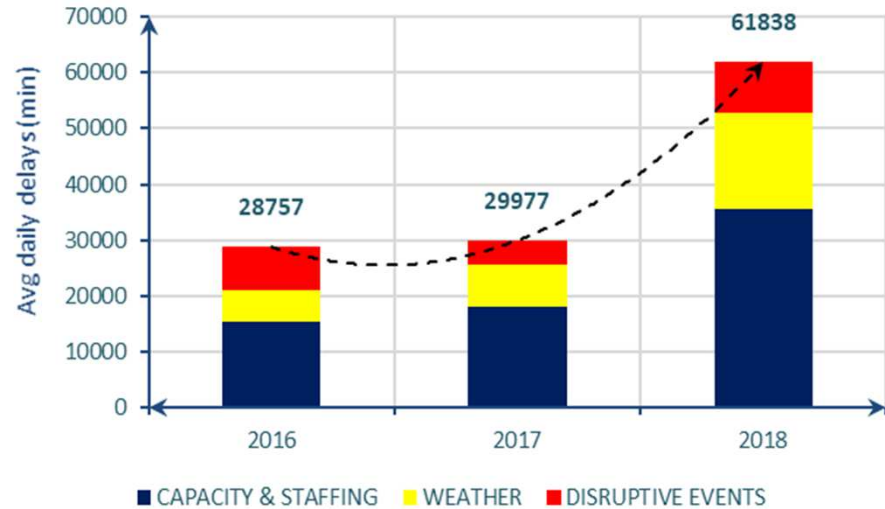
Increase in flows to
Turkey and Greece

Average en-route delay per flight:
2.01
min/ft (Jan-Sep)

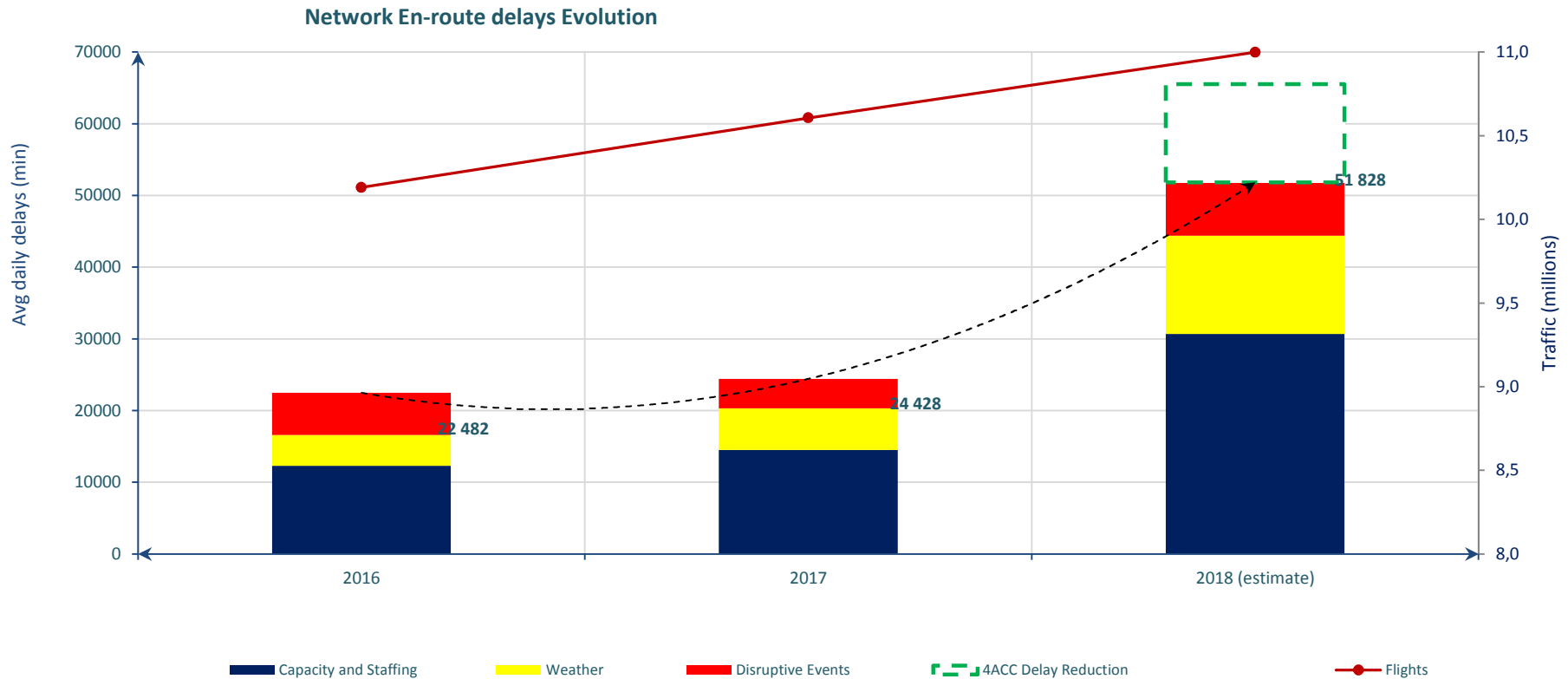


Top contributors:
Karlsruhe and Marseille

Year-to-date Network en route delays



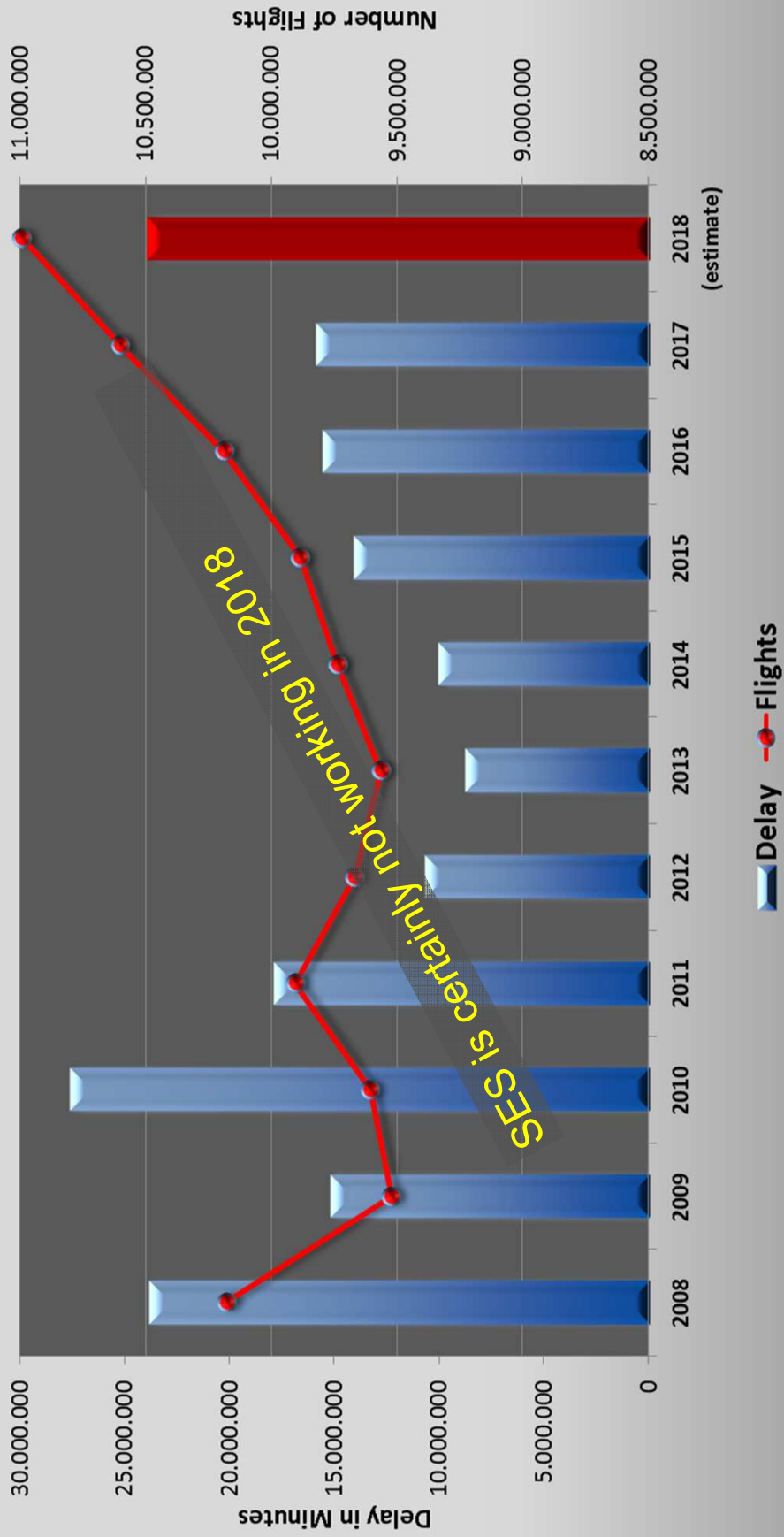
Network Mitigation Measures



- A **NM initiative** with 11 ANSPs to reduce the demand in Karlsruhe UAC and Maastricht UAC
- Reducing delay by approximately **5 million minutes** (slightly increasing the delays of the ANSPs who agreed to handle additional traffic and affecting flight efficiency)



Delays and Flights: 2008 - 2018

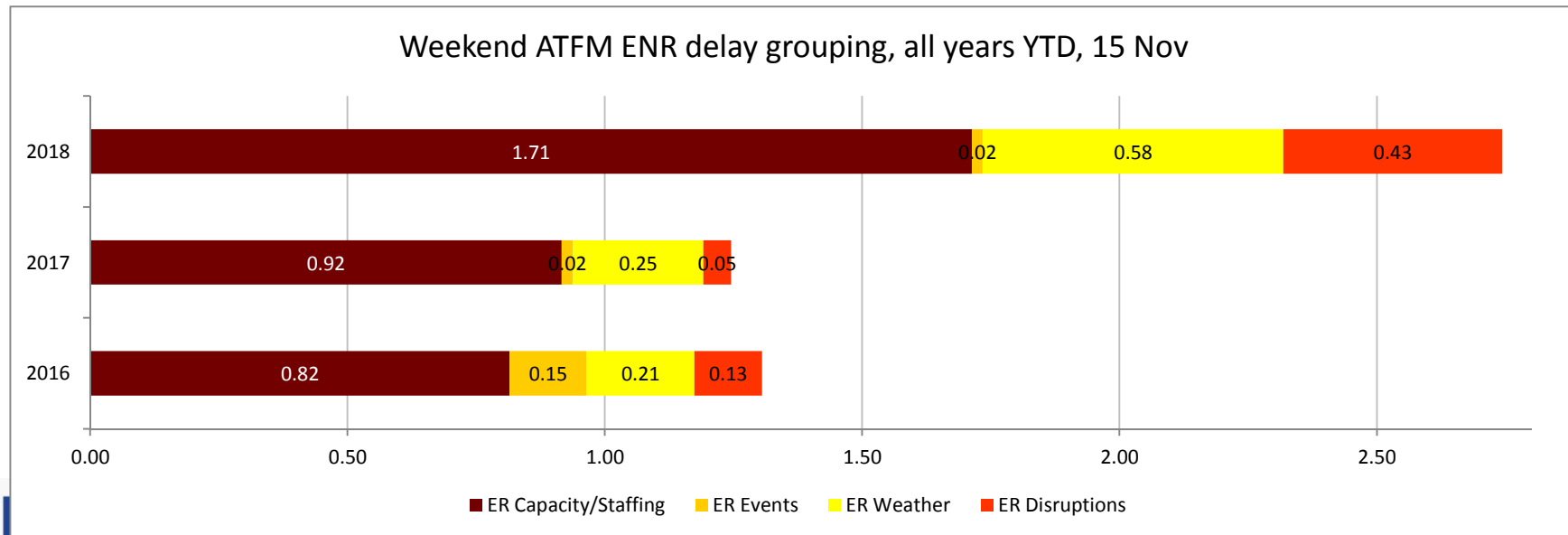
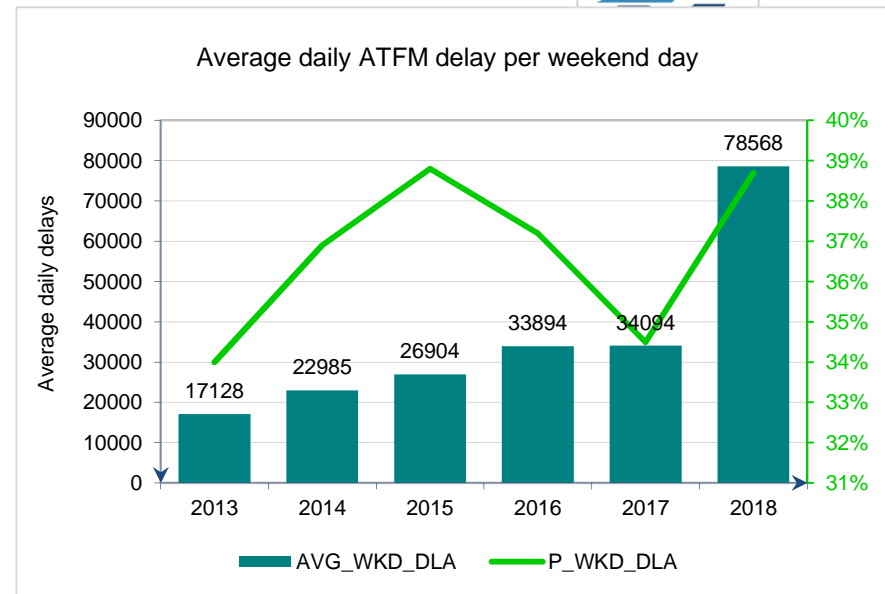


SES is certainly not working in 2018



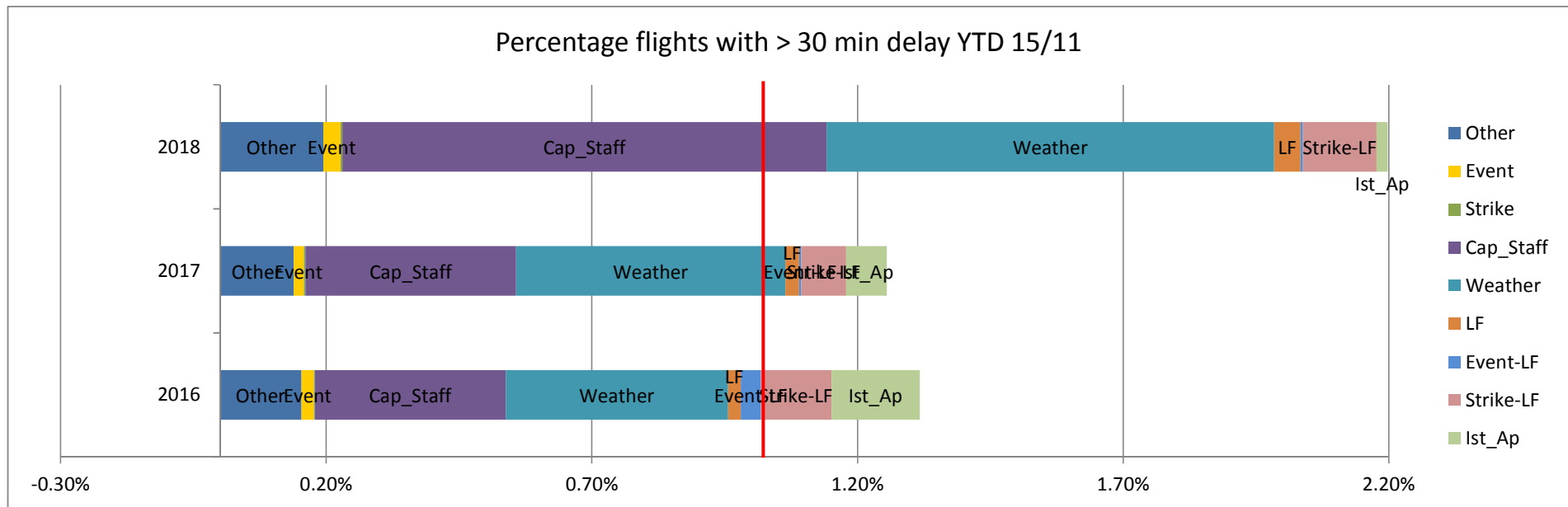
Capacity – Weekend delays

- The Marseille strikes during the weekends pushed the numbers up
- Weekend Capacity/ staffing increase 87% vs 2017 slightly less than overall (98%)
- Weather +130% more than the overall increase (117%)
- Total weekend delays increased 120% over 2017

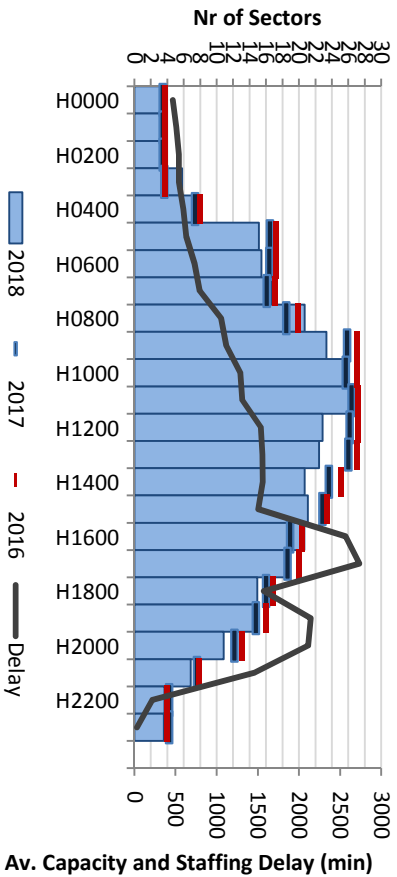


Capacity - Flights with more than 30 minute delays

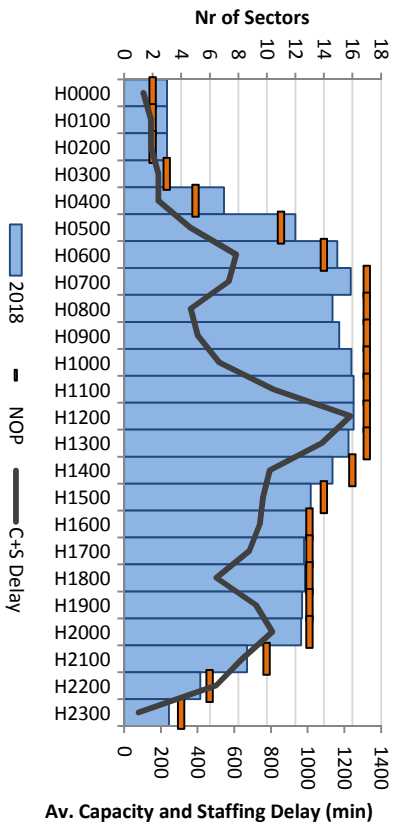
- Main contributors: Capacity/Staffing 41%, Weather 38%
- Vs 2017: Capacity/Staffing +130%, Weather +66%, Disruption +65%



Marseille Sectors - Saturday Summer Profile (after 25/06)

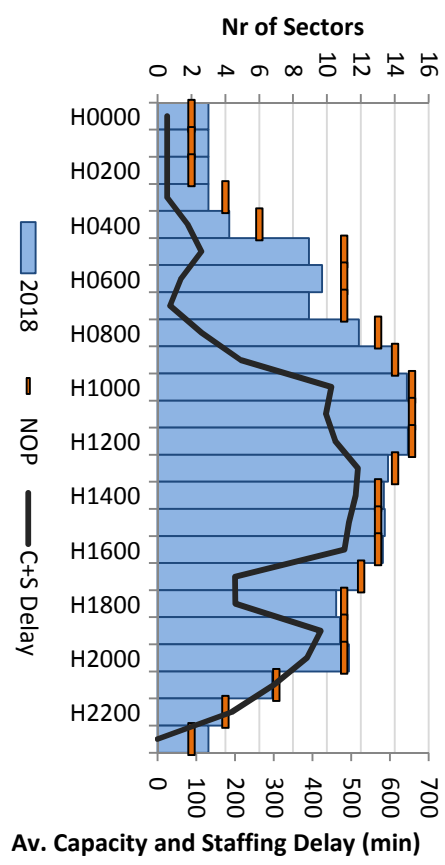


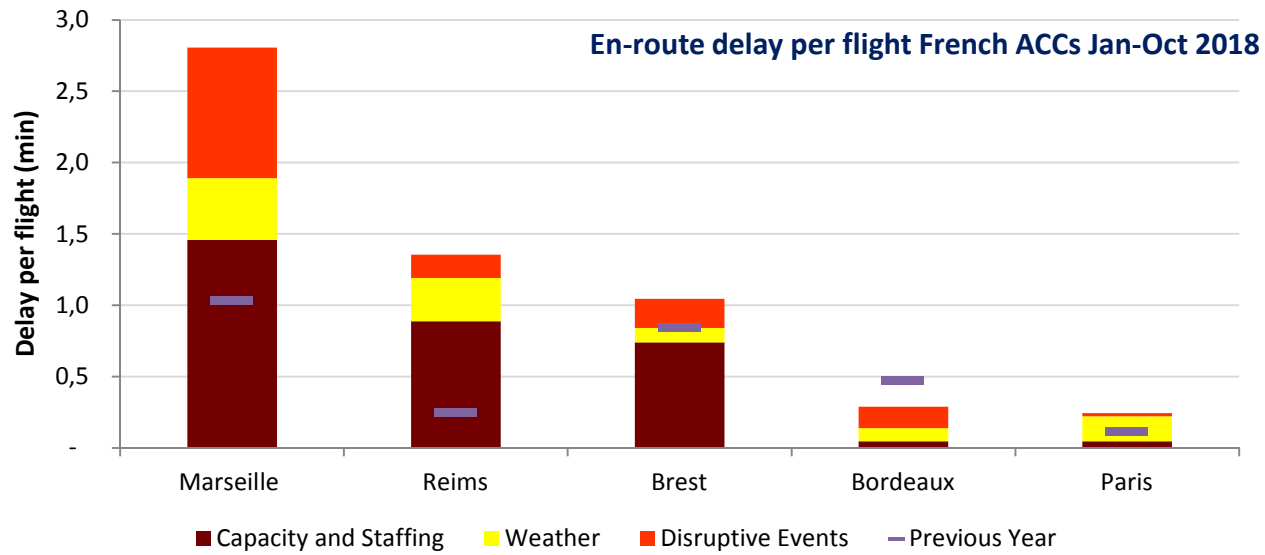
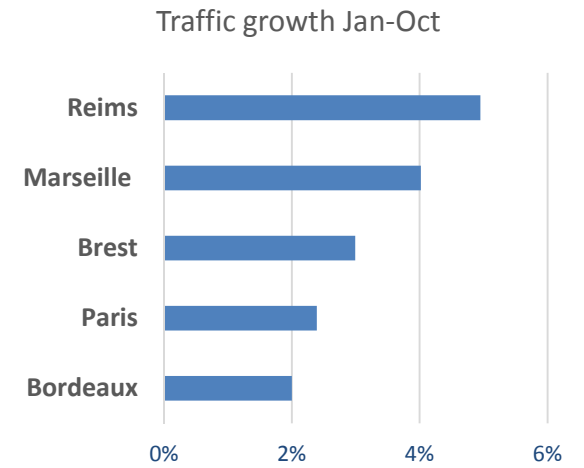
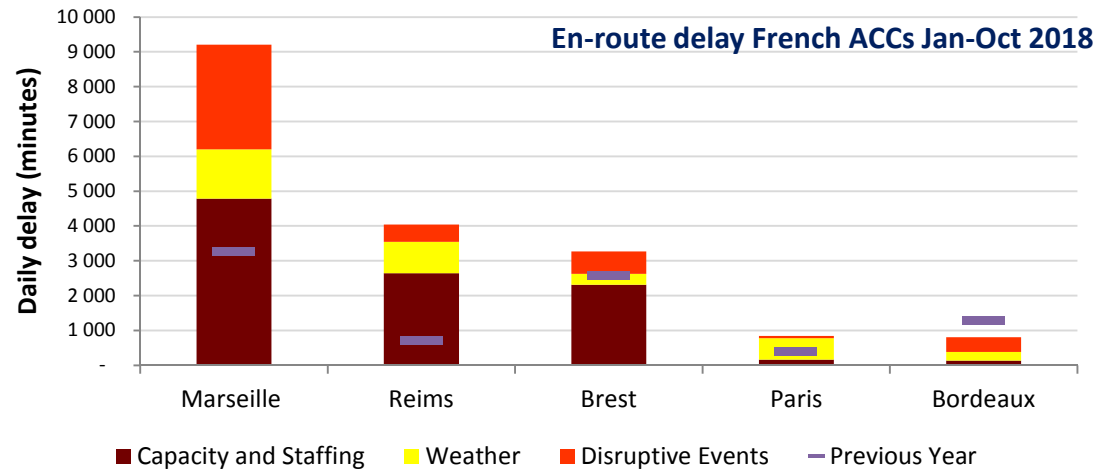
Brest Open Sectors - Saturday Summer Profile



enter your presentation title

Reims Open Sectors - Friday Summer Profile

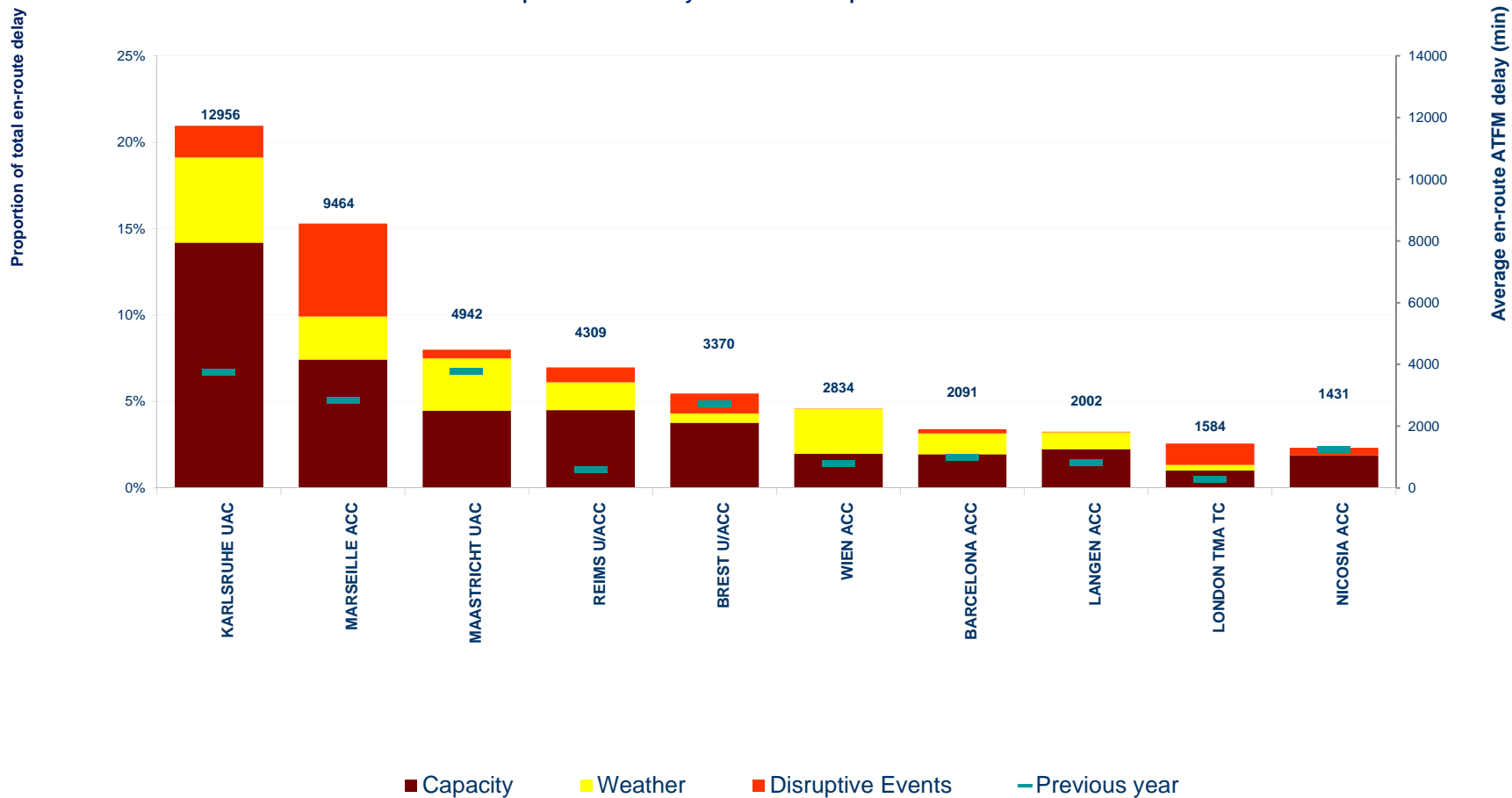




Network performance summary



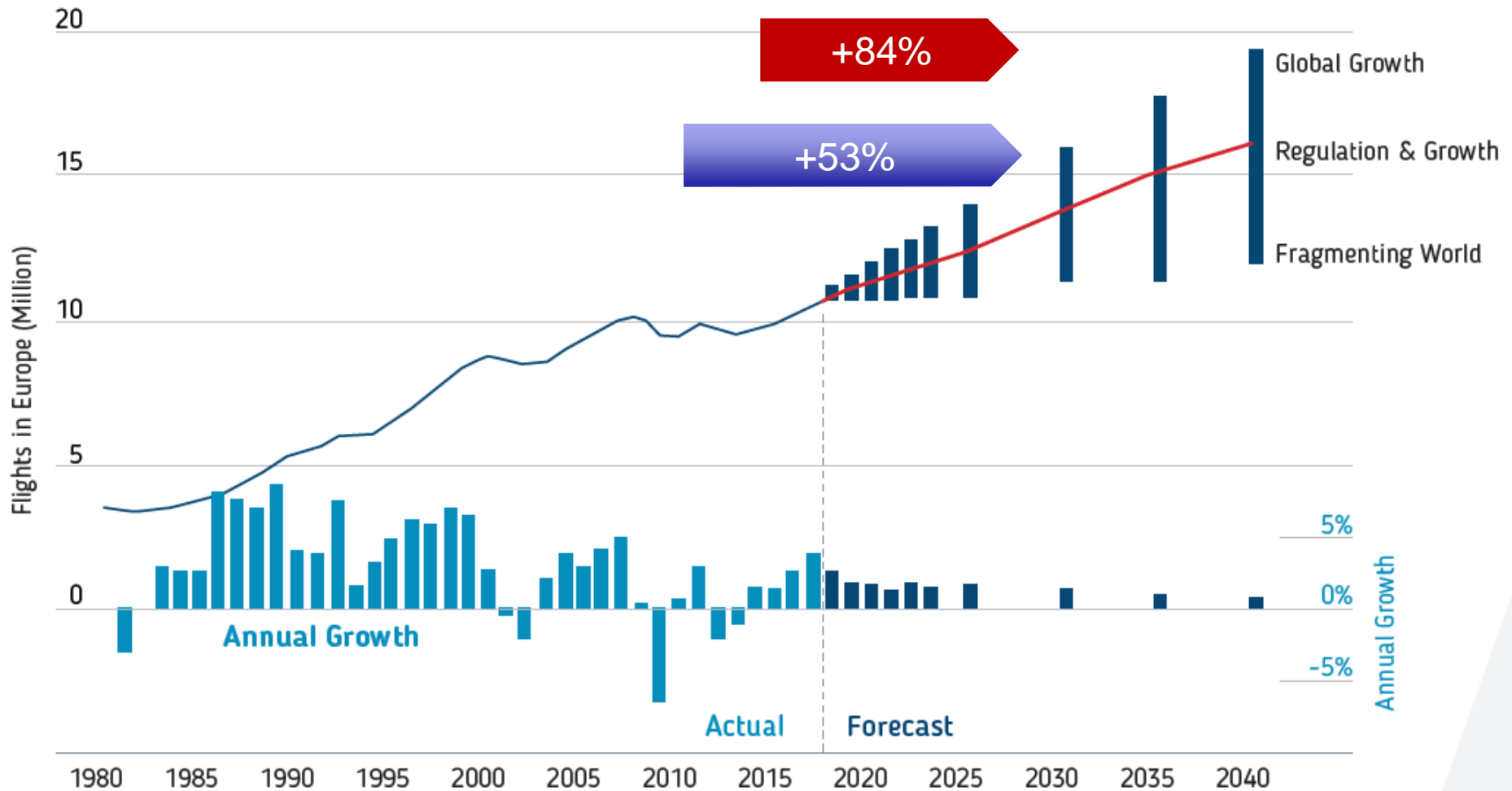
Top 10 En-route delay locations Jan-Sep 2018



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PC/50

Flight forecast for Europe to 2040

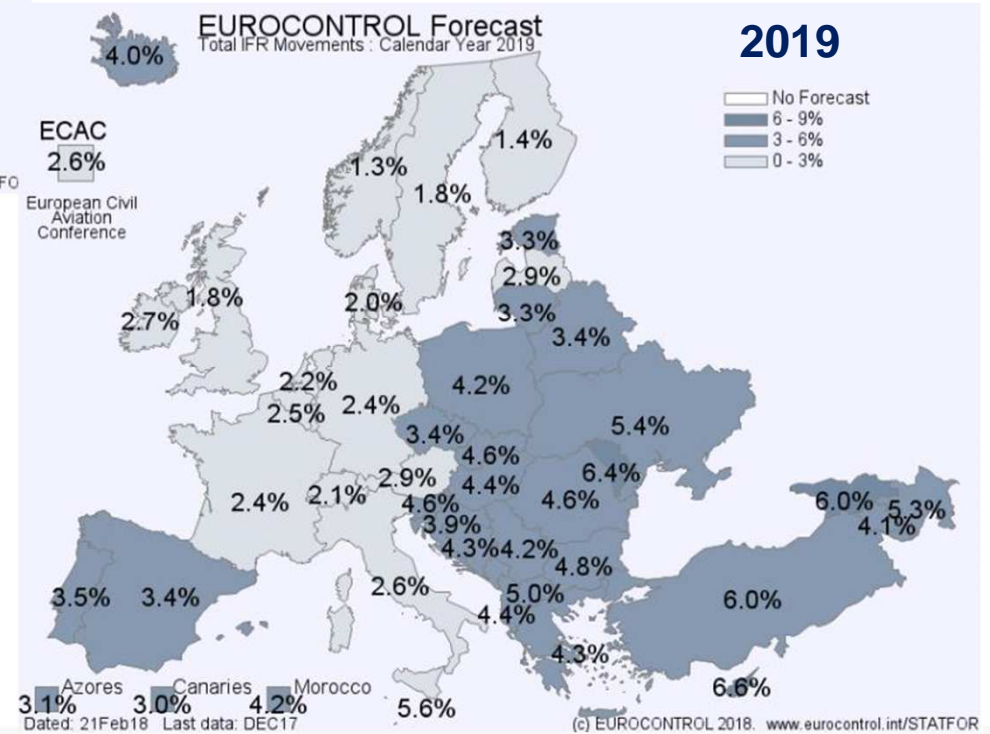
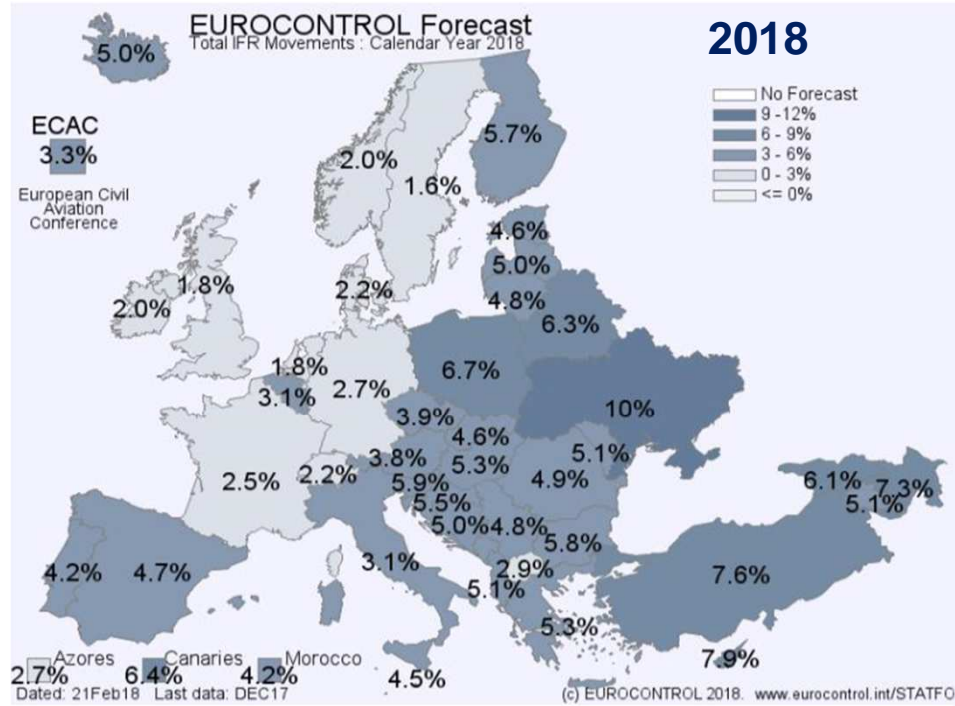


Short-term actions – 2019-2020

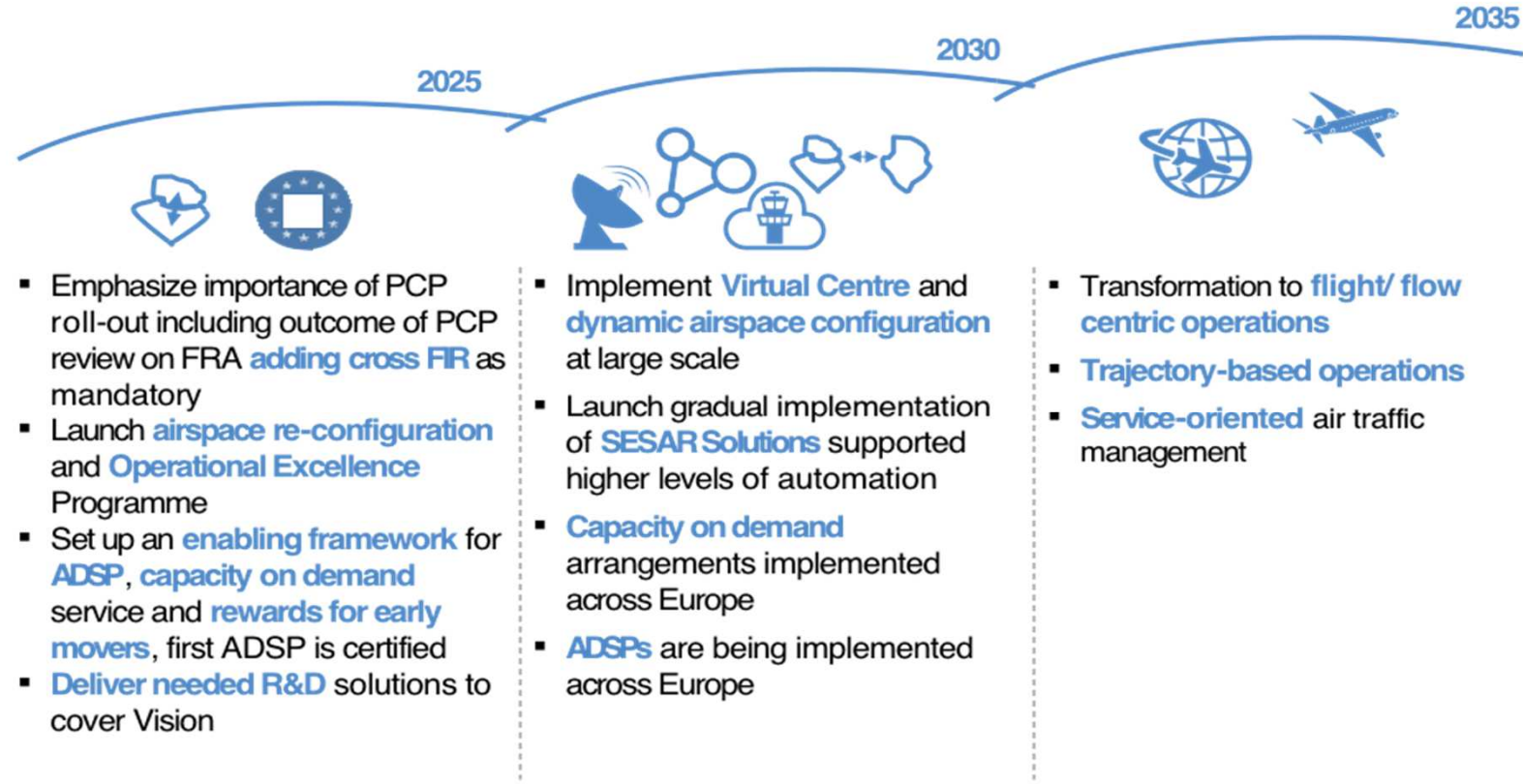
- First indications show that fewer sectors will be available in 2019 than in 2018. NM and ANSPs are working to implement the following:
- Network-related actions agreed at NMB level:
 - eNM/S19 ("Enhanced NM/ANSPs Network Measures for summer 2019")
 - Preparation of the NOP for 2019-2024, including specific sector opening schemes and rostering (2019 emphasis)
 - Network CDM process for management of en-route weather (2019)
 - Harmonisation of FUA application and enhanced FUA procedures (2019)
 - Network CDM process to optimise ATFM regulations (2019)
 - Addressing structural airspace bottlenecks (2019/2020)
 - ANSPs to work with trade unions to avoid strikes or to provide improved notification to airlines and the NM (2019)



Traffic flow changes in Europe



European ATM 2025 - 2035

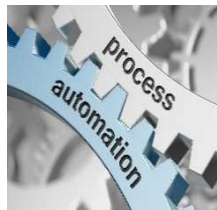


- Emphasize importance of PCP roll-out including outcome of PCP review on FRA **adding cross FIR** as mandatory
- Launch **airspace re-configuration** and **Operational Excellence** Programme
- Set up an **enabling framework** for **ADSP**, **capacity on demand** service and **rewards for early movers**, first ADSP is certified
- **Deliver needed R&D** solutions to cover Vision

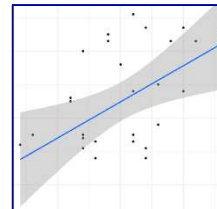
- Implement **Virtual Centre** and **dynamic airspace configuration** at large scale
- Launch gradual implementation of **SESAR Solutions** supported higher levels of automation
- **Capacity on demand** arrangements implemented across Europe
- **ADSPs** are being implemented across Europe

- Transformation to **flight/ flow centric operations**
- **Trajectory-based operations**
- **Service-oriented** air traffic management

Optimisation



Efficiency



Predictability



Informed decision-making

Data-driven
Intelligent
Open
Modular



Global ATFM



User Intimacy

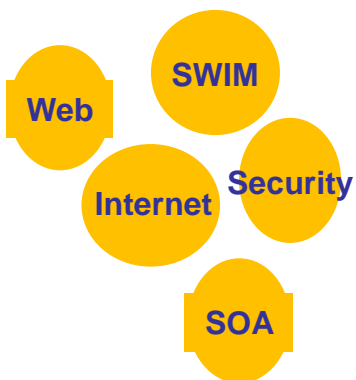
New NM System



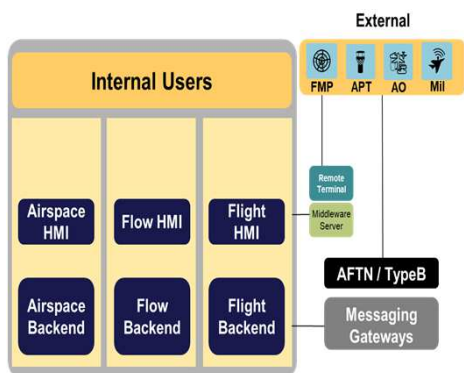
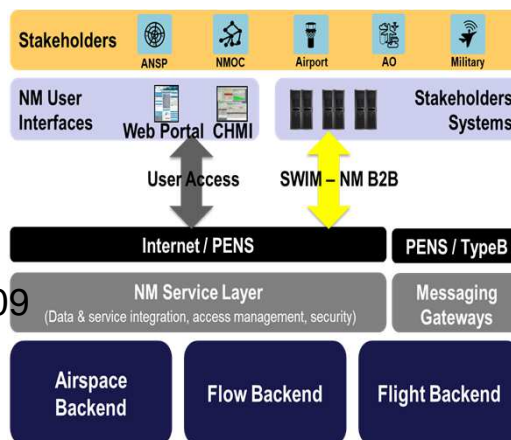
API
Economy
NM
ecosystem

Transformation

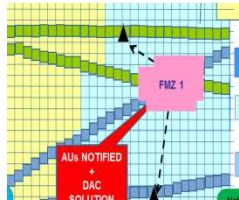
Phased Digital Transformation



New Architecture



Optimisation and Transformation



Flow in FRA
Dynamic sectorisation
Dynamic mobile areas

IFPS flight status	ETFMS Flight Status
	*Filed (not suspended)
Filed	*Filed Slot allocated
	*Slot Issued
	*Tact Activated
Suspended	*Filed - Suspended
ATC_Activated	*ATC Activated
ETFMS_Deleted	*Cancelled
Terminated	*Terminated

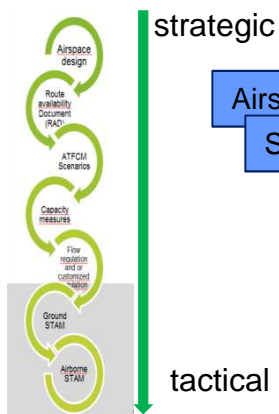
FF-ICE
TRJ mng
FOS



One System
Openness
Modularity
Workspaces
Algorithms

More dynamicity in airspace definition, adapting it to the utilisation
Consistent flight status and consistent behaviour of NM systems
Seamless ATFCM process from strategic to post-ops
Smooth network impact assessment and simulation processes
ASM/ATFCM/A-CDM integrated processes

Big data
Machine learning
Cloud



Airspace design
Scenario Mng
Prevalidations
Network Impact
Airborne reroutings

Predictability and anticipation
User intimacy
Process automation
Operational efficiency
Informed decision-making
Scalability
Fault-tolerance