Evolution of Network Management Operation Center NMOC

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SESAR: the performance targets

A future European ATM system than can:

- Enable a **3-fold** traffic increase in movements above 2006 levels whilst reducing delays

- Improve Safety Performance by a **factor of 10**

- Enable a **10% reduction** in the environmental effects per flight

- **Reduce** ATM unit costs to airspace users by at least **50%**.
Contribution of NMOC

- **Focus on performance areas for which there are network targets and a clear NM responsibility to contribute:**

- **Environment:** Network Management contribution to flight efficiency

- **Capacity:** NM contribution to improve average en-route ATFM delay
  - **NMOC** support to **ANSPs** to deliver performance (considering AOs needs). Capacity plans – ensure annual Network delay target for each year (RP1) is achieved
  - **NMOC** deliver operational benefits = 10% improvement on top of ANSP plans
Capacity – NMOC objectives en-route - 1

- **Weekend traffic 16% less** than in weekdays but **delays 23% higher**: weekend delays **reduced by 120,000’ per year**
  
  *Action: better usage ATFCM measures (incl. scenarios), MCP, sector configuration management, network effect, CDM*

- **Reduce percentage of flights delayed >30’** from **1,51% (2011)** to **1% (0,87 in 2012)**
  
  *Action: Slot list close monitor and manual interventions on individual penalties, RRP*

- **Effective delay reduction due to accepted reroute proposals (RRPs)**
  
  3% daily en-route delay:
  
  - 615’ per day reduction in 2011 = **2,0% daily en-route network delay**
  
  - 524’ per day reduction in 2012 = **3,1% daily en-route network delay**
Capacité – Objectifs NMOC en-route - 2

- Réduire le nombre de réglementations ATFCM produisant moins de 200' à moins de 20 par jour (25 réglementations/jour en 2011, 17/jour en 2012) en économisant 1,000' de retard par jour.
  
  *Action:* promotion STAM, comptes d’occupation, mise en œuvre et expansion MCP, support aux FMPs sur les connaissances ATFCM

- Procédure de partage de retard attendue pour réduire au moins de 25% de retard pour chaque événement - réduire le retard global de 50,000'/année.
  
  *Action:* accord bilatéral entre FMPs. Expander au jour des opérations.
Publicity on… MCP (Mandatory Cherry Picking) - 1

*New measure replacing ‘traditional’ ATFCM regulation caused by short peaks in en-route sectors*

- **Safety:** same effect of a traditional regulation
- **CTOT** issued **only for a limited** number of flights
- **Allows** as many flights as possible to operate in accordance with their time schedule (**no CTOT**)
- **Reduces Network delay** and **number of regs** giving delay **below 200’**
Publicity on… Mandatory Cherry Picking (MCP) - 2

- **Prototype MCP procedure tested 3 days in real time ops with EDYY.**
  7 MCP replaced 7 standard ‘traditional’ regulations

With 7 ‘standard’ regulations:
- 581 flights subject to CTOT
- Overall delay estimated 1,760’

With 7 MCP:
- 551 flights *did not* receive CTOT (no departure time constraint)
- 30 flights received CTOT with overall delay 268’
- delay saving 1,500’
- Effective AOs cost saving
Airport Operations – NMOC objectives

- **Reduce delays by 5%** (average) at 5 targeted airports (all delay reasons) e.g. CARA (Collaborative Arrivals Regulation Avoidance) at **LOWW**:  
  Overall delay 2010: 329,999’  
  2011: 229,269’  
  2012: 147,745’

- **Reduce ‘small’ airport delays**  
  *New procedures, slot list management, CDM exclusions.*

- **Support FMPs and TWRs in** decisional process for a better usage of ATFCM measures applied due weather and disruptions.

- **Support A-CDM** implementation
IFPS evolution

‘youth potion’ for an ‘antiquated’ system?

- Single area of responsibility: **one IFPS system processing all messages** (invalid FPLs shared across the two Units).
  
  *Benefit:*
  
  - *Easier management of human resources > reduced costs*
  - *Single phone help desk > easier life for AOs*

- **New FPL elements:** Taxi-time, Take-off weight, SID/STAR, time over points along the route.
  
  *Benefit:*
  
  - *Decreased invalid FPLs, more consistent flight trajectory*
Disruption/Crisis management

- **NMOC** providing a **timely response** to any type (planned or unplanned) of Network disruption or crisis

- Acting as **focal point for coordination**

- **Sharing/providing all relevant info** to all stakeholders via NOP, contributing to a common situational awareness

- **Elaborate and implement** agreed mitigation measures
NMOC (Ops Room) reorganization

- **Ops personnel** overall number adapted to Network requirements
- **Cross domain** validations
- **Merging** key Network activities
- **Dedicated Teams** managing the Network

**Benefits**

- **Enhanced** network operations procedures
- Improved **integration** of planning and operations
- Provide **flexibility** (adapting staffing to daily needs)
- **Reduced costs**
Doubts?
Questions?

Thank You!