



Network Manager
nominated by
the European Commission



MINISTRY
OF INFRASTRUCTURE
AND CONSTRUCTION



Civil Aviation Authority

**High Level Conference
Cybersecurity in Civil Aviation**

AGENDA

8-9 November 2017, Kraków, Poland

Network Manager and Cybersecurity

High Level Conference Cybersecurity in Civil Aviation

Žarko Sivčev

Advisor to Director Network Manager

Kraków, 8 – 9 November 2017

THE NETWORK MANAGER

CONNECTING THE NETWORK TO DELIVER IMPROVED PERFORMANCE

Network Manager adds value to network performance: **1 + 1 = 3**

DELAYS

2011
0.8 MINUTE
PER FLIGHT

2014
0.6 MINUTE
PER FLIGHT

AIRSPACE DESIGN & CAPACITY PLANNING
WE WORK WITH ALL OUR STAKEHOLDERS
TO CREATE AN EFFICIENT, FLEXIBLE AND
DYNAMIC AIRSPACE STRUCTURE AND
TO EXTRACT MAXIMUM CAPACITY
FROM THE NETWORK

CIVIL-MILITARY COORDINATION
FLEXIBLE USE OF AIRSPACE
THE MILITARY FREE UP AIRSPACE
WHEN THEY ARE NOT USING IT

BAD WEATHER
CAUSES 13% OF
PRIMARY DELAY.
WE WORK TO REDUCE
THE DISRUPTION & KEEP
THE NETWORK RESILIENT

2.27 MILLION PASSENGERS
PER DAY

27,000 FLIGHTS
PER DAY

1,940 AIRCRAFT
OPERATORS

520 AIRPORTS

69 CONTROL
CENTERS

42 EU / NON-EU
STATES

AIRPORTS IN THE NETWORK

**AIRPORT COLLABORATIVE
DECISION MAKING**
AIRPORTS WORK BETTER WHEN
ALL SERVICES, FROM ATC TO
BAGGAGE-HANDLING, ARE
CONNECTED WITH EACH
OTHER AND THE NETWORK

MANAGE SCARCE RESOURCES
100% OF REQUESTS MET IN 2013
CENTRAL CODE ALLOCATION
FOR 20 STATES

NETWORK PLANNING

- NETWORK STRATEGIC PLAN
- NETWORK PERFORMANCE PLAN
- NETWORK OPERATIONS PLAN

SAFETY

RUNWAY SAFETY
LESS THAN 1 SERIOUS INCIDENT
PER MILLION AIRCRAFT MOVEMENTS

CRISIS MANAGEMENT

WE COORDINATE THE MANAGEMENT
OF RESPONSES TO ANY CRISIS WHICH
IMPACTS ON AVIATION IN EUROPE

DATA SHARING

AERONAUTICAL SERVICES
PROVIDING INFORMATION FOR
THE FLIGHT: FROM AIRSPACE
CLOSURES TO WEATHER

FLOW MANAGEMENT SINCE 1995

WE MANAGE SURGES IN AIR TRAFFIC SO AS TO MINIMISE
IMPACT ON THE NETWORK. FLOW MANAGEMENT MINIMISES
FUEL BURN AND EMISSIONS BY HOLDING AIRCRAFT
ON THE GROUND SO AS TO AVOID CONGESTION IN THE AIR

200,000 **600,000**
TONNES OF FUEL TONNES OF CO₂

SAVED YEARLY

FLIGHT EFFICIENCY INITIATIVE LAUNCHED IN 2013

WE OFFER AIRCRAFT OPERATORS
THE MOST EFFICIENT ROUTES ON
THE DAY OF OPERATION

32,644 **202,700**
MINUTES NAUTICAL MILES

SAVED IN 2014



The Network Manager: 24/7 actor in coordinating & managing response to crises affecting aviation in Europe

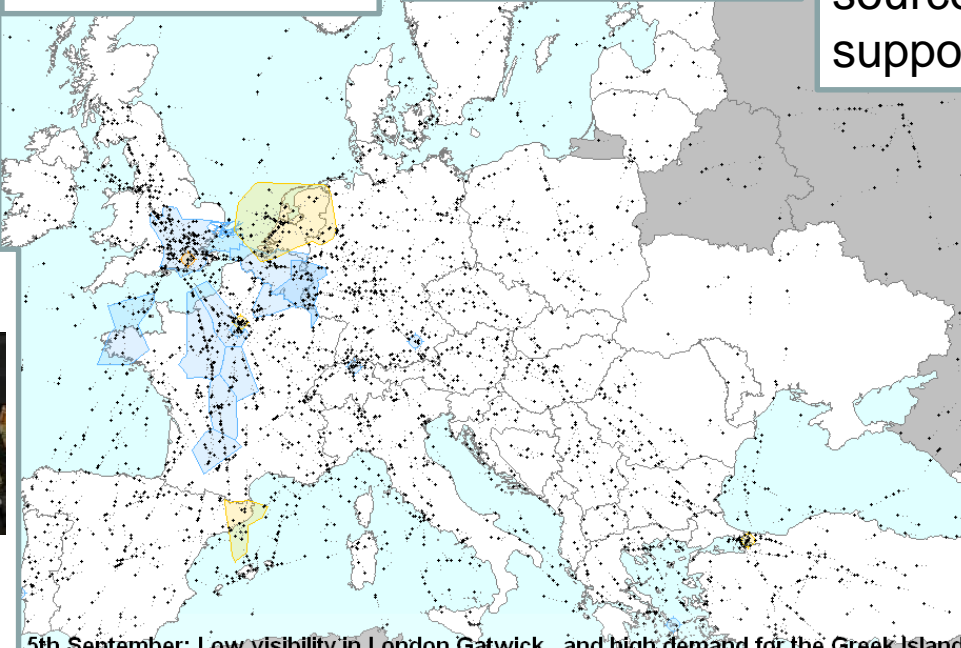
History Bookmarks Tools Help

www.nm.eurocontrol.int/PORTALWALL/gateway/spec/nopshowcase.html

Getting Started NOP SHOWCASE


on the EUR network

tion on Friday 5 September 2014 at 06:27 U




5th September: Low visibility in London Gatwick , and high demand for the Greek Islands. No significant enroute problems. Bardarbunga

Bárðarbunga




Alert status
NM mechanisms
Readiness

Brussels attacks




Security measures
Info exchange

MH17




Airspace status:
NM ultimate
source of info &
support to AOs

ICAO




NM to push for
sharing risk
assessments

Ebola



Supporting role
to coordinated
response

Conflict zones



Teleconferences
Alternate routes
Mitigated impact

Current situation

Planned flights	Airborne	Landed
23,382	4,034	2,021

Flights delayed more than 30 mins	Total amount of delays today (mins)
79	11,615

Today's top 5 accumulated delays (mins)

NIH+KOH+LXH+LNH FL335+	2,226
APT: LONDON GATWICK	1,402
APT: CHANIA / IOANNIS DASKALOGI	948
AMSTERDAM FIR CROSS BORDER A	825
BORDEAUX R4	821

Legend (delay in mins/flight)

< 15	> 15	> 30	> 45
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Roles of Network Manager (NM) and European Aviation Crisis Coordination Cell (EACCCC)

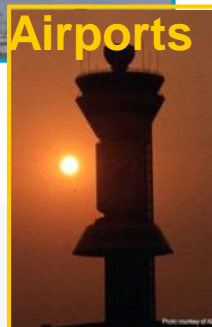
Coordinate management of response to the network crisis affecting aviation in Europe

EACCCC activated to support the NM in political aspects of network crises

NM
&
EACCCC



Members

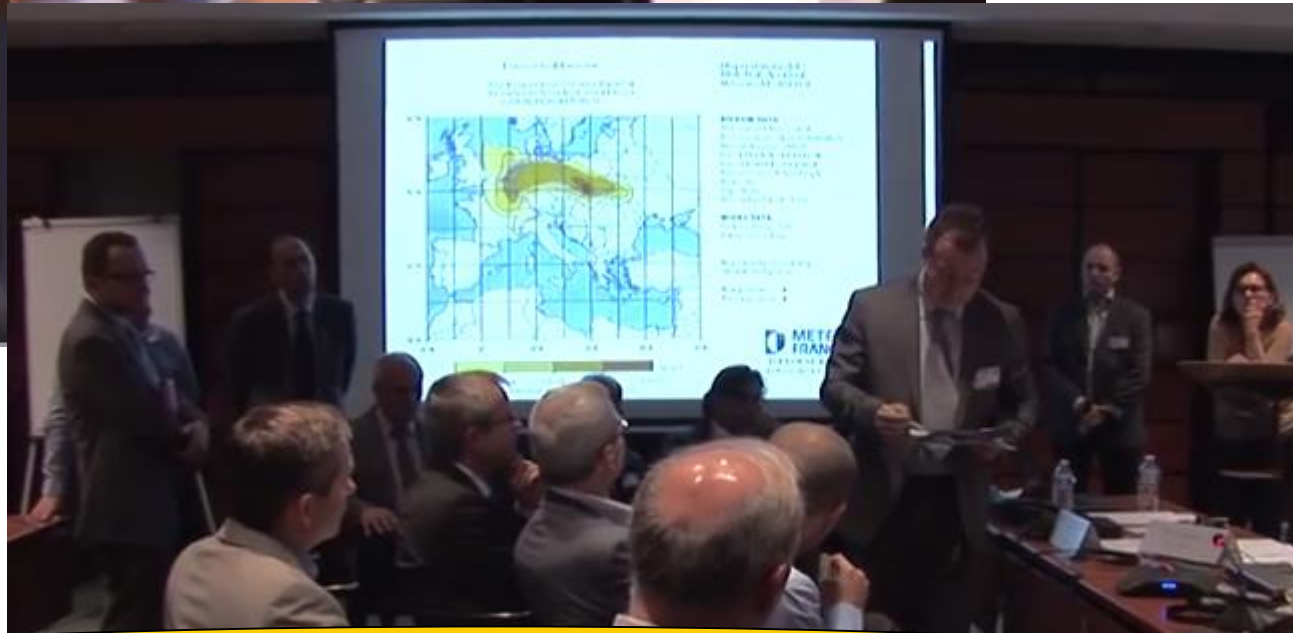


State focal
points

Preparing
for the next
crisis

European
Aviation
Crisis
Coordination
Cell (EACCC)

Network Manager
initiated by
European Commission

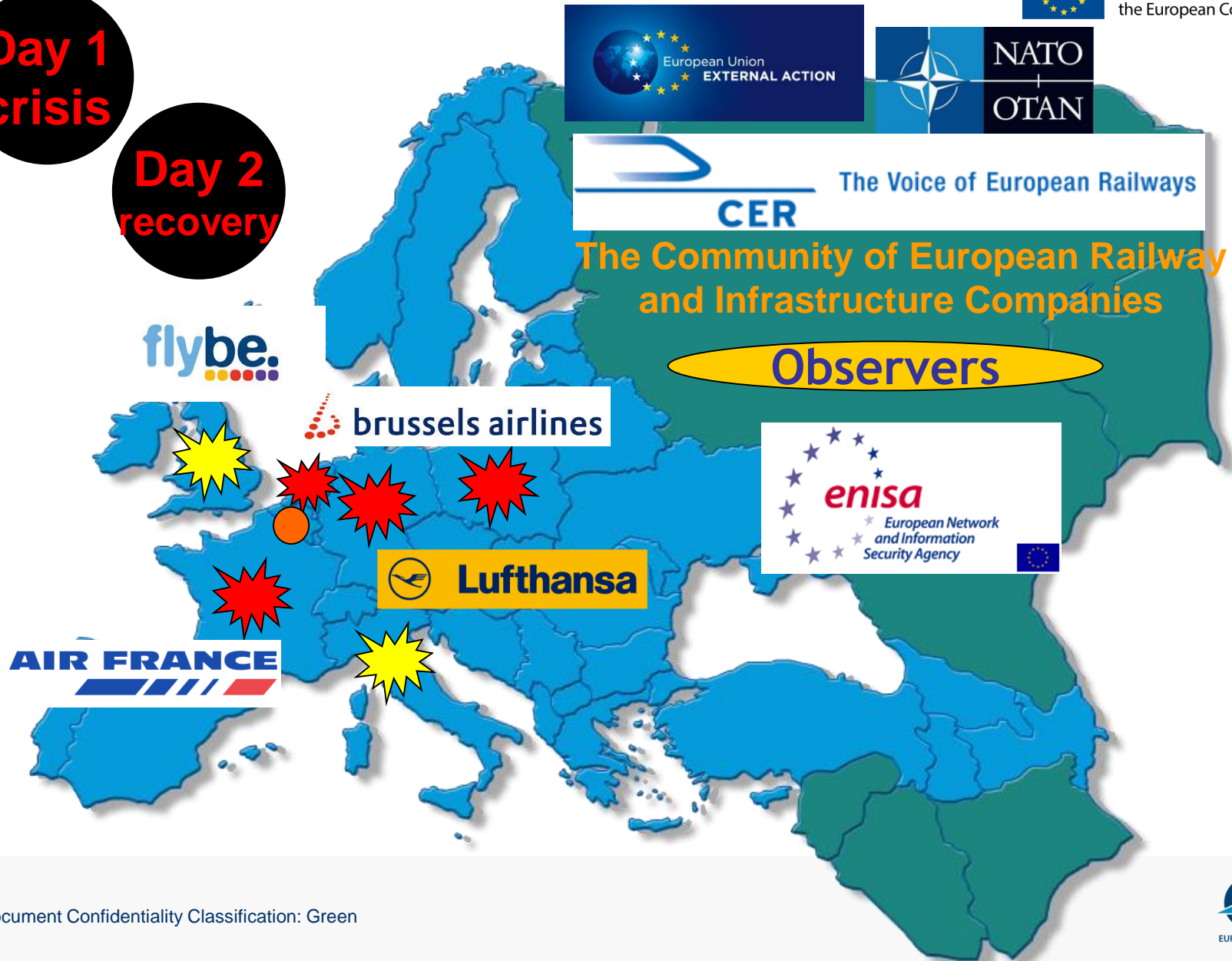


Exercise, exercise, exercise, ...

CYBER 13 – scenario & participants

Day 1
crisis

Day 2
recovery



EACCC18 – ATM coordination/cyber



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ATC centres under cyber-attack or under cyber-threat

- Planned for 13/14 March 2018 – ATCO reduction in confidence
 - Test the EACCC preparedness in case of cyber-attack on ATM:
 - EACCC coordination of harmonised approach based on national and European coordination
 - EACCC support to communication
 - Strengthening relationship between the cyber-security and aviation experts at European as well as national level
- 15 States + EACCC
- Expert organisations: EU Agency for Network and Information Security (ENISA) and European Centre for Cyber Security in Aviation (ECCSA)
- ANSPs, airports, airlines, EC & NM



**Network Manager adds value
to network performance!**

**Network Manager - connecting
you to the network!**