Supporting European Aviation

EUROCONTROL

3.0

All together now

A practical guide for Networkers for Summer 2022

FOUNDING MEMBER OF sesar JOINT UNDERTAKING

NETWORK MANAGER

The context - 1

Summer 2022 traffic forecast is for a sustained traffic recovery in the European Network, close to (or above at some airspaces/airports) 2019 levels.

Traffic to/from Europe, Middle East and Asia is constrained by the airspace unavailability caused by crisis in Ukraine. Further capacity reductions in European central/eastern airspace may occur because of military activities.

This is the 'perfect' mix of Network issues that may lead to disruptive days during the Summer, corresponding to the traffic demand peaks, where high ATFM delays may be recorded (necessary to perform safe operations).

A Network delay mitigation plan, agreed with ANSPs and Airspace Users, is in place to offload congested areas.

The context - 2

Significant ATFM delays are expected during Summer 2022.

The NMOC (Network Manager Operation Centre) is the Network frontline to mitigate ATFM delays and support Flight Efficiency.

The NMOC doesn't work in isolation and cannot be effective without the collaboration from all actors involved.

We have a number of operational requests and behavioural recommendations for each group of actors.

By complying with the requests and recommendations, traffic prediction will be significantly enhanced, traffic loads will gain stability and the positive 'side effect' will be ATFM delay reduction, whilst safety still guaranteed.

Please read on to see how you can help your operation, delay mitigation and your Network.

How to navigate

- **Slides 2 to 4:** Introduction

- **Slide 5:** click on each of the 'actors' to jump to relevant slides

- **Slides 6 to 11:** Dispatchers

- **Slides 12 & 13:** Pilots

- **Slide 14:** ATCO TWR

- **Slide 15:** ATCO ACC

- **Slides 16 to 21:** FMPs

- **Slide 22:** Airports

- **Slides 23 to 30:** the NM contribution

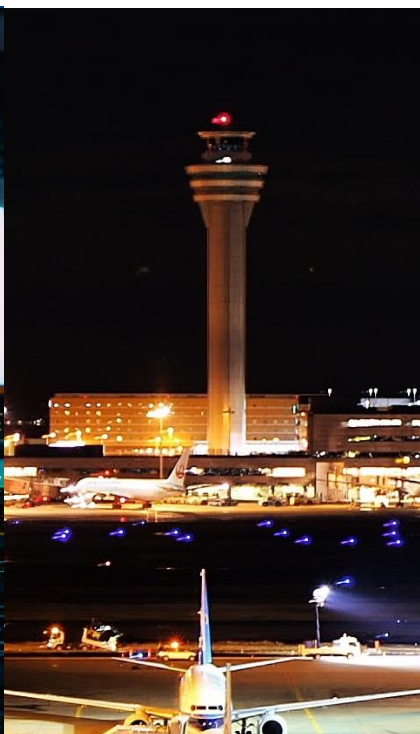**Click on top left icon of each slide to jump to slide 6**

What we ask of:

| Dispatchers | Pilots (Airlines/GA/BA) | ATCOs (Tower) | ATCOs (ACC) | FMPs | Airports |

What we ask Dispatchers – Slot Swapping

- **Slot Swapping** may be requested via the following communication channels:
    - **NOP Portal** (including the Swap investigator option)
    - **B2B**
    - **Telephone**

- It is allowed to perform up to **3 slot swaps** per flight (swaps can be done **only** if flights are subject to the **same** ATFM measure)

- As of June 2022, **NMOC accepts the proposals** for slot swapping of **pre-sequenced flights**.

- **WARNING!** **ETFMS will automatically reject the request if it is made after :**
  CTOT -(minus)Taxi Time -TRS -3 min
  After this time threshold a flight will **not** appear as candidate in the slot swap candidate list.

- Please also note that Slot Swapping **proposals** are subject to the assessment of the NMOC operational staff.

- According to the network situation, request may be **accepted** or **rejected**

More information: Chapter 5.7.2.6 of ATFCM Operations Manual

What we ask Dispatchers

- **File reliable FPLs with particular attention to:**

  ✅ **Cruise flight levels (RFL)**   ✅ **Taxi-times**

- **Avoid YO-YO vertical profiles in FPLs, trying to avoid an ATFM regulation, it is likely that you will not avoid delay, but you will rather cause a traffic overload in lower radar sector or a new ATFM measure (which you will be subject to).**

! NOTE that all YoYo FPLs 4000/5000ft and above over distances up to 300 nautical miles => REJ by NM system
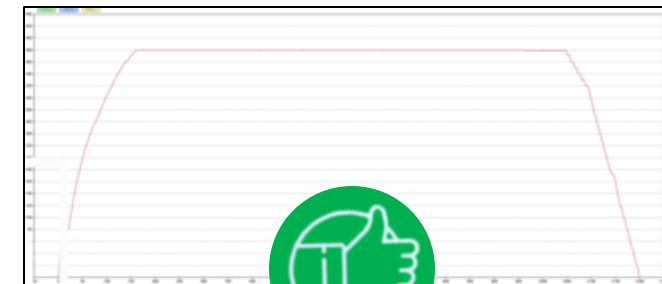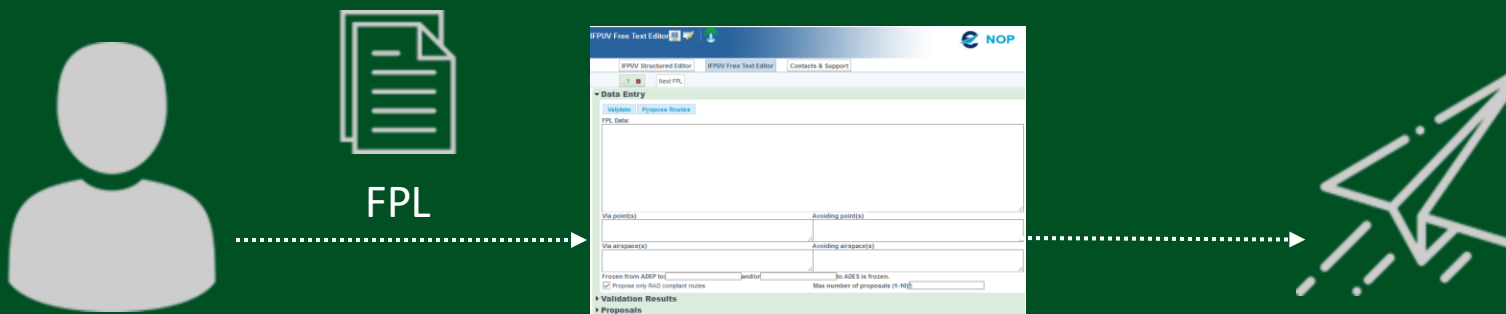
What we ask Dispatchers

- **Avoid sharp angles routes** if unable to find direct route... but ... rather ask NMOC Flight Planning staff to help you finding the best possible RAD compliant alternative route.
- **IFPS H24 phone** +32 (0) 2 745 1950

NOTE that all FPLs with turn >120deg above FL200 => REJ by NM system

- **Use IFPU FPL Validation (IFPUV) in NOP Portal to test your FPL before sending it to IFPS.**

FPL

✓ **Benefits: Network predictability and reduction on IFPS violations**

- **Keep EOBT updated, do not be afraid of a new slot. If that happens use e-HelpDesk.**

EOBT

What we ask Dispatchers

- **Use the E-HelpDesk instead** of telephone coordination to ask for delay improvement.

- **Follow E-HelpDesk operational procedures** for any flight request.

- **Keep EOBTs updated at all times!**

**** We remind you that the Flight Activation Monitoring (FAM) parameter is to 17 min.

Do not let your flight get suspended by the NM system!

FAM ~~**20 min**~~ **=> 17 min**

- **Do not submit to E-HelpDesk multiple requests** for the **same flight**, as only **one** will be considered *(unless you receive a different CTOT from your first request you entered in E-HelpDesk)*, all the others **will be rejected automatically** by the system.

- **Do not send request to E-HelpDesk more than 2 hours before EOBT** of the concerned flight, as the request will not be considered by the e-HelpDesk software.

EOBT

EOBT-2
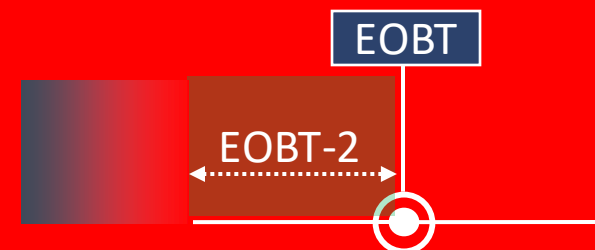
What we ask Dispatchers - AOLO Hotline

Restrict your calls to AOLO hotline <u>only</u> for flights needing special assistance.

AOLO general queries phone number: **+32 (0)2 745 1992**
Aircraft Operator Hot line phone number: **+32 (0)496 560 300**

Examples of qualifying reasons for calling the AOLO hotline:

- *Flights delayed and at risk of FPL cancellation due to crew duty times;*
- *AO needing assistance to urgently contact airborne flights or needing to know the position of aircraft they are not able to contact;*
- *Special medical flights;*
- *Flights at/close to holding point receiving SRMs due to DPI messages (if these cases are not already dealt by TWR/FMP in coordination with NMOC;*
- *Exceptional Aerodrome or ACC conditions causing delays that push flights into critical night curfews;*
- *Priority of re-positioning of diverted flights;*
- *Flights severely delayed by ATFM measures caused by meteorological phenomena*

AOWIR (Aircraft Operator What-if Reroute) YouTube Tutorial Links

NOP Tutorial : I want to reroute my flight. Part 1: https://www.youtube.com/watch?v=27cfrMN5nIA
NOP Tutorial : I want to reroute my flight. Part 2 : https://www.youtube.com/watch?v=TCZErM6b2RQ

ATFM delays are expected high in certain areas during Summer 2022.
In case you receive a bad CTOT, you have the chance to **declare your flight** as **critical** in the e-Helpdesk application and in NMP Flight APP.

It is left to the discretion of the Airspace User as to which flights should be marked as **critical**.

By flagging a flight as critical, the following actions will be applicable:
- The **call-sign of the flight will be highlighted** in the NMOC E-HelpDesk queue with **magenta** colour
- The **critical** flight will be **exempted** from E-HelpDesk manual user rules
- The **critical** flight will still be **subject** to all E-HelpDesk system rules (e.g. SIT1 rule).

- **Each Airspace User is allowed to mark as critical up to 5%** of its **regulated flights as long as...**
  - The **overall number of critical flights per Airspace User** is limited to **max 20 flights**
  - The **critical** flag function can only be attached to a request for **Slot improvement**.
  - **Once the flight is marked as critical,** it cannot be modified in the same day.

NMOC staff will exploit all means to **reduce the ATFM delay** of the **critical** flight, in coordination with relevant ANSP/Airport responsible for the ATFM measure, but **we cannot grant that each request will be satisfied**.

What we ask Pilots

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- **Ask TWR for start up in line with EOBT, Taxi-time and CTOT** (should you receive it).

- **Fly what you File!**
- **Maintain route/vertical profile as per FPL,** unless a **deviation** is dictated by **WX phenomena, by ATC or by technical reason.**

- **Respect the ETA at destination airport** and sector entry times (Target Times in SAM, SRM messages).

- **Do not ask for direct routes to ATC,** as entry times in sectors and arrival times at airport are jeopardized: time volatility causes loss of predictability!

- **Do not call NMOC e-HelpDesk from cockpit,** ask **your OCC** to do it (unless you are at same time dispatcher, handling, pilot...), as your **OCC** is the official coordinator for your Company.

What we ask Pilots - (GA/BA)

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Positive:

- **File FPL as early as possible** possibly not later than 4 hours before EOBT

- **Fly what you File!** Maintain FPL profile unless a deviation is dictated by WX phenomena, by ATC or by technical reason.

- **Keep EOBTs updated**, do not be afraid of a new slot, NMOC personnel will help you.

- **Respect** airport **slot**, particularly at airports with high summer holiday demand and low arrival rates

- **Respect the ATFM slot (CTOT)** if your flight is subject to an ATFM regulation.

- **Respect the ETA/CTA** at destination airport

- **If high delays** → use e-HelpDesk

Negative:

- **Do not call NMOC e-Helpdesk from cockpit**, ask your OCC to do it (unless you are at same time dispatcher, handling, pilot…).

- **Do not let your flight be suspended** by FAM! Keep EOBT updated.

- **Do not ask for direct routes!** as entry times in sectors and arrival times at airport are jeopardized: time volatility causes loss of predictability!

What we ask ATCOs (TWR)

- **Always** respect the CTOT slot tolerance window

CTOT

-5   +10
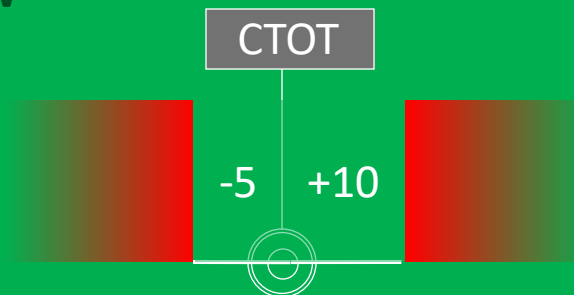
- If the flight is ready to go before the departure **slot issued, make an effort and send REA message to NM.**

REA   NMOC

- **A-CDM TWRs not to request STW/DTW just for ease, let us work on specific flights rather than to all departures. Please remember that application of STW/DTW deteriorates predictability in downstream en-route sectors.**

- **If a CTOT is expiring, do not wait last minute:** contact your FMP or contact directly NMOC to obtain a CTOT extension as per your local procedure.

- **Never let flight depart outside the CTOT slot tolerance window!** Contact your FMP or directly NMOC to obtain a CTOT extension as per your local procedure.

What we ask ATCOs (ACC)

- **Check the final requested flight level in FPL**

- **Ask pilots** to *Confirm able for filed Flight Level*

- **Refuse a level change (different from RFL)** requested by pilot **if not justified** by **WX phenomena, ATC or other technical reason.**

- **Do not give shortcuts**, unless dictated by ATC reasons. They will cause time volatility and loss of predictability in a radar sector downstream or at destination airport.

- **Do not propose flight level changes**, unless dictated by ATC reasons or if you know the impact downstream.

! **In general do not deviate the flight from the vertical/geographical profile as filed in FPL, unless dictated by WX, ATC or other technical reason.**

What we ask FMPs - Inform NM Strategic team

The Rolling NOP – 6 weeks traffic outlook:

- Reports expected traffic levels at **network, ACC and airport level**
- Capacity assessment including hotspots
- Updated weekly

Network measures for the transition to 4 Flight new system in Reims ACC:

- Reduced capacities during the transition
- RAD measures in place to mitigate impact (ATFM delay) on the network
- Measures assessed weekly and gradually lifted by LFEE during Summer.

- Inform NM Strategic of any event that may impact the area of responsibility of your FMP as soon as possible;

- Provide any updates on events and any relevant information (duration, capacity reduction, planned sector opening) to help to assess the impact;

- Anticipate your request for scenarios;

- Provide capacity and sector openings information for the rolling seasonal NOP

- Whenever possible, adapt the ATCO roster in advance to handle expected traffic levels.

Nm.strategic.operational.planning@eurocontrol.int

What we ask FMPs

- The NMOC staff has the Network overall view, so please consider suggestions from NMOC staff to resolve a demand capacity balancing (DCB) issue

- Provide NMOC reliable sector configurations & capacities at all times **(D-1 and tactical day)**

- Use B2B connection and NOP Portal (rather than phone) to **coordinate ATFM measures with NMOC** during the pretactical/tactical day.

- Apply recurrent ATFM measures at D-1, **do not wait for the tactical day,** particularly if overload is spotted in the early morning hours (first rotation).

- Do not just propose NMOC your solution (ATFM measure) to resolve an overload or a demand peak, but rather **tell NMOC what is the problem**, as your solution may negatively impact other sectors in other ACCs.

- ATFM measures shall be agreed with NMOC following CDM principle (NF IR 123/2019)

- Do not ask for an ATFM measure if your sector configuration has not been updated correctly in ETFMS, i.e. the actual sector configuration must be active.

What we ask FMPs

- Use **STAM/ACP/MCP** to resolve isolated demand peaks

- **Tactical Scenarios should be applied respecting the EOBT/TOBT of flights**. Absolute minimum parameter:
  EOBT of the first captured flight +120min.

- **When deciding about the duration of an ATFM measure, NMOC flow staff opinion shall be taken into consideration**: frequent ATFM measure changes, decided by the FMP without considering NMOC FM expertise, is one of the main reason for traffic volatility, causing further unpredictability and thousands of unnecessary ATFM delays.

- **Avoid standard ATFM measure**, you are going to penalize many more flights than necessary! Most of the overload peaks in sectors or airports can be solved out with a STAM (Short Term ATFM Measure).

- **Do not contact NMOC (phone, e-HelpDesk) to ask for slot improvement on behalf of AOs**, unless the need for slot change is dictated **by TWR sequencing** or flights taxiing with slots expiring. In any other case tell AOs to use NMOC e-HelpDesk.

- **Do not wait last minute to ask for an ATFM measure due to weather**, you may not capture all the concerned flights, risking an over-delivery.

What we ask FMPs

- **Do not wait until the last minute to contact/propose NMOC (B2B, NOP portal or NMP FLOW APP) for a new ATFM measure** or any other modification. When the situation requires major changes of the plan (i.e. due staffing issues, major traffic shifts, unplanned events etc), **tell us in advance**. We can apply the options in **SIMEX** (simulation tool) and transfer the proposed final solutions to ETFMS in one go.

Inform NMOC in advance → NMOC → Best final solutions →

Major change in plan   NMOC   SIMEX   TACT

- **If you monitor loads by using Occupancy Counts: do not ask for standard ATFM measure to resolve a peak in occupancy counts expected to occur clock time + 3 hours**, this is a **wrong** option. **Use different ATFCM techniques instead (e.g. MCP or STAM)**.

- **Do not use ETFMS to test** ATFM regulations or just guessing what could be the outcome. **Use the TACT SIMEX instead!**

If your ANSP/FMP is NOT connected B2B with the NMOC, you can still coordinate/ask/modify ATFM measures via the **NOP Portal application or the new NMP FLOW APP (in CIFLO)**, so expediting the coordination and avoiding the phone call to NMOC Flow staff.

We strongly suggest to subscribe to the NOP portal service by writing to:

e-helpdesk@eurocontrol.int

Our staff will guide you to the whole process (preparation and full OPS phase).

You Tube training video https://www.youtube.com/watch?v=2bUkFTuLnD8

What we ask FMPs

- **Detect non-standard (non RAD compliant)** advisory re-routing in **pre-tactical phase** and coordinate with NMOC. **We can suspend the RAD restriction** to optimize the available capacity during the tactical day.

- **If you spot a RAD measure forcing flights into bad WX**, report them to NMOC in due time **for its possible suspension** (possibly in the pre-tactical phase).

- **Use the e-HelpDesk connection with NMOC** to ask for slot extensions, slot improvements or an EXCLUSION from the ATFCM measure. **This will reduce the response time versus telephone** as your queries will be differentiated from AOs requests.

- **FMP will be always in the loop for assessing ATFM measures** in case of bottlenecks spotted at airports/enroute during <u>any</u> ATFCM phase. Such coordination may be in form of usual Strategic/Pretact/Tact coordination and may be supported by ad-hoc conferences, called by NM or stakeholders.

What we ask Airports

- **A-CDM airports**: Operate within agreed data updates and procedures and keep the A-CDM tool up to date at all times.

A-CDM TOOL

- **Keep your plans updated in Airport Corner** ref changes to planned/unplanned events at D-1 and day of operations. The Airport Corner proves that it is useful to have the info from airports especially when capacity is impacted.

- **Inform the NM Airport Unit (prior the day of operations)** or NMOC Airport Position **(day of operations)** of **any possible expected event/issue** that might have an impact on airport capacity and trigger ATFM delay.

- Report to NMOC or Airport Unit airport slot violations vs FPL ETA

Inform NMOC or Airport Unit

NM

Any event/issue impact on airport capacity and ATFM delay

The NMOC

The NMOC has 25 years experience in managing the Network (flight planning, airspace data, flow management, delay mitigation, disruption and crisis). Our experienced staff is able to take the best possible decision vs the needs of ANSPs, Airports and Airspace Users in a collaborative and coordinated manner, under normal, disruptive and critical circumstances.

2022 Summer traffic in the Network may achieve 100% (or above) vs 2019 figures.

The NMOC performance in ATFM delay reduction is excellent (**3** to **3.5M** min delay saved each year since 2012) using the mitigation **'toolset'** in collaboration with ANSPs, Airports and AUs:

- **Use of off-load measures**: re-routeing or level-capping scenarios
- **Use of RRP** (Re-routeing proposal) sent to Operator
- **Slot list management** by Flow Management staff
- **E-HelpDesk:** ability to treat each request within 90 seconds
- **Airport function**
- **Weather management**

The **delay mitigation toolset** will be only effective if all actors *play the game* according to CDM principles.

ATFM coordination channels with NMOC

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ATFM measures coordination time is crucial in ATFM.

Although it is still possible to use phone, TWR, FMP and Airspace Users may access NMOC e-HelpDesk/FM positions via the NOP portal or B2B (if connected with NM).

On top of NOP Portal and B2B, the FMPs can propose ATFM standard measures (MCP and Scenarios planned in 2023) via the new NM FLOW APP (a token is necessary and FMP staff fully trained).

On top of NOP Portal and B2B, the Airspace Users may access e-helpdesk via the NMP Flight APP.

APT	Contact APT position in NMOC	Phone +32-2-7291190
TWR	Slot Extension	NOP portal & B2B
	Slot Improvement	NOP portal & B2B
FMP	Exclusion from Reg	NOP portal, B2B, NMP FLOW APP
	Slot Extension	NOP portal, B2B, NMP FLOW APP
	Slot Improvement	NOP portal, B2B, NMP FLOW APP
	ATFM standard regulations proposals or modifications	NOP portal, B2B, NMP FLOW APP
AU	Slot Extension	NOP portal, B2B, NMP Flight APP
	Slot Improvement	NOP portal, B2B, NMP Flight APP
	Rerouting	NOP portal, B2B, NMP Flight APP
	Slot swap	NOP portal, B2B, NMP Flight APP
	Other	NOP portal, B2B, NMP Flight APP

The NM contribution
The Flight Efficiency Task Force

> **The NM created the FE Task Force to support AUs** in planning efficient/optimal routes, so achieving savings in **miles** => **fuel** and improving network **predictability** => **gains for Flight Efficiency**.

Identification of re-routing alternatives based on the current filed FPL and airspace opportunities, leading to:

- modification of the filed flight plan (**tactical improvement**) with more efficient route
- update company routes (**post-ops improvement**)
- **CFSP** database **changes**
- **proposals for** RAD relaxation, increase of DCT options

Reminder: *NM Flight Planning Requirements – Guidelines* document

⇒ basic NM flight planning requirements to be known by AU / CFSPs is available at:

⇒ https://www.eurocontrol.int/publication/nm-flight-planning-requirements-guidelines
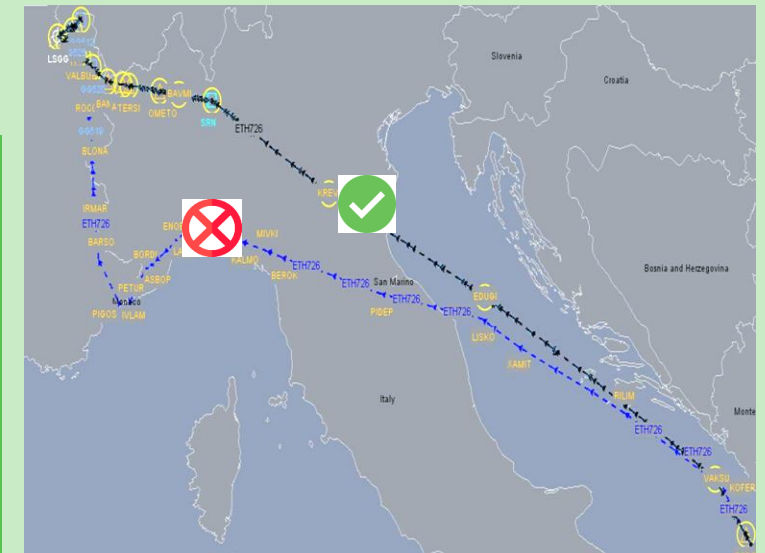
contact: nm.fetaskforce@eurocontrol.int

The purpose of the Airport Position is to:

- **gather situational awareness at airport level**
    - at D-1 (coordination with 'hotspot' airports/AO's to minimise the need for ATFM measures)
    - and throughout the day of operations;

- **focus NMOC staff attention to airport issues as:**
    - curfew
    - slot coordination/flight suspensions (FLS)
    - ATFM measures and delay mitigation
    - WX and unplanned events
    - Focal point for the **S21 SMART WX Trial** with **EDDF, EGLL, EBBR.**

- **providing Airports (APOC/Airport Ops Managers…) with single point of contact.**

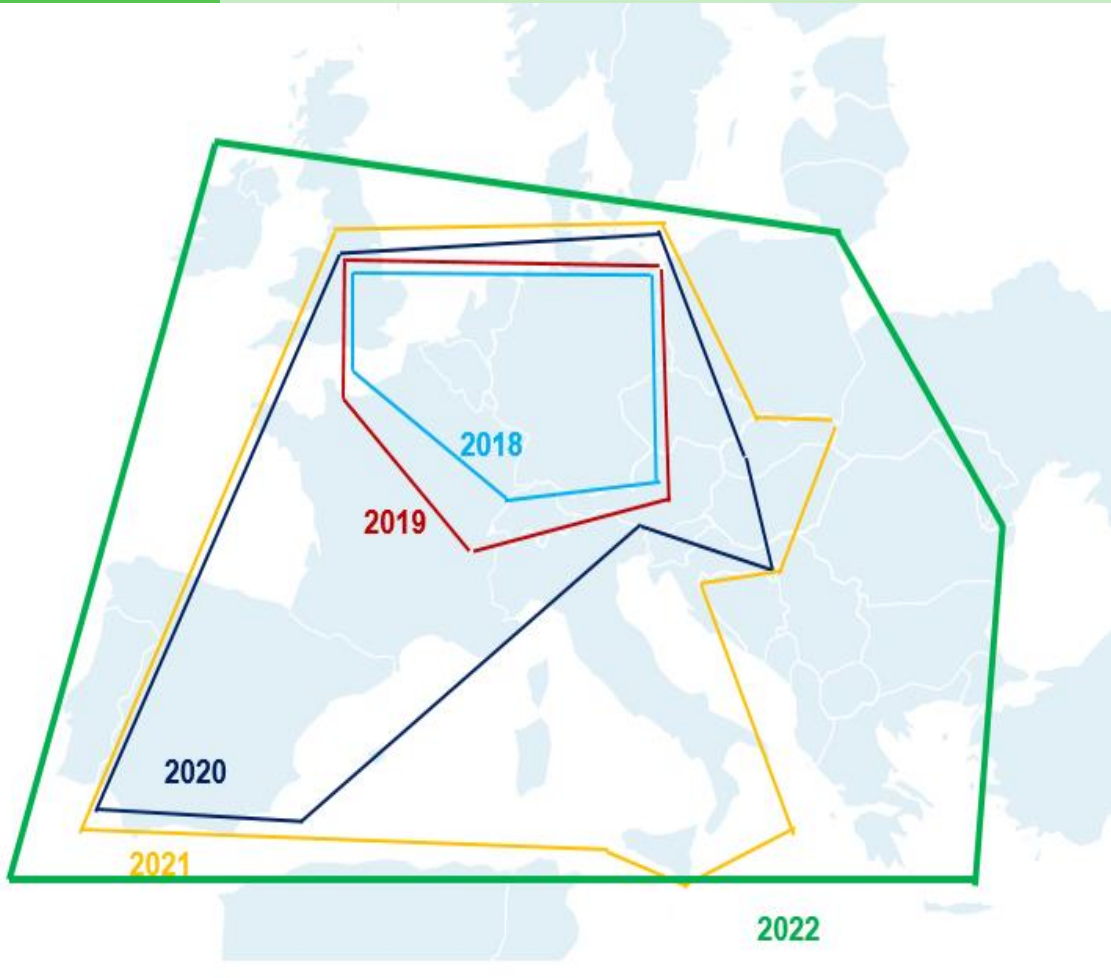**The 'Airport Position' is active daily in NMOC from 0300-1900UTC**

Contact us in reference to any airport issues, especially if you have a late request for an airport with high arrival delays as we can help advise on the situation.

NM Airport Position email: NM.Airports@eurocontrol.int
Phone +32-2-7291190 only during opening times 0300-1900 UTC

- **Geographical area expanded in 2022**

- **The official meteorological service providers of each of the ANSPs involved will be providing the forecasts under the coordination of EUMETNET.**

- **Weather situational awareness across the network both D-1 & D-0, including staff planning to reduce the risk of unnecessary regulations during Summer 22**

- **Pretactical/tactical teleconferences organised by NMOC or on stakeholders request to agree on delay mitigation plan.**

- **Increasing the lead time of application of tactical weather regulations and where possible reducing their number.**

- **Collaborative Decision Making processes and operational procedure in place (slides 29 & 30).**
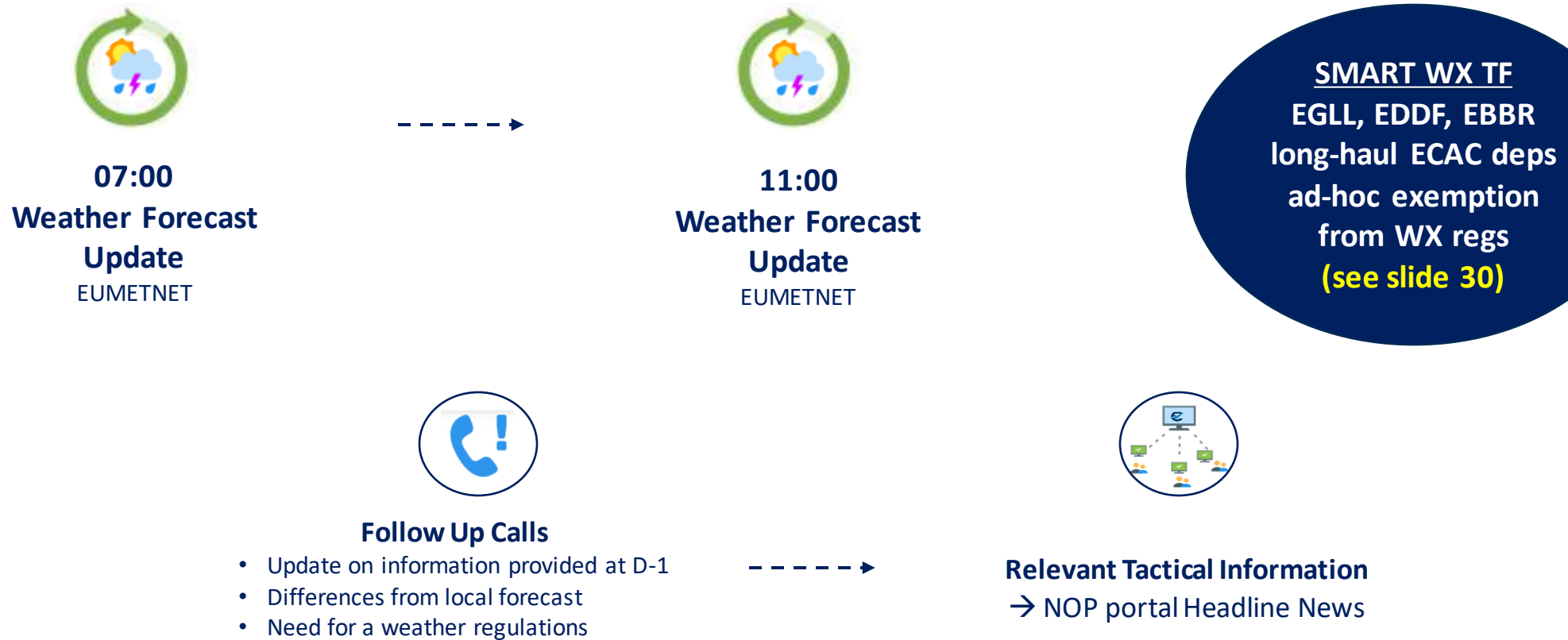
S2022 WX x-border procedure: Pre-tactical (D-1) phase

YES

09:15 - 11:00
Coordination and Building a Plan
- Invite for MS Teams meeting
- NOP portal – Headline News

11:30-12:30
Conferencing
(15-30min; aiming for 11:30)
- FMPs sharing their plan
- Agreement on Decision-Time

09:00
Weather Forecast
EUMETNET

09:15
NMOC decision for a Collaborative Conference

No Conference, BUT some Triggers Met

09:15 - 13:00
Direct Calls from NM Pre-tact to affected FMPs
- FMPs sharing their plan
- Agreement on Decision-Time
- Recording the feedback

16:00 – 17:00
Publishing the Plan
Summary in INP

NO

No further actions

All times UTC

07:00
Weather Forecast
Update
EUMETNET

11:00
Weather Forecast
Update
EUMETNET

SMART WX TF
EGLL, EDDF, EBBR
long-haul ECAC deps
ad-hoc exemption
from WX regs
(see slide 30)

Follow Up Calls
- Update on information provided at D-1
- Differences from local forecast
- Need for a weather regulations

Relevant Tactical Information
→ NOP portal Headline News

Calls through the day based on the situation
MET expert in NMOC

* All times UTC

Exemption [EM] ATFM Arrival Procedure

- EDDF, EBBR and EGLL airports use the Exemption Flow procedure to alleviate unnecessary ATFM delay on flights with EET>3,5 hours, captured by ATFM measures applied due to WX of short duration at destination airport.

- Applied when weather forecast indicates that the short weather phenomena may last up to 2 hours (i.e. morning fog, low cloud ceiling, CB).

- Instead of using a standard ATFM regulation, the FMPs may use the new EM (EXEMPTED) flow ATFM WX ARR regulation.

- The long haul flight will be EXEMPTED from the ATFM regulation on request of FMP
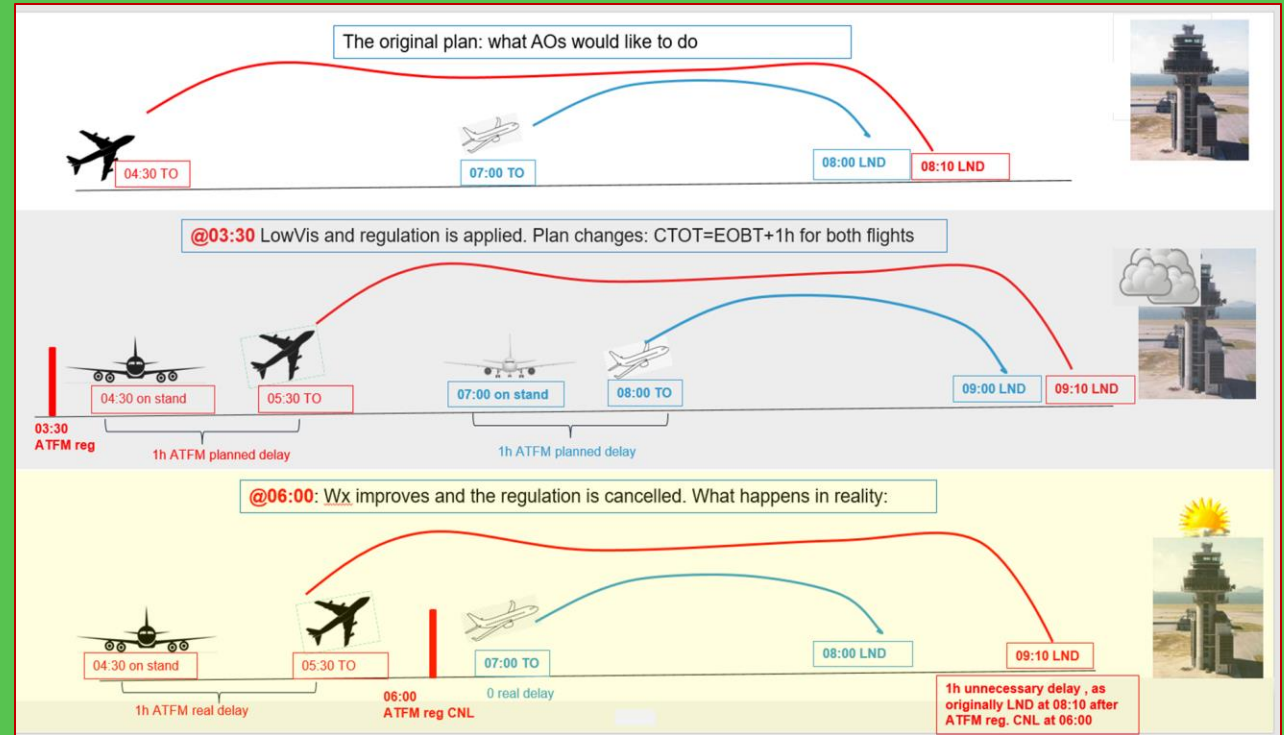
- The NMOC and the Airport unit are available to answer information queries about the new procedure and to create the corresponding traffic volumes (TFVs).

- Points of contact for interested ANSP/FMP/Airports: nm.dom@eurocontrol.int teodora.popova@eurocontrol.int .

EUROCONTROL Network Operations and NMOC

Wish you a busy Summer!