

Welcome to today's Stakeholder Consultation meeting on the revised draft FABEC Performance Plan for RP3. We will be starting shortly.

Housekeeping rules:

- If you would like to ask a question or provide a comment, please raise your hand OR type “question/comment” in the chat – the moderator will give you the floor as soon as possible.
- Please mute your microphone when not speaking: the moderator may mute your line if there is background noise.
- When beginning a question or comment, please introduce yourself with your name and the organisation you represent.
- We recommend not using your webcam when not speaking to preserve internet broadband bandwidth and provide a smoother meeting experience for all.



Stakeholder Consultation Meeting on Revised FABEC RP3 Performance Plan

Setting the Scene

**Ference van Ham, NL NSA
Chairman FABEC FPC**

2 September 2021

Purpose of the day

Performance and Charging Regulation, Article 10(4):

“In accordance with Article 10(1) and point (b) of Article 11(3) of Regulation (EC) No 549/2004, national supervisory authorities shall consult air navigation service providers, airspace users' representatives and, where relevant, airport operators and airport coordinators on the draft performance plans, including on the performance targets and incentive schemes contained therein.”

- Although no equivalent requirement has been included in the ‘RP3 emergency measures’, FABEC considers it good practice to consult stakeholders on performance plans.
- This consultation meeting focuses on the **FABEC elements of the RP3 performance plan**:
 - **Safety**
 - **Environment**
 - **En route capacity, including the incentive scheme**
- **Cost efficiency** and **terminal capacity** elements are a **national responsibility** and have been consulted by the FABEC States at the national level.



Why a FABEC performance plan?

- The FABEC Council decided in December 2017 to maintain performance planning at FAB level.
- Benefits of coordination and cooperation on performance:
 - Better understanding of each other's performance status and underlying drivers
 - Better and earlier awareness of planned activities (airspace, HR, technology)
 - Increased possibility for identification of opportunities for coordinated or even common activities
- Coordination and cooperation at FAB level does not mean all activities are defined and executed together!
 - Compare national level in larger States with multiple area control centres: different centres operate in different environments and face different issues, which can require different solutions or different timelines for similar solutions.



Development process of the FABEC plan

- Performance plan has been developed by the FABEC States' Financial and Performance Committee
 - Coordinated with other States' Committees as required

- FABEC NSAs have worked closely with FABEC ANSPs to gather required inputs and to understand plans, ambitions, uncertainties and expectations.

- FABEC NSAs have chosen to set the bar high for the service providers. The objective is to support the recovery of air transport after the pandemic. States recognise that it will be challenging to meet the targets, in particular in the context of traffic recovery over the remaining years of RP3:
 - likely to be uncertain and potentially volatile
 - increased risks of higher than usual variability of traffic evolution over the network, over the year and over the day

- FABEC Council has given its provisional approval to the targets presented today – pending stakeholder consultation



Impact of COVID on performance and planning

COVID affects performance and performance planning in a number of ways:

Practical issues

- **Financial impact**
- **System implementation**
 - Distancing constraints and remote working requirements affect practical elements of development, testing, validation and training
 - Travel constraints limit presence and delivery by international suppliers
- **ATCO training and availability**
 - Distancing requirements limit training capacity
 - Increased pressure on simulators for training as well as currency
 - Lack of high load traffic levels in OJT
 - Working requirements following vaccination

Uncertainty and data availability

- **Ongoing pandemic**
- **Uncertainty and variability in traffic recovery**
 - Lack of clarity on relation of 1 October plan to mid-October STATFOR forecast
- **Lack of up-to-date Network Operations Plan before 1 October**



Approach to the consultation

- Proposed targets in the key performance areas safety, environment and en route capacity, as well as the en route capacity incentive scheme, will be presented by the FABEC NSAs.
 - At the end of each presentation there will be time for questions and comments
 - Time for general discussion is foreseen in the afternoon

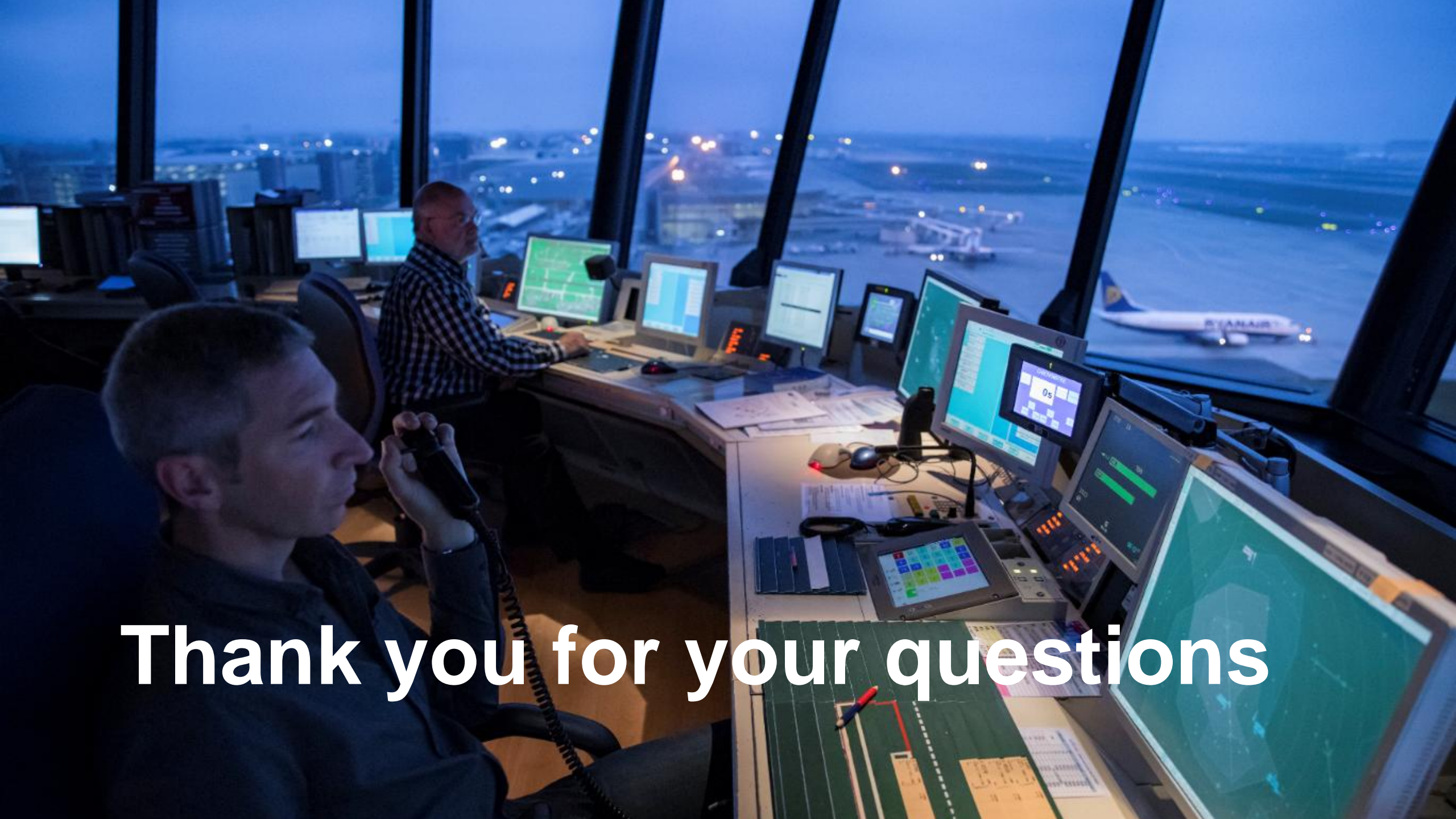
- Cost efficiency is presented for information and completeness only; details have been consulted at national level – no discussion is foreseen today.

- Stakeholder groups will be able to present general views and comments in the afternoon.

- Following the meeting, FABEC NSAs will consider stakeholder comments and, if appropriate, adapt proposed targets which will be proposed to the FABEC Council for final approval.

- Additional, written stakeholder comments following the meeting are welcome, if received by **10 September** at the latest.





Thank you for your questions

Stakeholder Consultation Meeting on Revised FABEC RP3 Performance Plan

Safety

Björn Schröder, LU NSA

2 September 2021

KPI Safety: Definition

(EU) 2019/317, Annex 1, section 1, paragraph 1.1:

“The minimum level of the effectiveness of safety management to be achieved by air navigation service providers certified to provide air traffic services. This KPI measures the level of implementation of the following safety management objectives:

- (a) safety policy and objectives;*
- (b) safety risk management;*
- (c) safety assurance;*
- (d) safety promotion;*
- (e) safety culture.”*



EU-wide targets

Commission implementing decision (EU) 2021/891 of 2 June 2021:

setting revised Union-wide performance targets for the air traffic management network for the third reference period (2020-2024) and repealing Implementing Decision (EU) 2019/903

Article 1

- (a) at least Level C in the safety management objectives ‘safety culture’, ‘safety policy and objectives’, ‘safety assurance’, and ‘safety promotion’;*
- (b) at least Level D in the safety management objective ‘safety risk management’.*

Safety targets unchanged

[level C = “Managed” – level D = “Assured”]



EC statement on performance plans assessment

(EU) 2019/317:

Article 14.1:

“The Commission shall assess the consistency of the national performance targets or FAB performance targets (...) taking into account local circumstances.”

Annex IV, 1.1 Criteria for safety assessment:

“(...) the level of effectiveness of safety management is equal to, or higher than the corresponding Union-wide performance targets.”

No assessment criteria for intermediate targets



RP3 FABEC actual safety achievements 2020 & targets

Final, 2024, FABEC targets are in line with the Commission Implementing Regulation (EU) 2019/317 Annex IV, 1.1 Union-wide targets, presented on slide 3.

- Initially, the same intermediate targets (2021-2023) for all 7 ANSPs were considered most appropriate by subject matter experts from Competent Authorities (CAs) and ANSPs in 2020.
- Upon determination of last year's actual safety performance i.e. the self-assessed ANSPs' questionnaires validated by CAs, it was identified that the ANSPs' safety performance in FABEC differs significantly at the beginning of RP3.
- Thus, individual ANSP targets would be an appropriate alternative to the same targets for all 7 FABEC ANSPs.
- The current ANSPs' RP3 EoSM achievements 2020 justify the proposal shown on the following slides:



RP3 FABEC actual safety achievements 2020 & targets

		2020A	2021	2022	2023	2024
		<i>Actual</i>	Target	Target	Target	Target
skeyes	Safety policy and objectives	<i>B</i>	C	C	C	C
	Safety risk management	<i>C</i>	C	C	D	D
	Safety assurance	<i>B</i>	B	B	C	C
	Safety promotion	<i>C</i>	C	C	C	C
	Safety culture	<i>B</i>	B	C	C	C
	Additional comments					
		2020A	2021	2022	2023	2024
		<i>Actual</i>	Target	Target	Target	Target
DSNA	Safety policy and objectives	<i>C</i>	C	C	C	C
	Safety risk management	<i>D</i>	D	D	D	D
	Safety assurance	<i>C</i>	C	C	C	C
	Safety promotion	<i>C</i>	C	C	C	C
	Safety culture	<i>B</i>	B	C	C	C
	Additional comments					

[level B = “Defined” - level C = “Managed” – level D = “Assured”]



RP3 FABEC actual safety achievements 2020 & targets

		2020A	2021	2022	2023	2024
		<i>Actual</i>	Target	Target	Target	Target
DFS	Safety policy and objectives	C	C	C	C	C
	Safety risk management	C	C	C	D	D
	Safety assurance	B	B	B	C	C
	Safety promotion	B	C	C	C	C
	Safety culture	C	C	C	C	C
	Additional comments					
		2020A	2021	2022	2023	2024
		<i>Actual</i>	Target	Target	Target	Target
ANA LUX	Safety policy and objectives	B	C	C	C	C
	Safety risk management	C	C	C	D	D
	Safety assurance	B	B	B	C	C
	Safety promotion	B	C	C	C	C
	Safety culture	B	B	C	C	C
	Additional comments					

[level B = “Defined” - level C = “Managed” – level D = “Assured”]



RP3 FABEC actual safety achievements 2020 & targets

		2020A	2021	2022	2023	2024
		<i>Actual</i>	Target	Target	Target	Target
LVNL	Safety policy and objectives	C	C	C	C	C
	Safety risk management	C	C	C	D	D
	Safety assurance	C	C	C	C	C
	Safety promotion	C	C	C	C	C
	Safety culture	C	C	C	C	C
	Additional comments					
		2020A	2021	2022	2023	2024
		<i>Actual</i>	Target	Target	Target	Target
Skyguide	Safety policy and objectives	C	C	C	C	C
	Safety risk management	C	C	C	D	D
	Safety assurance	C	C	C	C	C
	Safety promotion	C	C	C	C	C
	Safety culture	C	C	C	C	C
	Additional comments					

[level C = “Managed” – level D = “Assured”]



RP3 FABEC actual safety achievements 2020 & targets

		2020A	2021	2022	2023	2024
		<i>Actual</i>	Target	Target	Target	Target
MUAC	Safety policy and objectives	C	C	C	C	C
	Safety risk management	D	D	D	D	D
	Safety assurance	C	C	C	C	C
	Safety promotion	C	C	C	C	C
	Safety culture	C	C	C	C	C
	Additional comments					

[level C = “Managed” – level D = “Assured”]



Main measures put in place by ANSPs to achieve safety performance targets

- **A significant number of measures were put in place by FABEC ANSPs nationally as well as FABEC wide. Latter are listed below:**
 - Identification of deviations/ gaps to the requirements described in the RP3 EoSM-questionnaire, if any, and implementation of remedial measures accordingly;
 - Retrieval of a better common understanding between ANSPs and Competent Authorities of EoSM-questionnaire requirements, where necessary;
 - Maintenance of a FABEC dashboard. This is kept up-to-date by the SPM working group reporting to the the Standing Committee Safety (SC SAF). A yearly aggregation of SMI, RI and EoSM results is done under the leadership of the DSNA and analysed both by SPM and SC SAF. The publication on a website is foreseen in the near future.



Main measures put in place by CAs to achieve safety performance targets

- **The Competent Authorities have also implemented individual verification measures (oversight activities) as follows:**
 - Compliance verification of Commission Implementing Regulation (EU) 2017/373 is considered an effective means by inspecting the current safety performance and thus also anticipating if a set target is endangered.
 - FABEC Competent Authorities meet regularly (three times a year) in a dedicated working group, the Safety Performance and Risk Coordination Task Force (SPRC TF), to gather Safety Performance data, to compare the ANSPs' performance among each other and to jointly determine whether and where catch-up demand is necessary.
 - SPRC TF has established cooperation with SC SAF to guarantee a holistic approach including all 7 FABEC ANSPs.

Main measures put in place to achieve safety performance targets

Both, ANSPs and CAs, have united forces to proactively enhance the safety maturity level in the FABEC to facilitate an orderly and efficient flow of air traffic in our airspace.

The measures shown emphasize the FAB(EC) added value through an intense cooperation between the 6 Competent Authorities and the 7 ANSPs.



A woman with dark hair, wearing a blue and white striped sweater, is seated at a desk in a control room. She is holding a black microphone to her mouth and speaking. In front of her is a desk with several computer monitors displaying various data and charts. To her right, there is a large console with many buttons and a red pen. A man's face is partially visible on the left side of the frame, looking towards the woman. The background is filled with more computer monitors and equipment, creating a busy, professional atmosphere.

Thank you for your questions

Stakeholder Consultation Meeting on Revised FABEC RP3 Performance Plan

Environment

Mathias Schallnus, DE NSA

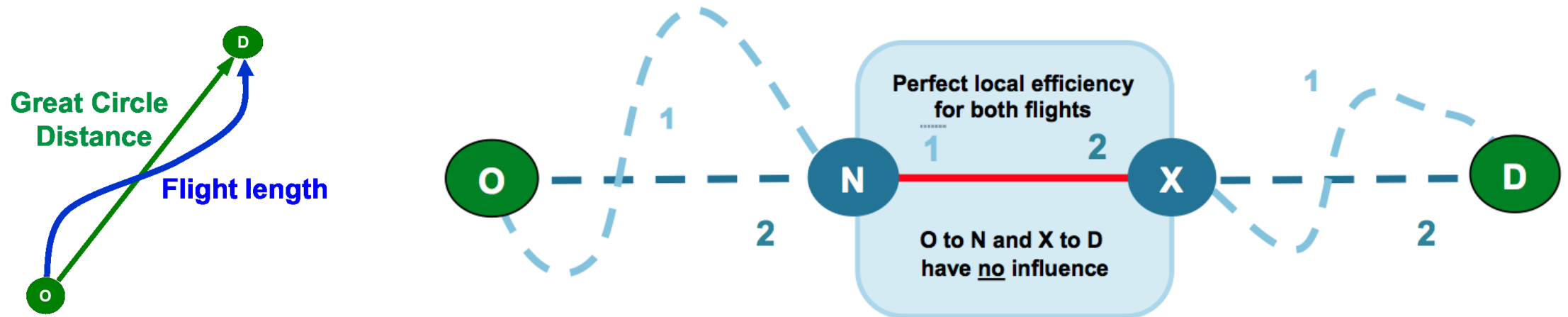
2 September 2021

KPI Horizontal En Route Flight Efficiency

Definition (EU) 2019/317, Annex 1

2.1 Environment

- a) the indicator is the comparison between the length of the en route part of the actual trajectory derived from surveillance data and the achieved distance, summed over IFR flights within or traversing the airspace as defined in Article 1, hereinafter referred to as ‘European airspace’;
- b) ‘en route part’ refers to the distance flown outside a circle of 40 NM around the airports;
- f) [...] When calculating this average, the ten highest daily values and the ten lowest daily values are excluded from the calculation.



EU-wide Environment Performance Targets FABEC/ ANSPs NM Reference Values (RV)

EU wide targets :

- Commission implementing decision (EU) 2021/891 of 2 June 2021 setting revised Union-wide performance targets for the air traffic management network for the third reference period (2020-2024) and repealing Implementing Decision (EU) 2019/903

Reference values:

- Local environment reference values for RP3 as published in a letter by the Network Manager to the European Commission (NMD/D-4727)

Correction compared to Draft PP

%	2021	2022	2023	2024
EU wide	2.37	2.37	2.40	2.40
FABEC RV (2021)	3.32	2.75	2.75	2.75
skeyes RV	5.93	5.23	5.23	5.23
DFS RV	2.40	2.65	2.65	2.65
DSNA RV	2.91	2.81	2.70	2.70
LVNL RV	6.26	5.81	5.81	5.81
MUAC RV	1.90	1.85	1.85	1.85
Skyguide RV	4.59	4.28	4.28	4.28



EC statement on performance plans assessment

(EU) 2019/317:

*Article 14.1: “The Commission shall assess the consistency of the national performance targets or **FAB performance targets** contained in the draft performance plans with the Union-wide performance targets on the basis of the criteria laid down in point 1 of Annex IV, and **taking into account local circumstances.**”*

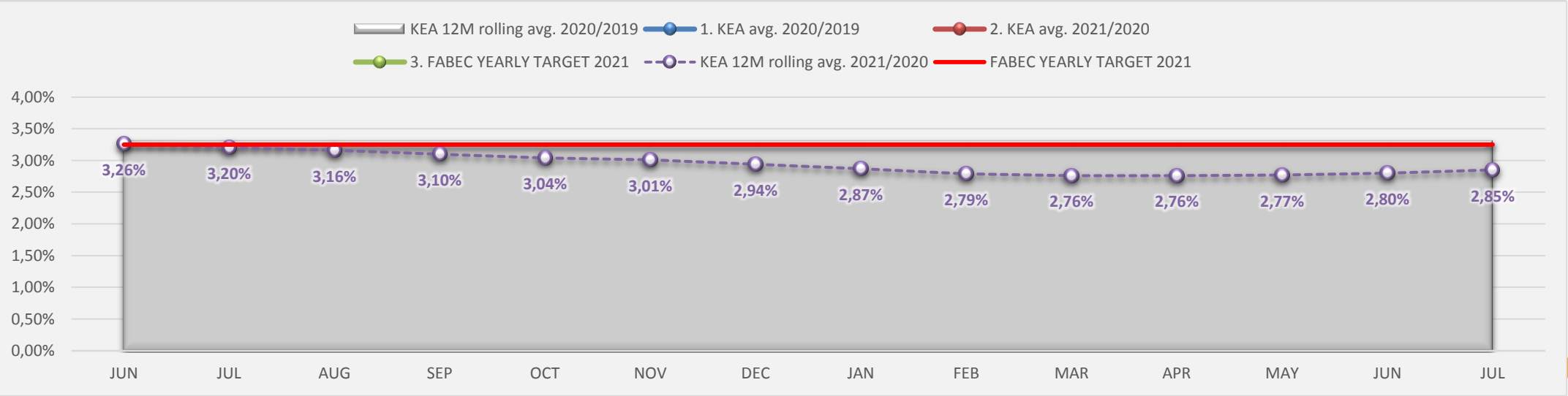
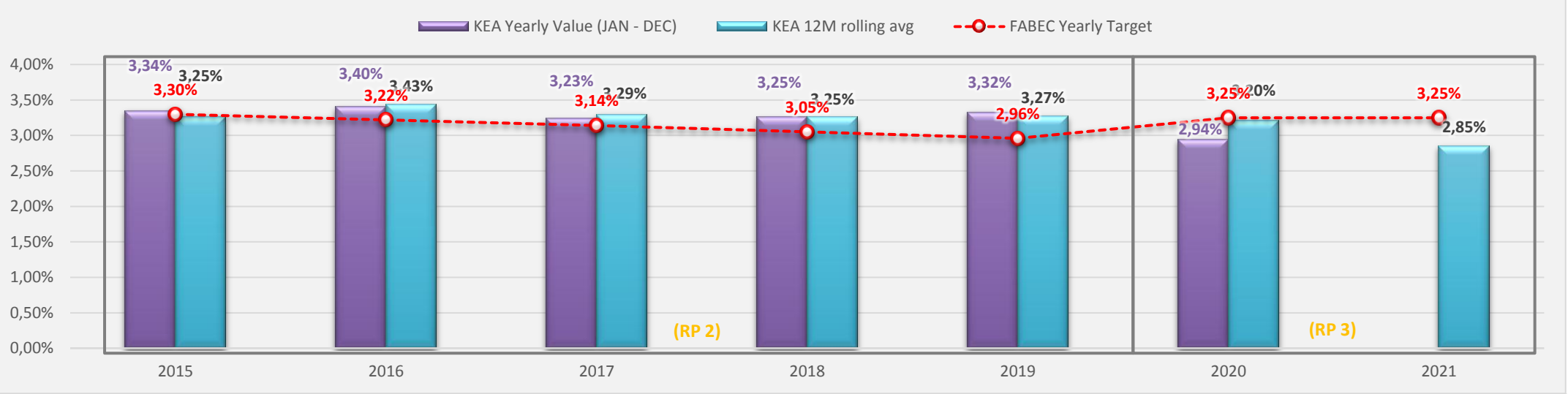
*Annex IV, 1.2 Criteria for environment assessment: “Consistency of national performance targets or FAB performance targets with Union-wide performance targets for each calendar year of the reference period, by **comparing the national performance targets or FAB performance targets with en route horizontal flight efficiency reference values set out in latest version of the European Route Network Improvement Plan** available at the time of adoption of the Union-wide performance targets.”*



FABEC Achievements 2015-2021



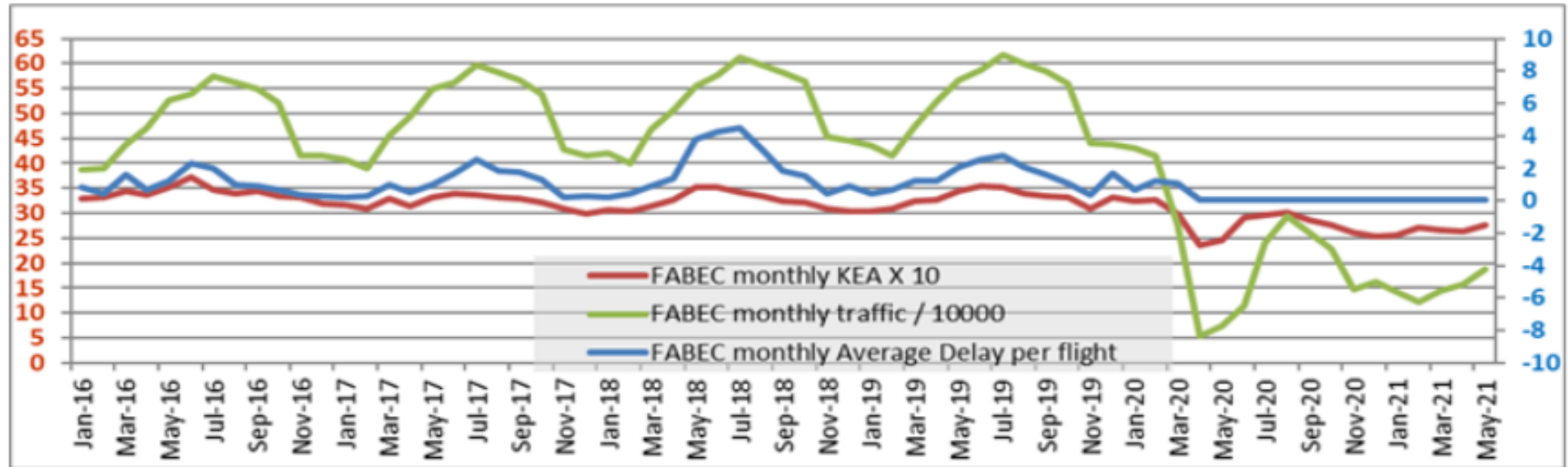
KPI #1: KEA/HFE at FABEC level (excl. 10 best/worst days)



Uncontrollable factors and interdependencies

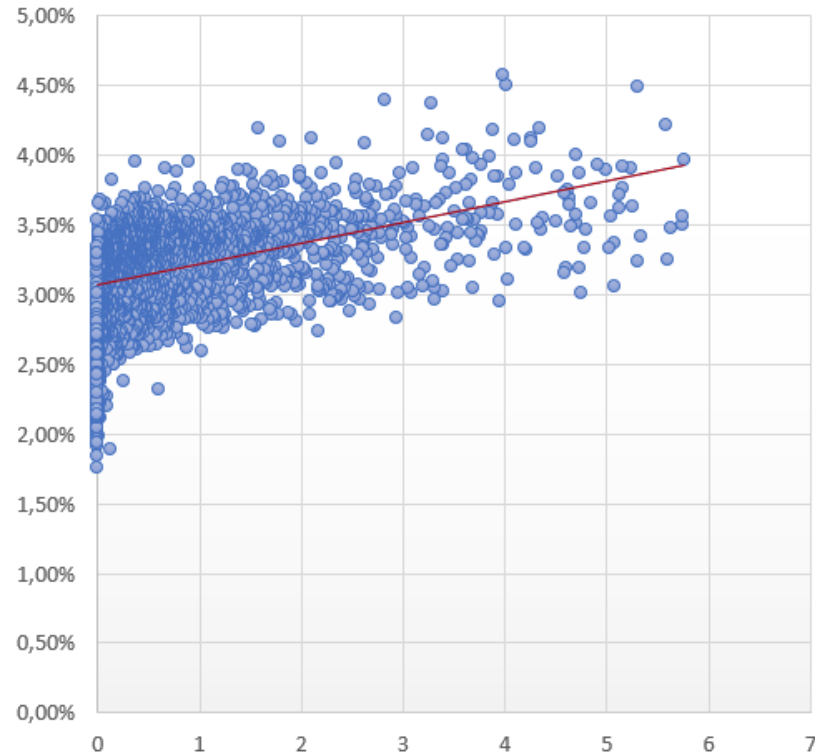


Interdependencies Traffic ./ Delays



Interdependencies: Delay

KEA and Average ATFM Delay W/O Outlier



Conclusion:

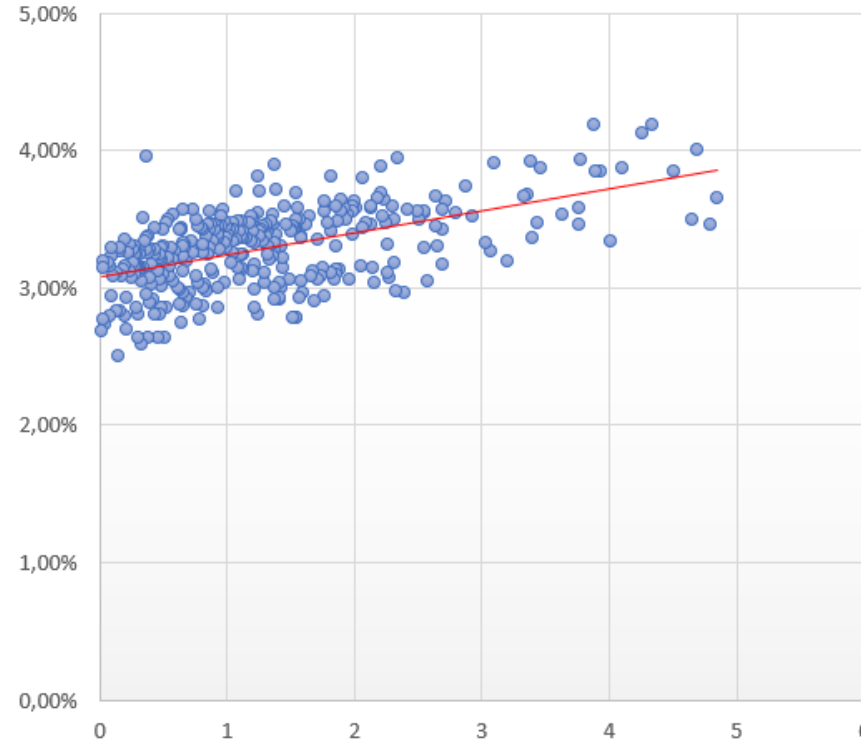
We can derive an equation as follows:

$$y = b_0 + B_1x$$

$$KEA = 0,0309526553346238 +$$

$$0,00114880921312177 \cdot \text{Average ATFM Delay}$$

KEA and Average ATFM Delay 2019 W/O Outlier



Conclusion:

We can derive an equation as follows:

$$y = b_0 + B_1x$$

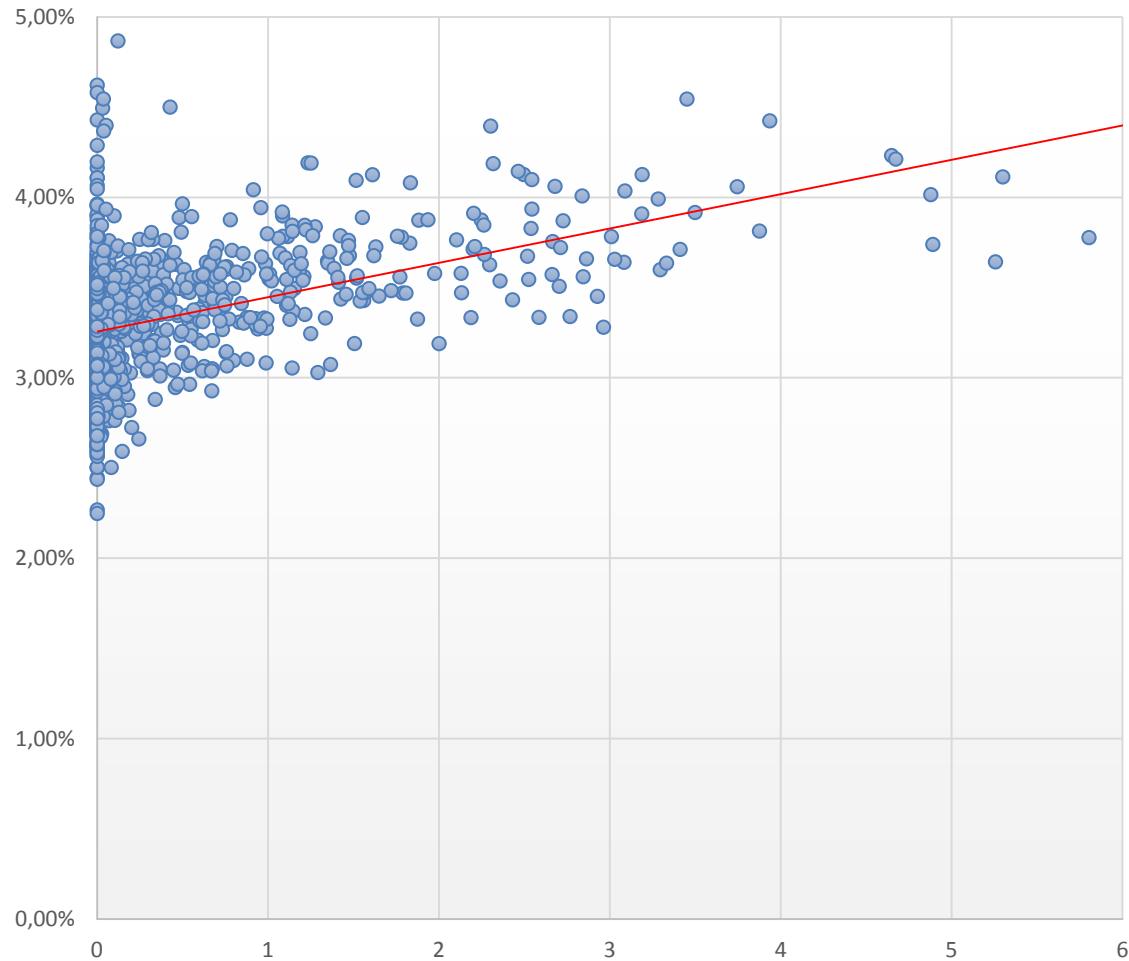
$$KEA = 0,0312888303131166 +$$

$$0,00121222756558709 \cdot \text{Average ATFM Delay}$$



Uncontrollable factors/ interdependency: weather

KEA and Average ATFM Weather Delay 2015-2019



KEA and Average ATFM Weather Delay 2020



FABEC Main Measures: FRA Implementation

End 2019

End 2021

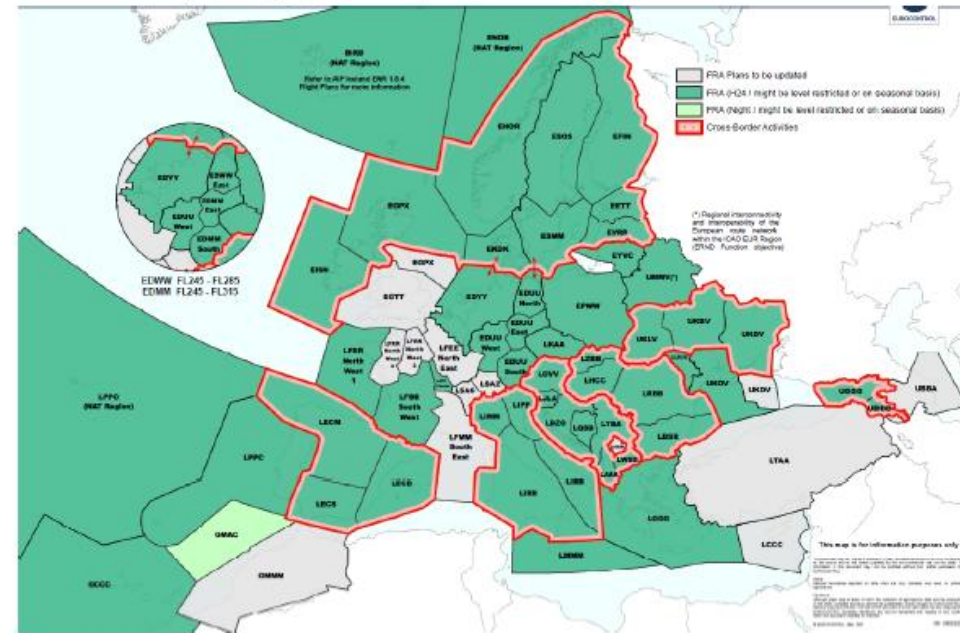
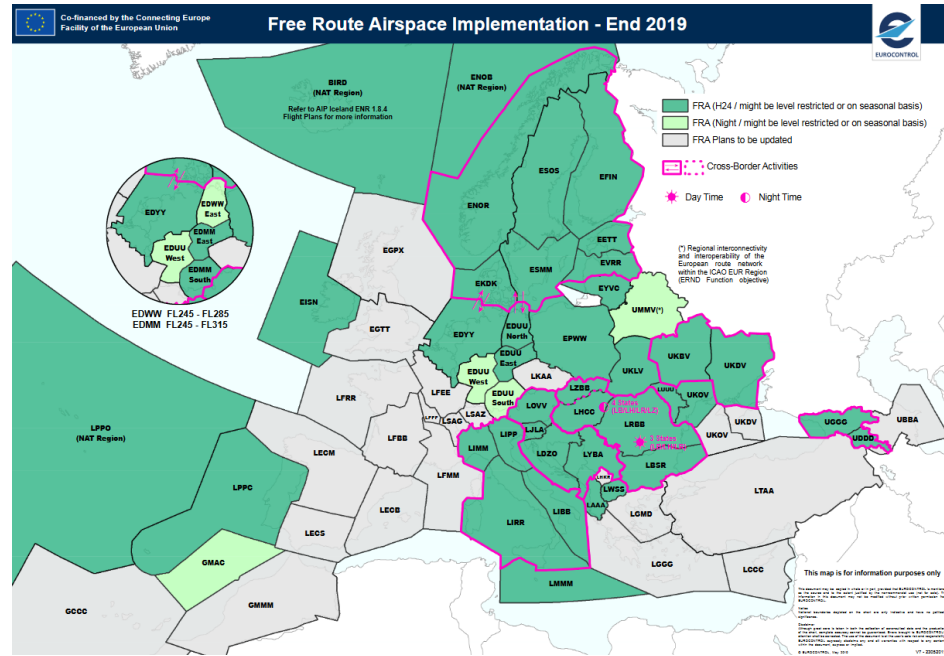





Figure 2 : FRA until end 2021

-  FRA Plans to be updated
-  FRA (H24 / might be level restricted or on seasonal basis)
-  FRA (Night / might be level restricted or on seasonal basis)

<https://www.eurocontrol.int/publication/european-route-network-improvement-plan-ernip-part-2>



FABEC - Other main measures: ERNIP Part 2

End of 2021

France:

- Free Route Airspace Bordeaux - Step 1.0
- Free Route Airspace Brest Atlantic - Step 1.0
- Free Route Airspace Paris - Step 1.1

Germany:

- Sector Changes in Munich ACC

Germany, France, Maastricht UAC:

- Interface re-sectorisation - COBRA WEST

Germany, Maastricht UAC, Netherlands:

- Dutch Airspace Redesign Programme (DARP)

Switzerland:

- PBN Transition Plan – Switzerland

Switzerland, FABEC:

- Flight Level Orientation/ FLOS change Switzerland

End of 2022

France:

- DCT Marseille ACC

Germany:

- Interface re-sectorisation - COBRA CENTRAL
- PBN Transition Plan - Germany

Netherlands:

- ATS Route Improvement Amsterdam FIR

Switzerland, France, Germany, Austria, Italy,

FAB EC:

- Free Route Airspace Switzerland – FRACH

Switzerland, Germany, FABEC:

- Cross Border FRA CHE/ DEU



FABEC - Other main measures: ERNIP Part 2

End of 2023

France:

- Free Route Airspace Marseille ACC - Step 1
- PBN Transition Plan - France

France, FABEC:

- Free Route Airspace Brest Continental East-Step 2
- Free Route Airspace Reims - Step 2

Germany

- Interface re-sectorisation

End of 2024

Belgium

- CDO/CCO Improvement at Belgian airports

France:

- Airspace Structure Improvement Bordeaux ACC
- Airspace Structure Improvement Reims ACC
- Airspace structure improvement at Reims ACC
- ELIXIR Phase 1 and 2
- Free Route Airspace Marseille ACC – Step 2
- Paris ACC re-organisation - Phase 3
- Reims ACC/ Brest ACC/Paris ACC re-sectorisation



Further ENV-related FABEC projects

Maastricht Upper Area Control



CCO/CDO

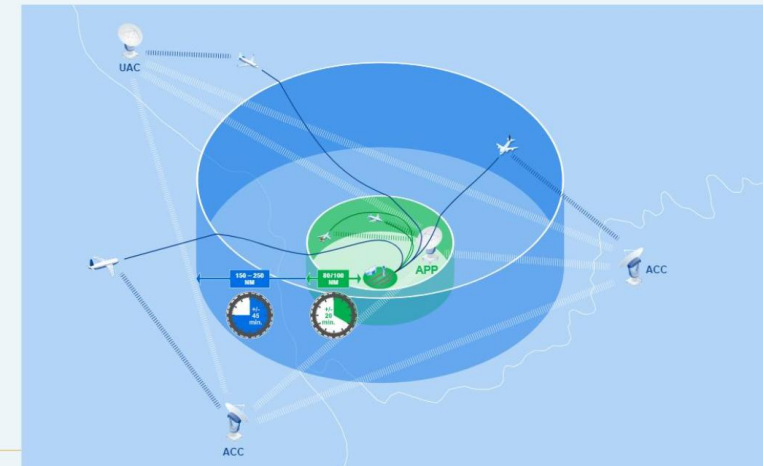
FABEC Airports with Continous Descent Operations



XMAN I/II

Environmental Objective: Optimal use of runway throughput to avoid extra fuel burn

- Extension of arrival sequencing to upper sectors and neighbouring area control centers
- Cross-border and cross-ANSP cooperation needed.
- System designed to increase capacity in times of high traffic and traffic peaks



FABEC FPC RP3 Targets proposal

KEA %	2021	2022	2023	2024
EU wide	2.37	2.37	2.40	2.40
<i>FABEC RV</i>	3.32	2.75	2.75	2.75
Proposed targets	3.32	2.75	2.75	2.75





Thank you for your questions

Stakeholder Consultation Meeting on Revised FABEC RP3 Performance Plan

Capacity (Average en route ATFM delay per flight)

Stéphane Lafourcade, FR NSA

2 September 2021

EU wide Capacity performance targets

KPI definition (Annex 1, Section 1, Paragraph 3.1 of (EU) 2019/317)

*“The average minutes of en route ATFM delay per flight attributable to air navigation services”,
calculated as follows:*

*The en route ATFM delay is the delay calculated by the Network Manager, expressed as the
difference between the estimated take-off time and the calculated take-off time allocated by the
Network Manager...*

This indicator covers all IFR flights and all ATFM delay causes, excluding exceptional events...

This indicator is calculated for the whole calendar year and for each year of the reference period.”



EU wide Capacity Performance targets FABEC / ANSPs NM Reference Values (RV)

- EU wide targets :

Commission implementing decision (EU) 2021/891 of 2nd June 2021 *setting the (revised) Union-wide performance targets for the air traffic management network for the third reference period...*

- Reference values:

Capacity reference values for RP3

published by PRB in March 2021 (Annex II, Advice on the revision of performance targets for RP3)

Min/flight	2021	2022	2023	2024
EU wide	0.35	0.50	0.50	0.50
FABEC RV	0.27	0.37	0.37	0.37
skeyes RV	0.07	0.12	0.13	0.12
DFS RV	0.18	0.24	0.25	0.24
DSNA RV	0.18	0.25	0.25	0.25
LVNL RV	0.06	0.09	0.09	0.10
MUAC RV	0.13	0.19	0.19	0.19
Skyguide RV	0.12	0.19	0.19	0.19



EC RP3 performance plans assessment

(EU) 2019/317:

Article 14.1: ***“The Commission shall assess the consistency of the national performance targets or FAB performance targets contained in the draft performance plans with the Union-wide performance targets on the basis of the criteria laid down in point 1 of Annex IV, and taking into account local circumstances.*”**

Annex IV, 1.3 Criteria for capacity assessment: ***“Consistency of national performance targets or FAB performance targets with Union-wide performance targets for each calendar year of the reference period, by comparing the national performance targets or FAB performance targets with the reference values set out in latest version of the Network Operations Plan available at the time of adoption of the Union-wide performance targets.”*”**



FABEC capacity achievements from RP1 to RP3

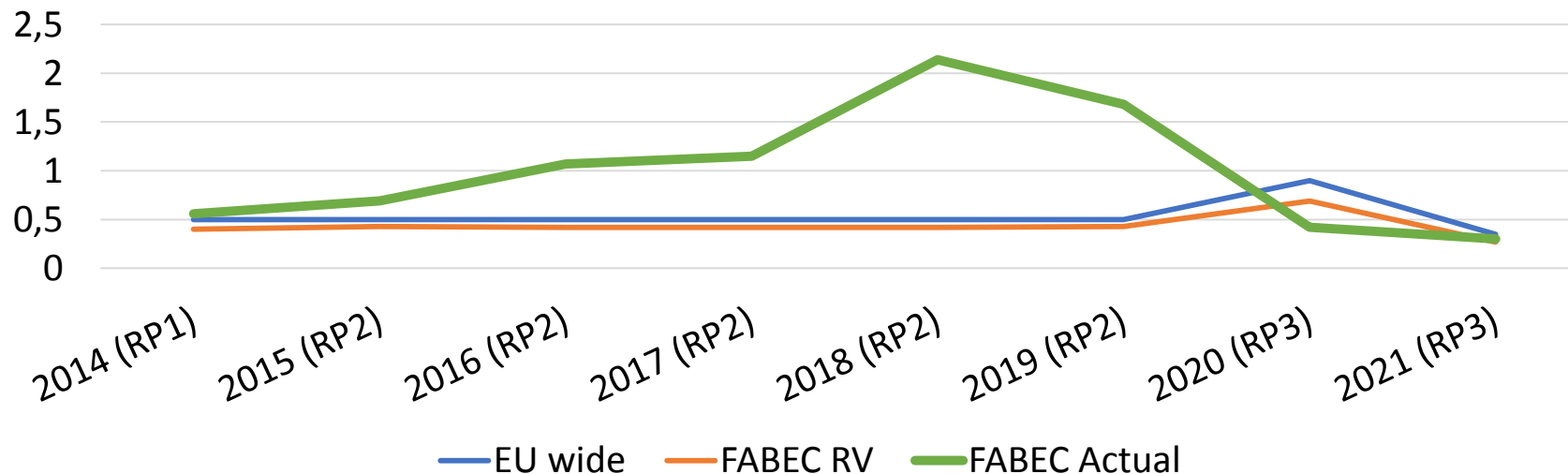


Average ATFM delay (Min/flight)	2014 (RP1)	2015 (RP2)	2016 (RP2)	2017 (RP2)	2018 (RP2)	2019 (RP2)	2020 (RP3)	2021 (RP3)
EU wide	0.50	0.50	0.50	0.50	0.50	0.50	0.90	0.35
FABEC RV	0.40	0.43	0.42	0.42	0.42	0.43	0.69	0.27
FABEC Target	0.50	0.48	0.49	0.42	0.42	0.43	3.45*	0.27
FABEC Actual	0.56	0.69	1.07	1.15	2.14	1.68	0.42	0.30**

* FABEC RP3 draft PP - 2019

** FABEC 2021 YTD actual (July)

FABEC average ATFM delay from RP1 to RP3 (min/flight)



FABEC current performance: FABEC and Local ANSP levels (focus on summer 2021)



2021 average ATFM delays (min/flight, all causes)	2021 RV	2021 Actual (January - July)
FABEC	0.27	0.30
skeyes	0.07	0.00
DFS	0.18	0.15
DSNA	0.18	0.39
LVNL	0.06	0.02
MUAC	0.13	0.00
Skyguide	0.12	0.07



FABEC current performance: focus on Summer 2021

Some delays in the FABEC area, mainly since July:

- Remaining **capacity** and **staffing** issues in some ACCs (Marseille, Reims, Karlsruhe), and some **MET** caused delays combined with:
 - July traffic peak days similar to 2019 levels in some ACCs (Marseille ACC: 80% of 2019 traffic in average, with some days between 90-100%)
 - Peaks of traffic higher than 2019 levels for some specific sectors during some periods of the day
 - Impact of COVID-19 vaccination on ATCOs (EASA 48h period) and self-isolation obligation (1800 off-days, including 1400 due to EASA 48h period, since 1st June for DSNA – 80% in ACC)
 - Lack of exposure to high traffic levels and different sector configurations (not compensated by simulator training in some ACC) leading to lower values for regulation thresholds.

Mitigation of non temporary causes:

- Improved planning and priority management for refresher trainings and simulator use
- Better anticipation in case of future additional vaccination plans (if required)
- Implementation of higher values for regulation thresholds

On average, 2021 FABEC NM reference value (0,27 min/flight) should be met

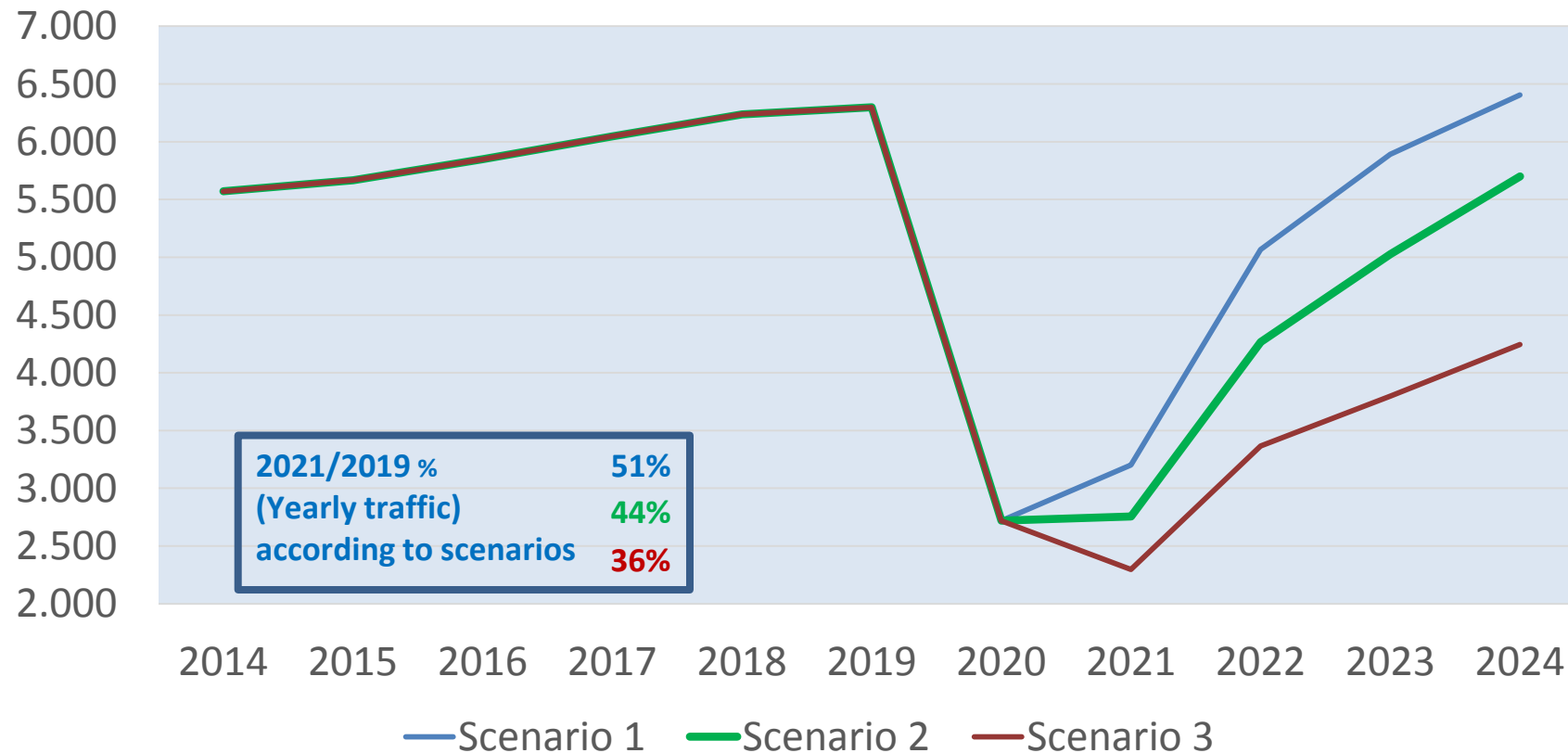


FABEC actual traffic and forecast from RP1 to RP3

May 2021 STATFOR forecasts (# flights)



IFR Movements (thousands)		2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	AAGR 2021-2024 (vs 2020)	RP2 AAGR 2015-2019 (vs 2014)	RP3 AAGR 2020-2024 (vs 2019)
FABEC	Sc1	.	.	.	.	.	.	.	3 201	5 067	5 891	6 405	24%	.	0,3%
	Sc2	5 571	5 667	5 848	6 048	6 238	6 298	2 719	2 755	4 267	5 028	5 699	20%	2,5%	-2,0%
	Sc3	.	.	.	.	.	.	.	2 297	3 365	3 797	4 244	12%	.	-7,6%



FABEC July 2021 traffic:
60% July 2019 IFR flights

Inequally spread:
from 53% for NL to 64% for FR

Temporary catch-up effect
vs faster recovery ?

New STATFOR mid-October



Main capacity enhancing measures during RP3

(exhaustive list of measures available in up-coming NOP)

▪ Infrastructure, technology and innovation: Implementations for additional capacity

- AMAN/XMAN and ICAS new versions for DFS&LVNL
- Coflight / 4-FLIGHT for DSNA
- Mid-life upgrade in CANAC2 for skeyes (preparing for SAS3)
- Virtual centre at Skyguide
- Increased use of CPDLC for all

▪ Human resources and training: Staff issues mitigations

- ATCO hiring and training in all ANSPs
- More flexible rostering, adapted shifts, vaccine schemes
- Changes in training (reduced duration, higher use of simulators)
- Sectors below FL 195 transferred to approach control units

▪ Network and cooperation civ-mil

- Continuation of rolling NOP and NM/ANSP collaboration
- FABEC NM&FABEC Airspace Design Coordination Group
- Enhanced FUA within FABEC area



Main capacity enhancing measures during RP3

1) New ATM systems and airspace design (higher capacity & productivity)



Main capacity enhancing measures during RP3: FABEC ANSPs major capacity driving investments



ICAS for DFS and LVNL: state-of-the-art, fully integrated civil/ military ATC system (enabling A-FUA), harmonized and interoperable rolled out at all DFS and LVNL control centers, featuring a 4D-trajectory and designed to provide ATC services within the entire airspace of Germany and the Netherlands (except in airspace controlled by MUAC). The key iCAS components Flight Data Processor, Controller Working Position and Middleware are developed in the iTEC Collaboration together with a total of 7 ANSPs (enabling a cost-efficient procurement and interoperability which intend to develop during RP4 a common ATS system: **iTEC OneSky (iTEC V3)**, based on harmonized requirements and providing a new way in sharing major costs (for development, training, operation, maintenance, etc.), an efficient way to keep ATM systems state-of-the-art and up to date, a major technical step forward (e.g using cloud technology) and new possibilities of working seamlessly.

4-Flight for DSNA: new ER ATM system providing a full electronic environment by using data drawn from the new generation **Coflight FDPS** designed to meet the SESAR objective of gate to gate, 4D trajectory management, DLS integration, traffic flow optimization and interoperability across Europe), featuring a range of innovative ATC tools enhancing safety, capacity and efficiency: full set of ATC tools to manage traffic flows, Tactical Control Tools for conflict detection within a 5-minute look-ahead timeframe, electronic negotiation of “what if” data that coordinates aircraft FL and direct routes with adjacent sectors, cooperative tools for shared situational awareness, improving the distribution of workload across controllers and network planners.

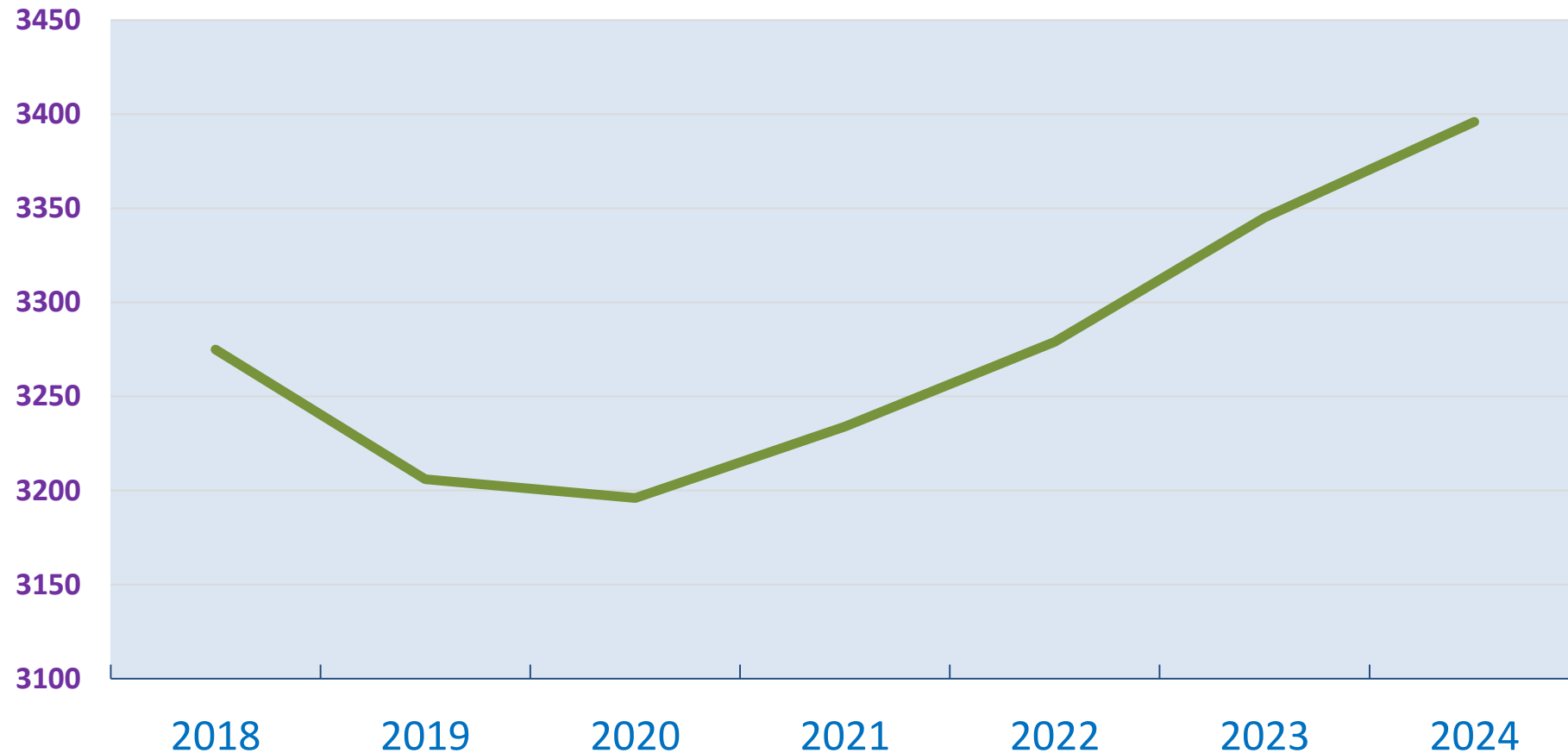
ATM Next Generation for skeyes: implementing a single, integrated and harmonized ATM system to support the integration of civil and military ATM services, improving capacity and operational efficiencies. It includes the upgrade of the current ATM system to extend its lifetime until the commissioning of the new system (SAS3, common implementation with **MUAC**) enabling an efficient sharing of data and integrated use of the airspace and allowing ATCOs to work flexibly from any workstation, on any airspace sector in line with the vision of the Airspace Architecture Study.

Virtual Center Switzerland: pioneer project in implementing the Airspace Architecture Study as defined by the SESAR Joint Undertaking by improving the airspace management, offering capacity that matches the demand, being more efficient and resilient and able to absorb traffic variations in a scalable manner, harmonizing the practices between Swiss ACCs.



Main capacity enhancing measures during RP3: 2) ATCO hiring & training: more ATCOs in OPS

FABEC RP3 ATCO in OPS FTE – ANSP forecast



Revised RP3 FABEC capacity targets proposed

FABEC States propose to set RP3 capacity performance targets as follows:

RP3	2021	2022	2023	2024
Target (min/flight)	<i>0.27</i>	<i>0.37</i>	<i>0.37</i>	<i>0.37</i>

FABEC States consider that:

- RP3 remains a transition phase enabling implementation of a full set of technical, HR and airspace redesign measures to accommodate traffic recovery and prepare RP4, providing delay containment between 2022 and 2024 while accommodating traffic recovery.
- The revised RP3 targets are set without prior knowledge (and prejudice) of FABEC NOP forecast for 2022-2024 ongoing update and do not include any buffer for disruption (industrial action, technical failure, exceptional meteorological event) and will need continued cooperation with NM and NSA monitoring.
- The revised RP3 targets are in line with the EU wide targets but are challenging for some ANSPs and major uncertainties remain (traffic volatility, structure recovery, sanitary evolution).



Revised RP3 FABEC capacity targets: challenges ahead

Proposed targets will be closely monitored by FABEC States' NSAs in order to address and mitigate challenges ahead:

- High uncertainties on traffic evolution (strong interdependencies with delays), peak and flow distribution and pandemic evolution.
- Local and temporary reduction of capacity for system implementation due to training, validation, commissioning and safety caution ATFM measures.
- ATCO hiring and training: impact of pandemic on training facilities and on the job training with lower traffic volumes; full hiring and training pace already reached in some cases.

Important data is still to be provided by EUROCONTROL:

- Updated NOP 2022–2024 and related delay forecast (draft expected in September 2021)
- Updated STATFOR traffic forecast expected mid-October (EC and PRB guidelines still to be clarified).



Thank you for your questions



Stakeholder Consultation Meeting on Revised FABEC RP3 Performance Plan

Cost-Efficiency

Ana Salas, CH NSA

2 September 2021

EU-wide target

Commission Implementation Decision (EU) 2021/891 of 2 June 2021 setting revised Union-wide performance targets for the air traffic management network for the third reference period (2020-2024) and repealing Implementing Decision (EU) 2019/903

Article 4

Union-wide performance targets in the key performance area of cost-efficiency

1. Union-wide performance targets for the key performance area of cost-efficiency, set for the key performance indicator defined in point 4.1 of Section 1 of Annex I to Implementing Regulation (EU) 2019/317 and subject, in respect of calendar years 2020 and 2021, to Articles 2(4) and 4(1) of Implementing Regulation (EU) 2020/1627, shall be a year-on-year change of the average Union-wide DUC for *en route* air navigation services:
 - (a) in respect of the combined calendar years 2020 and 2021, for which a single average DUC is calculated in accordance with Article 4(1) of Implementing Regulation (EU) 2020/1627: change of +120,1 % from the Union-wide DUC baseline value for the DUC set in paragraph 3;
 - (b) in respect of calendar year 2022: change of -38,5 % from the single average Union-wide DUC of calendar years 2020 and 2021 combined, calculated in accordance with Article 4(1) of Implementing Regulation (EU) 2020/1627;
 - (c) in respect of calendar year 2023: change of -13,2 % from the average Union-wide DUC of calendar year 2022;
 - (d) in respect of calendar year 2024: change of -11,5 % from the average Union-wide DUC of calendar year 2023.
2. The Union-wide baseline value for determined costs shall be set at EUR 6 265 631 152 in EUR2017.
3. The Union-wide DUC baseline value shall be set at EUR 50,23 in EUR2017.



Cost Efficiency

Cost efficiency targets have been already consulted at national level in FABEC.

- 25 June and 1 July – France
- 2 July – Netherlands
- 15 July – Switzerland
- 10 August – Germany
- 18 August – Belgium and Luxembourg



Cost Efficiency RP3


- The Cost Efficiency figures to be presented in the next slide are the latest available.
- These figures are still subject to final revision including outcome of the discussion with users and ongoing work between ANSPs, airspace users and States.



Aggregated global figure (latest available data)

FABEC real en route unit cost (in EUR2017)	2020/2021	2020 D	2021 D	2022 D	2023 D	2024 D	CAGR 24/20	CAGR 24/19	CAGR 24/14
Belgium-Luxembourg	202.64	196.47	208.78	146.02	126.91	113.96	-12.73%	6.47%	4.54%
France	146.16	151.02	141.63	83.87	69.90	61.24	-20.20%	0.55%	-0.66%
Germany	138.12	137.22	139.02	89.98	76.93	68.11	-16.06%	0.63%	-2.16%
Netherlands	156.68	157.05	156.30	101.99	87.73	76.88	-16.35%	2.00%	1.29%
Switzerland	237.46	221.22	252.95	151.68	113.59	97.67	-18.49%	2.13%	0.14%
Aggregated weighted average	150.57	151.56	149.61	93.12	78.20	68.81	-17.92%	1.16%	-0.69%
		133.3%	-1.3%	-37.8%	-16.0%	-12.0%			





Thank you for your questions

Stakeholder Consultation Meeting on Revised FABEC RP3 Performance Plan

En route Incentive Scheme

Pieter Verstreken, BE NSA

2 September 2021

Regulatory framework (1/2)

Article 11 of IR (EU) 2019/317 of 11 February 2019 – Incentive schemes

- non-discriminatory, transparent and effective
- proportionate to the level of ATFM delay
- symmetric range around the pivot value
- maximum penalty at least equal to the maximum bonus (< 2% DC)
- only ANSP(s) involved that contribute to the FABEC en route capacity target
- modulation mechanism at FABEC and ANSP level in a uniform manner



Regulatory framework (2/2)

Article 3(3) of IR (EU) 2020/1627 of 3 November 2020

- The incentive schemes shall cover only the calendar years 2022 to 2024
 - No bonus/penalty awarded for 2020 and 2021
- Unit rate adjustments are only possible as from the first year following the adoption of the performance plan.

ANNEX XIII of IR (EU) 2019/317 of 11 February 2019 - SPECIFIC REQUIREMENTS REFERRED TO IN ARTICLE 11(3)

- Possibility for modulation of pivot values (November NOP release of year n-1, CRSTMP ATFM delay causes)
- Calculation of financial advantages and disadvantages (% of the determined costs of year n and recovered from/reimbursed to airspace users through an increase/ a reduction of the unit rate in year n+2).



FABEC En route Incentive Scheme

FABEC level – Trigger mechanism

- Depending on the FABEC performance compared to the FABEC Pivot value

Bonus

No bonus nor Penalty

Penalty

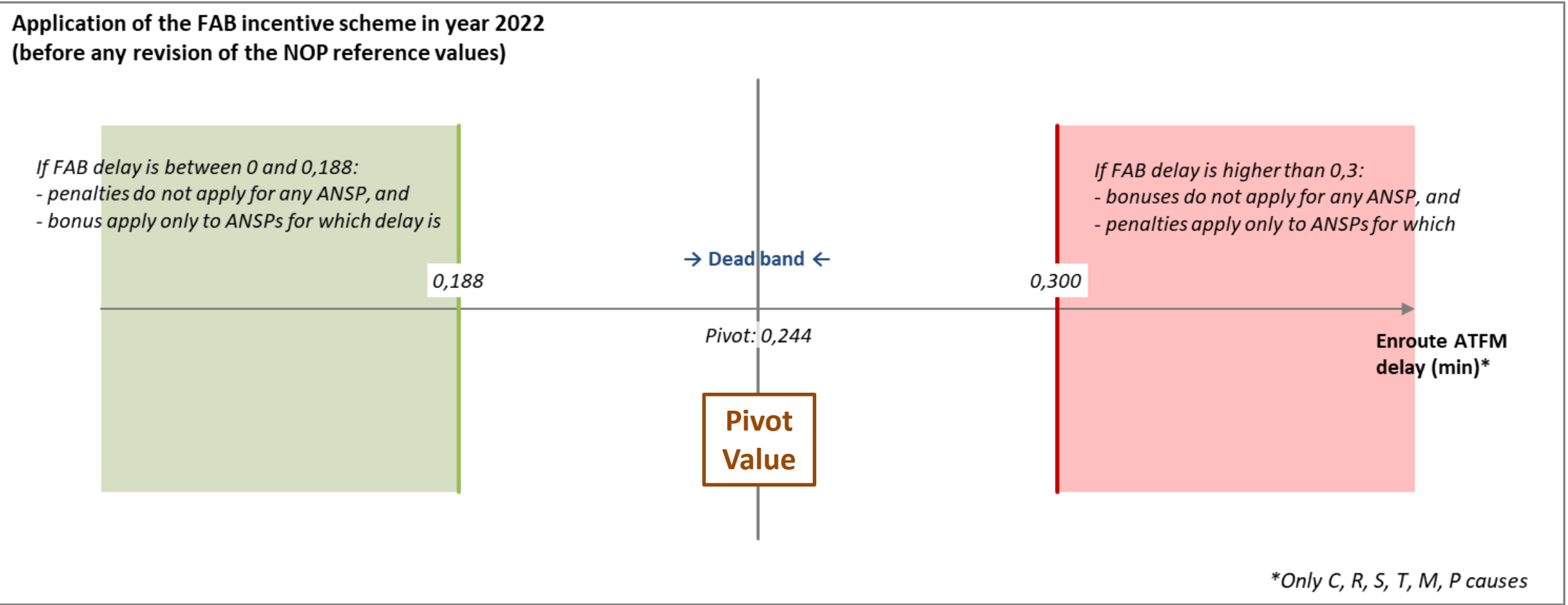
- In case of a bonus at FABEC level, only those ANSPs that have performed better than their expected contribution (beyond the dead-band) are awarded a bonus
- In case of a penalty at FABEC level, only those ANSPs that have performed worse than their expected contribution (beyond the dead-band) receive a penalty

ANSP level – Calculation of bonus or penalty, if any

- **Bonus**: a percentage of the determined costs of year n and recovered from airspace users through an increase of the unit rate in year n+2
- **Penalty**: a percentage of the determined costs of year n and reimbursed to airspace users through a reduction of the unit rate in year n+2



FABEC level – Trigger mechanism



FABEC level – Trigger mechanism

5.2.1.1 Parameters at FAB level for the calculation of financial advantages or disadvantages - Enroute

FABEC - Enroute	Expressed in	Value
Dead band Δ	%	$\pm 23,0\%$
Max bonus ($\leq 2\%$)*	% of DC	0,50%
Max penalty (\geq Max bonus)*	% of DC	0,50%
The pivot values for RP3 are*	modulated	CRSTMP

* These values apply to all ANSPs and for the whole duration of RP3

- ← Symmetric range around Pivot value
- ← Max Bonus = Max Penalty
- ← Modulation mechanism: only CRSTMP

	2020	2021	2022	2023	2024
<i>Ref. values (mins of ATFM delay/ flight) as per NM letter of 1.6.2021</i>			0,37	0,37	0,37
Alert threshold (Δ Ref. value in fraction of min)			$\pm 0,059$	$\pm 0,059$	$\pm 0,059$
FAB Performance Plan targets (mins of ATFM delay per flight)			0,37	0,37	0,37
FAB pivot values for RP3 (mins of ATFM delay per flight)*			0,24	0,24	0,24
Delay ranges for the calculation of financial advantages / disadvantages	Dead band range		[0,188-0,3]	[0,188-0,3]	[0,188-0,3]
	Bonus range		FAB delay < 0,188	FAB delay < 0,188	FAB delay < 0,188
	Penalty range		FAB delay > 0,3	FAB delay > 0,3	FAB delay > 0,3

← CRSTMP ER ATFM delay causes

- Large dead band to avoid bonuses in case traffic is lower than expected, but also to provide for a considerable margin in case traffic increases faster than expected
- 0,5% bonus/malus is considered to have a material impact on revenues
 - Tight cost planning for ANSPs



ANSP level – Calculation of bonus or penalty, if any

Example of a dead band expressed in fraction of min.

skeys	Expressed in	Value
Dead band Δ	fraction of min	±0,030 min
Max bonus (≤2%)*	% of DC	0,50%
Max penalty (≥ Max bonus)*	% of DC	0,50%
The pivot values for RP3 are*	modulated	CRSTMP

* These values are defined at FAB level and apply to all ANSPs and for the whole duration of RP3

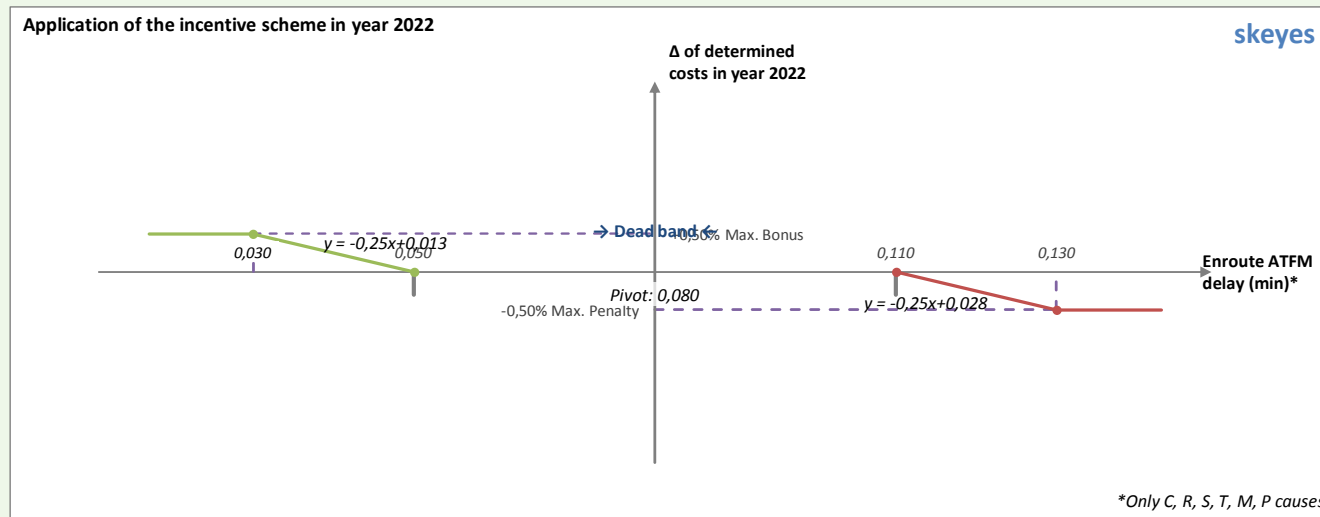
← Set up by NSA

	2020	2021	2022	2023	2024
Ref. values (mins of ATFM delay/ flight) as per NM letter of 1.6.2021			0,12	0,13	0,12
Alert threshold (Δ Ref. value in fraction of min)			±0,050	±0,050	±0,050
Performance Plan targets (mins of ATFM delay per flight)			0,12	0,13	0,12
Pivot values for RP3 (mins of ATFM delay per flight)**			0,08	0,09	0,08
Delay ranges for the calculation of financial advantages / disadvantages	Dead band range		[0,05-0,11]	[0,06-0,12]	[0,05-0,11]
	Bonus sliding range*		[0,03-0,05]	[0,04-0,06]	[0,03-0,05]
	Penalty sliding range*		[0,11-0,13]	[0,12-0,14]	[0,11-0,13]

← CRSTMP ER ATFM delay causes

* Bonuses only apply if ATFM delay per flight in year n at FAB level is within the 'Bonus range' for year n as shown in Section 5.2.1.1 and penalties only apply if ATFM delay per flight in year n at FAB level is within the 'Penalty range' for year n as shown in Section 5.2.1.1.

** When modulation applies, these figures are only indicative as they will be updated annually on the basis of the November n-1 NOP and the methodology described in 5.2.1.2.a2. The pivot values for year n have to be notified to the EC by 1 January n.



ANSP level – Calculation of bonus or penalty, if any

Example of a dead band expressed in percentage

DFS	Expressed in	Value
Dead band Δ	%	±23,0%
Max bonus (≤2%)*	% of DC	0,50%
Max penalty (≥ Max bonus)*	% of DC	0,50%
The pivot values for RP3 are*	modulated	CRSTMP

← Set up by NSA

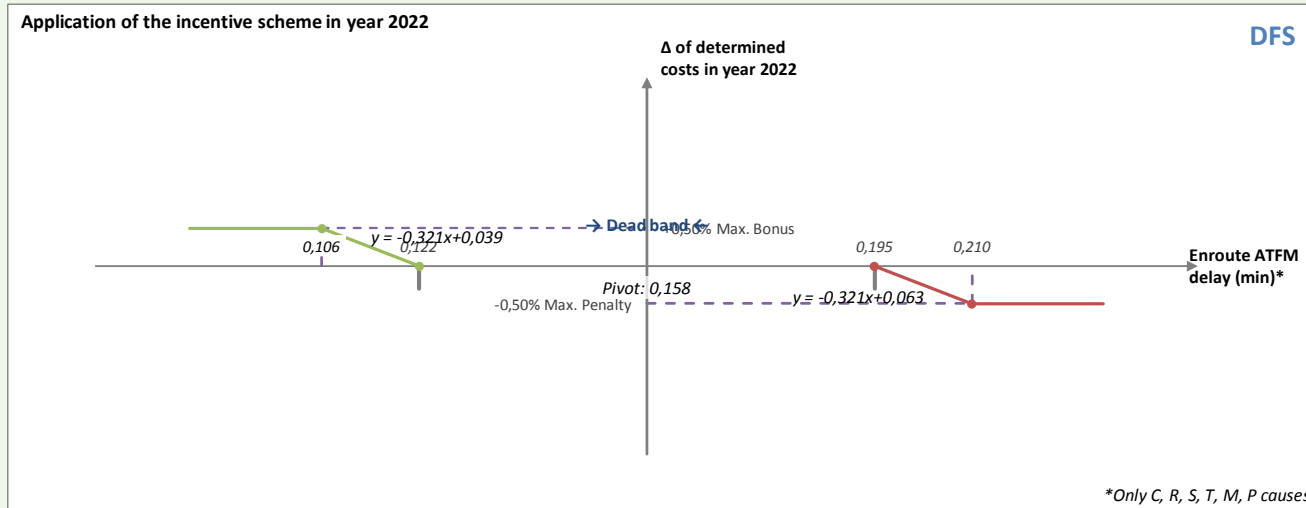
* These values are defined at FAB level and apply to all ANSPs and for the whole duration of RP3

	2020	2021	2022	2023	2024
Ref. values (mins of ATFM delay/ flight) as per NM letter of 1.6.2021			0,24	0,25	0,24
Alert threshold (Δ Ref. value in fraction of min)			±0,052	±0,053	±0,052
Performance Plan targets (mins of ATFM delay per flight)			0,24	0,25	0,24
Pivot values for RP3 (mins of ATFM delay per flight)**			0,16	0,17	0,16
Delay ranges for the calculation of financial advantages / disadvantages	Dead band range		[0,122-0,195]	[0,127-0,203]	[0,122-0,195]
	Bonus sliding range*		[0,106-0,122]	[0,113-0,127]	[0,106-0,122]
	Penalty sliding range*		[0,195-0,21]	[0,203-0,218]	[0,195-0,21]

← CRSTMP ER ATFM delay causes

* Bonuses only apply if ATFM delay per flight in year n at FAB level is within the 'Bonus range' for year n as shown in Section 5.2.1.1 and penalties only apply if ATFM delay per flight in year n at FAB level is within the 'Penalty range' for year n as shown in Section 5.2.1.1.

** When modulation applies, these figures are only indicative as they will be updated annually on the basis of the November n-1 NOP and the methodology described in 5.2.1.2.a2. The pivot values for year n have to be notified to the EC by 1 January n.



Proposed FABEC modulation mechanism

- **Scope of incentives to cover only CRSTMP *en route* ATFM delay causes**
 - ANSPs are supposed to be responsible for these causes

- **FABEC CRSTMP-ratio = 66%**
 - Based upon historical data (2012-2020)

- **No modulation of the pivot value based upon the November release of year n-1 of the NOP**
 - Currently no updated NOP available
 - Shorter timeframe
 - Marginal impact



Main characteristics of FABEC *en route* incentive scheme

- **Performance at FABEC level will trigger a bonus or penalty, if any**
 - In case of a bonus at FABEC level, only those ANSPs that have performed better than their expected contribution (beyond the dead-band) are awarded a bonus.
 - In case of a penalty at FABEC level, only those ANSPs that have performed worse than their expected contribution (beyond the dead-band) are awarded a penalty.

- **Main parameters**
 - Dead-band as a symmetric range around the pivot value set at 23% at FABEC level and set by each NSA at ANSP level (expressed in percentage or in fraction of minute)
 - Maximum bonus and penalty set at 0.5% of determined costs at ANSP level

- **Modulation mechanism**
 - Limit the scope of incentives to cover only CRSTMP *en route* ATFM delay causes
 - No modulation based upon the N-1 November release of the NOP





Thank you for your questions