Stakeholder Consultation Meeting on FABEC RP4 Performance Plan

Welcome

Jean-Christophe Braun, FR DGAC

FABEC presidency

4 September 2024

Stakeholder Consultation Meeting on FABEC RP4 Performance Plan

Setting the Scene

Pieter Verstreken, BE NSA
Chairman FABEC FPC

4 September 2024

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.*"

This consultation meeting focuses on the **FABEC elements of the RP4 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 July 2023 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 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.

FABEC added value is included in proposed RP4 performance targets

Development process of the FABEC plan

- Performance plan has been developed by the FABEC States' Finance and Performance Committee and 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 expected increase in traffic. FABEC NSAs recognize that it will be challenging to meet the targets.
- FABEC NSAs propose to include an addional environmental KPI into the FABEC performance plan and plan to monitor one additional PI in the field of capacity.
- FABEC Council has given its provisional approval to the targets presented today – pending stakeholder consultation

Approach to the consultation

- Proposed targets in the key performance areas of 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.
  - ANSP experts may be asked to answer questions from other stakeholders on detailed operational issues or plans, if necessary.

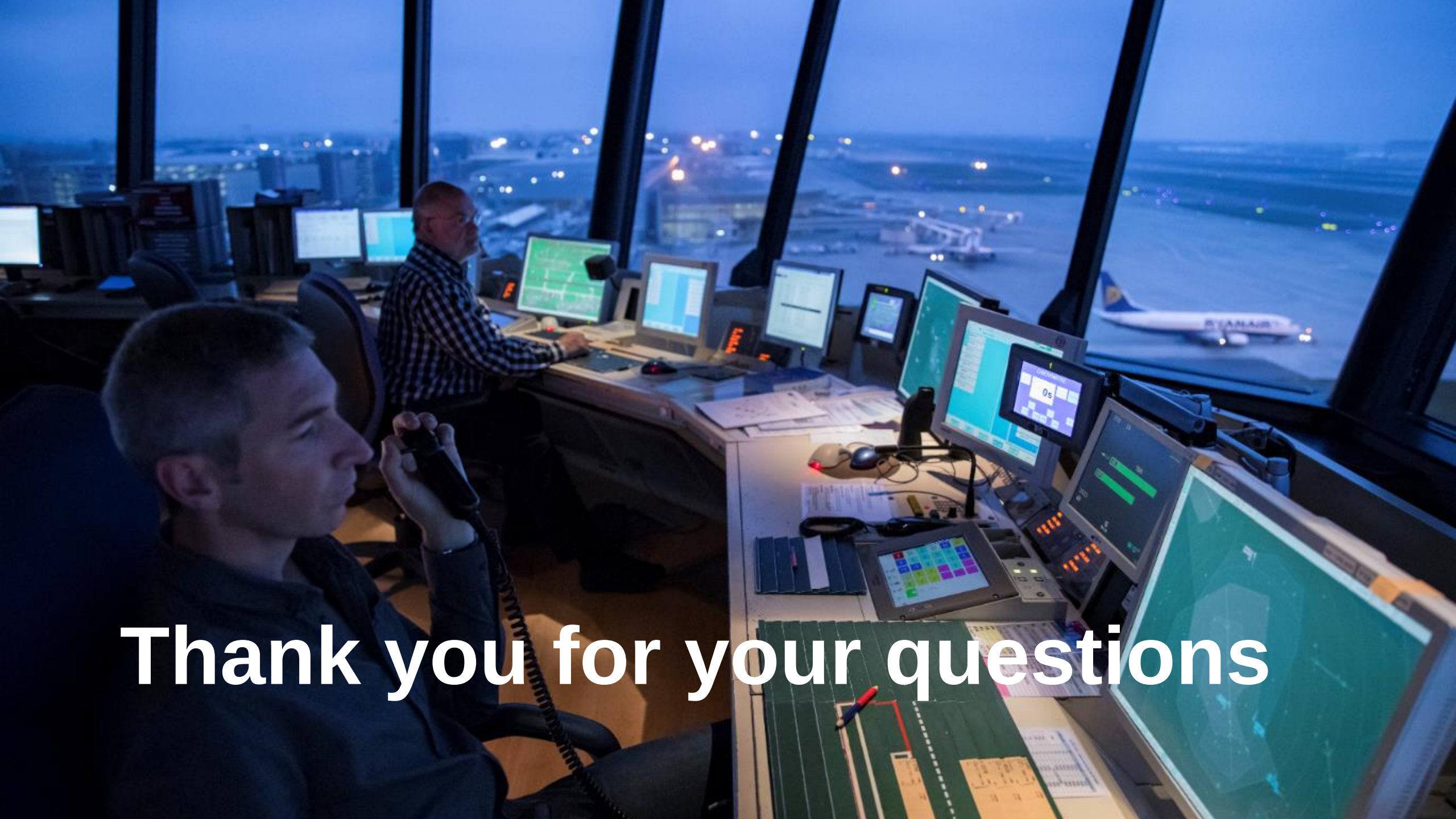
- **Cost efficiency** is presented for information and completeness only; details have been consulted at national level – **no discussion is foreseen today**.

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

- Following the consultation, 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 **9 September** at the latest.

10:00	Welcome	Jean-Christophe Braun, FR DGAC, FABEC Presidency
10:10	Setting the Scene	Pieter Verstreken, BE NSA, Chairman FABEC Finance and Performance Committee
Presentation of FABEC Performance Plan RP4		
10:30	Safety	Björn Schräder, LU NSA
10:50	Environment	Fredrik Eriksson, NL NSA
11:20	Capacity	Stéphane Lafourcade, FR NSA
12:00	LUNCH	
13:15	Cost Efficiency	Ana Salas, CH NSA
13:25	Incentive Scheme	Verena Kastlan, DE NSA
Stakeholder Views		
14:00	ANSP	Thomas Hellbach, PMG
14:30	Airspace Users	To be confirmed
Coffee Break		
15:10	Wrap-up	Jean-Christophe Braun Pieter Verstreken
15:30	END	



Thank you for your questions

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Safety

Björn Schräder, LU NSA

Key performance indicator definition

- KPI definition (*annex 1, section 1, paragraph 1.1 of (EU) 2019/317*);
- Unchanged compared to RP3.

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) 2024/1688 of 12 June 2024

setting Union-wide performance targets for the air traffic management network for the fourth reference period from 1 January 2025 to 31 December 2029

Article 2

(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 compared to RP3

[level C = "Managed" – level D = "Resilient" in RP4 vs. "Assured" in RP3]

EC statement on performance plans assessment

(EU) 2019/317 (unchanged):

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 for the KPA Safety

RP3 FABEC actual safety achievements 2023 & RP4 targets

Final, 2029, FABEC targets are in line with the Commission Implementing Regulation (EU) *2019/317 Annex IV, 1.1* Union-wide targets, presented on slide 8.

- Based on:
  - The actual RP performance achieved until mid-2024;
  - The Corrective action plans to be implemented before 2025/RP4 due to substandard performance;
  - The consultations held among the 6 NSAs & 7 ANSPs between 25 April and 28 June

    Individual intermediate targets for 2025-2028 have been determined.

- The starting point i.e. intermediate target end-2025 does differ significantly between FABEC ANSPs due to the current performance in RP3. Consequently, the evolution from 2025 onwards, necessary to reach the 2029 RP4 targets, does differ likewise.

- Within a careful assessment among both NSAs & ANSPs of the new RP4 questionnaire the level D for SRM (Safety Risk Management) was considered very challenging compared to the other MOs (Management Objectives) and will thus remain the major concern throughout the upcoming RP. The final proposal is shown on the following slides:

RP4 FABEC safety targets

		2025	2026	2027	2028	2029
		Target	Target	Target	Target	Target
skeyes	Safety policy and objectives	B	B	B	B	C
	Safety risk management	B	B	B	C	D
	Safety assurance	B	B	B	B	C
	Safety promotion	B	B	B	B	C
	Safety culture	B	B	C	C	C
	Additional comments					

		2025	2026	2027	2028	2029
		Target	Target	Target	Target	Target
DSNA	Safety policy and objectives	B	B	C	C	C
	Safety risk management	B	B	B	C	D
	Safety assurance	B	B	C	C	C
	Safety promotion	B	B	B	B	C
	Safety culture	B	C	C	C	C
	Additional comments					

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

RP4 FABEC safety targets

		2025	2026	2027	2028	2029
		Target	Target	Target	Target	Target
DFS	Safety policy and objectives	B	B	C	C	C
	Safety risk management	B	B	B	C	D
	Safety assurance	B	B	C	C	C
	Safety promotion	B	C	C	C	C
	Safety culture	B	B	C	C	C
	Additional comments					

		2025	2026	2027	2028	2029
		Target	Target	Target	Target	Target
ANA LUX	Safety policy and objectives	B	B	B	B	C
	Safety risk management	B	B	B	C	D
	Safety assurance	B	B	B	B	C
	Safety promotion	B	B	B	C	C
	Safety culture	A	B	B	B	C
	Additional comments					

[level A = “Informal Arrangements” - level B = “Defined” - level C = “Managed” – level D = “Resilient”]

RP4 FABEC safety targets

		2025	2026	2027	2028	2029
		Target	Target	Target	Target	Target
LVNL	Safety policy and objectives	C	C	C	C	C
	Safety risk management	B	B	C	C	D
	Safety assurance	B	B	B	C	C
	Safety promotion	A	C	C	C	C
	Safety culture	A	A	B	B	C
	Additional comments					

		2025	2026	2027	2028	2029
		Target	Target	Target	Target	Target
Skyguide	Safety policy and objectives	C	C	C	C	C
	Safety risk management	B	B	C	C	D
	Safety assurance	B	B	B	C	C
	Safety promotion	B	C	C	C	C
	Safety culture	B	C	C	C	C
	Additional comments					

[level A = “Informal Arrangements” - level B = “Defined” - level C = “Managed” – level D = “Resilient”]

RP4 FABEC safety targets

		2025	2026	2027	2028	2029
		Target	Target	Target	Target	Target
MUAC	Safety policy and objectives	B	C	C	C	C
	Safety risk management	B	B	B	C	D
	Safety assurance	B	B	C	C	C
	Safety promotion	B	B	C	C	C
	Safety culture	B	C	C	C	C
	Additional comments					

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

Main measures put in place to achieve the local safety performance targets

ANSPs

- In accordance with *(EU) 2017/373 ATM/ANS.OR.B.005(a)(5)* and *AMC1 ATS.OR.200(3)(iii)* ANSPs need to develop and maintain a process to identify the causes of substandard performance of the SMS. This process is overseen by NSAs within their oversight cycle.

- ANSPs have defined at national level addtional measures to counteract in a proactive manner substandard performance of the SMS to facilitate the achievement of RP4 final targets in 2029. These are:
  - Recruitment of additional safety staff;
  - Inclusion of human factors specialists;
  - Specific training, e.g. in the area of SRM (ref. slide 10, bottom);
  - Open communication of (organisation-wide) risks;
  - Safety surveys;
  - Safety Culture assessments and Just Culture training;
  - Updated safety strategy.

Main measures put in place to achieve the local safety performance targets

NSAs

- Compliance verification of *(EU) 2017/373* is considered by EASA as an effective means to identify substandard performance of the SMS. This is done within the national oversight cycle. Eventual intermediate targets not being reached can thus be identified at the earliest possibility;

- FABEC NSAs meet regularly (three times a year whereas once in person, each January to evaluate the ANSPs' actual safety performance of the previous year). The SPRC TF (Safety Performance and Risk Coordination Task Force) gathers data permanently and jointly performs a kind of "benchmarking" of the ANSPs, even throughout RP3 where Performance Plans finally were submitted at national level;

- The NSAs-ANSPs cooperation has been maintained to prepare a common approach (target consultation) end-June 2024. A joint way forward in relation to the RP4 questionnaire interpretation before 2025 is also foreseen later this year.


Thank you for your questions

Stakeholder Consultation Meeting on FABEC RP4 Performance Plan

Environment

Fredrik Eriksson, NL NSA

KPI Horizontal En Route Flight Efficiency

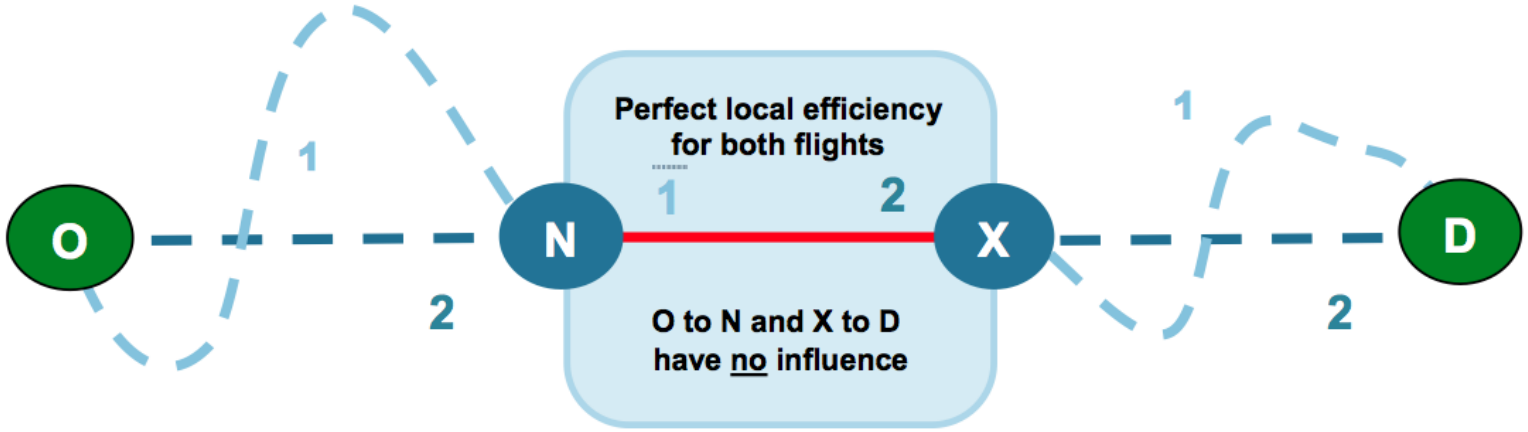
Definition (EU) 2019/317, Annex 1

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.*



https://ansperformance.eu/methodology/horizontal-flight-efficiency-pi/

EU-wide targets

Commission implementing decision (EU) 2024/1688 of 12 June 2024

setting the Union-wide performance targets for the air traffic management network for the fourth reference period from 1 January 2025 and ending on 31 December 2029.

- **Article 3**

Union-wide performance targets for the key performance area of environment, as defined in point 2.1 of Section 1 of Annex I to Implementing Regulation (EU) 2019/317, shall be an average horizontal en route flight efficiency of the actual trajectory and measured as average additional distance flown compared to the great circle distance and shall not exceed the following percentages: 2,80 % in 2025, 2,75 % in 2026, 2,71 % in 2027, 2,68 % in 2028 and 2,66% in 2029.

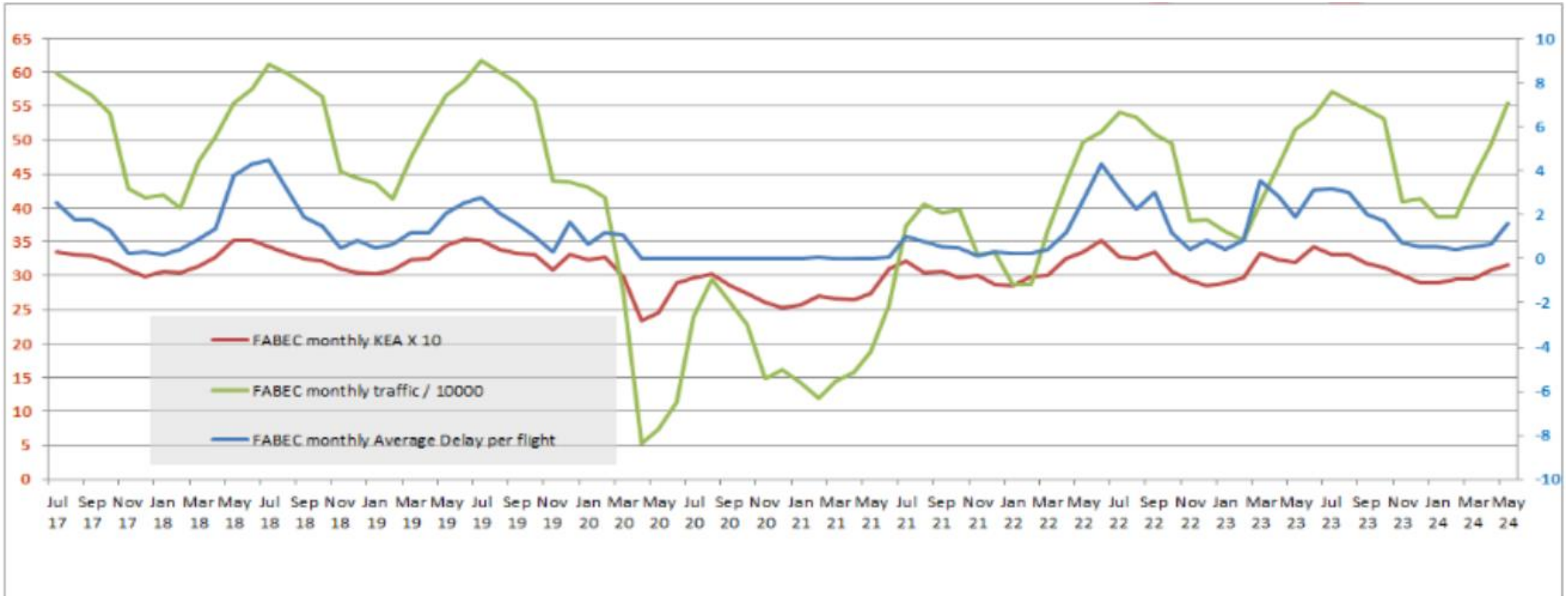
Union-wide ENV target	2025	2026	2027	2028	2029
Average union-wide horizontal flight efficiency targets	2,80%	2,75%	2,71%	2,68%	2,66%

Reference values for Environment

Environment reference values for RP4
published by EC in May 2024

%	2025	2026	2027	2028	2029
EU wide	2.80%	2.75%	2.71%	2.68%	2.66%
FABEC RV	2.89%	2.84%	2.81%	2.79%	2.78%
Belgium RV	3.50%	3.48%	3.46%	3.42%	3.40%
Germany RV	2.62%	2.57%	2.55%	2.54%	2.53%
France RV	2.87%	2.83%	2.79%	2.76%	2.75%
Netherlands RV	2.92%	2.90%	2.88%	2.86%	2.84%
Switzerland RV	4.34%	4.31%	4.28%	4.23%	4.18%

Interdependency with Traffic/Delay



Contributions to FABEC target

MUAC:

- Cooperation with DSNA for the implementation of FRA with Reims ACC East (FEB 2024) and ACC West (2025).
- Cross border FRA with DFS (NOV 2023)
- MUAC ATM portal offering re-routing proposals to Airspace users using the ATM portal.

Skeyes:

- Improved FUA at Belgian level – together with BE MIL and MUAC
- Establishing (with BE MIL and MUAC) a CIV-MIL AMC co-located at skeyes premises, aiming to optimise the airspace management between CIV and MIL

Contributions to FABEC target

DSNA:

- FRA implementation in Marseille, Reims, and Paris ACC (NOV 2025), in Brest and Paris ACC (NOV 2026), and in Reims (2027).
- Cross-border FRA with Switzerland, MUAC, and DFS.
- Implementation of PBN trajectories in ORLY in 2025 and CDG between 2026 and 2028

DFS:

- Cross-border FRA with Sweden, Denmark, Austria, Switzerland, and Maastricht UAC implemented.
- Cross-border FRA with Poland and Czech Republic dependent on when system enabling trajectory-based flight plan data processing (iCAS or similar) is operational.
- FRA in Langen and Bremen FIR also dependent on trajectory-based system.

Contributions to FABEC target

LVNL:

- Implementation of RECAT-EU and TBS at Schiphol in 2023.
- Use of LARA for advanced FUA, making temporary reserved areas available for civil traffic.
- Implementation of extended AMAN, reducing the need for vectoring and holding in ACC sectors.

Skyguide:

- FRA cross-border improvements.
- FABEC RAD harmonization.
- CIV-MIL airspace management cell system deployment.

Additional KPI - Environment

Additional KPI - Environment

Definition IR 2019/317 Art 8 paragraph 4:

Member states may establish key performance indicators and indicators for monitoring in addition to those referred to in paragraph 2 as regards, in particular, civil-military or meteorological aspects.

Environmental Management KPI

A KPI measuring the operational and non-operational environmental performance of the FABEC ANSPs.

Pushing the FABEC ANSPs to invest in environmentally beneficial projects in both an operational and a non-operational environment.

ANSPs are expected to acquire one of the following before the end of RP4 (2029):

- CANSO GreenATM accreditation level 3 (managed) or higher;
- an equivalent level of another environmental accreditation/certification system;
- or an equivalent level of performance to be audited by the FABEC finance and performance committee.

Environmental management KPI – Four categories

Governance:

- Policy and plan
- Environmental management system
- Environmental culture
- Environmental targets

Infrastructure & Utilities:

- Energy management
- Power procurement and production
- CNS rationalisation
- CNS flight inspection

Other:

- Sustainable procurement
- Airport/community relations
- Airspace change management
- Mobility management

Improved ATM:

- Flexible use of Airspace (FUA)
- Meteorological information
- Improved surveillance coverage
- Airport-Collaborative Decision Making (A-CDM)
- Surface movement
- Continuous Climb Operations (CCO)
  Continuous Descent Operations (CDO)
- Performance-Based Navigation (PBN)
- Wake Turbulence optimisation
- Trajectory Optimisation
- Air traffic flow management
- Research & Development

Thank you for your questions

FABEC

Stakeholder Consultation Meeting on FABEC RP4 Performance Plan

En Route Capacity

(Average en route ATFM delay per flight)

Stéphane Lafourcade, FR NSA

making the difference

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) 2024/1688 of 12th June 2024 setting the Union-wide performance targets for the air traffic management network for the fourth reference period…

- **Reference values:**

  Capacity reference values for RP4, calculated by the Network Manager

  Initially distributed by EC 21st May 2024

Min/flight	2025	2026	2027	2028	2029
EU wide	0.90	0.70	0.60	0.50	0.50
FABEC RV	0.63	0.50	0.43	0.36	0.36
skeyes RV	*0.22*	*0.17*	*0.16*	*0.12*	*0.12*
DFS RV	*0.39*	*0.32*	*0.29*	*0.23*	*0.23*
DSNA RV	*0.44*	*0.35*	*0.28*	*0.24*	*0.24*
LVNL RV	*0.16*	*0.12*	*0.10*	*0.10*	*0.10*
MUAC RV	*0.31*	*0.26*	*0.23*	*0.19*	*0.19*
Skyguide RV	*0.36*	*0.27*	*0.23*	*0.20*	*0.20*

EC RP4 performance plans assessment

(EU) 2019/317:

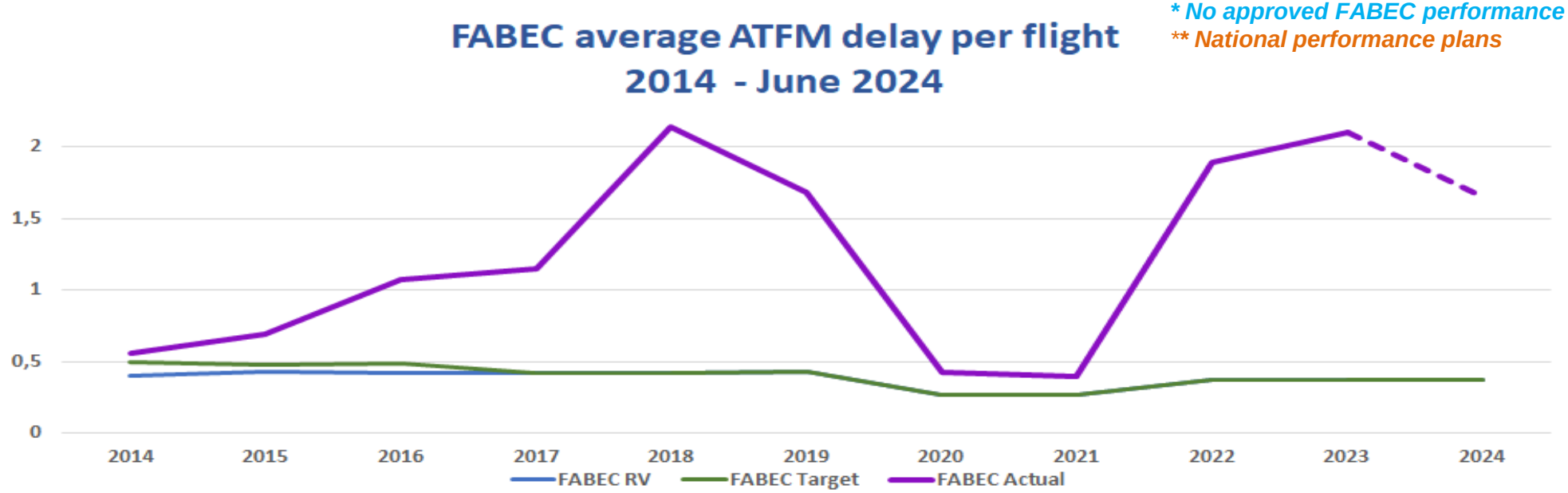
Article 14.1: ***The Commission shall assess the consistency of the national performance targets or FAB performance targets*** *contained in the draft performance plans with the Union-wide performance targets on the basis of the criteria laid down in point 1 of Annex IV, and taking into account local 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	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
	(RP1)	*(RP2)*	*(RP2)*	*(RP2)*	*(RP2)*	*(RP2)*	*(RP3)*	*(RP3)*	*(RP3)*	*(RP3)*	*(RP3)*
EU wide Targets	0.50	0.50	0.50	0.50	0.50	0.50	0.35	0.35	0.50	0.50	0.50
FABEC RV	0.40	0.43	0.42	0.42	0.42	0.43	0.27	0.27	0.37	0.37	0.37
FABEC Targets	0.50	0.48	0.49	0.42	0.42	0.43	*0.27**	*0.27**	*0.37***	*0.37***	*0.37***
FABEC Actual	0.56	0.69	1.07	1.15	2.14	1.68	0.42	0.40	1.89	2.10	*1.65*

** No approved FABEC performance plan*
*** National performance plans*



FABEC RP3 actual performance:

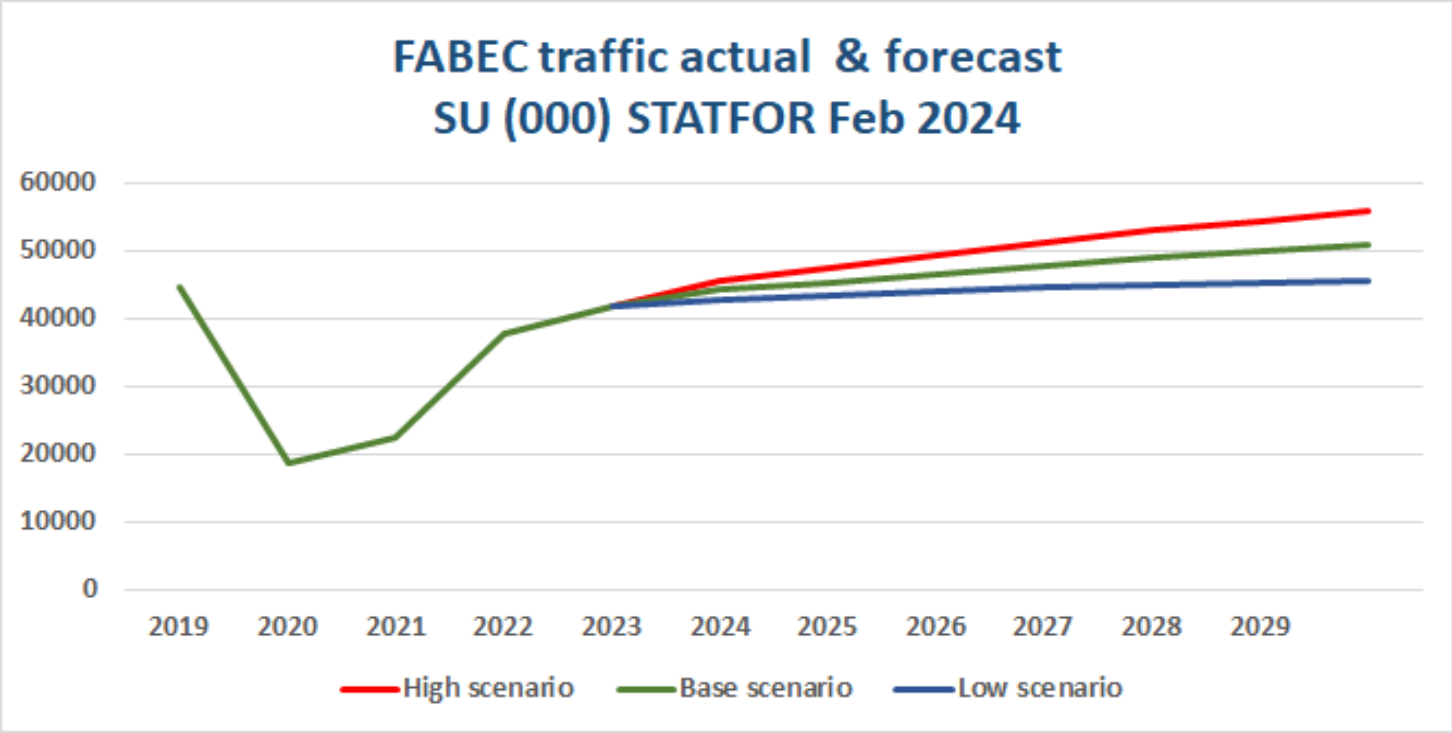
Current delays in the FABEC area, mainly due to:

- Remaining **capacity** and **staffing** issues in some ACCs (Geneva, Karlsruhe, Marseille, Munich, Reims)
- System implementation and related transition plans (e.g. 4-FLIGHT at Reims, Marseille and Paris)
- Traffic recovery and volatility (2023 traffic already higher than 2019 in some areas: Reims ACC 2023 traffic = 105% of 2019 traffic level)
- 2023 high impact of French ATC industrial actions
- Increasing weather-related delays
- Increased military activity and impact of the war in Ukraine

FABEC actual traffic and forecast from RP2 to RP4

Feb 2024 STATFOR forecasts

Total service units (Thousands)		2019	2020*	2021	2022	2023	2024*	2025	2026	2027	2028*	2029	2030	Total Growth	AAGR RP3 2020-2024	AAGR RP4 2025-2029
FABEC	High	.	.	.	.	.	45 511	47 325	49 374	51 210	53 004	54 372	55 859	34%	0,3%	3,6%
	Base	44 732	18 645	22 587	37 772	41 693	44 238	45 366	46 516	47 684	48 914	49 866	50 896	22%	-0,2%	2,4%
	Low	.	.	.	.	.	42 878	43 244	43 978	44 490	45 001	45 257	45 548	9%	-0,8%	1,1%



FABEC back to 2019 level in 2024

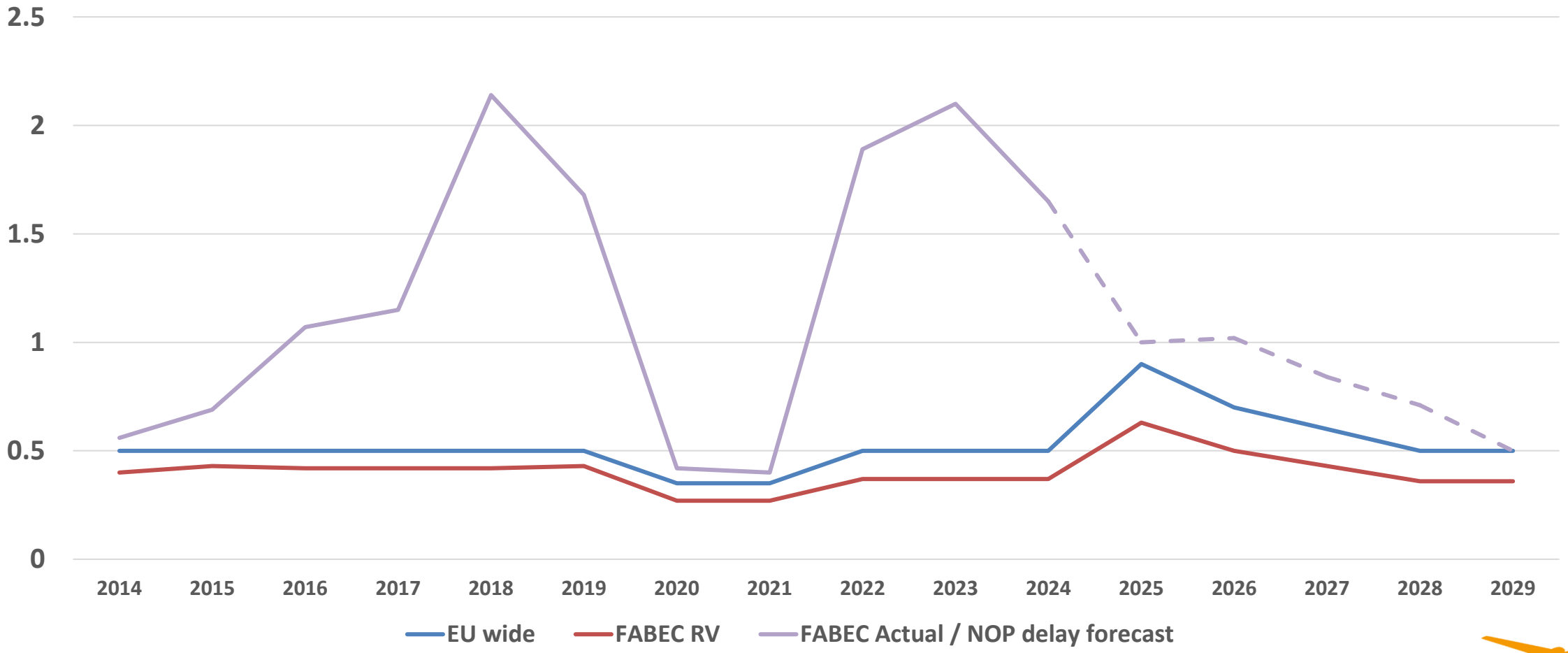
+2.4% per year over RP4

Uneven distribution of traffic growth

- From +1.7% per year for NL
- Up to +2.7% per year to CH

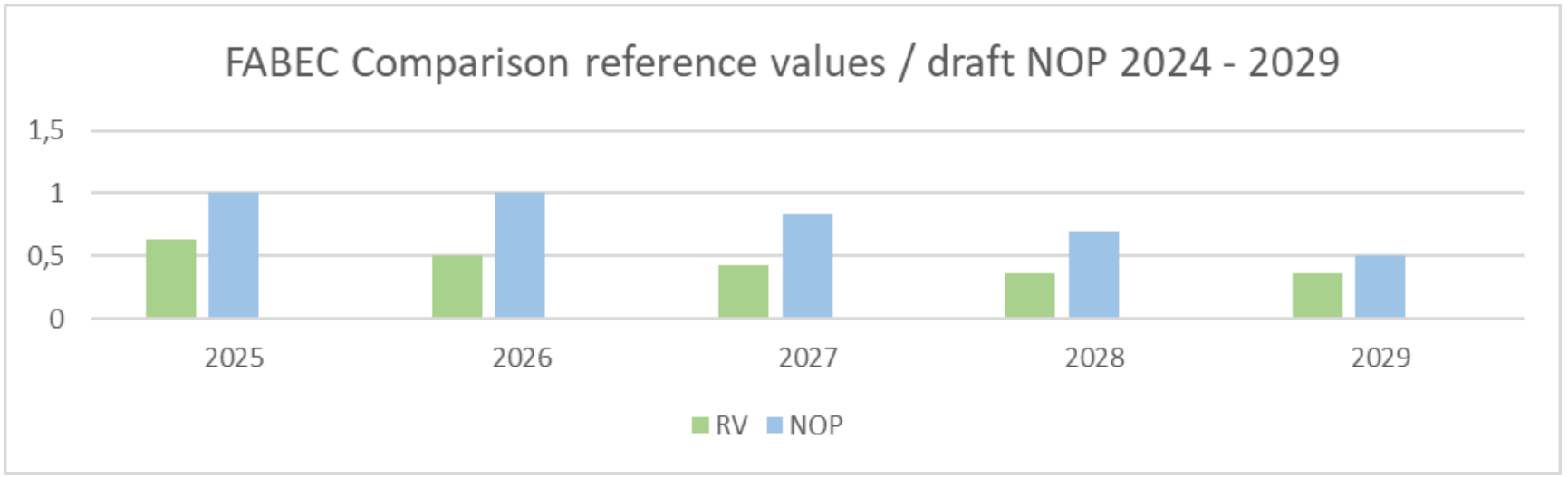
FABEC draft NOP 2024 – 2029 delay forecast

FABEC actual / draft NOP ER ATFM delays
Compared to EU-wide targets and FABEC reference values



FABEC draft NOP 2024–2029 and NM reference values

FABEC (min/flight)	2025	2026	2027	2028	2029
Reference values	0.63	0.50	0.43	0.36	0.36
Draft NOP delay forecast	1.00	1.02	0.84	0.71	0.50



Still need to:

- **Foster** current draft NOP FABEC ANSPs capacity measures
- **Maximise** benefits from their implementation
- **Build up** on ongoing high levels of recruitment and training
- **Implement** new productivity measures

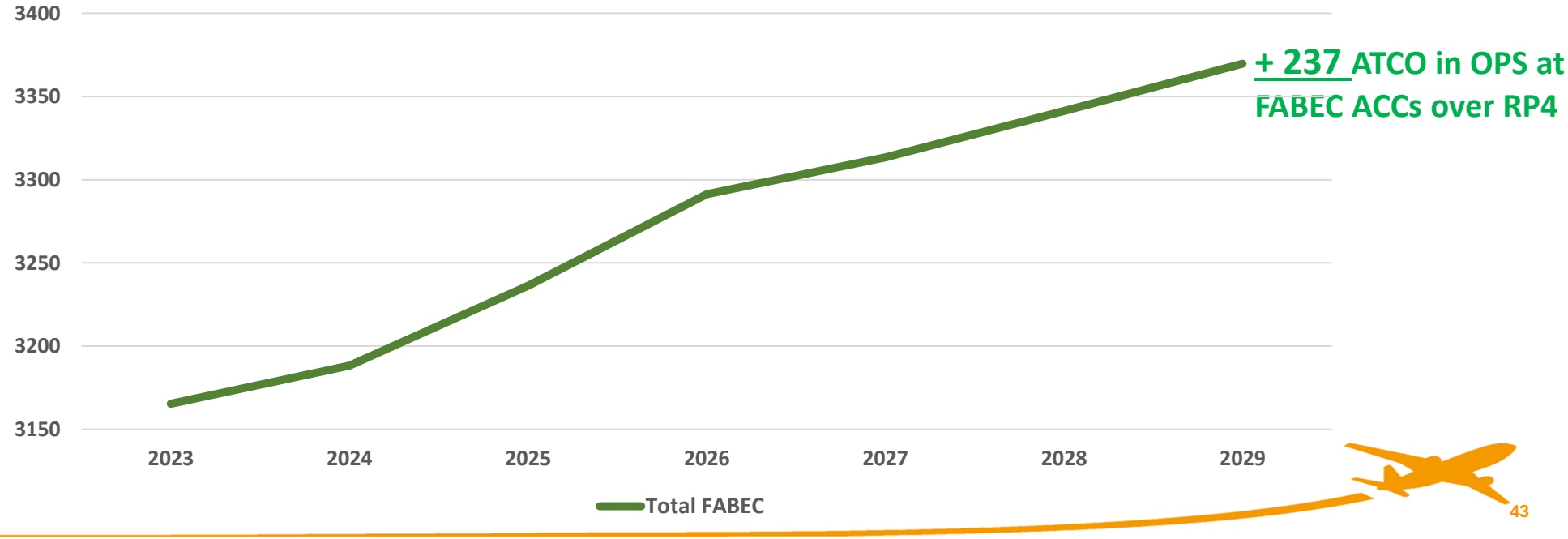
Main capacity enhancing measures during RP4

Exhaustive list of measures available in NOP 2024–2029

- **Infrastructure, technology and innovation: implementations for additional capacity**
  - AMAN/XMAN and ICAS new versions for DFS & LVNL
  - 4-FLIGHT at all ACCs / New 4-FLIGHT Revolution for DSNA
  - ATC system upgrade in CANAC2 for skeyes
  - Virtual centre at Skyguide
  - Increased use of CPDLC for all ANSPs
- **Human resources and training: Staff issues mitigations**
  - High level of ATCO hiring and training in all ANSPs
  - New social agreements, flexible rostering & adapted shifts,
  - Changes in training (reduced duration, higher use of simulators)
  - Sectors below FL 195 transferred to approach units (DSNA)
  - New ATC strikes management law in France
- **Airspace, network and civ-mil cooperation**
  - Continuation of rolling NOP and NM/ANSP collaboration
  - Enhanced FUA within FABEC area
  - FABEC FRA

Main capacity enhancing measures during RP4:
ATCO hiring & training: more ATCOs in OPS at ACCs (1/3)

ATCO in OPS at ACC (FTE)	2023	2024	2025	2026	2027	2028	2029
Skeyes	87	92	97	99	101	99	96
DSNA	1263	1279	1299	1333	1357	1369	1362
DFS	1212	1193	1217	1231	1267	1296	1324
LVNL	80	82	81	82	22	84	85
Skyguide	239	243	239	239	237	243	239
MUAC	294	296	307	302	305	305	306
Total FABEC	**3175**	**3185**	**3240**	**3286**	**3349**	**3396**	**3412**

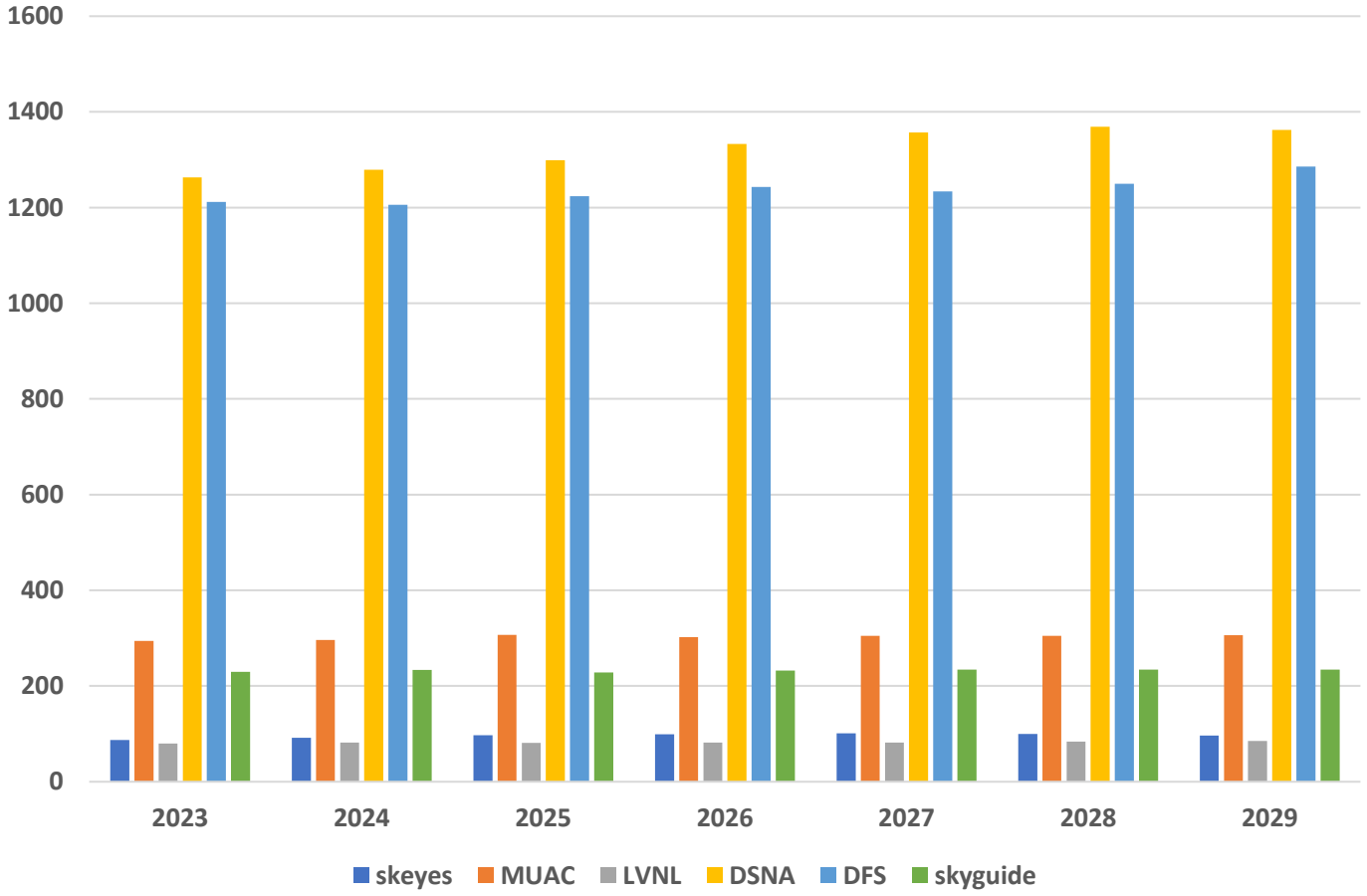


+ 237 ATCO in OPS at FABEC ACCs over RP4

Main capacity enhancing measures during RP4:

ATCO hiring & training: more ATCOs in OPS at ACCs (2/3)

 # ATCOs in OPS (ER ACC) over RP4 FABEC
& per FABEC ANSP = +7.5 % from 2023 to 2029

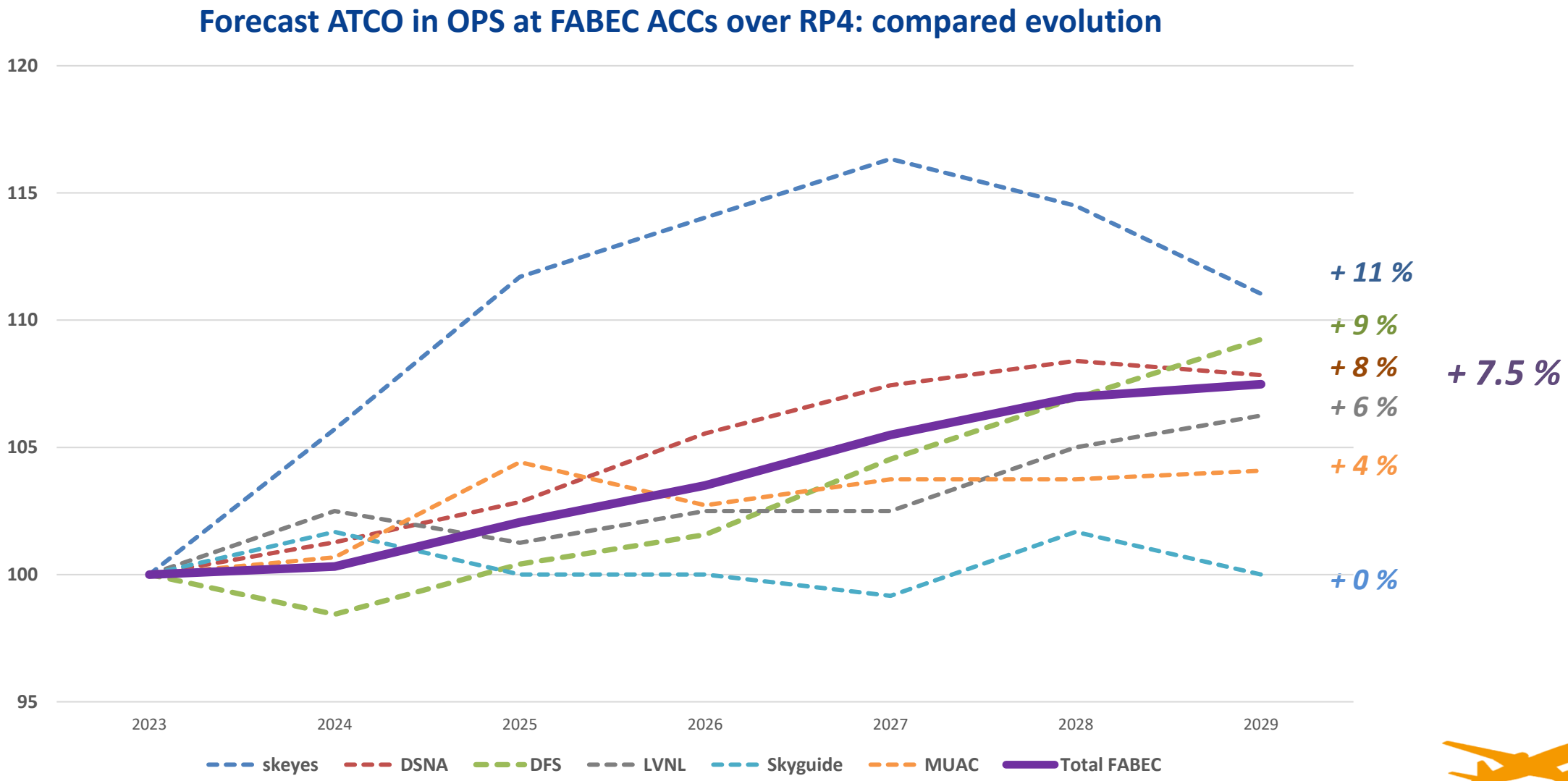


- Continuous increase over RP4 at FABEC ACCs for ATCO in OPS (FTE)
- Mainly driven by DSNA & DFS
- In addition, high level of new ATCO hiring over RP4 :

→ + 426 trainees / year in average for FABEC

→ Additional ATCOs in OPS for RP5 (additionnal capacity & anticipation of retirement wave)

Main capacity enhancing measures during RP4:
ATCO hiring & training: more ATCOs in OPS at ACCs (3/3)



Main capacity enhancing measures during RP4:

FABEC added value

- Joint ANSP & States Work Program: this FABEC program aims to organise and enhance coordination and efficiency between Air Navigation Service Providers and states to improve air traffic management and operational performance.
- Extended Arrival Management (XMAN): XMAN focuses on optimising arrival sequences and managing arrival traffic flows at airports to reduce TMA delays and improve overall fuel/emission efficiency.
- Free Route Airspace (FRA): FRA aims to provide aircraft operators with the flexibility to plan and fly the most efficient and direct routes within designated airspace, reducing fuel consumption and emissions.
- FABEC New Generation Fighter Task Force (NGF): The TF ensures requirements and impacts of the latest generation of fighters on operations are considered for overall capacity provision.
- Operational Excellence Benchmark Capacity Planning: This initiative seeks to develop and implement practices to optimise capacity planning and operational excellence in air traffic management.
- Airspace & route optimisation: many small improvements are planned and coordinated at cross-border interfaces.

RP4 FABEC en route capacity targets

FABEC States proposal

FABEC States propose to set RP4 capacity performance targets as follows:

RP4	2025	2026	2027	2028	2029
Target (min/flight)	0.63	0.50	0.43	0.36	0.36

FABEC NSA consider that:

- RP4 will finalise the implementation of a full set of technical, HR and airspace redesign measures to accommodate post-covid traffic recovery and further growth.
- RP4 will see a large increase in ATCO in OPS at FABEC ACCs to address current RP3 staffing issues
- The proposed RP4 FABEC targets are considered very ambitious and do not include any buffer for disruption (industrial action, technical failure, exceptional meteorological event)
- The proposed RP4 FABEC targets are consistent with the EU wide targets and aligned with FABEC RV but are very challenging for ANSPs and major uncertainties remain (traffic volatility, structure recovery, geopolitical evolution).

RP4 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; as an example, fast ongoing traffic recovery in Summer 2024, e.g.
    - → 5th July 2024 = 11,632 flights controlled by DSNA: highest daily traffic ever.
- Local and temporary reduction of capacity for system implementation (transition plans) due to training, validation, commissioning and safety caution ATFM measures (mainly at skeyes in 2027-2028 and DSNA in 2025-2026) which will need continued cooperation and fine-tuning with NM, neighboring ANSPs and the users as well as NSA monitoring.
- ATCO hiring and training: full hiring and training pace is already reached in some cases, optimisation of training is ongoing (simulator) but pressure of upcoming retirement waves and training failure rates to be considered.
- Geopolitical and economic uncertainties.

Additional PI – En route capacity

New Capacity Performance Indicator:

FABEC Peak-Hour Throughput PI (1/2)

Purpose:

- Enhance the measurement of Air Navigation Service Providers capacity provision.
- Provide a clearer picture of capacity performance by focusing on actual traffic throughput.
- Address limitations of current KPI (average ATFM delay per flight) by incorporating actual traffic movements.

Benefits:

- Provides a more nuanced understanding of capacity provision.
- Helps all stakeholders better align capacity management with forecasted demands.
- Identify correlations between peak traffic, planned traffic, and delays.
- Supports continuous improvement in air traffic management by identifying periods of over and under-provision of capacity.

New Capacity Performance Indicator:

FABEC Peak-Hour Throughput PI (2/2)

How it works:

Daily Peak Demand Assessment:

- Identify the 3-hour peak traffic period for each Area Control Center (ACC).
- Calculate the average number of movements per hour during these peak periods.

Comparison with Planned Traffic:

- Compare daily peak throughput with planned traffic levels.
- Classify performance as: below/close to/above planned traffic.

Delay Analysis:

- Record delays incurred on peak traffic days.
- Identify correlations between peak traffic, planned traffic, and delays.

Aggregation and Reporting:

- Aggregate data across all FABEC ACCs.
- Analyse trends and identify performance insights.
- Use results to refine target-setting and improve capacity management strategies.


Thank you for your questions

Stakeholder Consultation Meeting on FABEC RP4 Performance Plan

Cost Efficiency

Ana Salas, CH NSA

COST EFFICIENCY, EU 2019/317

Annex I, Section 1, Paragraph 4.1.

1.4. *COST-EFFICIENCY*

En route determined unit cost

(a) Consistency of the determined unit cost trend at charging zone level over the reference period with the Union-wide determined unit cost trend over the same period, whereby those trends are expressed as a percentage.

For the purpose of calculating those trends, the applicable Union-wide and local performance target values and the baseline values for the determined unit costs referred to in point (a) of Article 9(4), and in point (a) of Article 10(2) shall be used.

(b) Consistency of the determined unit cost trend at charging zone level over a time period covering both the reference period covered by the performance plan and the preceding reference period ('long term determined unit cost trend') with the Union-wide determined unit cost trend over the same period, whereby those trends are expressed as a percentage.

The long-term determined unit cost trend at charging zone level shall be calculated by using the actual unit cost at charging zone level for the year before the start of the preceding reference period concerned.

(c) Consistency of the determined unit cost level: comparison of the baseline value for the determined unit cost referred to in point (a) of Article 10(2) at the level of the charging zone concerned with the corresponding average value of the charging zones where air navigation service providers have a similar operational and economic environment as defined in accordance with point (c) of Article 9(4).

(d) A deviation from the criteria referred to in points (a) to (c) may be deemed necessary and proportionate in order to:

(i) allow the achievement of the performance targets in the key performance area of capacity set at national level or the level of functional airspace blocks provided that the deviation from the Union-wide determined unit cost trend is exclusively due to additional determined costs related to measures necessary to achieve the performance targets in the key performance area of capacity; or

(ii) implement restructuring measures that lead to restructuring costs referred to in Article 2(18), provided that the deviation is exclusively due to those restructuring costs and that a demonstration is provided in the performance plan that the restructuring measures concerned will deliver a net financial benefit to airspace users at the latest in the subsequent reference period.

EU-wide targets

Commission implementing decision (EU) 2024/1688 of 12 June 2024

setting the Union-wide performance targets for the air traffic management network for the fourth reference period from 1 January 2025 and ending on 31 December 2029.

Article 5

Union-wide performance targets for the key performance area of cost-efficiency, as defined in point 4.1 of Section 1 of Annex I to Implementing Regulation (EU) 2019/317, shall be a year-on-year change of the average Union-wide determined unit cost for en route air navigation services of -1,2 % for 2025, -1,2 % for 2026, -1,2 % for 2027, -1,2 % for 2028 and -1,2 % for 2029. The year-on-year change shall be calculated starting from the baseline value for the determined unit cost set in paragraph 3.

Union-wide CE target	2025	2026	2027	2028	2029
Average Union-wide determined unit cost for en route ANS	-1.2%	-1.2%	-1.2%	-1.2%	-1.2%

Cost Efficiency

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

- July 3– France
- July 5 – The Netherlands
- July 10 - MUAC
- July 16 – Switzerland
- August 7 – Luxembourg terminal
- August 8 – Germany
- August 19 – Belgium and Luxembourg

Cost Efficiency RP4

- RP4 is a period with developments planned in the main pillars of air navigation services such as airspace, technology, innovation, airport, institutional, human factor and safety at FABEC level.

- Implementation of new ATM systems and upgrades of legacy systems will take place in RP4.

- Recruiting: ambitious ATCO recruiting, on the job training with higher traffic conditions and new ATCO agreements.

Aggregated global figure (User Consultation's data)

FABEC real en route unit cost	Baseline 2019	Baseline 2024	2025 D	2026 D	2027 D	2028 D	2029 D	CAGR 29/24	CAGR 29/19
Belgium-Luxembourg	94.11	100.07	101.57	102.47	102.02	100.33	99.57	*-0.10%*	*0.63%*
France	65.35	62.45	62.42	62.03	61.96	60.46	59.34	*-1.02%*	*-1.07%*
Germany	72.02	76.41	75.86	74.70	74.71	73.93	73.49	*-0.78%*	*0.22%*
The Netherlands	86.78	107.59	105.79	104.91	104.69	104.39	104.35	*-0.61%*	*2.07%*
Switzerland	103.90	133.34	138.20	137.50	134.06	131.73	133.13	*-0.03%*	*2.79%*
Aggregated weighted average	**72.34**	**75.05**	**75.05**	**74.37**	**74.14**	**72.88**	**72.16**	*-0.78%*	*-0.03%*
Year-on-year variation at FABEC level			*0.0%*	*-0.9%*	*-0.3%*	*-1.7%*	*-1.0%*		

Thank you for your attention

FABEC

Stakeholder Consultation Meeting on FABEC RP4 Performance Plan

En route Incentive Scheme, Traffic Risk Sharing Mechanism

Verena Kastlan, GER NSA

making the difference

En route Incentive Scheme

Regulatory framework – IR (EU) 2019/317

General principles:

Article 11 para 1, 2, 3 lit a-f

Incentive schemes shall

- be of financial nature, effective and proportionate
- apply during the entire period covered by the performance plan
- be non-discriminatory, transparent and effective
- have material impact on revenue at risk
- have maximum fin. disadvantages which are at least equal to the maximum fin. advantages
- have pivot values for the purpose of calculating the financial advantages and disadvantages
- consist of a symmetric range (dead band) around the pivot value for minor variations in delay not leading to an incentivization
- be of effect in n+2

Regulatory framework – IR (EU) 2019/317

Additional principles for FAB PPs

Article 11 para 3 lit g

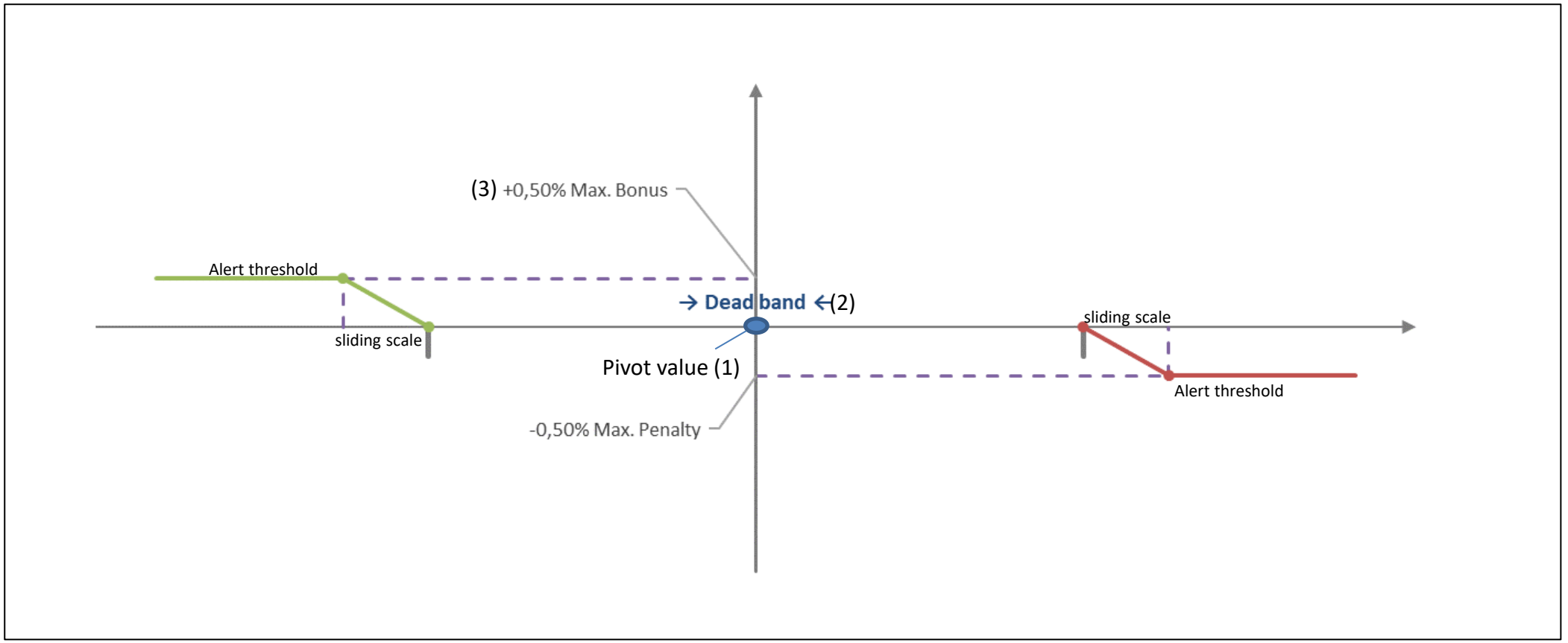
Incentive schemes shall

- be applied uniformly, in a consistent manner to all ANSPs concerned
- consist of additional pivot values on FAB level
- only apply in a respective year to the ANSPs contributing to the FABs total over-/ underperformance

Annex XIII No 2

- Smooth sliding scale from dead band to alert threshold

Building the incentive scheme



1. Pivot values FABEC

Art 11 para 3 lit c,g

- Based on performance targets at nat. level or modulated at nat. level in accordance with point 1 Annex XIII
- **Annex XIII 1.1. modulation may follow one or both following points**
  - (a) pivot value shall be informed by the ref. value at ANSP level from November release of n-1 NOP
  - (b) limited to cover delay causes related to the codes CRSTMP of the ATFCM user manual

FABEC and national pivot values limited to cover CRSTMP delay causes

Calculation of the pivot values

- Ratio calculated based on historic values from ANSPs performance
- RP2 ratio chosen
- pivot values represent 67.29% of the FABEC Capacity target
- For the ANSP pivot values individual CRSTMP shares have been applied to the reference values

	2025	2026	2027	2028	2029
FABEC	0.42	0.34	0.29	0.24	0.24
Skeyes	0.17	0.13	0.13	0.10	0.10
DFS	0.26	0.22	0.20	0.15	0.15
DSNA	0.28	0.22	0.18	0.15	0.15
LVNL	0.10	0.08	0.06	0.06	0.06
MUAC	0.19	0.16	0.14	0.12	0.12
Skyguide	0.25	0.19	0.16	0.14	0.14

2. Dead band

Art. 11 para 3 lit d

- Symmetric range around the pivot value to ensure that minor delay variations do not lead to financial incentivation

Annex XIII No 2.1

- The alert threshold referred to in Art. 9 para 4 lit b iii, established by Commission Implementing Decision (EU) 2024/1688, limits the dead band

FAB / ANSP	Dead band
FABEC	+/- 0.065 Min
skeyes	+/- 0.030 Min
DSNA	+/- 0.045 Min
DFS	+/- 0.065 Min
LVNL	+/- 0.020 Min
Skyguide	+/- 0.050 Min
MUAC	+/- 0.040 Min

3. Maximum bonus / penalty

Art 11 para 3 lit b

- Maximum fin. disadvantages shall at least be equal to the maximum fin. advantages
- Bonus / penalty shall not exceed 2%

FABEC Maximum bonus / penalty value
0.5% of DC of ANSPs

How to calculate the incentive

1. FABEC target achieved and is the performance outside the dead band:
   If yes: (dis)incentive will be calculated according to steps 2. to 4.
   If no: no incentive applicable
2. The FABEC performance is used to calculate a percentage value up to 0,5% (bonus/penalty range).
3. Which ANSPs did contribute to the overall FAB over-/underperformance? All ANSPs which contributed to the FABECs overall over-/underperformance and are outside the individual dead band, will be contributors to the (dis)incentive.
4. The percentage value calculated in step 2 will be multiplied uniformly with the determined costs of the respective year of every individual ANSP being contributor to the FABs over- or underachievement.
5. The result is then the amount to be granted to or charged from the ANSP in question.

Traffic Risk Sharing Mechanism

Regulatory framework – IR (EU) 2019/317

General principles

Article 11 para 2 in conjunction with Art. 27

- risk of revenue changes due to traffic variations shall be shared between ANSPs and AUs
- Standard parameters set out in Art. 27 para 2-4

			Service units lower than plan		Service units higher than plan	
	Dead band	Risk sharing band	% loss to be recovered	Max. charged if SUs 10% < plan	% additional revenue returned	Min. returned if SUs 10% > plan
Standard parameters	±2,00%	±10,0%	70,0%	5,6%	70,0%	5,6%

- NSAs may adapt the values of the parameters (para 5)

FABEC NSAs do not opt for an adaptation


Thank you for your questions

FABEC RP4 Consultation, 4 September 2024

FABEC ANSP

Thomas Hellbach, Chair FABEC Performance Management Group

Preliminary remarks

The FABEC air navigation service providers are pleased to contribute jointly to this performance plan. We are fully committed to continue our constructive cooperation for the benefit of the entire European aviation system.

We are aware that, as infrastructure managers, we have a great responsibility towards our customers and all beneficiaries of European aviation.

We believe that our aviation system can only be optimized through cooperation and open debate with all stakeholders. The complexity of our industry, the different perspectives and needs require an even better mutual understanding and constructive dialogue.

The current regulatory framework is not perfect. The objectives of this Performance Plan are extremely ambitious. We already know that, in the medium term, the performance framework will need to be improved so that all parties can do their jobs better and aviation becomes even safer, more efficient and more environmentally friendly.

RP4 will come with many challenges (1/2)

Traffic Evolution and Situation Summer 2024:

- Traffic is forecast to increase throughout RP4 with significant volatility. Traffic forecasting has been demonstrated to be ineffective for supporting local strategic decision-making.
- FABEC Area: Karlsruhe, Zurich, and Reims ACCs: 10% to 15% increase compared to 2023, with Geneva ACC expecting a 20% to 25% increase compared to 2023.
- Karlsruhe Sector Family South: 20% to 30% increase compared to 2019.

Tense personnel situation for ATCOs throughout FABEC:

- Despite ANSPs recruiting and training at maximum capacity to build up capacity and compensate for exceptional retirement waves, not all delays will be avoided.

New ATS Systems:

- Implementation of new ATS systems in several ACCs (e.g. 4-Flight in Brest and Bordeaux) lead to temporary capacity reductions to ensure safety. However, these new systems add ATCO support functionalities increasing ATCO productivity and capacity.

RP4 Challenges (2/2)

Severe Weather/ Direct negative consequences of climate change on aviation:

- Today, nearly half of all regulated airport traffic delays are due to adverse weather conditions. The expected increase in severe weather during the summer months will add operational complexity and contribute to significant delays. Severe turbulence has increased by 55% from 1979 to 2020, and it is projected to become two to three times more common by 2050 due to climate change (Smithsonian Magazine) (Cambridge) (SpringerLink).

Ukraine Conflict:

- The Russian invasion of Ukraine is reducing European airspace capacity, shifting traffic and requiring increased military traffic and activities. Consequently, airspace complexity has significantly increased.

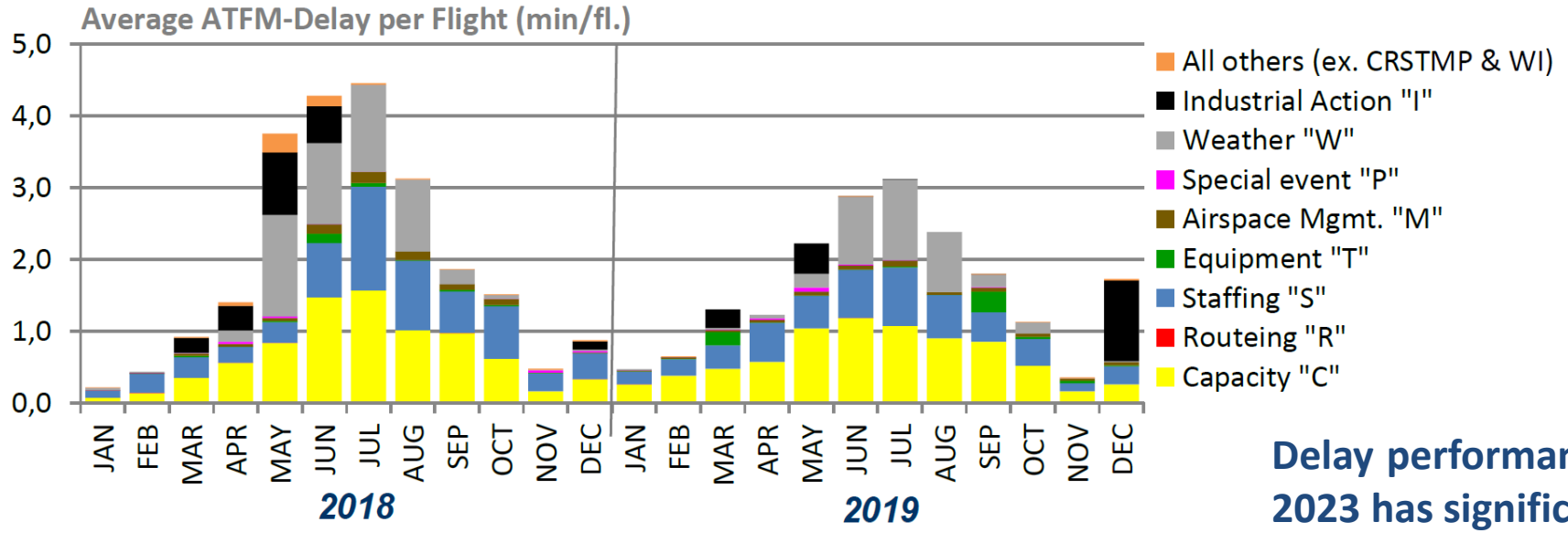
New Generation Fighter Aircraft:

- Germany, Belgium, the Netherlands, and Switzerland have and will receive a total of 157 F-35 aircraft over the period of RP4 to enhance NATO air defense capabilities (new French 4th and 5th NGF not yet included). These new fighter aircraft likely require more airspace for training missions with expected restrictions of civil traffic.

Notable improvement of CRSTMP delay from RP2 to RP3

FABEC

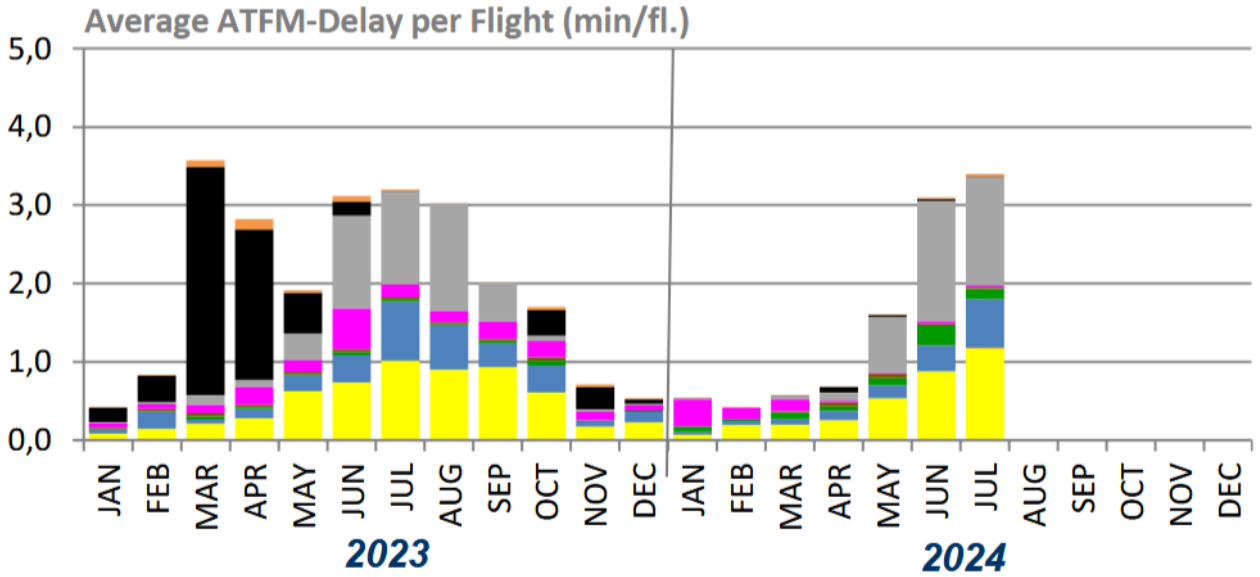
ADM due to reason code
min/fl. (*monthly value*)



2018 delay (min/fl.):
All causes 2,12
CRSTMP 1,40

2023 delay (min/fl.):
All causes 2,10
CRSTMP 1,07

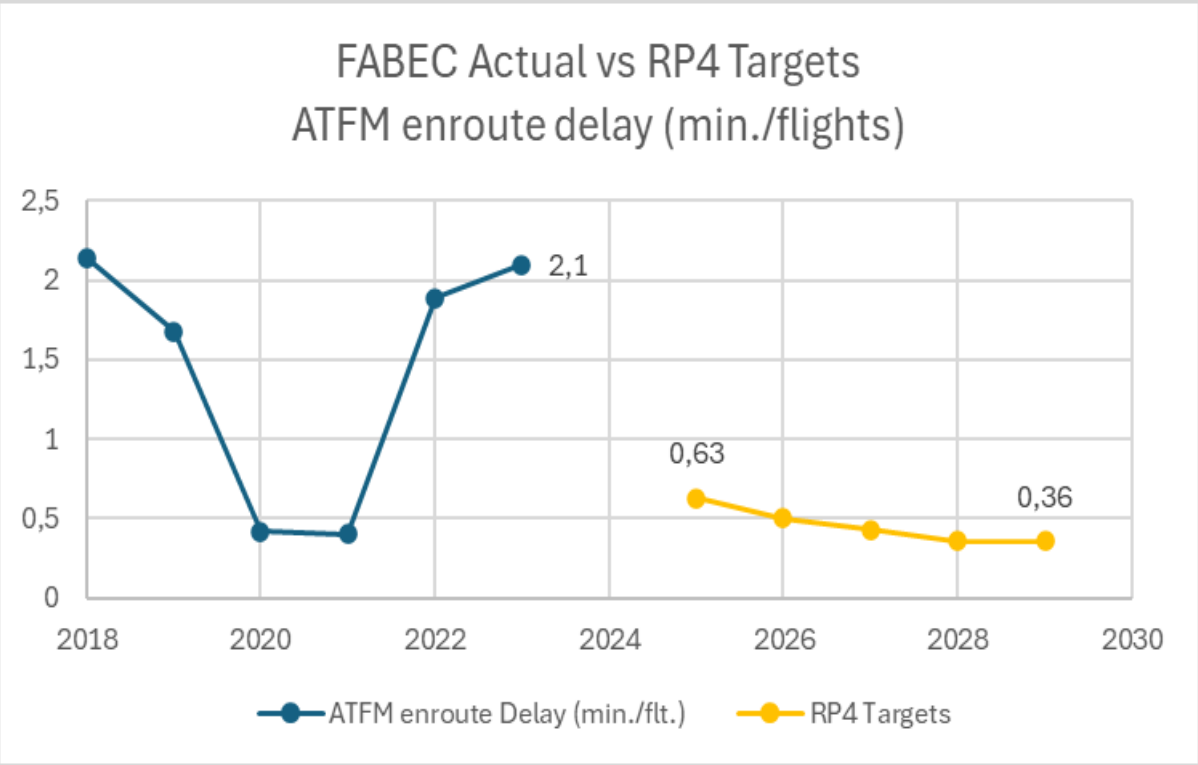
Delay performance between 2018 and 2023 has significantly improved.



Staffing delay 2018/2023:
Karlsruhe: -85%
Marseille: -54%
Brest: -93%

Capacity delay 2018/2023:
Karlsruhe: -18%
Brest : -92%
Bremen: -57%

RP4 Targets: Capacity



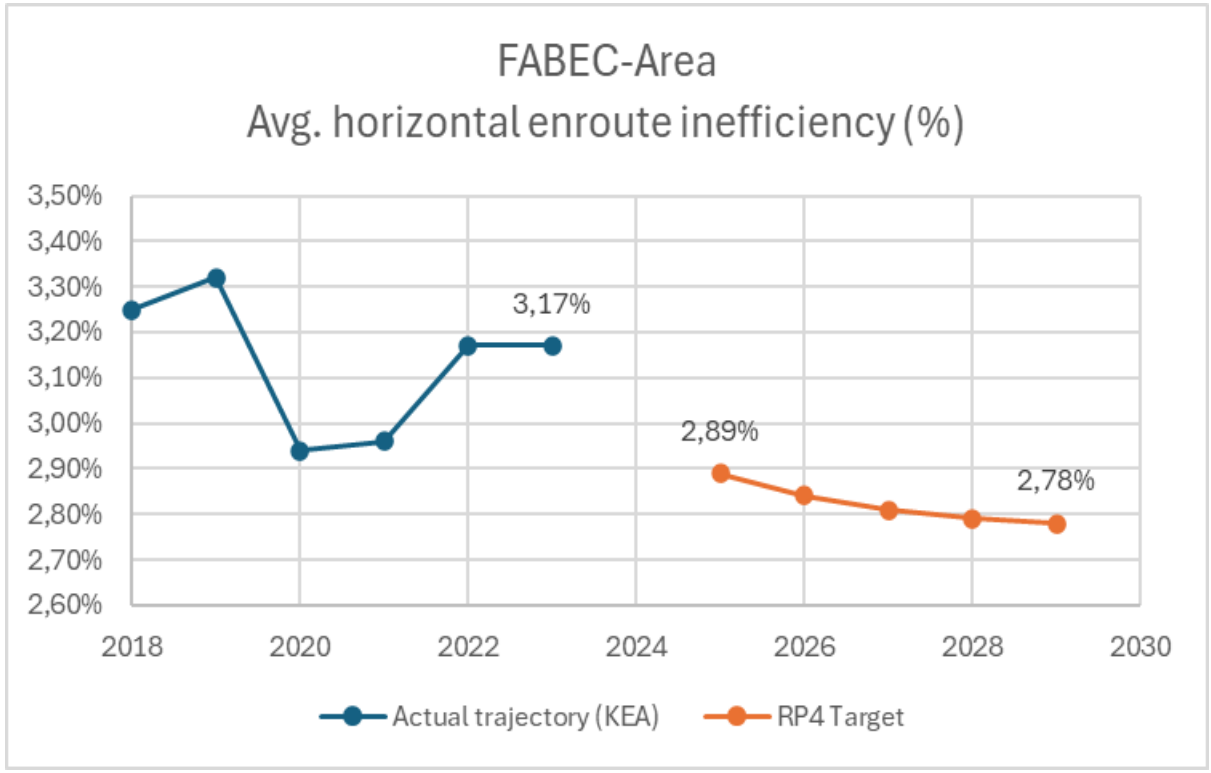
Required improvement in (min./flights) from 2023 actual to achieve the targets and reference values for **2025** and **2029**

	2025	**2029**
SES-Area	0,94	1,34
FABEC	1,47	1,74
DFS	1,31	1,47
DSNA	1,65	1,85
ECTL MUAC	-0,11	0,01
LVNL	-0,09	-0,03
skeyes	-0,13	-0,03
Skyguide	-0,16	0,00

FABEC's RP4 reference values are 0,63 (2025) and 0,36 (2029), while actual annual performance is 2,1 (2023). The delay performance of 2020/2021 during the pandemic, with very low traffic, is close to the reference values of RP4, but traffic has multiplied and will further increase.

Despite numerous capacity measures, RP4 target achievement remains highly challenging.

RP4 Targets: Environment



Required improvement in percentage points from 2023 actual to achieve the targets and reference values for **2025** and **2029**

	2025	**2029**
SES-Area	0,19%	0,33%
FABEC	0,28%	0,39%
Belgium	0,09%	0,19%
France	0,46%	0,58%
Germany	0,07%	0,16%
Switzerland	0,09%	0,25%
The Netherlands	0,02%	0,10%

FABEC's horizontal flight efficiency (HFE) is already very high (~97%) but subject to influences outside of ANSPs´ control. A change of KPI is required!

Achieving 2024 and RP4 targets is highly challenging due to a large gap between current performance and reference values.

ANSP measures to cope with increased traffic demand

Maximizing Recruitment and Training and optimizing Staff Deployment as well as retention:

- Priority remains on maximize academy and on-the job ATCO training.
- Proficiency training is improved to maximize time at the sector instead of in classroom.
- Reduced work of ATCOs in projects/administration to maximize on-board time.
- Introducing incentives for extra shifts.
- DSNA plans to increase ATCOs gradually by ~11% and DFS by ~10% throughout RP4.

Improving and Renewing Air Traffic Service (ATS) Systems:

- Ongoing implementation of advanced ATS systems to increase capacity, improve efficiency and reliability.
- Increased utilization of CPDLC

Improving Airspace Structure and Sectorization:

- Re-designing Airspace to streamline flows and adapt to recent changes, even further (~97% efficient).
- Offer options to enable NM and airlines to use available capacity more effectively.
- More flexible sector boundaries that can be adjusted in real-time based on traffic demand.

Conclusion

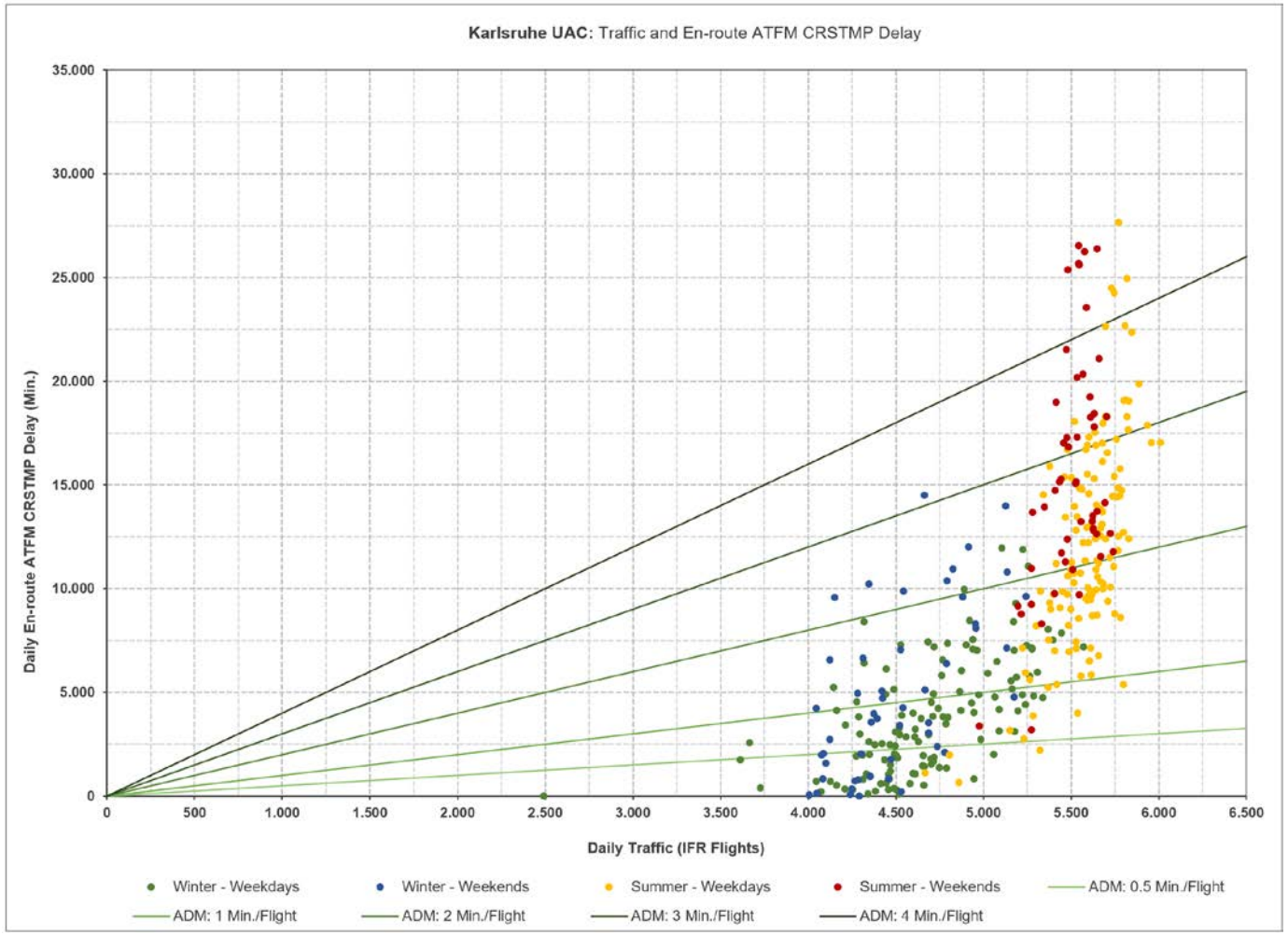
- The targets and reference values set at FABEC and local levels are **deemed extremely challenging.**

- ANSPs support the voluntary adoption of the two indicators proposed by FABEC States, which demonstrate **effective environmental commitment** and measure **real peak-hour capacity provision**.

- The numerous new monitoring indicators proposed by the EU Commission will considerably **increase the workload for ANSPs and NSAs** without improving actual performance measurement or addressing the flaws in the existing KPIs (such as Horizontal Flight Efficiency).

Thank you for your attention.

Exponential Evolution of Delay



As daily traffic increases, delays increase at an accelerating rate.

The analysis shows a clear exponential relationship between daily traffic and daily delay.

The exponential increase in delays cannot be modelled with current tools used to set, validate and break-down targets.

Current performance targets were set without accounting for the exponential growth in delays or any initial balancing of influences (system implementation, increasing weather incidence, increasing military activity, etc.) on FAB or national level.

This requires a review of the targets, the target setting methodology and the incentive/penalty scheme.

Airspace User Expectations For FABEC Performance Plan RP4

04 September 2024

Recovery

- Recovery post COVID remains patchy, some state already above 2019, but many also remain below
- Nevertheless, ANSP`s must play their part
- Recovery needs:
  - Provision of efficient capacity that is scaled to demand
  - Full review of CAPEX and status of implementation
  - Continued Cost containment measures
  - Transparency

Performance Planning- FABEC

- Experience to date is that FABEC does not meet the requirements until well into the Reference Period
- We can not reconcile the advantages of FABEC:
  - No flexibility of service provision between the states (except MUAC)

- The FABEC performance plan appears designed to fail, as it will not fulfill the European targets, or we already can anticipate non-compliance (e.g. capacity in Germany).
- For RP3 no agreed FAB level plan so difficult to compare and contrast for the new RP4 proposal
- Challenges that were apparent in RP2 remain today, those local circumstances should not be still considered in RP4

FABEC States have consistently not delivered expected performance

NSAs should

Challenge air navigation service providers (ANSPs) to deliver the service required

Set ambitious local targets to support the challenge

Promote desired behavior, improvements and best practices

Ensure that ANSPs deliver both performance and appropriate investment plans

ANSPs should

Deliver a consistent and sustainable service

Focus on providing operational and cost benefits in all performance areas

Plan, consult and justify investments based on airspace users needs

Invest as agreed

Ensure appropriate staffing and System resources and adapt to changing requirements

Airspace Users Positions

- Member States and ANSPs must adapt costs and practices to reflect reality
- RP4 Draft Performance Plans show combined **+250% increases** For FABEC states
- Identify solutions to
  - Ensure sustainable cost and operational environment for airspace users
  - Ensure under recoveries are handled in a fair and equitable manner

Safety

- The intention to meet the EU Wide Safety Targets is supported
- Some data sharing to date, but no identified synergies leading to cost-efficient or more effective oversight/ application
- EoSM, Safety Promotion and Safety Culture progressing at different speeds
- Transparency of individual NSA and ANSP proposals needed

Environment

- KEA target in line with Reference Values is strongly supported
- ANSPs must keep building efficient airspace and reducing complexity
- Focus required on Vertical Flight efficiency which increases CO2 emissions.
- Support airlines in their efforts to avoid double or triple burden on emissions
- Projects planned in order to deliver must be prioritized
- Robust plan and commitment at ANSP and state level is essential
- Historical performance suggests little confidence in FABEC to deliver

Capacity

- "*RP3 Staffing and capacity issues have been addressed through progressive implementation of new ATM system, more flexible rostering schemes and additional recruitments initiated in RP3 in order to support ongoing traffic recovery while increasing productivity and capacity in RP4*".
- Really??? Highest level on Capacity delays are in FABEC (+17million min 22/23)
- Enroute ATFM delay in line with Reference Value, while supported should not be seen as a "Blank Cheque"
- Already without a full recovery of 2019 traffic; Capacity issues are already apparent with Key FABEC ACC`s
- DSNA and DFS must consult mitigation plans for already identified issues
- Current investment and costs increase to close the capacity gap remains a challenge to be accepted- same situation was identified in RP3 (2019)
- Projects planned to deliver are not identified

Capacity

- Almost all ATC units mention risks related to future available capacity:
  - Unreliability of the actual recovery path,
  - Management of Volatility,
  - Availability of sufficient staff (controllers)
  - Rostering (flexibility of staff)
  - Necessary training measures (limiting staff availability)
  - Impact of COVID19 crisis with limiting effect on staff availability (e.g. ATCO training temporarily stopped or delayed)
  - Implementation of new ATC systems (iCAS, 4Flight)

- What are the mitigations planned?? Projects planned to deliver are not identified

Incentives

- CRSTMP limitation is not supported
- In the case of FABEC a Penalty only scheme should be developed to truly incentivize delivery of performance
- Achievement of both FAB and individual State targets must the priority, this will drive the changes required by Airspace users
- Current Incentive Scheme targets not supported as its actually rewards underperformance. Bonus should be only allowed if there is a real improvement
- A meaningful incentive scheme is needed, that drives behavior and where it is not cheaper for ANSPs to not deliver

RP4 Discussion/expectations

- We expect significant improvement of performance
- Required understanding of mitigation measures planned by FABEC in the short term and prioritization of airspace user benefit
- How are state NSA`s planning to drive the performance ?

- Minimum AU expectation is FABEC to meet all European of targets with cost effective implementation

Thank you