



PBN Map tool

Definitions and calculations rules

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1 “RUNWAY” CHARACTERISTICS

The PBN Map tool provides information (when available) on Approach, SID, STAR, and Transition procedures for each runway at airports and Heliports within the ECAC area. This data covers both fixed-wing and rotorcraft operations.



Figure 1 Airport view – Data per procedure and runway

Runway types and associated instrument flight procedures are organized as follows:

RWY	Cat H
07	N
07	Y
25	N
HEL	Y

Figure 2 Runway characteristics

1.1 RWY

This field indicates the Runway designator (e.g. 07). In case of Heliports or landing locations (Helicopter operations), the runway designator is “HEL”.

1.2 Cat H

This field indicates whether the instrument flight procedures are intended exclusively for helicopter operations (Category H), or for fixed-wing aircraft operations (Categories A, B, C, D, or E).

- **Y** indicates that the instrument flight procedures to a specific runway or Heliport are for Helicopter only operations.
- **N** indicates that the instrument flight procedures are for fixed-wing aircraft (Cat A, B, C, D, E) operations.

If both fixed-wing (Cat H =N) and helicopter (Cat H=Y) procedures exist for the same runway, the runway is listed in two separate rows:

- One with “CAT H = N” for fixed-wing aircraft procedures, and
- One with “CAT H = Y” for helicopter only procedures.

2 APPROACH

RWY	Cat H	Conv IAP	Conv IAP Circling only	LNAV	LNAV Circling only	LP	LNAV/ VNAV	LPV (APV1) ②	LPV (Cat1) ②	RNP AR	ILS	GLS Cat 1	GLS Cat 2/3
18	N	Y	N	Implemented 2012	N		Impossible	Impossible	Impossible	Planned 2024	Cat 1		
36	N	Y	N	Implemented 2012	N		Impossible	Impossible	Impossible	Planned 2024	Cat 1		

Figure 3 Airport - Approach tab

2.1 Individual Approach procedures

2.1.1 Conv IAP

2D conventional approach procedure (Non-Precision approach).

2.1.2 Conv IAP (Circling only)

2D conventional approach procedures to circling minima only.

- **Y** indicates that all published conventional 2D approach procedures (Conv IAP) for the runway provide circling minima only, with no straight-in minima available.
- **N** indicates that at least one published conventional 2D approach procedure includes straight-in minima.

2.1.3 LNAV

RNP APCH to LNAV minima.

2.1.4 LNAV (Circling only)

RNP APCH (LNAV) to circling minima only.

- **Y** indicates that all RNP APCH procedures with LNAV for the runway provide circling minima only, with no straight-in minima available.
- **N** indicates that at least one RNP APCH with LNAV procedure includes straight-in minima.

2.1.5 LP

RNP APCH to LP minima.

2.1.6 LNAV/VNAV

RNP APCH to LNAV/VNAV minima.

2.1.7 LPV (APV 1)

RNP APCH to LPV minima based on APV 1 procedure design criteria.

2.1.8 LPV (Cat 1)

RNP APCH to LPV minima based on Cat 1 procedure design criteria.

2.1.9 RNP AR

RNP Authorization Required Approach.

2.1.10 ILS

ILS approach procedure.

2.1.11 GLS Cat 1

Cat 1 approach procedure based on GBAS

2.1.12 GLS Cat 2/3

Cat 2 or Cat 3 approach procedures based on GBAS.

2.2 Approach - Implementation status

The implementation status is obtained from the State's AIP and the draft PBN Transition plans submitted to EUROCONTROL NM in the context of EU 1048/2018 (PBN IR).

For PBN and GBAS approach procedures, the implementation status can be any of the following values:

- **IMPLEMENTED:** at least one procedure is published (the publication date can be provided; if no date is provided it is assumed that the approach was implemented before 2012).
- **PLANNED:** at least one procedure is planned to be published (an implementation date can be provided).
- **NOT PLANNED:** an assessment has been made by the local ANSP/Airport, and it has been decided not to implement this procedure.
- **IMPOSSIBLE:** the procedure is not possible to implement due to technical limitations. For those runways and approach procedures (LNAV, LNAV/VNAV and LPV) affected by the PBN IR (EU 1048/2018), the technical feasibility of implementation is based only on the exemptions listed in the regulation.
- The status is left empty when no information is available to EUROCONTROL.

For conventional approach procedures, the information provided is based only on the current publication status in the State's AIP:

- **ILS**
 - **Cat 1** indicates that at least one ILS approach procedure is published in the national AIP for the runway, and that Category I is the only minima available (No Category II nor Category III minima/operations are available)
 - **Cat 2** indicates that at least one ILS approach with Category II minima is published in the national AIP for the runway (No Category III minima/operations are available)
 - **Cat 3** indicates that at least one ILS approach with Category III operation is published in the national AIP for the runway.
 - If several ILS Categories (i.e. Category I and Category II) are available for the runway, the highest category is included.
 - The field is left empty when there are no published ILS procedures for the runway

- **Conv IAP**
 - **Y** indicates that at least one of the following conventional 2D approach procedures is published:
 - VOR approach (e.g., VOR RWY 12, VOR A)
 - NDB approach (e.g., NDB RWY 12, NDB A)
 - TACAN approach (e.g., TACAN RWY 12)
 - LOC approach (e.g., LOC RWY 12, LOC A)
 - SRE approach (e.g., SRE RWY 12)
 - **N** indicates that none of the above procedures are published for the runway.

2.3 Aggregated Approach procedures

Aggregated approach procedures are determined at the runway level, based on the implementation status of each **individual approach procedure**.

	Any PBN	LPV	LNAV/VNAV and LPV	3D PBN	3D PBN and 2D CONV	PA	ILS Cat 1 only	ILS Cat 2/3	NPA or APV	GLS	GNSS only
Conv IAP					and				or		no
LNAV	or								or		or
LP	or								or		or
LNAV/VNAV	or		and	or					or		or
LPV (APV1)	or	or		or					or		or
LPV (Cat 1)	or	or		or		or					or
RNP AR APCH	or			or					or		or
ILS					no	or	Cat 1 only	Cat 2 or Cat 3			no ¹
GLS Cat 1						or				or	
GLS Cat 2/3						or				or	
LPV			and								
3D PBN					and						

Table 1 Aggregated Approach procedures

Aggregated approach procedures are identified in the tool filters with an “*” (i.e. Any PBN*)

¹ No Cat 1 and no Cat 2 and no Cat 3

3 STANDARD INSTRUMENT DEPARTURE ROUTES (SID)

RWY	Cat H	Omni DEP only	Conventional	Hybrid	Open/Closed	Overlay	RNAV 1 (GNSS)	RNAV 1 (DME/DME)	IRU required	CRITICAL DME CHART	RNP 1	RF	RNP 0.3	PinS (Cat H)
05	N	N	N	N	O		Implemented	Implemented	N	N	Not Planned	N	Not Planned	
23	N	N	N				Planned 2024	Not Planned			Not Planned		Not Planned	
30	N	Y												

Figure 4 Airport - SID tab

3.1 Individual SID procedures

3.1.1 Conventional

SID based on conventional navigation.

3.1.2 RNAV 5 GNSS

SID based on RNAV 5 GNSS.

3.1.3 RNAV 5 DME/DME

SID based on RNAV 5 DME/DME.

3.1.4 RNAV 1 GNSS

SID based on RNAV 1 GNSS.

3.1.5 RNAV 1 DME/DME

SID based on RNAV 1 DME/DME.

3.1.6 RNP 1

SID based on RNP 1.

3.1.7 RNP AR

SID based on RNP AR.

3.1.8 A-RNP

SID based on Advanced RNP.

3.1.9 RNP 0.3

SID based on RNP 0.3 (CAT H).

3.1.10 PinS (CAT H)

SID based on PinS procedures (CAT H).

3.2 OMNI DEP only

This field specifies whether omnidirectional procedures are the only option for departure operations:

- **Y** indicates that no Standard Instrument Departures (SIDs) are published or planned, and omnidirectional procedures are available as the only option for departure operations.
- **N** indicates that SIDs are published or planned.

3.3 SID - Implementation status

The implementation status is obtained from the State's AIP and the draft PBN Transition plans submitted to EUROCONTROL NM in the context of EU 1048/2018 (PBN IR).

For PBN procedures, the implementation status can be any of the following values:

- **IMPLEMENTED:** at least one procedure is published (the publication date can be provided; if no date is provided it is assumed that the SID was implemented before 2022).
- **PLANNED:** at least one procedure is planned to be published (an implementation date can be provided).
- **NOT PLANNED:** the SID is not implemented and no information for future implementation is available to EUROCONTROL.
- **IMPOSSIBLE:** the procedure is not possible to implement due to technical limitations.

For conventional SID procedures, the information provided is based only on the current publication status in the State's AIP:

- **Conventional**
 - **Y** indicates that at least one conventional SID is published in the AIP.
 - **N** indicates that no conventional SIDs are published.

3.4 Additional SID information (Attributes)

3.4.1 Hybrid

This parameter indicates the availability of hybrid SIDs.

- **Y** indicates that at least one SID includes a combination of PBN and non-PBN segments.
- **N** indicates that all SIDs are either fully conventional or fully PBN, with no mixed segments within the procedure.

3.4.2 Open/Closed

This parameter specifies the availability of Open or Closed SIDs, based on EUROCONTROL's assessment.

- **Open SID.-** ATC assistance is required to continue navigation.
- **Closed SID.-** In principle, ATC assistance is not required to continue navigation.

Values:

- **O:** All SIDs are Open
- **C:** All SIDs are Closed
- **CO:** Both Open and Closed SIDs are available.

3.4.3 Overlay

This parameter shows whether PBN trajectories follow conventional trajectories, as closely as practicable, based on EUROCONTROL's assessment.

Values:

- **Y**: PBN SIDs are overlays of the conventional SIDs.
- **N**: PBN SIDs are not overlays of conventional SIDs.

3.4.4 IRU required

This field indicates the availability of PBN SIDs with IRU/INS required.

- **Y** indicates that at least one PBN SID requiring the use of IRU/INS is published in the national AIP for the runway.
- **N** indicates that PBN SIDs are published in the national AIP for the runway, but none require the use of IRU/INS.

3.4.5 Critical DME chart

This parameter indicates the availability of RNAV 5 (DME/DME) or RNAV 1 (DME/DME) SIDs with Critical DME(s).

- **Y** indicates that at least one RNAV 5 (DME/DME) or RNAV 1 (DME/DME) SID requiring the availability of specific DME(s), commonly referred to as "Critical DME(s)", is published in the national AIP for the runway.
- **N** indicates that RNAV 5 (DME/DME) or RNAV 1 (DME/DME) SID are published in the national AIP for the runway, but none of these require the availability of specific DME(s). (No critical DMEs published in the chart)

3.4.6 RF

This parameter indicates the availability of SIDs with Radius-to-Fix (RF) required.

- **Y** indicates that at least one RNAV 1 or RNP 1 or RNP 0.3 or RNP AR or A-RNP SID requiring the use of Radius-to-Fix (RF) is published in the national AIP for the runway.
- **N** indicates that RNAV 1 or RNP 1 or RNP 0.3 or RNP AR or A-RNP SIDs are published in the national AIP for the runway, but none require Radius-to-Fix (RF).

3.5 Aggregated SID procedures

Aggregated SID procedures are determined at the runway level, based on the implementation status of each **individual SID procedures**.

	PBN	Any SID (Conventional or PBN)	Conventional and PBN	PBN only	Conventional only	RNAV 5	RNAV 1	RNAV 1 (GNSS & DME/DME)	GNSS only	RNAV1 or RNP1
Conventional		or	and	no	Y				no	
RNAV 5 GNSS	or					or			or	
RNAV 5 DME/DME	or					or			no	
RNAV 1 GNSS	or						or	and	or	or
RNAV 1 DME/DME	or						or	and	no	or
RNP 1	or								or	or
RNP 0.3	or								or	
RNP AR	or								or	
A-RNP	or								or	
PinS (CAT H)	or								or	
PBN		or	and	Y	no					

Table 2 Aggregated SID procedures

Aggregated SID procedures are identified in the tool filters with an “*” (i.e. PBN*)

4 STANDARD INSTRUMENT ARRIVAL ROUTES (STAR)

RWY	Cat H	Conventional	Hybrid	Open/Closed	Overlay	RNAV 5 (GNSS)	RNAV 5 (DME/DME)	RNAV 1 (GNSS)	RNAV 1 (DME/DME)	IRU required	CRITICAL DME CHART	RNP 1	RF	RNP 0.3	A-RNP
12	N	Y	Y	C	N	Not Planned	Not Planned	Planned 2027	Not Planned			Not Planned		Not Planned	Not Planned
30	N	Y	N	C	N	Implemented	Implemented	Planned 2027	Not Planned	N	N	Not Planned		Not Planned	Not Planned

Figure 5 Airport - STAR tab

4.1 Individual STAR procedures

4.1.1 Conventional

STAR based on conventional navigation.

4.1.2 RNAV 5 GNSS

STAR based on RNAV 5 GNSS.

4.1.3 RNAV 5 DME/DME

STAR based on RNAV 5 DME/DME.

4.1.4 RNAV 1 GNSS

STAR based on RNAV 1 GNSS.

4.1.5 RNAV 1 DME/DME

STAR based on RNAV 1 DME/DME.

4.1.6 RNP 1

STAR based on RNP 1.

4.1.7 A-RNP

STAR based on Advanced RNP.

4.1.8 RNP 0.3

STAR based on RNP 0.3 (CAT H).

4.2 STAR - Implementation status

Same as 3.3. (“SID” should be replaced by “STAR”)

4.3 Additional STAR information (Attributes)

Same as 3.4. (“SID” should be replaced by “STAR”, and it should be noted that RNP AR is not available for STAR procedures)

4.4 Aggregated STAR procedures

Aggregated STAR procedures are determined at the runway level, based on the implementation status of each **individual STAR procedures**.

	PBN	Any STAR (Conventional or PBN)	Conventional and PBN	PBN only	Conventional only	RNAV 5	RNAV 1	RNAV 1 (GNSS & DME/DME)	GNSS only	RNAV1 or RNP1
Conventional		or	and	no	Y				no	
RNAV 5 GNSS	or					or			or	
RNAV 5 DME/DME	or					or			no	
RNAV 1 GNSS	or						or	and	or	or
RNAV 1 DME/DME	or						or	and	no	or
RNP 1	or								or	or
RNP 0.3	or								or	
A-RNP	or								or	
PBN		or	and	Y	no					

Table 3 Aggregated STAR procedures

Aggregated STAR procedures are identified in the tool filters with an “*” (i.e. PBN*)

5 TRANSITIONS

Transitions are not formally defined by ICAO. In this context, the PBN Map tool includes information under “Transitions” only for procedures explicitly charted as such, and solely for monitoring purposes.

5.1 Individual Transition procedures

Same as 4.1 (“STAR” should be replaced by “Transition”)

5.2 Transitions - Implementation status

Same as 3.3. (“SID” should be replaced by “Transition”)

5.3 Additional Transitions information (Attributes)

Same as 3.4. (“SID” should be replaced by “Transition”)

5.4 Aggregated Transitions procedures

Same as 4.4 (“STAR” should be replaced by “Transition”)

6 “AIRPORT” CHARACTERISTICS

In addition to runway-specific details, the PBN Map Tool provides aggregated information at the airport level, calculated from the detailed data available for each runway.

6.1 Airport implementation status

Airports have the same **Individual** and **aggregated** procedures as described in previous sections.

The implementation status of a specific procedure (i.e. LNAV or RNAV 1 GNSS) at the airport level is calculated based on the information available for each runway:

- **Fully implemented²**: All runways at the airport have implemented the procedure.
- **Partially implemented³**: At least one runway at the airport has implemented the procedure.
- **Planned**: The procedure is not currently implemented at the airport but there are plans to be Partially or Fully implemented.
- **Impossible**: The procedure cannot be implemented on any runway at the airport.
- **Not planned⁴ (None)**: The procedure is not implemented at the airport, and there are no plans for implementation.

Runways with an implementation status set to “Impossible” are excluded from the calculation of the status of the airport. For example, for one airport with two runway ends, if LNAV is “Implemented” on one end and “Impossible” on the other end, then the airport status for LNAV is “Fully implemented”. If the airports had three runway ends and LNAV was “Implemented”, “Impossible” and “Planned”, the airports status would be “Partially implemented”.

Warning: the list of runway ends might be different for each type of procedure (Approach, SID, STAR and Transition). For example, if one airport has two runway ends 01 and 19, both will be associated to ‘Approach’ if there are instrument approach procedures published to both runway ends, however only one runway end will be associated to ‘STAR’ if STAR procedures exist only for runway 01.

² This is represented by “Y” in the export files for “Conventional”, “Conv IAP”, “Conv IAP (Circling only)” and “LNAV (Circling only)”.

³ This is represented by “P” in the export files for “Conventional”, “Conv IAP”, “Conv IAP (Circling only)” and “LNAV (Circling only)”.

⁴ This is represented by “N” in the export files for “Conventional”, “Conv IAP”, “Conv IAP (Circling only)” and “LNAV (Circling only)”.

6.2 Airport attributes

6.2.1 Approach

The **New naming convention**⁵ is information for PBN approaches at an airport. This is captured at airport level. This can have any of the following values:

- **Implemented** when the new naming (RNP instead of RNAV) is implemented. A date may be added.
- **Planned** when the new naming is planned to be implemented. A date may be added.

The field is left empty when no information on the naming convention is available

6.2.2 SID/STAR/Transition

The airport implementation status of **Hybrid, Overlay, Critical DME Chart, IRU required, and RF** is calculated as follows:

- **Y** if at least one runway at the airport has this attribute.
- **N** if this attribute is not implemented at the airport.

For **Open/Closed**:

- **O** if all runways are Open
- **C** if all runways are Closed
- **CO** if runways are both Open and Closed

⁵ ICAO Circular 353

6.3 Airport colour code in the map view

6.3.1 Individual and aggregated procedures only (Attributes ignored)

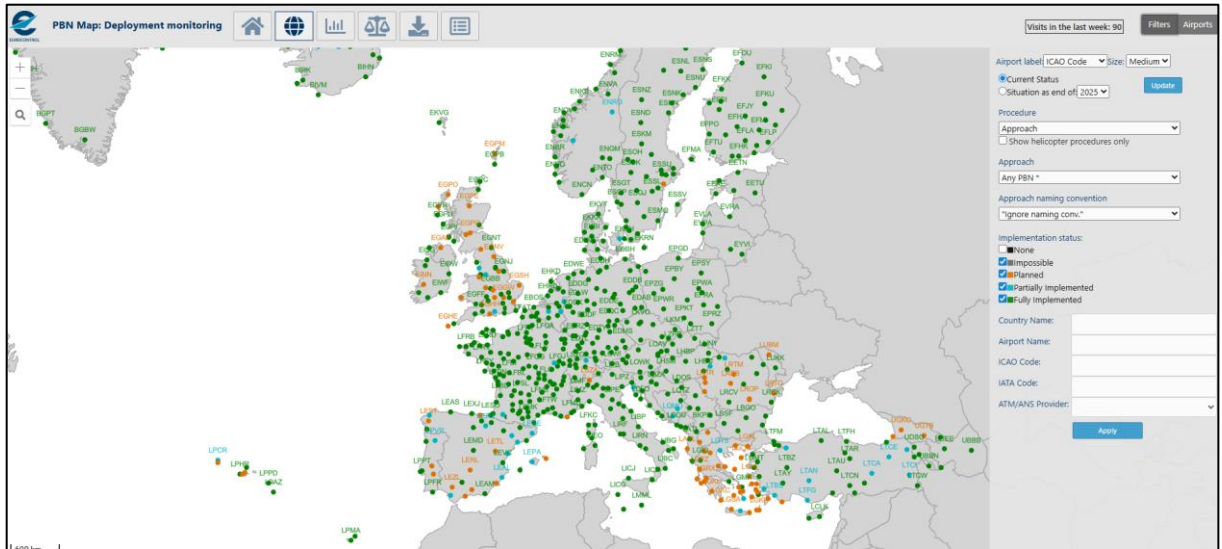


Figure 6 Map view – Data per airport

The Map provides information based on the filters selected on the right-hand side of the window.

To see the Airport implementation status (6.1) of the **individual** and **aggregated** procedures only, the following filters should be selected:

- **Procedure:** Approach, SID or STAR
- **Approach/SID/STAR:** Individual or aggregated procedures
- **New naming convention (Approach):** Ignore
- **Attributes (SID/STAR):** Ignore

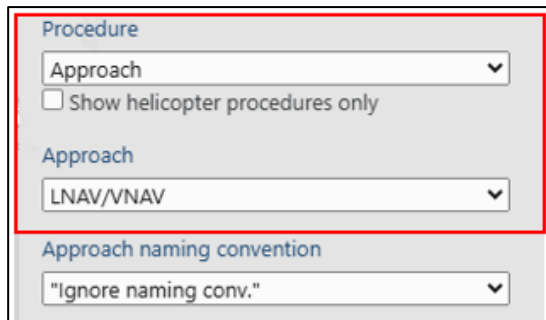


Figure 7 Approach individual and aggregated procedures – Map view

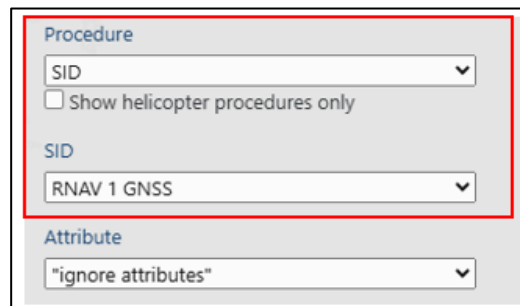


Figure 8 SID individual and aggregated procedures – Map view

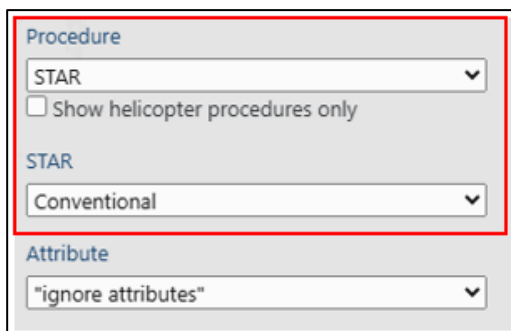


Figure 9 STAR individual and aggregated procedures – Map view

6.3.2 Individual and aggregated procedures with Attributes (Beta)

To determine the airport implementation status for both individual and aggregated types in conjunction with the attributes, the *Attribute* filter should also be applied.

The colour code is explained in the following table:

	New naming			
Airport implementation STATUS	<ignore>	IMPLEMENTED	PLANNED	empty
Not planned / empty	black	black	black	black
Impossible	grey	black	black	black
Planned	orange	black	orange	black
Partially implemented	blue	blue	orange	black
Fully implemented	green	green	orange	black
	Hybrid, Overlay, with critical DME, with RF and IRU required			
Airport implementation STATUS	<ignore>	Y	N	
Not planned	black	black	black	
Impossible	grey	black	black	
Planned	orange	black	black	
Partially implemented	blue	blue	black	
Fully implemented	green	green	black	
	Open			
Airport implementation STATUS	<ignore>	O	C	CO
Not planned	black	black	black	black
Impossible	grey	black	black	black
Planned	orange	black	black	black
Partially implemented	blue	blue	black	blue
Fully implemented	green	green	black	blue

Figure 10 Attributes colour code – Map view

As this feature is still in the development phase within the Map view, its use is not recommended. However, if users wish to view the attributes for each runway and airport, it is advisable to access this information through the Excel files available for download on the Export page.

7 STATUS AGAINST THE PBN IR OBJECTIVES (EU 2018/1048)

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7.1 Introduction and scope

The criteria for the calculation of the compliance monitoring against the PBN IR (EU 1048/2018) has been defined by **EASA**. The assessment is only made at runway level.

The “PBN IR status” accounts only for runways within the PBN IR scope (airports that are within the airspace where the regulation applies):

The “**Status against PBN IR objectives**” assessment:

- **Apply to SES States:** Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain and Sweden.
- **Apply to the following overseas territories:**
 - Spain: Canary Islands
 - Portugal: the Azores and Madeira
 - France (ultraperipheral regions airspace): Guadeloupe, French Guyana, Martinique, Mayotte, Réunion, Saint-Martin.
- **Apply to Territories with other agreements:** Iceland, Liechtenstein, Norway, Switzerland, Moldova, and the Western Balkans, (i.e., Albania, Bosnia and Herzegovina, North Macedonia, Montenegro, Serbia, and Kosovo -without prejudice to positions on status, which is in line with UNSCR 1244 and the ICJ Opinion on the Kosovo Declaration of Independence).

The “**Status against PBN IR objectives**” assessment excludes:

- Any airport within a country or territory not mentioned above.
- Any airport which according to an approved PBN Transition plan is excluded from the PBN IR scope (exclusion approved by the competent national authority).
- Any airport where the Military are responsible for putting in place the required instrument flight procedures.
- Any Heliport (HEL), as the PBN Regulation applies to instrument flight procedures designed for runways.

PBN Approach and **PBN SID/STAR** procedures required by the **PBN IR (EU 1048/2018)** can be summarized in the following table:

Procedure	Runway type ⁶	PBN IR requirement	PBN IR Target date	PBN IR status (PBN Map tool)
Approach	Instrument (IRE)	RNP APCH with LNAV, LNAV/VNAV and LPV lines of minima ⁷ at IREs ⁸ without PA ⁹ .	03-12-2020	Objectives met, or Objectives not met
		RNP APCH with LNAV, LNAV/VNAV and LPV lines of minima ¹⁰ at all IREs	25-01-2024	
	Non - Instrument (Non-IRE)	Not targeted ¹¹	Not targeted	Not required
SID/STAR	Instrument (IRE)	At least one RNAV 1 or RNP 1 or RNP 0.3 ¹² SID/STAR where a SID/STAR is established	25-01-2024	Implemented, or Not Implemented
		RNAV 1 or RNP 1 or RNP 0.3 ¹³ for all SIDs/STARs	06-06-2030	-
	Non-instrument (Non-IRE)	At least one RNAV 1 or RNP 1 or RNP 0.3 ¹⁴ SID/STAR where a SID/STAR is established	Implementation can start at any time, provided that it finishes by 06-06-2030	Implemented, or Planned, or Planned after the deadline, or Not Planned
		RNAV 1 or RNP 1 or RNP 0.3 ¹⁵ for all SIDs/STARs	06-06-2030	-

Table 4 PBN IR (EU 2018/1048) requirements

⁶ EU 2018/401 and EU 139/2014

⁷ Derogations may apply as stated in AUR.PBN.2005 (2) (3)

⁸ Except the IREs located at PCP airports

⁹ Precision Approach

¹⁰ Derogations may apply as stated in AUR.PBN.2005 (2) (3)

¹¹ If the runway becomes instrument, AUR.PBN.2005 (1) (2) (3) apply.

¹² CAT H

¹³ CAT H

¹⁴ CAT H

¹⁵ CAT H

If the PBN IR requirements for Approach are adhered to for a specific IRE, the PBN IR Status can be designated as "*Objectives met*". Conversely, if these requirements are not implemented, the PBN IR status is classified as "*Objectives not met*", assuming that full PBN approach implementation should have been accomplished by 25-01-2024.

Concerning the PBN IR requirements for SID/STAR, the evaluation of PBN IR compliance is solely based on whether the implementation of PBN SID/STAR has commenced at IREs (25-01-2024). The full PBN compliance assessment (06-06-2030) is currently unavailable¹⁶, as it necessitates the estimated number of PBN SID/STAR routes that ATM/ANS providers consider as a complete PBN implementation. ATM/ANS providers are encouraged to incorporate this information in the upcoming edition of the draft PBN Transition plans.

Consequently, for those IREs where the PBN SID/STAR implementation should have commenced by 25-01-2024, the PBN IR status will be "*Implemented*" if at least one RNAV 1 or RNP 1 or RNP 0.3¹⁷ SID/STAR is already implemented. If the required procedure is not implemented, the PBN IR status will be "*Not Implemented*".

For those Non-IREs where the PBN SID/STAR implementation can initiate at any time, provided that it finishes by 06-06-2030, the PBN IR status will be "*Implemented*" if at least one RNAV 1 or RNP 1 or RNP 0.3¹⁸ SID/STAR is already implemented. If there are plans to commence PBN SID/STAR implementation before 2030, the PBN IR status will be "*Planned*".

In case the implementation is scheduled after 2030, the PBN IR status will be "*Planned after the deadline*". If the required procedure is not implemented, and no plans are outlined in the PBN Transition Plan, the PBN IR status will be "*Not Planned*".

The **PBN IR Status** for each runway can be found in the "**PBN Status against PBN IR**" tab when clicking on an airport (Only available if the airport is within the PBN IR Scope):

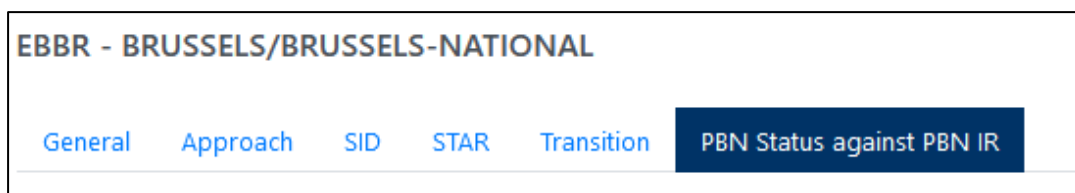


Figure 11 Airport - PBN IR Status tab

The criteria and calculations are further explained in the following chapters.

¹⁶ Under development
¹⁷ CAT H
¹⁸ CAT H

7.2 Approach

	Approach (with 3 minima)	
RWY	Target date	PBN IR Status/Year
01	2020	Objectives met / 2022
19	2024	Objectives not met

Figure 12 PBN IR Status – Approach

7.2.1 Target date

Target date for Approach can be any of the following values:

- **Not targeted:**
 - Runways within airports outside the PBN IR Scope, or
 - Runways within the PBN IR Scope but considered as Non-IRE¹⁹
- **2020 (03-12-2020):** IREs within the PBN IR Scope
 - Non-precision approach (NPA) runways²⁰ except those at PCP airports, or
 - Precision approach (PA) runways²¹ without ILS/GLS but with LPV CAT I implemented after 2018 (NPA runway in 2018, when the rule entered into force)
- **2024 (25-01-2024):** IREs within the PBN IR Scope
 - NPA runways at PCP airports, or
 - PA runways with ILS/GLS implemented or LPV CAT I implemented by 2018

¹⁹ EU 139/2014

²⁰ EU 2018/401

²¹ EU 2018/401

7.2.2 PBN IR status

The **PBN IR status** for each runway end depends on the **Target date** and the **implementation status** of **LNAV**, **LNAV (circling only)**, **LNAV/VNAV** and **LPV** lines of minima.

- **Not required:** for those runways which have no target date (**Target date = Not targeted**)
- **Objectives met:**
 - Straight-in RNP APCH implementation is not possible²² (LNAV - Circling minima only = Y):
 - **LNAV** status is **IMPLEMENTED**
 - Straight-in RNP APCH implementation is possible (LNAV - Circling minima only = N) and intended to Helicopter operations (CAT H = Y):
 - **LNAV** and **LPV**²³ status are either **IMPLEMENTED** or **IMPOSSIBLE**
 - Straight-in RNP APCH implementation is possible (LNAV - Circling minima only = N):
 - **LNAV**, **LNAV/VNAV** and **LPV** are either **IMPLEMENTED** or **IMPOSSIBLE**
- **Objectives not met:** All other cases not covered above

7.2.3 PBN IR Year

PBN IR Year indicates the date (if available) when the implementation of the required minima (considering any applicable derogations) is over.

The **PBN IR Year** for each runway end depends on the **PBN IR Status** and the **implementation dates** of **LNAV**, **LNAV/VNAV** and **LPV** lines of minima.

If the **PBN IR Status = Not required**, then **PBN IR Year = Not required**

If the **PBN IR Status = Objectives met**, then

- If no Year of implementation is available for all LNAV, LNAV/VNAV and LPV lines of minima, then **PBN IR Year = No date**
- If the Year of implementation is available, then **PBN IR Year** is the **MAX** value of **LNAV year**, **LNAV/VNAV year** and **LPV year**.
 - Example: LNAV implemented in 2017, LNAV/VNAV implemented in 2020 and LPV implemented in 2023 → PBN IR Year = 2023

If the **PBN IR Status = Objectives not met**, then **PBN IR Year = Objectives not met**

²² According to the information provided in the PBN Transition plan.

²³ APV 1 or CAT 1

7.3 SID

	PBN SID	
RWY	Target date	PBN IR Status/Year
01	2024	Not Implemented
19	2030	Planned / 2024

Figure 13 PBN IR Status – SID

7.3.1 Target date

Target date for SID can be any of the following values:

- **Not targeted**
 - Runways within airports outside the PBN IR Scope, or
 - Runways within the PBN IR Scope but with no SID implemented
- **2024** (25-01-2024):
 - IREs²⁴ within the PBN IR Scope where a SID is implemented
- **2030** (06-06-2030):
 - Non-IREs²⁵ within the PBN IR Scope where a SID is implemented

7.3.2 PBN IR Status

The **PBN IR status** for each runway end depends on the **Target date** and the **implementation status** of **RNAV 1 or RNP 1**²⁶ and **RNP 0.3**²⁷ SID procedures.

- **Not required:** for those runways which have no target date (**Target date = Not targeted**)

RWYs with Target date = 2024

- **Implemented:**
 - IREs with **CAT H = Y** (Helicopter operations)
 - **RNAV 1 or RNP 1 or RNP 0.3** status is **IMPLEMENTED**
 - IREs with **CAT H = N**
 - **RNAV 1 or RNP 1** status is **IMPLEMENTED**
- **Not Implemented:** All other cases not covered above

²⁴ EU 2018/401

²⁵ EU 139/2014

²⁶ Aggregated type

²⁷ CAT H

RWYs with Target date = 2030

- **Implemented:**
 - Non-IREs with **CAT H =Y** (Helicopter operations)
 - **RNAV 1 or RNP 1 or RNP 0.3** status is **IMPLEMENTED**
 - Non-IREs with **CAT H = N**
 - **RNAV 1 or RNP 1** status is **IMPLEMENTED**
- **Planned:**
 - Non-IREs with **CAT H =Y** (Helicopter operations)
 - **RNAV 1 or RNP 1 or RNP 0.3** status is **PLANNED (Implementation date ≤ 2030)**
 - Non-IREs with **CAT H = N**
 - **RNAV 1 or RNP 1** status is **PLANNED (Implementation date ≤ 2030)**
- **Planned after the deadline:**
 - Non-IREs with **CAT H =Y** (Helicopter operations)
 - **RNAV 1 or RNP 1 or RNP 0.3** status is **PLANNED (Implementation date > 2030)**
 - Non-IREs with **CAT H = N**
 - **RNAV 1 or RNP 1** status is **PLANNED (Implementation date > 2030)**
- **Not Planned:** All other cases not covered above

7.3.3 PBN IR year

PBN IR Year indicates the date (if available) when the PBN SID implementation started, or it is planned to start (Non-IREs).

The **PBN IR Year** for each runway end depends on the **PBN IR Status** and the **implementation dates** of **RNAV 1, RNP 1 and RNP 0.3**²⁸ SID procedures.

PBN IR Status = Not required

- **PBN IR Year = Not required**

RWYs with Target date = 2024

- **PBN IR Status = Implemented**
 - CAT H= Y
 - If no Year of implementation is available for RNAV 1, RNP 1 and RNP 0.3, then **PBN IR Year = No date**
 - If the Year of implementation is available, then **PBN IR Year** is the **MIN** value of **RNAV 1year, RNP 1year and RNP 0.3year**.
 - Example: RNAV 1 implemented in 2018 and RNP 0.3 implemented in 2022 → PBN IR Year = 2018
 - CAT H= N
 - If no Year of implementation is available for RNAV 1 and RNP 1, then **PBN IR Year = No date**
 - If the Year of implementation is available, then **PBN IR Year** is the **MIN** value of **RNAV 1year and RNP 1year**.
 - Example: RNAV 1 implemented in 2018 and RNP 1 implemented in 2022 → PBN IR Year = 2018
- **PBN IR Status = Not Implemented**
 - **PBN IR Year = Not Implemented**

²⁸ CAT H

RWYs with Target date = 2030

- CAT H= Y
 - If no Year of implementation is available for RNAV 1, RNP 1 and RNP 0.3, then **PBN IR Year = No date**
 - If the Year of implementation is available, then **PBN IR Year** is the **MIN** value of **RNAV 1year, RNP 1year and RNP 0.3year**.
 - Example: RNAV 1 implemented in 2018 and RNP 0.3 implemented in 2022 → PBN IR Year = 2018
 - Example: RNP 1 is planned by 2026 and RNP 0.3 is planned by 2030 → PBN IR Year = 2026
- CAT H= N
 - If no Year of implementation is available for RNAV 1 and RNP 1, then **PBN IR Year = No date**
 - If the Year of implementation is available, then **PBN IR Year** is the **MIN** value of **RNAV 1year and RNP 1year**.
 - Example: RNAV 1 implemented in 2018 and RNP 1 implemented in 2022 → PBN IR Year = 2018
 - Example: RNAV 1 is planned by 2024 and RNP 1 is planned by 2026 → PBN IR Year = 2024

7.4 STAR

Same as 7.3 (“SID” should be replaced by “STAR”)

7.5 Graphical illustration of the PBN IR status (PBN IR dashboard)

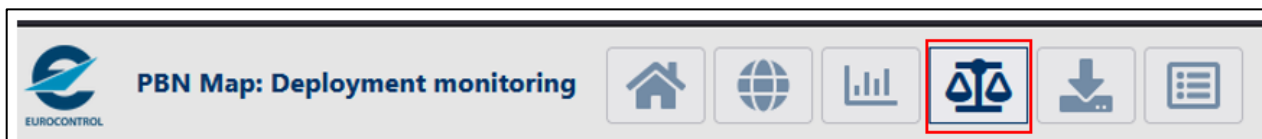


Figure 14 PBN IR dashboard

The **PBN IR dashboard** offers the user the possibility to select the data to be displayed by Country, Airport and ATM/ANS provider.

Figure 15 PBN IR Dashboard – Data selection

It is essential to note that the PBN IR assessment is done at Runway level, hence **the information to be displayed is only based on the 'Target date' and 'PBN IR Status' of each runway end** that is included in the selection made by the user. It is recommended that the user download the data in advance ('Export' page) to better understand the data displayed in the PBN IR dashboard.

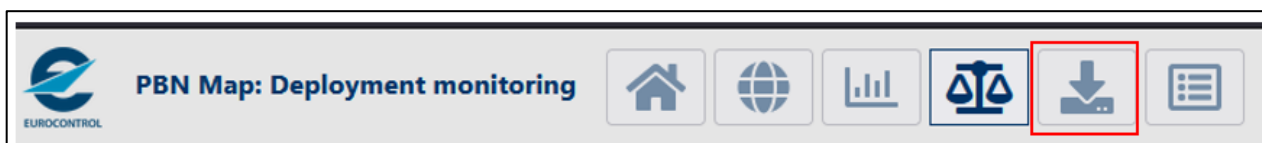


Figure 16 Export page

Figure 17 Export page – Data selection

In order to see a graphical illustration of the PBN IR status, there should be at least one targeted runway within the data selected by the user.

7.5.1 PBN IR Targeted RWYs

7.5.1.1 Approach

The deployment status against PBN IR objectives is illustrated with 3 pie-charts:

- **GRAPH 1: Number of targeted IREs**

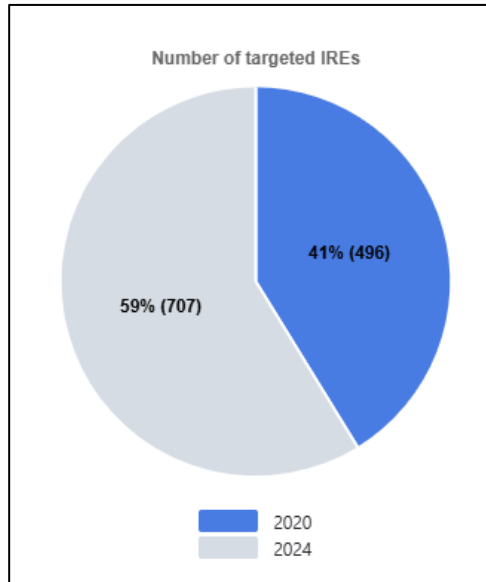


Figure 18 PBN IR dashboard – Approach – Targeted IREs

In **Blue**: the number of IREs that have Target date = 2020

In **Grey**: the number of IREs that have Target date= 2024

- **GRAPH 2: RNP APCH deployment status at 2020 targeted IREs**

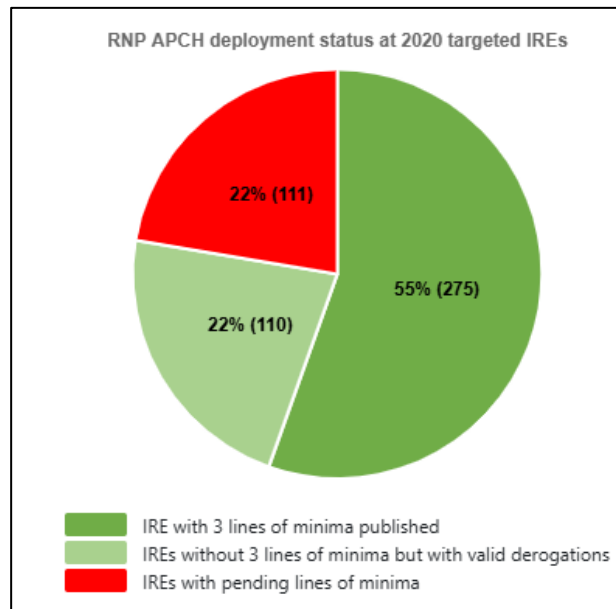


Figure 19 PBN IR dashboard – Approach – 2020

- **GRAPH 3: RNP APCH deployment status at 2024 targeted IREs**

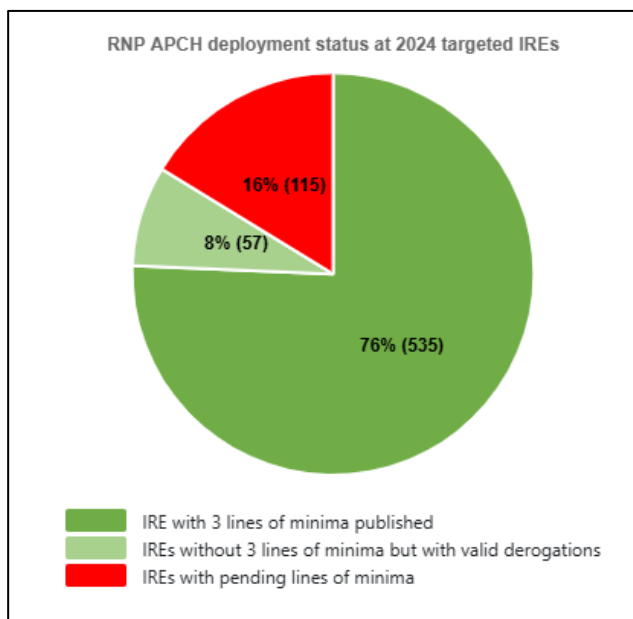


Figure 20 PBN IR dashboard – Approach – 2024

For GRAPH 2 (2020) and GRAPH 3 (2024), the instrument runway ends (IREs) are organized in the following categories:

- **IREs with 3 lines of minima published**
 - All targeted IREs with **PBN IR Status = Objectives met** and with **LNAV, LNAV/VNAV** and **LPV** status as **IMPLEMENTED**.
- **IREs without 3 lines of minima but with valid derogations²⁹**
 - All targeted IREs with **PBN IR Status = Objectives met** and with **LNAV, LNAV/VNAV** and **LPV** status either as **IMPLEMENTED** or **IMPOSSIBLE**.
- **IREs with pending lines of minima**
 - All targeted IREs with **PBN IR Status = Objectives not met**.

²⁹ As per Annex AUR.PBN.2005 (2) of the PBN IR (EU 2018/1048)

7.5.1.2 SID/STAR

The deployment status against PBN IR objectives is illustrated with 3 pie-charts:

- **GRAPH 1: Number of targeted RWYs**

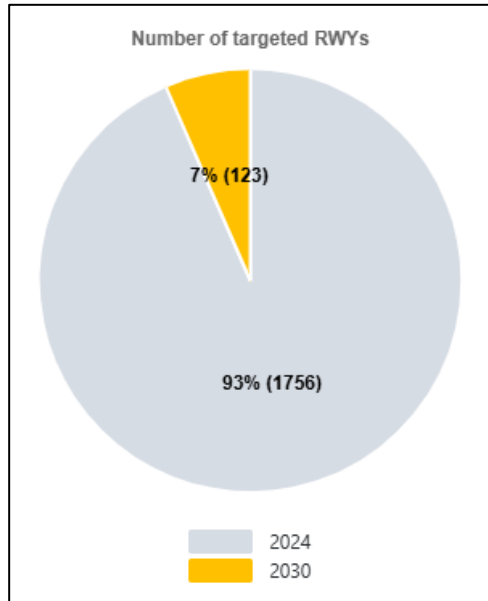


Figure 21 PBN IR dashboard – SID/STAR – Targeted RWYs

In **Grey**: the number of **IREs that have Target date = 2024** for SID and STAR procedures.

In **Orange**: the number of **Non-IREs that have Target date= 2030** for SID and STAR procedures.

- **GRAPH 2: RNAV 1/RNP 1/RNP 0.3 SID deployment status at 2024 targeted IREs.**

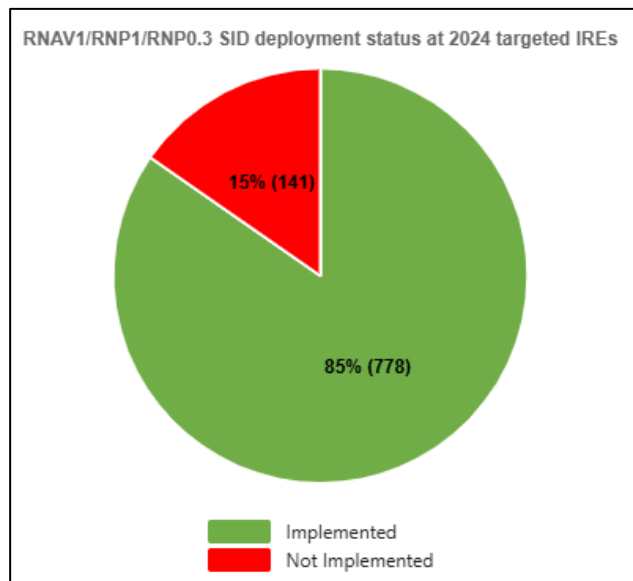


Figure 22 PBN IR dashboard– SID – 2024

- GRAPH 3: **RNAV 1/RNP 1/RNP 0.3 STAR deployment status at 2024 targeted IREs**

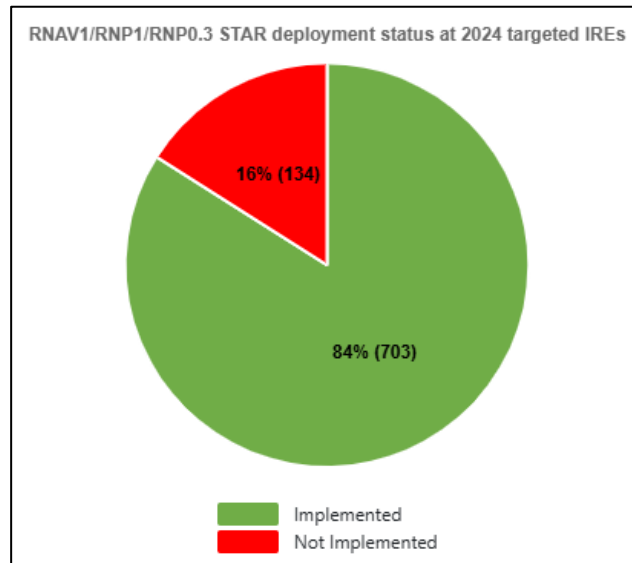


Figure 23 PBN IR dashboard– STAR – 2024

For GRAPH 2 (SID) and GRAPH 3 (STAR), the instrument runway ends (IREs) are organized in the following categories:

- **Implemented**
 - All 2024 targeted IREs with **PBN IR Status = Implemented**
- **Not implemented**
 - All 2024 targeted IREs with **PBN IR Status = Not Implemented**

7.5.2 RWYs Not targeted by the PBN IR

If only runways with “**Target date = Not targeted**” are included in the selection made by the user, no information will be displayed.

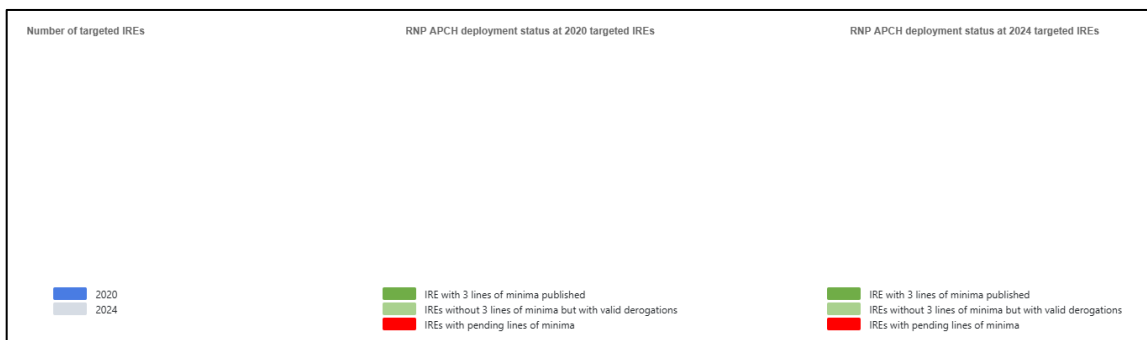


Figure 24 PBN IR dashboard – RWYs not targeted by the PBN IR

References

- [1] ICAO Doc 9613 PBN Manual Edition 5
- [2] ICAO Doc 8168 Vol II PANS-OPS
- [3] ICAO Circular 353
- [4] EU 2018/1048
- [5] EU 2014/139
- [6] EU 2018/401



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