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Runway Performance Report **2025**

BRUSSELS SOUTH CHARLEROI AIRPORT

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Runway performance report

Brussels South Charleroi Airport

EXECUTIVE SUMMARY

In 2025, Brussels South Charleroi Airport confirmed its position as Belgium's fastest-recovering airport, reaching 96,354 movements—a 17% increase over 2019 levels and the only airport in the country to have fully exceeded pre-pandemic traffic volumes.

This report gives an overview of the Air Traffic Management (ATM) performance at Brussels South Charleroi Airport (International Civil Aviation Organization – ICAO code: EBCI). ATM Performance is driven by four Key Performance Areas (KPAs): safety, capacity, environment, and cost-efficiency. Its aim is to provide our main stakeholders with traffic figures for 2025 and relevant data on the performance of our operations at Brussels South Charleroi Airport, namely on three of the four KPA's: safety, capacity, punctuality, and environment. While 2019 remains a standard reference year for the industry, it is interesting to observe the recovery trend since the pandemic of 2020. Therefore, the last four years are analysed throughout this report to show the year-over-year evolution.

Traffic

Traffic volumes in 2025 increased by 5% compared to the previous year, driven primarily by a 6% rise in IFR flights. The busiest month was August, which was a return to a typical summer peak. During the busy holiday season (May to September), a local agreement between the airport and flight schools aimed to reduce the number of touch-and-go at Brussels South Charleroi Airport by encouraging these to be performed at alternative airfields. This led to a more consistent distribution of VFR traffic throughout the remainder of the year. Moreover, the daily traffic pattern has evolved: the distinct drop-in activity between morning and evening peaks has almost disappeared, replaced by a continuous high flow of operations throughout the day.

Ryanair remains the backbone of commercial traffic, accounting for nearly 80% of movements and growing by 7%, while Pegasus saw a growth of 24%.

Additionally, the airspace faced new challenges with a significant rise in drone activity (+18%), including a sharp increase in state-related drone operations due to a heightened security context after the drone incident in autumn.

Safety

Safety is a crucial pillar in air traffic control. As such, safety occurrences and missed approaches are followed up by skeyes' safety unit who analyses the situations, trends and, when relevant, investigates. The number of missed approaches, a procedure used when the approach cannot be continued for a safe landing, and particularly their cause can indicate which measures are to be taken to improve the safety of air navigation service provision. In 2025, there were 129 missed approaches, resulting in a rate of 2.7 per 1,000 arrivals. This increase was largely influenced by weather conditions—specifically thunderstorms and windshear—and unstable approaches, which together accounted for most events.

For safety occurrences, the report shows that there were six runway incursions in Brussels South Charleroi Airport in 2025. These occurrences are discussed within the Local Runway Safety Team (LRST) to ensure all stakeholders are informed and can collaboratively discuss possible actions.

Capacity and Punctuality

Brussels South Charleroi Airport has a declared capacity for the used runway configurations. This capacity is based on a theoretical throughput capacity following certain assumptions and rules. In this report, the declared IFR capacity is given together with a view on the effectively used capacity. The declared capacity was exceeded on certain days, typically when the traffic mix contained a high percentage of VFR flights (over 56%), where IFR separation rules do not apply.

Since 2015, skeyes is subject to an annual target regarding ATFM arrival delay which is defined as the delay of a flight caused by a regulation attributable to the terminal and air navigation services of the destination airport. 2025 marked the beginning of Fourth Reference Period (RP4), introducing new performance targets. Brussels South Charleroi Airport is not considered as a contributor airport to this target; however, delay is monitored as an internal performance indicator. In 2025, Brussels South Charleroi Airport registered 894 minutes of ATFM arrival delay (equivalent to approximately 0.03 minutes per flight), a slight increase mainly attributed to an accident (landing gear collapse) and weather events.

When considering the broader network impact, total ATFM delay affecting traffic to and from Brussels South Charleroi Airport accounted for 115,343 minutes on arrivals and 112,622 minutes on departures in 2025. Only a limited share of these delays was attributable to skeyes (5% of arrival delay and 4% of departure delay), with the majority generated by other ANSPs.

Environment

A preferential runway system (PRS) is in place at Brussels South Charleroi Airport and defines runway 24 as the preferred runway to use, when the necessary conditions are met. While runway 24 remains the primary runway, the return of the “spring phenomenon”—persistent north-east winds in April and May—caused usage of runway 06 to nearly double compared to 2024.

The chapter continues with statistics on the continuous descent operations (CDO). The rate of CDO Fuel (flying a CDO from FL100) and CDO Noise (flying a CDO from FL60) is increasing in the last years. The ‘average level-off time below certain altitude’ (10,000 ft, 6,000 ft, and 3,000 ft) shows that the average level-off time increased during the months with more north-east winds.

Despite the traffic growth, skeyes and airline coordination successfully reduced night traffic, with movements at 23:00 dropping by 6% from 2024 to 2025. Finally, this report also introduces a new metric: Additional Taxi Time. Despite an increase in reference times, operational efficiency improved, with the average actual taxi-out and taxi-in times decreasing compared to the peaks of 2023.

SYNOPSIS

En 2025, Brussels South Charleroi Airport a confirmé sa position d'aéroport belge connaissant la reprise la plus rapide en atteignant 96.354 mouvements, soit une augmentation de 17 % par rapport aux niveaux de 2019. Il est également le seul aéroport du pays à avoir pleinement dépassé les volumes de trafic d'avant la pandémie.

Le présent rapport passe en revue les performances de la gestion du trafic aérien (Air Traffic Management (ATM) Performance) à Brussels South Charleroi Airport. Les performances ATM reposent sur quatre domaines de performance clés (KPA, Key Performance Areas) : la sécurité, la capacité, l'environnement et l'efficacité économique. Ce rapport se focalise sur les opérations de skeyes à Brussels South Charleroi Airport (code de l'Organisation de l'Aviation civile internationale (OACI) : EBCI). Son objectif est de fournir aux principaux stakeholders les chiffres du trafic pour 2025 et des données pertinentes sur la performance des opérations à Brussels South Charleroi Airport, à savoir pour trois des quatre KPA : la sécurité, la capacité (ponctualité) et l'environnement. Si 2019 demeure une année de référence standard pour le secteur, il est intéressant d'observer la tendance à la reprise depuis la pandémie de 2020. C'est pourquoi les quatre dernières années sont analysées dans le présent rapport afin de montrer l'évolution d'une année sur l'autre.

Trafic

Les volumes de trafic en 2025 ont augmenté de 5 % par rapport à l'année précédente, principalement en raison d'une hausse de 6 % des vols IFR. Août est le mois avec le plus de trafic, ce qui démontre un retour au pic de l'été. Pendant la période de forte activité (mai à septembre), un accord local entre l'aéroport et les écoles de pilotage visait à réduire le nombre de touch-and-go en encourageant leur réalisation sur des aérodromes alternatifs. Cela a conduit à une distribution de vols VFR uniforme sur le reste de l'année. Par ailleurs, le modèle de trafic journalier a évolué : la baisse d'activité marquée entre les pics du matin et du soir a quasiment disparu, laissant place à un flux d'opérations élevé et continu tout au long de la journée.

Ryanair reste la pierre angulaire du trafic commercial et comptabilise près de 80 % des mouvements, soit une croissance de 7 %, alors que Pegasus a connu une croissance impressionnante de 24 %.

De plus, l'espace aérien a dû relever de nouveaux défis suite à une augmentation significative de l'activité des drones (+18 %), notamment une forte hausse des opérations de drones étatiques en raison d'un contexte de sécurité accru suite à l'incident des drones survenu en automne.

Sécurité

La sécurité est un pilier essentiel du contrôle aérien. C'est pourquoi les événements de sécurité et les approches interrompues font l'objet d'un suivi par la Safety Unit de skeyes, qui analyse les situations, les tendances et, le cas échéant, mène des enquêtes.

Le nombre d'approches interrompues, une procédure utilisée lorsque l'approche ne peut pas être poursuivie pour effectuer un atterrissage en toute sécurité, et en particulier leur cause, peuvent indiquer les mesures à prendre pour améliorer la sécurité de la prestation des services de navigation aérienne. En 2025, on a dénombré 129 approches interrompues, soit un taux de 2,7 pour 1.000 arrivées. Cette augmentation est principalement due aux conditions météorologiques, notamment aux orages et aux cisaillements de vent, ainsi qu'à des approches instables, qui représentent ensemble la majorité des incidents.

Concernant les événements liés à la sécurité, le rapport indique qu'il y a eu six incursions de piste à Brussels South Charleroi Airport en 2025. Ces événements sont examinés par la Local Runway Safety Team (LRST) afin de garantir que toutes les parties prenantes soient informées et puissent discuter ensemble des actions possibles.

Capacité et ponctualité

Brussels South Charleroi Airport dispose d'une capacité déclarée pour les configurations de pistes utilisées. Cette capacité repose sur une capacité de débit théorique suivant certaines hypothèses et règles. Le présent rapport comporte la capacité IFR déclarée ainsi qu'un aperçu de la capacité effectivement utilisée. La capacité déclarée a été dépassée certains jours, notamment lorsque la combinaison de trafic comprenait une forte proportion de vols VFR (plus de 56 %), pour lesquels les règles de séparation IFR ne s'appliquent pas.

Depuis 2015, skeyes est soumise à un objectif annuel concernant le retard ATFM à l'arrivée, c'est-à-dire le retard d'un vol causé par une régulation imputable aux services terminaux et de navigation aérienne de l'aéroport de destination. L'année 2025 a marqué le début de la quatrième période de référence (PR4), avec l'introduction de nouveaux objectifs de performance. Brussels South Charleroi Airport n'est pas considéré comme un aéroport contributeur pour cet objectif ; toutefois, les retards y sont suivis en tant qu'indicateur de performance interne. En 2025, Brussels South Charleroi Airport a enregistré 894 minutes de retard ATFM à l'arrivée (soit environ 0,03 minute par vol), une légère augmentation principalement due à un accident (affaissement du train d'atterrissage) et à des phénomènes météorologiques.

Si l'on considère l'impact global sur le réseau, le retard ATFM total affectant le trafic à destination et en provenance de Brussels South Charleroi Airport représentait 115.343 minutes aux arrivées et 112.622 minutes aux départs en 2025. Seule une part limitée de ces retards était imputable à skeyes (5 % des retards à l'arrivée et 4 % des retards au départ), la majorité étant générée par d'autres prestataires de services de navigation aérienne.

Contrairement à l'année précédente, l'année 2025 a connu un modèle de retards plus irrégulier, caractérisé par une augmentation marquée des retards de courte durée (jusqu'à 15 minutes), ainsi que par une hausse des retards plus longs causés par la fermeture d'une piste.

Environnement

Un système de pistes préférentielles (PRS, Preferential Runway System) est en place à Brussels South Charleroi Airport et définit la piste 24 comme préférentielle, lorsque les conditions requises sont réunies. Bien que la piste 24 demeure la piste principale, le retour du « phénomène printanier », soit des vents persistants de nord-est en avril et en mai, a entraîné un quasi-doublement de l'utilisation de la piste 06 par rapport à 2024.

Le chapitre se poursuit par des statistiques sur les Continuous Descent Operations (CDO). Le taux de CDO Fuel (vols CDO à partir du niveau de vol 100) et de CDO Noise (vols CDO à partir du niveau de vol 60) a augmenté ces dernières années. Le 'temps moyen de mise en palier en dessous d'une certaine altitude' (10.000 pieds, 6.000 pieds et 3.000 pieds) montre que ce temps moyen a augmenté durant les mois où les vents de nord-est étaient plus forts.

Malgré la croissance du trafic, la coordination entre skeyes et les compagnies aériennes a permis de réduire efficacement le trafic de nuit, avec une baisse de 6 % des mouvements à 23h entre 2024 et 2025. Enfin, le présent rapport introduit un nouvel indicateur : le temps de roulage supplémentaire. Malgré une hausse des temps de référence, l'efficacité opérationnelle s'est améliorée, les temps moyens réels de roulage au départ et à l'arrivée ayant diminué par rapport aux pics de 2023.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

GLOSSARY

AAE	Above Aerodrome Elevation
AIP	Aeronautical Information Publication
AMC	Acceptable Means of Compliance
AMS	Airport Movement System
ANSP	Air Navigation Service Provider
AIBT	Actual In-Block Time
AOBT	Actual Off-Block Time
ALDT	Actual Landing Time
ATC	Air Traffic Control
ATCO	Air Traffic Control Officer
ATFM	Air Traffic Flow Management
ATM	Air Traffic Management
ATOT	Actual Take-Off Time
BAC	Brussels Airport Company
BCAA	Belgian Civil Aviation Authority
BURDI	Belgium–Netherlands U-space Reference Design Implementation
CEF	Connecting Europe Facility
BVLOS	Beyond Visual Line of Sight
CAA	Civil Aviation Authority
CCM	Air Corsica
CDO	Continuous Descent Operations
CET	Central European Time
CISP	Common Information Service Provider
CO_2	Carbon Dioxide
CRSTMP	C-Capacity, R-Routeing, S-Staffing, T-Equipment, M-Airspace Management, P-Special Event
CTR	Control Zone
DAA	Drones & Aerial Activities
EASA	European Union Safety Agency
EBAW	Antwerp Airport
EBBR	Brussels International Airport
EBCI	Brussels South Charleroi ICAO Code
EBFN	Koksijde Air Base
EBLG	Liege Airport
EBOS	Ostend-Bruges International Airport
FABEC	Functional Airspace Block Europe Central
FCA	Fly-Coop
JFA	Jetfly Aviation
ICAO	International Civil Aviation Organization
IFR	Instrument Flight Rules
LRST	Local Runway Safety Team
LT	Local Time
NOx	Nitrogen Oxides
PBN	Performance Based Navigation
PGT	Pegasus
PRU	Performance Review Unit
RAT	Risk Analysis Tool
RNP	Required Navigation Performance
ROTA	Runway Occupancy Time for Arrivals
RPAS	Remotely Piloted Aircraft System
RP3	Third Reference Period (2020-2024)
RP4	Fourth Reference Period (2025-2029)
RUK	Ryanair UK Limited
RWY	Runway
RYR	Ryanair
SPW	Service Public de Wallonie
PGC	European Aircraft Private Club
PRS	Preferential Runway System
UAS	Unmanned Aircraft System
VLL	Very Low-Level Zones
VLOS	Visual Line of Sight
VFR	Visual Flight Rules
VOE	Volotea
WMT	Wizz Air Malta
Wx	Weather
WZZ	Wizz Air

1 TRAFFIC

This first chapter presents the traffic data of Brussels South Charleroi Airport (International Civil Aviation Organization (ICAO) code: EBCI).

The data regarding manned aviation is recorded by the Airport Movement System (AMS). The AMS is an in-house developed Air Traffic Control (ATC) system that records aircraft movements within the aerodrome and its Control Zone (CTR). A movement is defined as an aircraft crossing the CTR or either landing at or taking off from the aerodrome. As this report focusses on runway performance, crossings of the CTR are not considered.

In this report, movements encompass take-offs or landings of all manned traffic at the aerodrome, including flights under Visual Flight Rules (VFR) and Instrumental Flight Rules (IFR), helicopters and airplanes, and traffic of any market segment (e.g. commercial, military, or general aviation). It is to be noted that all the movements are counted in local time (LT).

Adhering to the aerodrome movement definition agreed to by the Belgian Civil Aviation Authority (BCAA), each recorded instance is quantified as follows:

- **one take-off = one departure movement;**
- **one landing = one arrival movement;**
- **one touch-and-go = two movements: one departure & one arrival.**

For unmanned aviation, data is retrieved from a web application developed by SkeyDrone[1], the Drone & Aerial Activities (DAA). This tool was developed to facilitate planning, coordination and information flow between drone operators and Air Traffic Control, especially in controlled airspace.

1. SkeyDrone is a joint venture between the Belgian Air Navigation Service Provider skeyes and the Brussels Airport Company. Its mission is to provide end-to-end solutions for drone operations, focusing on the safe and efficient management of uncrewed aircraft.

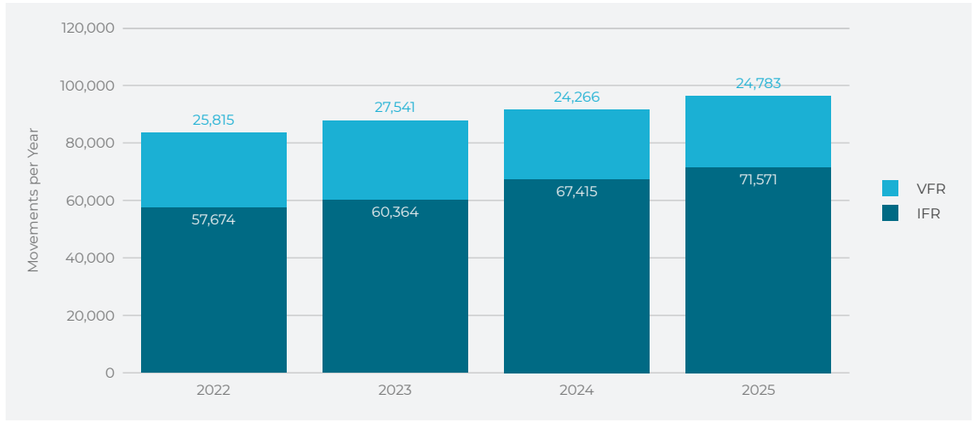
Traffic Overview

Traffic at Brussels South Charleroi Airport has kept growing year after year. When looking at the last few years starting from 2022, the numbers have climbed steadily. In 2025, total traffic reached 96,354 movements, which is an increase of 5% compared to the previous year. Notably, this represents a full recovery and a 17% increase compared to pre-pandemic 2019 levels, making Brussels South Charleroi the only Belgian airport to have fully surpassed its 2019 performance. Looking further back to 2022, traffic has jumped by over 15% in just three years. This growth is mostly driven by IFR flights, which went up by 6% last year, while VFR traffic saw a smaller rise of 2%. The number of aircraft movements for the last four years is as follows:

2022:	**83,489 movements**	(57,674 IFR; 25,815 VFR);
2023:	**87,905 movements**	(60,364 IFR; 27,541 VFR);
2024:	**91,681 movements**	(67,415 IFR; 24,266 VFR);
2025:	**96,354 movements**	(71,571 IFR; 24,783 VFR).

Figure 1.1 shows the traffic at Brussels South Charleroi Airport over the last four years. The positive trend matches the latest forecast from the network manager EUROCONTROL Seven-Year Forecast, which projects the total European network traffic to reach 11.4 million flights in 2026 -a 3.1% growth in the base scenario. While the forecast for the Belgian market remains more conservative, Brussels South Charleroi Airport's specific growth continues to outperform the national average for Belgium and the projected recovery rates for Brussels Airport. This positive outlook is based on a resilient economy and busy airline schedules planned for the coming winter.[2]

Figure 1.1: *Yearly traffic overview*



2. 'EUROCONTROL Forecast Update 2025-2031 - Autumn Update | EUROCONTROL', accessed on 24 February 2026, https://www.eurocontrol.int/publication/eurocontrol-forecast-update-2025-2031.

Figure 1.2 provides information about the monthly evolution of the traffic (total movements) at Brussels South Charleroi Airport for 2022, 2023, 2024 and 2025. ***Figure 1.3*** shows the movements split between Instrument Flight Rules (IFR) traffic and Visual Flight Rules (VFR) traffic.

Since 2022, traffic at Brussels South Charleroi Airport is following a positive trend, driven by the strong presence of airlines like Ryanair, Pegasus, and Wizz Air, which have continued to develop their networks here. Yet, while these airlines remain the backbone of their traffic today, the context is evolving. 2025 ended with the highest traffic levels analysed, as shown in the breakdown below.

Figure 1.2: *Monthly total movements per year*

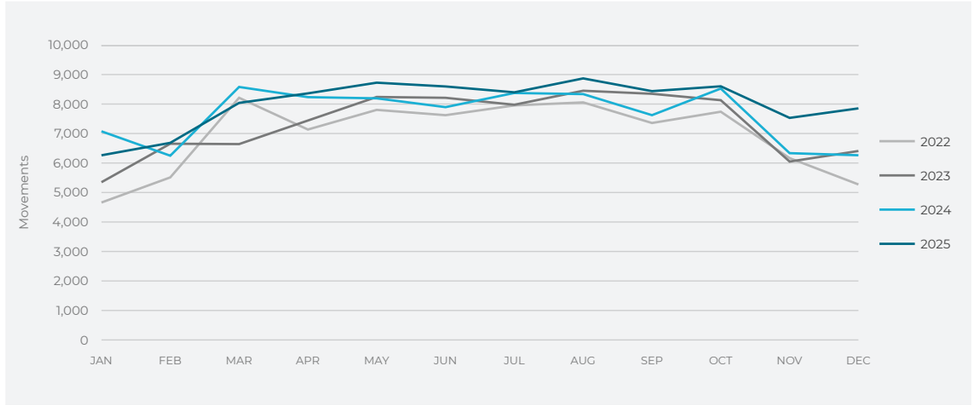
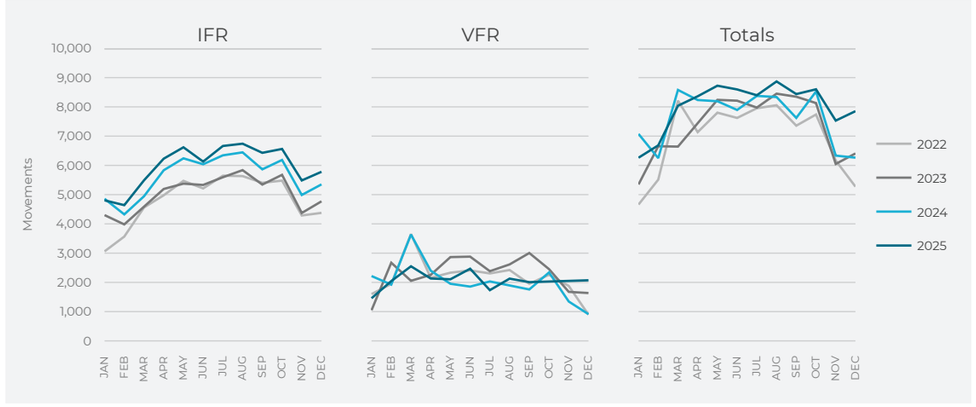


Figure 1.3: *Monthly IFR and VFR movements per year*



Looking at ***Table 1.1***, the number of IFR flights was consistently higher than in 2024 for nearly the whole year, with monthly increases frequently situated between 5% and 11%, according to the monthly distribution. VFR traffic, however, was very erratic. The monthly variations were significant, even though the overall volume of VFR flights ended up being comparable to last year (+2%). In contrast to high peaks at the end of the year, when December VFR traffic doubled (+127%) compared to 2024, driven by unusually favourable weather, there were drops in the first quarter. January saw a 34% decrease due to bad weather and frequent Instrument Meteorological Conditions (IMC), followed by a 30% drop in March. These fluctuations reflect the natural volatility of non-scheduled traffic, which depend on weather conditions as well as demand from flight schools and private pilots, rather than fixed timetables. The busiest month in 2025 was August, recording 8,869 movements. This shift back from 2024 to a summer peak is partly due to the restrictions put in place to limit VFR training flights during the busy holiday season (May to September) to manage the complexity of the airspace. However, 2025 was also a difficult year for operations due to social unrest. The airport faced total flight cancellations during national strikes on March 31, June 25, and November 26. On these days, the airport had to close its runways because there was not enough airport staff to ensure operations, which had an impact on the monthly movements for March, June, and November.

Table 1.1: *Monthly movements per flight rule per year*

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total
IFR	**2022**	3,060	3,566	4,560	4,978	5,471	5,212	5,647	5,633	5,405	5,479	4,287	4,376	**57,674**
	2023	4,300	3,982	4,588	5,193	5,375	5,331	5,594	5,837	5,343	5,677	4,373	4,771	**60,364**
	2024	4,858	4,324	4,944	5,833	6,241	6,039	6,343	6,445	5,865	6,185	4,988	5,350	**67,415**
	2025	4,805	4,640	5,489	6,229	6,618	6,129	6,663	6,741	6,429	6,562	5,485	5,781	**71,571**
	2025 vs 2024	-1%	+7%	+11%	+7%	+6%	+1%	+5%	+5%	+10%	+6%	+10%	+8%	+6%
VFR	**2022**	1,601	1,946	3,652	2,158	2,331	2,410	2,306	2,423	1,952	2,260	1,879	897	**25,815**
	2023	1,049	2,672	2,054	2,256	2,865	2,880	2,382	2,614	3,004	2,453	1,676	1,636	**27,541**
	2024	2,217	1,924	3,635	2,401	1,952	1,856	2,032	1,892	1,758	2,340	1,346	913	**24,266**
	2025	1,457	2,044	2,550	2,133	2,106	2,467	1,734	2,128	2,008	2,039	2,045	2,072	**24,783**
	2025 vs 2024	-34%	+6%	-30%	-11%	+8%	+33%	-15%	+12%	+14%	-13%	+52%	+127%	+2%
Total	**2022**	4,661	5,512	8,212	7,136	7,802	7,622	7,953	8,056	7,357	7,739	6,166	5,273	**83,489**
	2023	5,349	6,654	6,642	7,449	8,240	8,211	7,976	8,451	8,347	8,130	6,049	6,407	**87,905**
	2024	7,075	6,248	8,579	8,234	8,193	7,895	8,375	8,337	7,623	8,525	6,334	6,263	**91,681**
	2025	6,262	6,684	8,039	8,362	8,724	8,596	8,397	8,869	8,437	8,601	7,530	7,853	**96,354**
	2025 vs 2024	-11%	+7%	-6%	+2%	+6%	+9%	0%	+6%	+11%	+1%	+19%	+25%	+5%

Table 1.2: *Monthly arrivals and departures per year*

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total
Arrivals	**2022**	2,329	2,757	4,106	3,566	3,901	3,813	3,973	4,030	3,677	3,871	3,085	2,638	**41,746**
	2023	2,677	3,327	3,318	3,722	4,124	4,104	3,988	4,225	4,172	4,064	3,024	3,206	**43,951**
	2024	3,537	3,124	4,289	4,116	4,099	3,945	4,183	4,171	3,814	4,263	3,172	3,130	**45,843**
	2025	3,127	3,340	4,020	4,179	4,364	4,300	4,194	4,434	4,223	4,300	3,767	3,924	**48,172**
	2025 vs 2024	-12%	+7%	-6%	+2%	+6%	+9%	0%	+6%	+11%	+1%	+19%	+25%	+5%
Departures	**2022**	2,332	2,755	4,106	3,570	3,901	3,809	3,980	4,026	3,680	3,868	3,081	2,635	**41,743**
	2023	2,672	3,327	3,324	3,727	4,116	4,107	3,988	4,226	4,175	4,066	3,025	3,201	**43,954**
	2024	3,538	3,124	4,290	4,118	4,094	3,950	4,192	4,166	3,809	4,262	3,162	3,133	**45,838**
	2025	3,135	3,344	4,019	4,183	4,360	4,296	4,203	4,435	4,214	4,301	3,763	3,929	**48,182**
	2025 vs 2024	-11%	+7%	-6%	+2%	+6%	+9%	0%	+6%	+11%	+1%	+19%	+25%	+5%

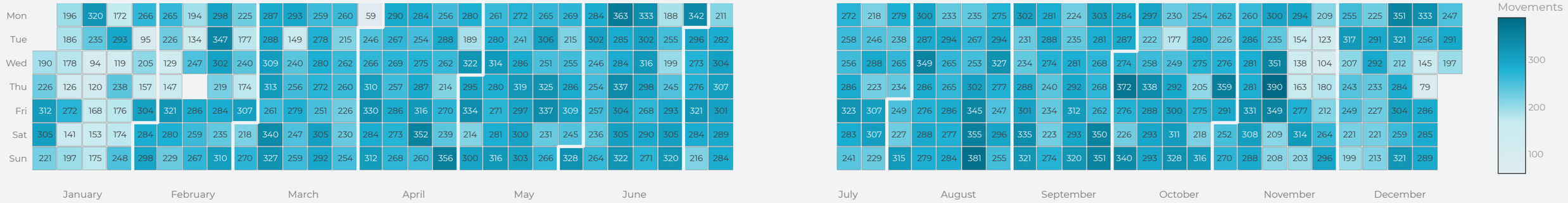


Figure 1.4: *Calendar view of movements per day in 2025*

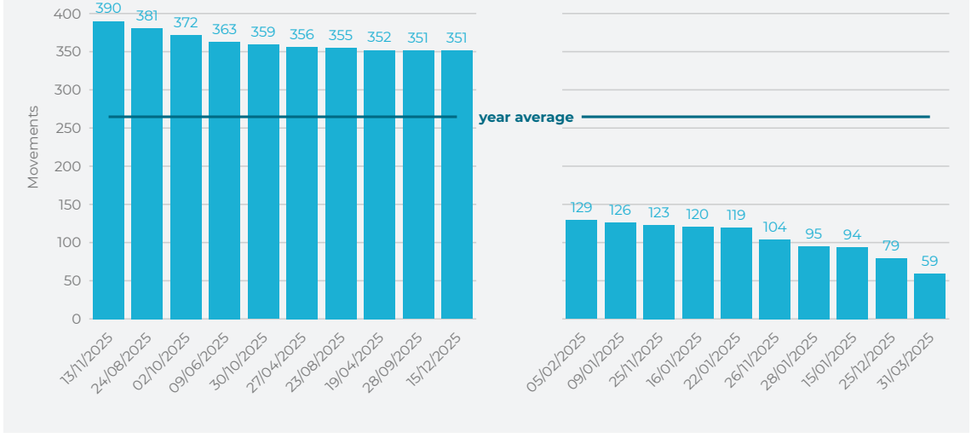
On average, there were 265 movements per day in 2025. ***Figure 1.4*** shows a visualization of the movements per day in a calendar view. ***Figure 1.5*** shows the top ten days with the highest traffic and the bottom ten days with the lowest traffic.

2025's busiest days were distributed in an unusual way. The busiest day of the year was November 13th, with 390 movements. The top ten days occur in April, June, August, October, November, and December. This dispersion is linked to VFR limitations imposed during the summer, which reduced the usual seasonal VFR peaks; once these restrictions were lifted, VFR traffic increased again, resulting in a more uniform VFR distribution throughout the year.

The list of days with the least traffic is influenced by the winter season and specific social events. January was the quietest month, accounting for half of the bottom ten days. However, the days with the lowest traffic were driven by other factors. The lowest number of movements for the entire year was recorded on March 31st (59 movements), which corresponds to the national strike mentioned earlier. Christmas Day (December 25th) follows closely as the second quietest day. The impact of the November 26th strike is also visible, placing that day in the bottom five with only 104 movements.

On the 18th of April, a cyber-attack on the Service public de Wallonie (SPW) temporarily disconnected all internet connections. This also generated some issues at the airport with a minimal impact on operations.

Figure 1.5: *Top ten and bottom ten days of traffic in 2025*



Traffic Patterns

There are several ways to calculate and show hourly traffic levels. In this report, each value represents the average number of movements during the previous 60 minutes.

The chart is created using half-hour steps, which means that consecutive values overlap by 30 minutes. For example, the total shown at 10:00 includes all movements recorded between 09:00 and 10:00, while the total shown at 10:30 includes movements recorded between 09:30 and 10:30.

The graph in ***Figure 1.6*** shows the average hourly movements throughout the day in LT for the period from 2022 to 2025. In 2025, flights were more evenly distributed, rather than showing distinct peaks in the morning and evening with a quiet period in between (as previously seen in 2024). Traffic increases rapidly in the morning and stays high throughout the day. The drop in activity after the morning rush has almost completely disappeared, replaced by a continuous flow of operations that lasts until the late evening.

Figure 1.7 and ***Figure 1.8*** provide a closer look at this evolution by splitting the traffic into IFR and VFR flights. For IFR traffic (***Figure 1.7***), the growth discussed earlier is visible in the daily pattern. The number of flights in 2025 (represented by the dark blue line) is consistently higher than in previous years during almost every hour of the day. The day starts with a morning peak at 07:00, but unlike previous years where traffic would decrease significantly afterward, the traffic now remains high. The graph also shows a distinct second wave of activity in the late afternoon, with a peak appearing around 17:00, before traffic gradually goes down after 22:00.

In contrast, VFR traffic (***Figure 1.8***) follows a completely different trend. These flights generally avoid the commercial rush hours. There is no early morning or late evening peak; instead, VFR activity is concentrated in the middle of the day. In 2025, it began at around 10:00 and stayed busy until the late afternoon, filling the gaps between the main commercial waves.

Figure 1.6: *Average hourly movements per year*

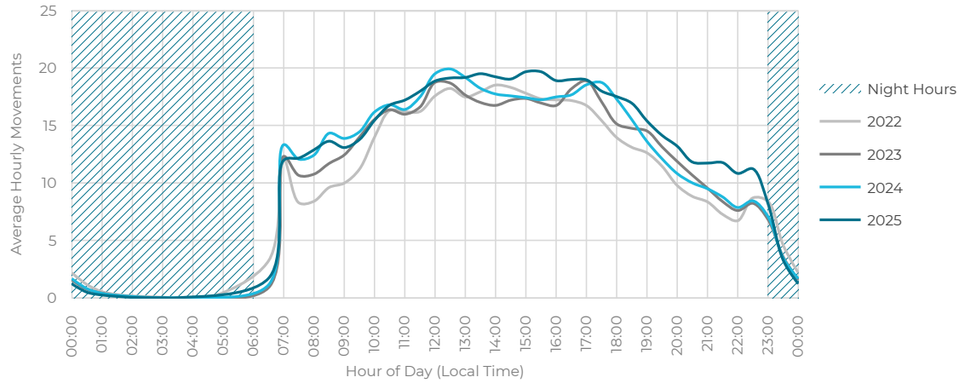


Figure 1.7: *Average hourly IFR movements per year*

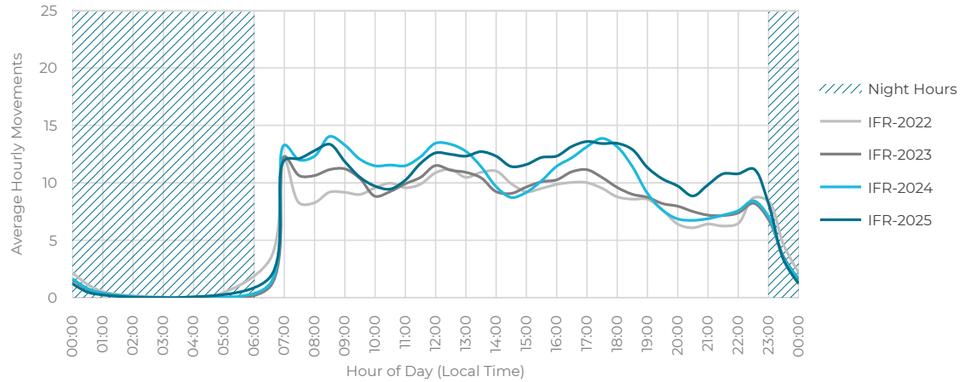
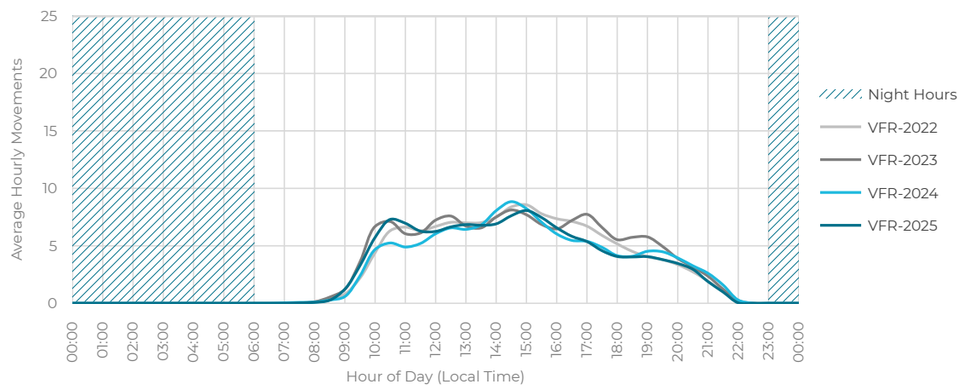


Figure 1.8: *Average hourly VFR movements per year*



Runway Use

The use of one runway configuration over another depends on several factors that must be considered, such as meteorological conditions or runway equipment, for example. In Brussels South Charleroi Airport, there is a preferential runway system to be used, as mentioned in the Aeronautical Information Publication (AIP). Runway 24 is the preferred used runway due to the frequent wind blowing from a south-westerly direction. ***Figure 1.9*** shows the runway in Brussels South Charleroi Airport as published in the Aerodrome Chart - ICAO in the eAIP.[3]

Figure 1.9: *Aerodrome ground movement chart*

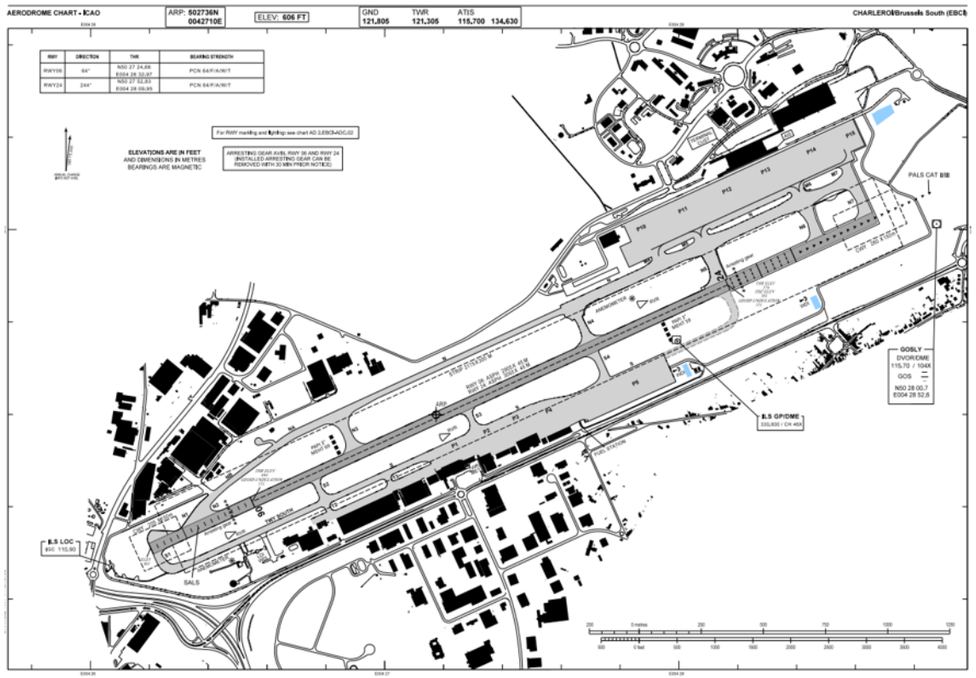


Figure 1.10 shows the runway usage at Brussels South Charleroi Airport from 2022 to 2025. In 2025, runway 24 remained the primary runway, handling 76,608 take-offs and landings. However, there is a shift compared to last year. While 2024 was an exceptional year with very few north-east winds, 2025 saw a return of these wind patterns. Consequently, the use of runway 06 nearly doubled compared to the previous year, jumping to 19,746 movements. The proportion of its use has come back to the levels of 2023, and 2022.

Figure 1.11 shows the runway usage per month in 2025. The influence of the wind direction is clearly visible. While runway 24 dominates the winter months, reaching 100% usage in January and 98% in November. However, the picture changes in Spring.

3. 'eAIP Belgium and Luxembourg', accessed on 24 February 2026, https://ops.skeyes.be/html/belgocontrol_static/eaip/eAIP_Main/html/index-en-GB.html.

The "spring phenomenon" of north-east winds, which was largely absent in 2024, was prominent this year. This is most obvious in April, where the wind patterns forced most of the traffic onto runway 06 (52%), making it the most used runway for that month. This trend continued into May, where Runway 06 still handled a significant 40% of the traffic. Even earlier in the year, during February and March, there was a higher-than-average use of Runway 06 (29% and 28%), confirming that 2025 was a much windier year from the north-east sector than what was experienced lately. More details about winds can be found in ***Figure 4.13*** and ***Figure 4.14*** in the fourth chapter of this report.

Figure 1.10: *Runway usage per year in movements with yearly wind roses*

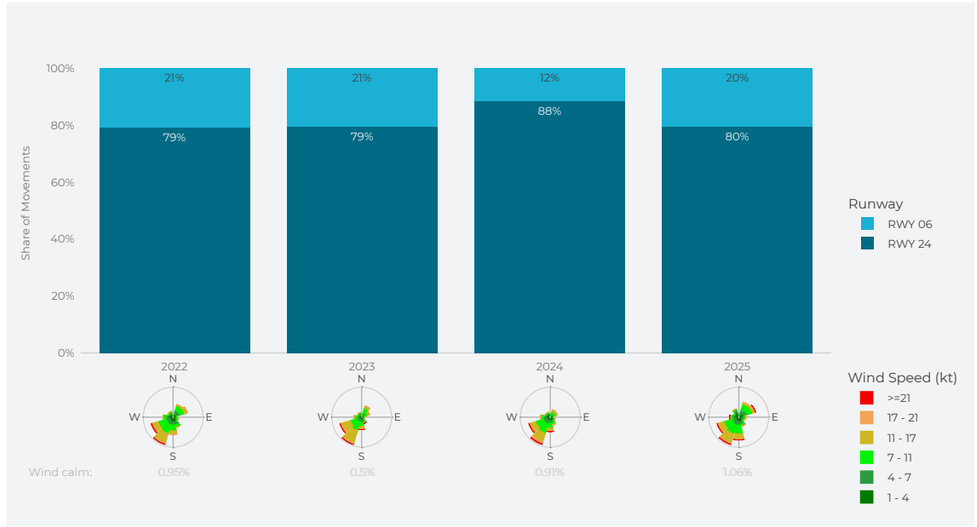
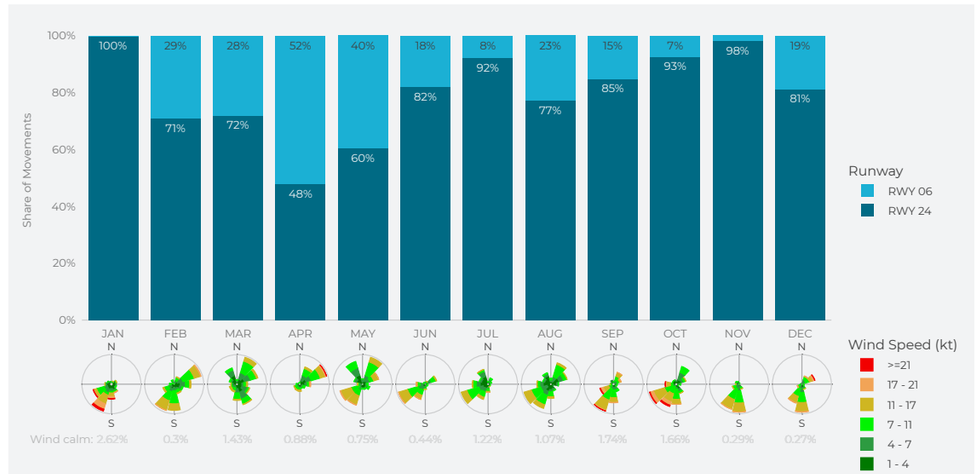


Figure 1.11: *Runway usage per month in 2025 in share of movements*



Market Contributions

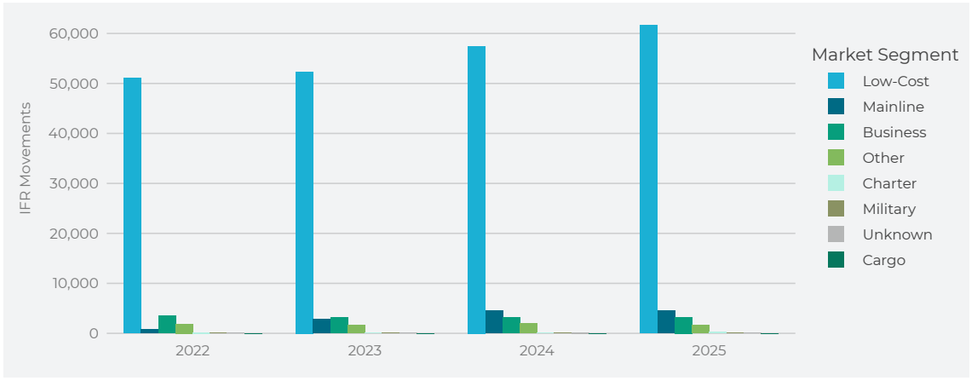
This subchapter analyses the components of commercial traffic at Brussels South Charleroi Airport by examining the market segments that drive activity and growth. It reviews the performance of leading airlines/operators and key destinations to illustrate how each contributes to overall airport traffic. As the focus is on commercial traffic, only IFR movements are considered.

MARKET SEGMENTS

This subsection analyses the type of markets Brussels South Charleroi Airport serves. In this first subsection, the IFR traffic at the airport is categorised per market segment. Aviation market segments are categorised based on air travel and transport, defined by their purpose, target customers, and business models. For this grouping, the air traffic market segmentation rules from STATFOR/EUROCONTROL[4] are followed, based on the flight plan information captured by skeyes' AMS. The EUROCONTROL's Market Segment Rules provide a definition for air traffic market segments based on lists of aircraft types, aircraft operators and the flight types filed on flight plans. It should be noted that the market segment classification rules were updated in November 2025, resulting in minor adjustments to past data. The Unknown category is included to account for movements with incomplete data, particularly those lacking information in the flight plan.

Figure 1.12 shows the market segment distribution for Brussels South Charleroi Airport from 2022 to 2025. The main market segment operating in Brussels South Charleroi Airport is Low-Cost. EUROCONTROL has defined a list of operators to be included in the Low-Cost group. This group includes airlines like Ryanair, Vueling and Wizz Air, among others. In 2025, this segment reached a new milestone, surpassing 60,000 IFR movements for the first time in the last four years and a 28% increase compared to pre-pandemic levels. The Mainline segment also shows growth and is defined by EUROCONTROL as: other scheduled flights, usually hub & spoke operations by airlines' main operating units, using larger aircraft (>120 seats) and including long-haul operations.

Figure 1.12: *IFR movements by market segment*



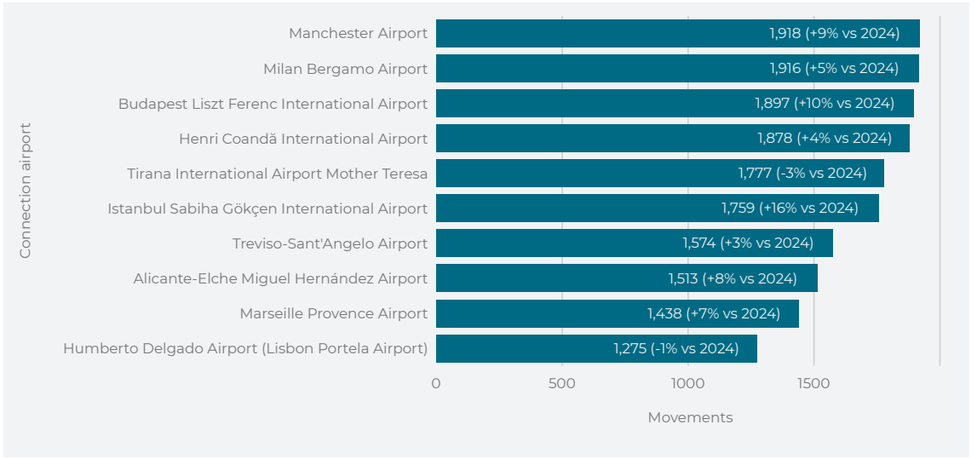
4. 'Market Segment Rules | EUROCONTROL', accessed on 15 January 2026, https://www.eurocontrol.int/publication/market-segment-rules.

Figure 1.13 and ***Figure 1.14*** provide the top ten international connections, the airports to and from which most traffic arrives/departs. For Brussels South Charleroi Airport, Manchester Airport became the top connection with 1,918 movements (+9%), placing this destination in its highest position in recent years. Rounding out the top three are Milan Bergamo Airport, with 1,916 movements (+5%), and Budapest Liszt Ferenc International Airport, which recorded 1,897 movements (+10%).

Overall, the data reflects a sturdy growth trend across major routes. Beyond the top three, Istanbul Sabiha Gökçen saw the most significant surge in popularity with a 16% increase compared to 2024. However, the growth was not universal; Tirana (-3%) and Lisbon (-1%) were the only destinations in the top ten to see a slight reduction in flight movements.

Figure 1.13: *Top ten international connections map*

Figure 1.14: *Top ten international connections*



The top airlines operating at Brussels South Charleroi airport are shown in ***Table 1.3***. Ryanair (RYR) remains the undisputed leader at Charleroi. In 2025, the airline performed 56,807 movements, growing by another 7% compared to last year. To put this in perspective, Ryanair alone accounts for nearly 80% of all commercial traffic at the airport. Behind them, the Wizz Air group continues to be a major player, though an internal shift can be seen. Wizz Air Malta (WMT) has continued to grow (+3%), solidifying its role as the second busiest airline, while the original Wizz Air (WZZ) branch saw a small decrease (-4%). It is also worth highlighting the growth of Pegasus. Their "PGT" branch had an impressive year, jumping by 24% compared to 2024.

Table 1.3: *Top ten airlines operating in Brussels South Charleroi Airport*

	RYR	WMT	WZZ	PGC	PGT	CCM	VOE	JFA	RUK	FCA	Total
2022	42,070	0	4,692	1	1,364	650	4	140	142	80	**49,143**
2023	46,634	2,301	3,250	1,565	1,346	580	94	202	146	86	**56,204**
2024	52,928	3,898	2,985	2,251	1,518	596	76	167	148	102	**64,669**
2025	56,807	4,033	2,867	2,322	1,884	632	178	158	142	73	**69,096**
2025 *vs* 2024	+7%	+3%	-4%	+3%	+24%	+6%	+134%	-5%	-4%	-28%	+7%

Drone Activities

The growing activities of Unmanned Aircraft Systems (UAS) and the variety of their operations are among the challenges driving the future of Air Navigation Service Providers (ANSP). To enable a reliable and efficient UAS integration, a framework was designed at European Union level: U-space. U-space is a set of specific services and procedures designed to ensure safe and efficient access to airspace for a large number of drones. Implementing U-space airspace requires states to define and designate U-space airspaces with mandatory service provision. For the provision of these mandatory services, the deployment of U-space will entail the integration of two new service providers into the system: the Common Information Service Provider (CISP) and the U-Space Service provider (USSP). The CISP will be in charge of making the common information required available, to enable the operation and provision of U-space services in U-space airspaces wherever it has been designated.[5]

In Belgium, skeyes plays a central role in U-space deployment. skeyes has been coordinating and successfully finished the Belgium–Netherlands U-space Reference Design Implementation (BURDI) project, a major European Digital Sky Demonstrator co-funded under the Connecting Europe Facility (CEF) and supported by the SESAR 3 Joint Undertaking. By 2024, effective U-space operations began to be launched within implemented airspace under BURDI coordination, supported by early establishment of coordination mechanisms among skeyes, regulators, and industry stakeholders.

In 2025, skeyes received its certification as the single CISP[6] in Belgium, affirming its commitment and successful integration of UAS traffic. To achieve this, not only did skeyes develop the CIS software, skeyes also took a central role in the development of the U-space as manager of Unmanned Aircraft System geographical zones (GeoZone) in Belgium. All controlled airspace zones above and around airports in Belgium are GeoZones. These are only accessible to drones complying with technical and operational criteria called access conditions, and that can have restrictions with regard to the use of drones. skeyes is the GeoZone manager for controlled airspace above and around the airports of Antwerp, Brussels, Charleroi, Liege, Ostend, and the Radio Mandatory Zone (RMZ) of Kortrijk.[7][8]

As a result of the partnership between skeyes, SkeyDrone, and Brussels Airport Company (BAC), a drone detection system is now operational. In parallel, the detection infrastructure at the regional airports is being further upgraded and extended by SkeyDrone.

Another service provided by SkeyDrone is the drone service application: Drone & Aerial Activities (DAA), which is a web application to facilitate planning, coordination and information flow between drone operators and Air Traffic Control, especially in controlled airspace. The figures in this report related to UAS are provided by the DAA tool.

5. 'What Is U-Space | EASA', accessed on 2 February 2026, https://www.easa.europa.eu/en/what-u-space.
6. Skeyes CISP," accessed on February 27, 2026, https://cis.skeyes.be/terms-and-conditions.
7. 'Skeyes Geographical Zone Statuses Can Be Seen at Https://Map.Droneguide.Be', accessed 24 February 2026, https://map.droneguide.be/.
8. 'Drones & Aerial Activities | Skeyes Drone Service Application', accessed on 4 February 2026, https://www.skeyes.be/en/services/drone-home-page/you-and-your-drone/drone-service-application/.

Table 1.4 displays the number of drone activities and the level of risk involved to operations at the airport. The level of risk involved in the operations is sorted into three categories that are defined by the risk the drone activity forms for manned aviation in Very Low-Level Zones (VLL). For all airports where a control zone exists, these are defined as:

VLL0 - high risk → Runway and surroundings;

VLL1 - moderate risk → Departure/approach track, visual circuits and the rest of the control zone above 400 ft above aerodrome elevation (AAE), excluding the high-risk zone;

VLL2 - low risk → On the edge of the control zone below 400 ft AAE, outside the moderate and high-risk zone.

A drone activity can take place in several VLL zones; therefore, it will be counted as one activity for each risk level. This means that the sum of activities in the Low, Moderate and High-risk levels will not provide the total number of activated drone activities in Brussels South Charleroi Airport CTR.

In 2025, drone activity saw an upward trend across all categories.

- **low risk:** Increased by 16% in 2025 to reach a total of 1,079 movements;
- **moderate risk:** Activities in this zone doubled with a 117% increase (growing from 23 to 50 movements);
- **high risk:** While this category also saw a 100% increase year-over-year, it is important to note that this represents a nominal rise from one operation in 2024 to two in 2025.

Table 1.4: *Activated drone operations per VLL zone risk level*

	Low	Moderate	High
2022	648	5	3
2023	780	11	0
2024	928	23	1
2025	1,079	50	2
2025 *vs* 2024	+16%	+117%	+100%

In Brussels South Charleroi Airport area, there were 1,107 drone activities recorded in 2025. This represents an overall growth of 18% compared to 2024. Those activities can also be classified into a different scheme, taking into account the complexity of the operation. There are two such categories with activities in Belgium, which are described as follows (as per European Union Aviation Safety Agency (EASA) definition[9]):

OPEN → Presents low risk to third parties. An authorization from the Civil Aviation Authority (CAA) is not required;

SPECIFIC → More complex operations or aspects of the operation fall outside the boundaries of the Open Category. Authorization is required from the CAA.

Table 1.5 shows the drone operations recorded in Brussels South Charleroi Airport following the EASA risk category. The growth in 2025 was primarily driven by the 'Open' category, which rose by 25% to reach 823 activated operations. The 'Specific' category remained relatively stable with a slight increase of 2% (284 operations).

Table 1.5: *Activated drone operations per EASA risk category*

	Open	Specific	Total
2022	406	248	**654**
2023	514	274	**788**
2024	657	279	**936**
2025	823	284	**1,107**
2025 *vs* 2024	+25%	+2%	+18%

Furthermore, ***Table 1.6*** provides the number of exempted drone activities. These are operations performed by firefighters, police or different federal entities and are a service provided to the state. This is where the security context mentioned earlier becomes visible in the numbers. Exempted drone operations jumped significantly, from 18 in 2024 to 52 in 2025, an increase of 189%. This surge is correlated with the increased need for aerial surveillance and security patrols by law enforcement agencies in response to the events of late 2025.

Table 1.6: *Activated exempted drone operations*

	Regular	Exempted	Total
2022	649	5	**654**
2023	785	3	**788**
2024	918	18	**936**
2025	1,055	52	**1,107**
2025 *vs* 2024	+15%	+189%	+18%

9. 'EASA, "Drones - Regulatory Framework Background"', accessed on 4 February 2026, https://www.easa.europa.eu/en/domains/civil-drones/drones-regulatory-framework-background.

Finally, drone operations regarding visual line of sight are shown in ***Table 1.7***. Two type of operations are registered:

VISUAL LINE OF SIGHT (VLOS) → This means the drone is operated within the visual range of the pilot, allowing them to see the drone without any visual aids other than corrective lenses;

BEYOND VISUAL LINE OF SIGHT (BVLOS) → In BVLOS operations, the drone is flown outside the pilot's direct visual range, typically relying on technology such as cameras, GPS, or sensors to navigate and observe the environment.

2025 confirmed the gradual introduction of BVLOS. After their initial appearance in 2024, these operations grew by 27%, recording 19 flights this year.

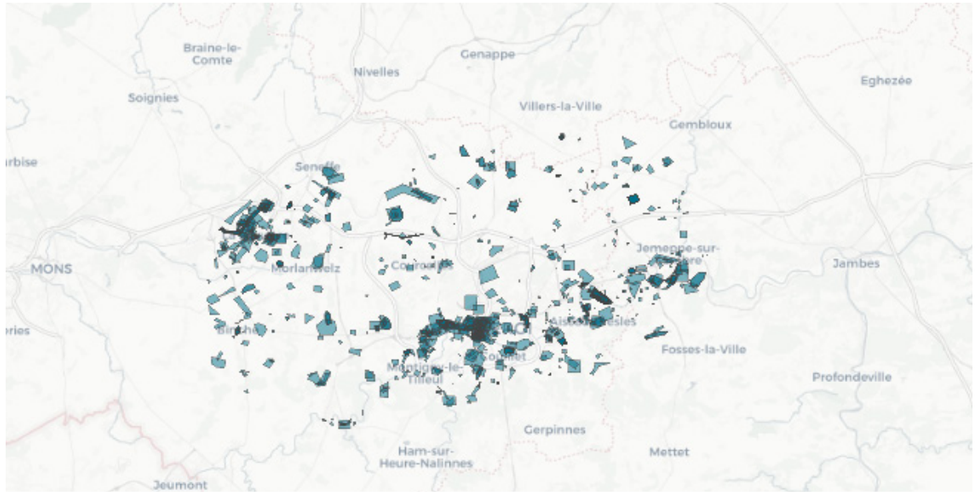
Table 1.7: *Activated drone operations per type*

	VLOS	BVLOS	Total
2022	654	0	**654**
2023	788	0	**788**
2024	921	15	**936**
2025	1,088	19	**1,107**
2025 *vs* 2024	+18%	+27%	+18%

The reserved airspace polygons, which were authorized for drone operations in Brussels South Charleroi Airport's CTR in 2025, are shown in ***Figure 1.15***. Most of the operations focused over the city of Charleroi and along the river. The top five activity types in the CTR are:

1. **Related to photo- and videography;**
2. **Aerial photography;**
3. **Photogrammetry** (art, science, and technology of obtaining reliable information about physical objects and the environment through processes of recording, measuring, and interpreting photographic images and patterns of recorded radiant electromagnetic energy and other phenomena);
4. **Recreational;**
5. **Power line pylon inspection missions.**

Figure 1.15: *Reserved airspaces of authorized drone operation*



DRONE INCIDENTS AND DETECTION MEANS

The European aviation sector faced a significant security challenge during the autumn, characterized by a series of unexplained unmanned aircraft observations across the continent. Starting in late September, numerous airports and military installations ranging from Scandinavia to Germany reported unauthorized drone activity, leading to temporary airspace closures in Copenhagen, Munich, and others.

Belgium was not spared from this phenomenon. In November, sightings were reported near sensitive sites, including the Doel nuclear power station and military bases like Kleine Brogel. The specific locations of these drone sightings (November 2025) in Belgium are illustrated in ***Figure 1.16***, while the timeline was the following:

- October 31st - November second - suspicious drones were spotted over Belgium's Kleine Brogel Air Base for three nights in a row;
- November fourth - drones sighting reported at Brussels Airport (EBBR), Liege Airport (EBLG), Ostend-Bruges Airport (EBOS) and Antwerp Airport (EBAW), air traffic suspended several times at EBBR and EBLG;
- November fifth - drone sighting reported at EBBR;
- Novembre sixth - drone sighting reported at EBBR, EBOS, Koksijde Air Base (EBFN), EBAW, EBLG and Brussels South Charleroi Airport (EBCI), air traffic suspended at EBBR and EBLG;
- November seventh - drone sighting reported at EBLG, air traffic suspended;
- November eighth - drone sighting reported at EBLG, air traffic suspended;
- November ninth - drone sighting reported at EBLG, air traffic suspended;
- November 12th - drone sighting reported at EBBR, air traffic suspended;
- November 24th - drone sighting reported at EBLG, air traffic suspended.

Figure 1.16: *Locations of drone sightings during November 2025*

Drone related regulations on the fourth of November caused 3,377 minutes of Air Traffic Flow Management (ATFM) delay in total for the country while Brussels South Charleroi Airport accounted for 315 minutes. There were no other drone related regulations between the first and the 20th of November.

Regarding the impact of the Remotely Piloted Aircraft System (RPAS) interference, there was one report in Brussels South Charleroi Airport indicating RPAS interference, which did not have any operational impact. However, there were seven diversions from Brussels International Airport to Brussels South Charleroi Airport due to drones on November fourth.

Towards the end of 2025 skeyes initiated different tests regarding drone detection. These tests are particularly important in light of recent drone attacks across Belgium, as well as the steadily increasing number of drones and drone users.

2 SAFETY

- **Missed Approaches**
- **Runway Incursions**
- **Other Noteworthy Incidents**
- **Improvements and Recommendations**

This chapter is divided into four topics: missed approaches, runway incursions, other noteworthy incidents, and recommendations & awareness. The number of arrivals is provided by the AMS under the BCAA's aerodrome movement definition.

The missed approaches covered in the following chapter are based on internal logging. As such, the quality and accuracy of the available information is commensurate with the level of reporting. These logs of missed approaches are not considered as safety occurrences. They are an operational solution allowing to maintain safety margins when the approach cannot be continued for a safe landing. At the same time, particularly during peak hours at busy airports, they also increase the traffic complexity and the residual safety risk. It could be argued that missed approaches are a hybrid leading indicator, and that by analysing the reasons leading to this type of procedure, it is possible to examine if there are any systemic deficiencies in a technical equipment, in a procedure or in manner in which Air Traffic Control Officers (ATCOs) and/or pilots apply these procedures.

Runway incursions are a lagging runway safety indicator. The runway incursions and occurrences discussed in other noteworthy incidents are safety occurrences. These are subject to a risk classification using the Risk Analysis Tool (RAT) methodology to assess the contribution that skeyes had in the chain of events (in accordance with EU Reg 376/2014 and EU Reg 2019/317). The following chapters indicate the severity classification that was derived from the calculated RAT risk for the safety occurrences.[10]

10. COMMISSION IMPLEMENTING REGULATION (EU) No 1216/2011 of 24 November 2011 laying down a performance scheme for air navigation services and network functions;

The following definitions apply for the severity classification (in accordance with EASA Acceptable Means of Compliance (AMC[11])). This classification scheme is applicable for the later mentioned operational occurrences.

Table 2.1: *Severity classification*[12]

Severity Classification	Description
A – Serious incident	An incident involving circumstances indicating that there was a high probability of an accident and is associated with the operation of an aircraft, which in the case of a manned aircraft, takes place between the time any person boards the aircraft with the intention of flight until such time as all such persons have disembarked, or in the case of an unmanned aircraft, takes place between the time the aircraft is ready to move with the purpose of flight until such time it comes to rest at the end of the flight and the primary propulsion system is shut down.
B – Major incident	An incident associated with the operation of an aircraft, in which the safety of the aircraft may have been compromised, having led to a near collision between aircraft, with ground or obstacles (i.e. safety margins were not respected; in this case, not as a result of an ATC instruction).
C – Significant incident	An incident involving circumstances indicating that an accident, or a serious or major incident could have occurred if the risk had not been managed within the safety margins, or if another aircraft had been in the vicinity.
D – Not determined	Insufficient information was available to determine the risk involved or inconclusive or conflicting evidence precluded such determination (RAT RF < 70 %).
E – No safety effect	An incident which has no safety significance.
N – No ATM ground contribution	No system, procedure or person involved in the provision of ATC services initiated or contributed to the incident.

Missed Approaches

Missed approaches are performed according to published procedures, under the instructions of the air traffic controller or initiated by the pilot, when, for any reason, the approach cannot be continued for a safe landing. Besides the discomfort for passengers and crew, the missed approaches increase the air traffic management complexity. The number of missed approaches and particularly their cause can therefore indicate which measures are to be taken to improve the safety of air navigation service provision. All missed approaches are reported by the ATCOs and by cause of event. The number of missed approaches at Brussels South Charleroi Airport is closely monitored and followed up by skeyes' safety unit and are subsequently monitored on a weekly basis. Trends are analysed and, when relevant, investigated to identify root causes and to implement improvement measures.

"Other" includes the missed approaches that could not be attributed to predefined reasons such as passengers not ready, flight criteria not met (e.g. flap configuration) or not confirmed (runway not clear).

Further details can be found in ***Table 0.1*** in **ANNEX A**: Missed approaches, which shows missed approaches per cause for each runway in the years 2022 until 2025.

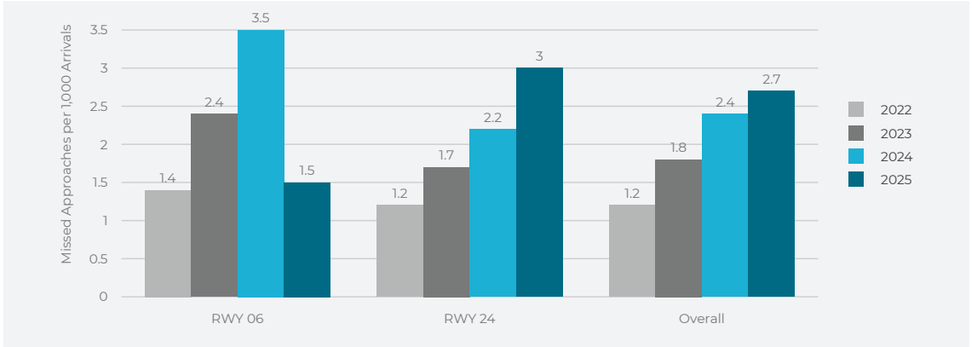
Missed approaches at Brussels South Charleroi Airport went up again in 2025. A total of 129 missed approaches was recorded, compared to 110 the previous year. To put this in perspective relative to the growing traffic, ***Figure 2.1*** shows the rate per 1,000 arrivals, which climbed from 2.4 in 2024 to 2.7 in 2025.

11. "ICAO Doc 4444 – PANS–ATM AMC 3 of EU Reg 2019/317, accessed on January 15, 2026

12. UI – under investigation (a non-official severity classification used during the process before a final classification is determined)

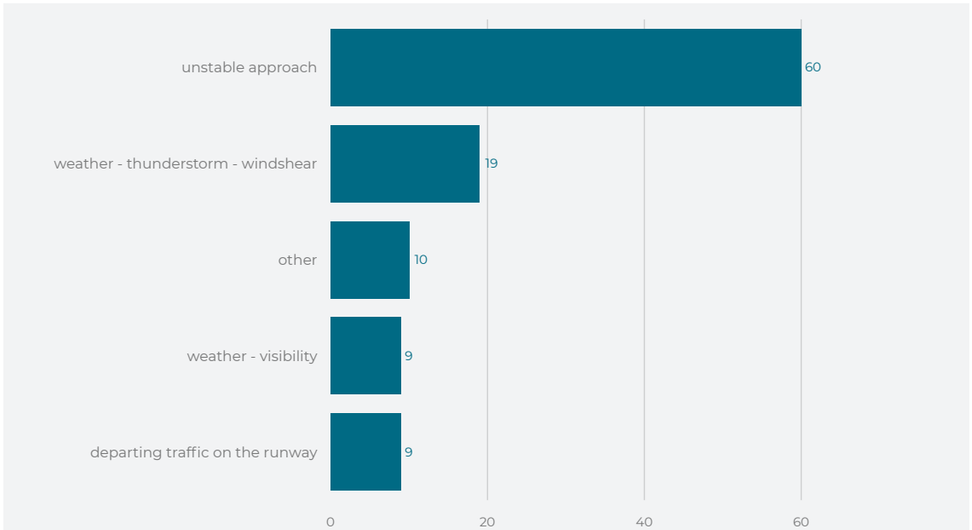
The number of arrivals is provided by the AMS tool under the BCAA's aerodrome movement definition. It can be observed that 2025 has the highest rate in the last years overall.

Figure 2.1: *Rate of missed approaches per 1,000 arrivals per runway per year*



All missed approaches are recorded by cause of event, and the reporting is done by the ATCOs. ***Figure 2.2*** shows the top five causes for missed approaches in 2025, ordered from the most to the least frequent. When looking at the causes, unstable approaches remain the number one reason for a go-around, accounting for 47% of all cases (60 occurrences out of 129). This typically happens when an aircraft is too high or too fast during the final phase of the flight, often due to tailwinds at higher altitudes or when the aircraft takes a very direct route and cannot slowdown in time. The second biggest factor was weather, specifically thunderstorms and windshear, which caused 19 missed approaches (15%), followed by other issues (ten occurrences). These other issues included a bounced landing, aircraft being too high, TCAS advisories, runway occupancy or bird activity requiring a go-around.

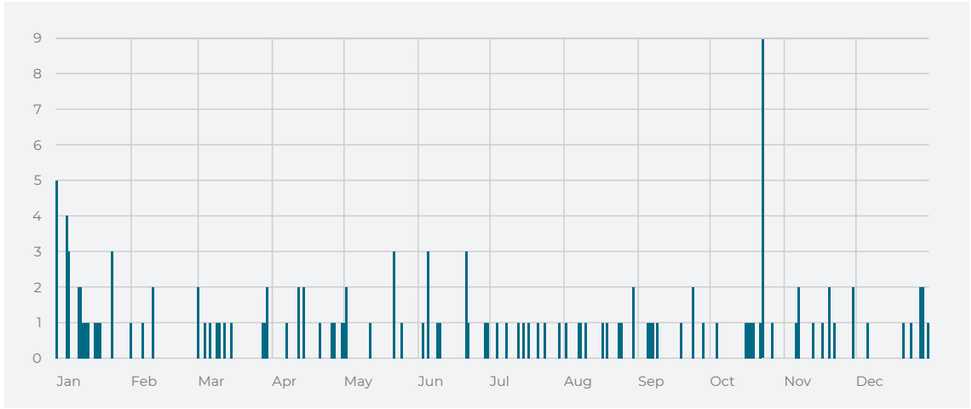
Figure 2.2*: Top five causes for missed approaches*



It is worth noting that unstable approach and thunderstorm-windshear have consistently been the main causes of missed approaches in previous years. Together, they accounted for 61% of all missed approaches this year.

Figure 2.3 shows the number of missed approaches per day in 2025. While most days see zero or one missed approach, one day in late October stands out clearly with a spike of nine missed approaches in a single day. This exceptional peak was driven by severe weather conditions (Code Yellow weather warning for high winds) passing through the area, forcing multiple aircraft to abort their landings.

Figure 2.3: *Number of missed approaches per day*



Further details can be found in the annex, which shows the main causes for missed approaches for each runway in ***Table 0.1***. Again, this year, there is a marked difference between the two runways. Despite seeing a marked reduction in the number of missed approaches (3.5 to 1.5), this year runway 24 had a drastic increase in missed approaches to the extent of seeing three per 1,000 arrivals. Unstable approaches contributed most to this (54 incidents), which is consistent with runway 24 being the most frequently used runway. Weather conditions mentioned above were the second most significant factor.

Runway Incursions

According to ICAO Doc 4444 – PANS–ATM, a Runway Incursion (RI) is defined as "any occurrence at an aerodrome involving the incorrect presence of an aircraft, vehicle or person on the protected area of a surface designated for the landing and take-off of aircraft".[13]

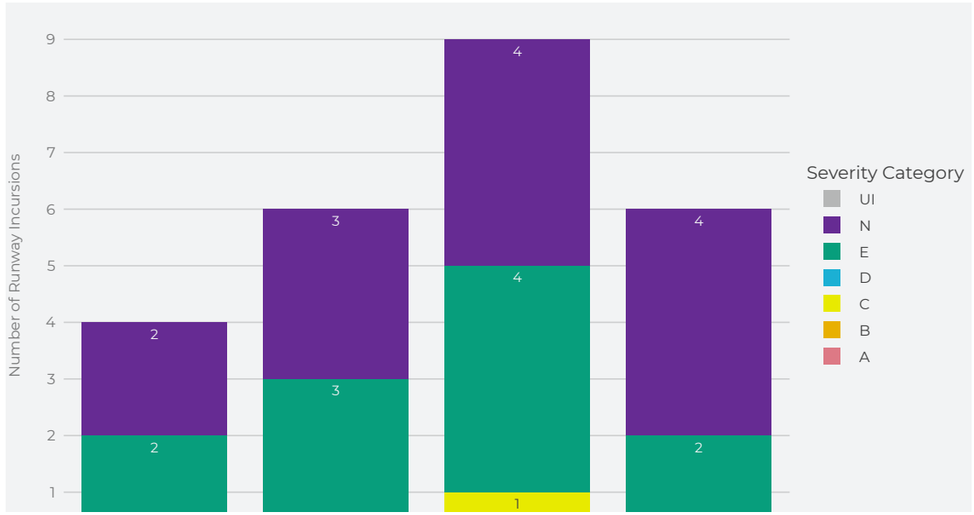
AMC 3 of EU Reg 2019/317 defines the "incorrect presence" as "the unsafe, unauthorised, or undesirable presence, or movement of an aircraft, vehicle, or pedestrian, irrespective of the main contributor (e.g. ATC, pilot, driver, technical system)".[14]

Figure 2.4 gives an overview of runway incursions and their severity, while ***Figure 2.5*** gives a monthly overview of the runway incursions in 2025. There was an improvement in runway safety in 2025. The total number of runway incursions dropped to six, compared to nine the previous year. Furthermore, the severity of these incidents was significantly lower. Unlike 2024, which recorded a 'C-severity' (Significant) incident, 2025 saw no incidents classified as A, B, or C.

From the six instances of runway incursions mentioned earlier, two were categorized as E-severity incident (No safety effect), four as N-severity incidents (no ATM contribution). Of the two E-severity incidents, one situation involved an aircraft lining up on the runway after the controller misunderstood a question added by the flight crew during their taxi clearance read-back. The second instance occurred when an aircraft taxied past the holding point and entered the runway without receiving the proper clearance to line up.

Another way of comparing these figures is with the rate of runway incursions per 100,000 movements. ***Figure 2.6*** shows this rate for Brussels South Charleroi Airport for the period from 2022 until 2025. This figure is further in line with the analysis in this section.

Figure 2.4: *Yearly runway incursions per severity category*



13. 'APAC-Guidance-Material-for-the-Implementation-of-Amendment-1-to-15th-Edition-of-the-PANS-ATM-Doc4444.Pdf', accessed on 10 February 2026, https://www.icao.int/sites/default/files/APAC/Documents/edocs/ATM/APAC-Guidance-Material-for-the-Implementation-of-Amendment-1-to-15th-Edition-of-the-PANS-ATM-Doc4444.pdf.
14. ICAO Doc 4444 – PANS–ATM AMC 3 of EU Reg 2019/317

Figure 2.5: *Monthly runway incursions per severity category in 2025*

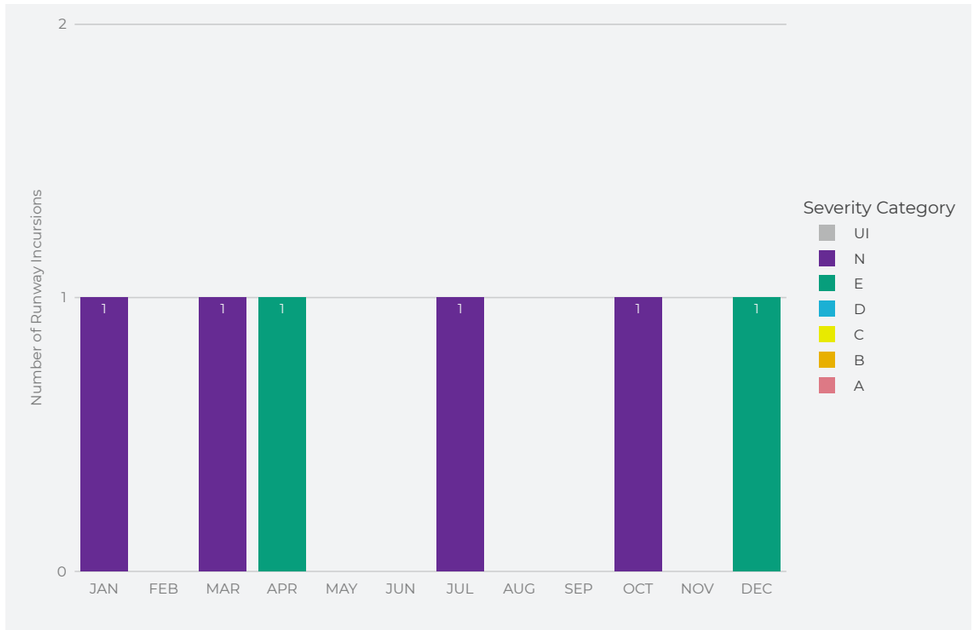
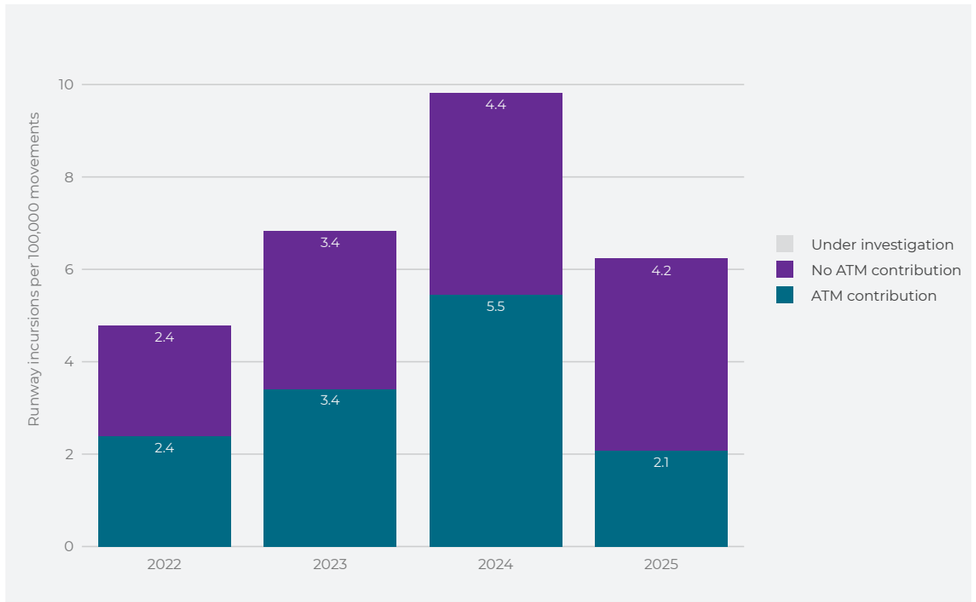


Figure 2.6: *Yearly rates of runway incursions per 100,000 movements by ATM contribution*

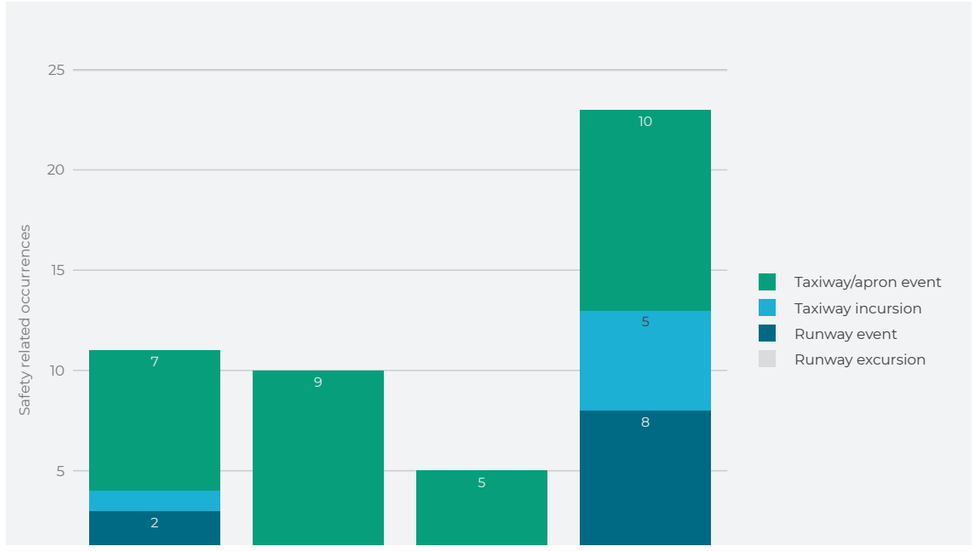


Other Noteworthy Incidents

Other safety occurrences are discussed in this section. In addition to runway incursions, other incidents can happen and must be reported, such as runway events, runway excursions, taxiway/apron events, and taxiway incursions. ***Figure 2.7*** gives a summary of those incidents in Brussels South Charleroi Airport, per year.

In 2025, there were 23 events: eight runway events, ten taxiway/apron events and five taxiway incursions.

Figure 2.7: *Yearly runway and taxiway safety events*



In 2025, there was an increase of eight deviations from Air Traffic Management (ATM) procedures compared to the previous year (see ***Figure 2.8***). Most of these occurrences are not taking place on the ground but are airborne.

Regarding deviations from Air Traffic Control (ATC) clearances, ten occurrences were identified in 2025, compared to seven in 2024. These deviations can be categorized as ground operations and airborne phase.

For the ground handling operations, three deviations were recorded. These included two instances where aircraft pushed back facing the wrong cardinal direction and one instance of an aircraft being towed without proper clearance.

15. 2024 numbers have a small difference compared to the last years report due to recategorisation of safety occurrences.

Figure 2.8: *Yearly deviations from ATM procedures and ATC clearance*[15]

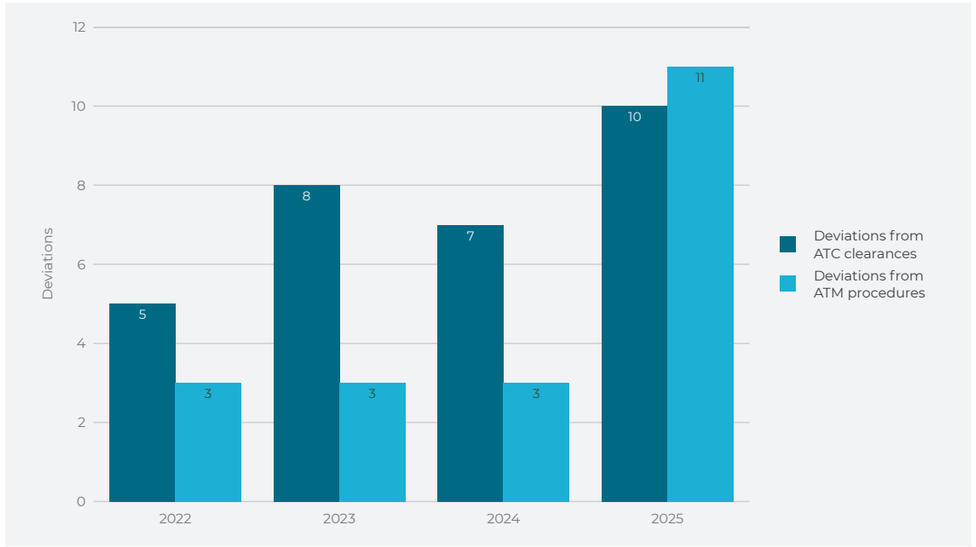
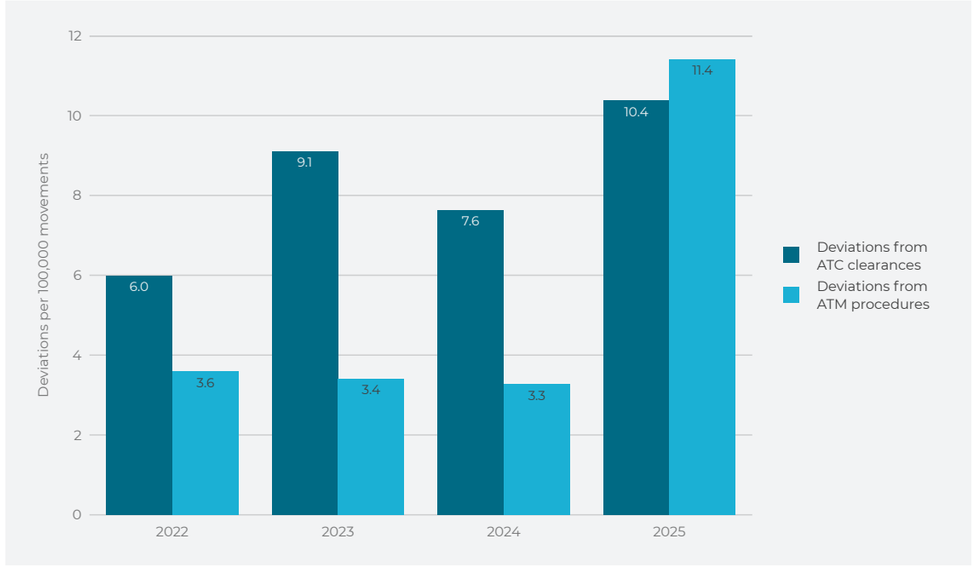


Figure 2.9 shows the deviations from ATC clearance and deviations from ATM procedures as a ratio of deviations per 100,000 movements. The rate of reports concerning deviations from ATM procedures rose to 11.4 per 100,000 movements in 2025, a significant increase compared to 2024 and 2023. Likewise, the rate of reports concerning deviations from ATC clearance increased to 10.4 in 2025, up from 7.6 in 2024.

Figure 2.9: *Yearly deviations from ATM procedures and ATC clearance per 100,000 movements*



Improvements and Recommendations

skeyes has established a Local Runway Safety Team (LRST) together with the stakeholders at Brussels South Charleroi Airport. All apron events, taxiway incursions, runway incursions, and more, if deemed useful, are discussed in the LRST to present the view of each stakeholder. As such, each stakeholder can focus more easily on actions to be taken on their side. In reply to safety recommendations, skeyes improved the implementation of safety nets in the A-SMGCS for a better prevention of Runway Incursions. Thanks to the collaboration at the level of the LRST, the airport in collaboration with skeyes is committed to switch to H24 stop bar usage.

2 CAPACITY & PUNCTUALITY

This chapter addresses the airport capacity and punctuality. Capacity reflects the system's ability to accommodate demand without causing avoidable delays.

In the first section, the declared capacities for different runway configurations are given along with a view on the effective utilisation of this capacity.

In the second section, the punctuality at Brussels South Charleroi Airport is studied. The arrival delay, delay due to regulations placed by Brussels South Charleroi Airport on the arrivals, is analysed and the ATFM delay from the airport's point of view is given, i.e., the impact on traffic to or from Brussels South Charleroi Airport caused by regulations not only at Brussels South Charleroi Airport, but also in the Belgian en-route airspace and by other Air Navigation Service Providers (ANSPs).

Airport Capacity

The capacity of an aerodrome, defined as the number of operations it can handle in a given time, is influenced by factors such as airport layout, fleet mix of the arriving and departing traffic, ATC procedures, weather conditions and technological aids.

Under optimal conditions, a theoretical measure, called **Theoretical Capacity Throughput**, is calculated for each runway configuration. This represents the average number of movements (arrivals and/or departures) that can be performed on the runway system within one hour, based on certain assumptions:

- *A continuous supply of arrivals and/or departures;*
- *Simultaneous Runway Occupancy (SRO) is prohibited (ATC rule);*
- *Safe Wake Vortex separation distances between flights are maintained (ATC rule);*
- *A static fleet mix (unchanging aircraft types);*
- *Unchanging approach and departure procedures;*
- *Optimal operational conditions (e.g. weather and staffing).*

The calculation also incorporates the following parameters:

- *The fleet mix from a monthly sample of traffic;*
- *A nominal radar separation of three nautical miles (NM);*
- *A 15% loss factor in inter-arrival times to account for conservative separation by controllers;*
- *Assumptions for the average Runway Occupancy Time for Arrivals (ROTA);*
- *An average approach speed of 136 knots (ground speed);*
- *Inter-departure time, determined by the time between take-off clearance and reaching a specified altitude.*

Since safe wake vortex separation distances are specified only for IFR flights, the Theoretical Capacity Throughput applies exclusively to IFR movements, and represents the highest number of IFR movements that an aerodrome can handle per hour with a given runway configuration under ideal conditions.

In practice, optimal conditions are rarely achieved. To account for this, the **Declared IFR Capacity** is set at 90% of the theoretical maximum. ***Table 3.1*** shows the declared IFR capacity per runway configuration at Brussels South Charleroi Airport. Note that this is only a theoretical calculation and is currently not used for schedule coordination purposes.

Table 3.1: *Declared IFR capacity*

Runway Configuration		Declared IFR Capacity (movements/hour)		
Departures	Arrivals	Only Departures	Only Arrivals	All Movements
06	06	27	30	42
24	24	29	33	42

Figure 3.1: *Hourly movements and declared capacity for runway configuration 24-24*

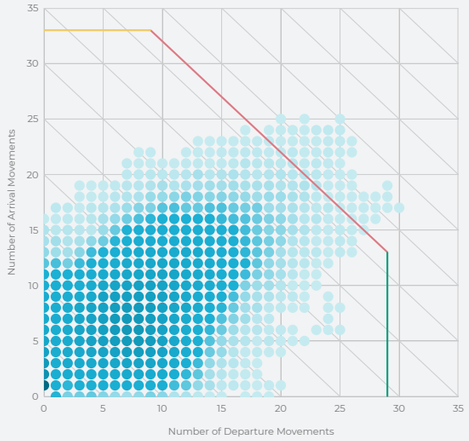
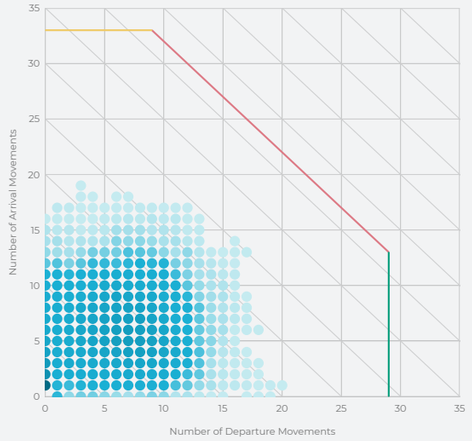
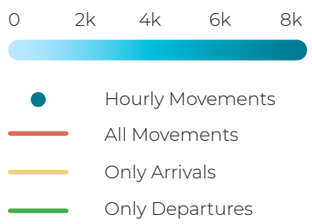


Figure 3.2: *Hourly movements and declared capacity of hours with ≥80% IFR for runway configuration 24-24*





To get a view on the actual usage of the aerodrome's capacity, the **Effectively Used Capacity** is an important performance indicator for the airport and the air navigation service provider handling the arrivals and departures. For each runway configuration, it compares the theoretical value of the declared capacity to the distribution of the actual number of movements performed within each hour of the year.

Figure 3.1 to ***Figure 3.4*** provide a straightforward way to visualise exceedances of the declared capacity. In these plots, each dot represents a rolling hour throughout the year of 2025 (with a roll step of one minute), during which the runway configuration was active for at least an hour within the default opening times of the aerodrome and during which there was at least one movement. The position of the dot indicates the number of arrivals (y-axis) and the number of departures (x-axis). The opacity of the dot indicates if there were many or few hours with this number movements, with more translucency indicating fewer occurrences. The declared capacity for both arriving and departing traffic is shown by a diagonal red line: At any point on this line, the x-axis value (departures) and y-axis value (arrivals) will add up to the threshold number (total movements). The declared capacity for only departures is shown with a green vertical line and the declared capacity for only arrivals is shown with a yellow horizontal line. Any dot above this line indicates an hour exceeding the declared capacity.

Even though the capacity is only declared for IFR movements, the plots consider both IFR and VFR movements. This is because only considering IFR flights would give a distorted view on the number of hourly movements – especially for airports with high VFR shares. Helicopter movements are not included, as they do not necessarily land on the runways, but missed approaches are. The notation for the runway configurations in this report always mentions the departure runway first, then the arrival runway, separated by a hyphen.

Figure 3.3: *Hourly movements and declared capacity for runway configuration 06-06*

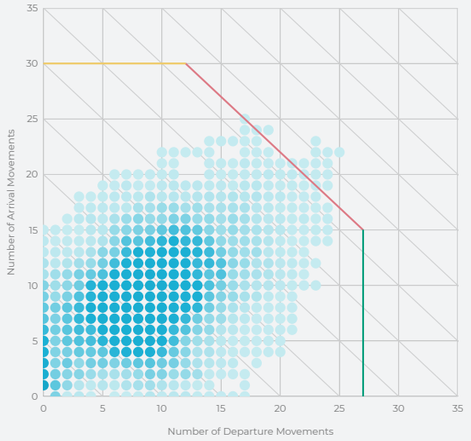
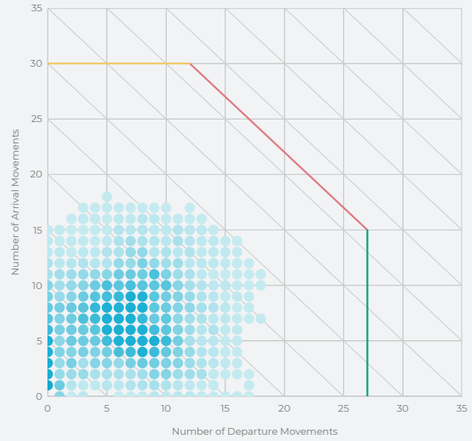


Figure 3.4: *Hourly movements and declared capacity of hours with ≥80% IFR for runway configuration 06- 06*



The data in ***Figure 3.1*** shows the hourly movements for runway configuration 24–24 throughout 2025. During this period, peak traffic reached 50 movements per hour, which is an increase over the 46 movements recorded in 2024. This growth occurred alongside a more even spread of traffic than in previous years, largely due to the VFR local agreement implemented between May and September. As seen in ***Figure 3.2***, the declared capacity is not actually reached during hours where IFR flights account for at least 80% of the traffic, suggesting the current limits are well-suited for standard commercial operations.

A similar trend for runway configuration 06-06 is shown in ***Figures 3.3*** and **3.4**. Peak movements for mixed traffic rose to 47 per hour in 2025, up from 43 in the previous year. While this figure sits above the declared capacity of 42 movements per hour, the limit was not exceeded at times where IFR traffic was the primary focus. To track these instances, ***Table 3.2*** provides a detailed breakdown of every date the declared capacity was exceeded, including the specific number of movements over the limit. These busier periods always involved a high proportion of VFR traffic, representing at least 56% of the hourly movements. This higher throughput is possible because VFR operations do not require the same separation rules as IFR flights. Even during these peak times, the airport maintained a steady balance, with arrivals and departures split between 40% and 60%.

Table 3.2: *Days with hours exceeding the capacity at EBCI in 2025 per runway configuration.*

Runway Configuration		Date	Maximum	% of IFR	% of Departures
Departures	Arrivals	of Occurrence	Extra Movements	at Occurrence	at Occurrence
06	06	Feb. 14	1	28%	44%
		Mar. 18	1	23%	51%
		Apr. 29	5	6%	53%
		May. 7	2	32%	55%
24	24	Jan. 8	2	18%	55%
		Jan. 21	6	8%	50%
		Mar. 8	7	22%	51%
		Jun. 2	2	14%	59%
		Aug. 24	3	18%	53%
		Aug. 30	2	20%	52%
		Sep. 27	4	26%	52%
		Sep. 28	8	44%	50%
		Oct. 14	7	6%	51%
		Nov. 11	3	16%	51%
		Nov. 12	6	21%	60%
		Nov. 22	4	35%	54%
		Dec. 2	1	19%	51%

Punctuality

Punctuality can be seen as a service quality indicator from a passenger perspective. This section observes one of the factors that influences punctuality: Air Traffic Flow Management (ATFM) delay. ATFM delay is defined as the time difference between estimated take-off time and calculated take-off time of the Network Manager (EUROCONTROL). The difference is due to ATFM measures to ensure safe handling of operations in the air or at airports. These measures are classified according to the causes listed below:

A - *Accident*;
C – *ATC Capacity*;
D - *De-icing*;
E - *Equipment (non-ATC)*;
G – *Aerodrome Capacity*;
I - *Industrial Action (ATC)*;
M - *Airspace Management*;
N - *Industrial Action (non-ATC)*;
O - *Other*;
P - *Special Event*;
R – *ATC Routeing*;
S – *ATC Staffing*;
T - *Equipment (ATC)*;
V – *Environmental Issues*;
W - *Weather*;
NA - *Not Specified*.

The ATFM measures with Air Navigation Service Provider (ANSP) contribution are listed according to the Functional Airspace Block Europe Central (FABEC) performance plan:[16]

C – *ATC Capacity*;
R – *ATC Routeing*;
S – *ATC Staffing*;
T - *Equipment (ATC)*;
M - *Airspace Management*;
P - *Special Event*.

All causes with ANSP contribution are referred to as CRSTMP, which stands for C-Capacity, R-Routeing, S-Staffing, T-Equipment, M-Airspace Management, P-Special Event. Additionally, the measures due to W-Weather are split into a separate category, resulting in three aggregated categories: CRSTMP, Weather and Other categories.

The next section focusses on a Key Performance Indicator (KPI): arrival delay. The ATFM Arrival Delay is an indicator of ATFM delay on the ground for a flight, due to a regulation placed at the destination airport.

In addition, the last section of this chapter provides an overview of the influence of ATFM measures on traffic arriving at or departing from Brussels South Charleroi Airport along their routes, regardless of which unit placed the regulations.

ATFM ARRIVAL DELAY

As of January 1st, 2015, skeyes is subject to an annual target with regard to ATFM arrival delay. ATFM arrival delay is the delay of a flight attributable to terminal and airport air navigation services, caused by restrictions on landing capacity (regulations) at the destination airport. The average minutes of ATFM arrival delay per flight is a performance indicator in accordance with the European Performance Regulation (EU) no 317/2019, Annex 1, section 1, §3.1(b). This indicator is the average time, expressed in minutes, of ATFM arrival delay per inbound IFR flight and is calculated for the whole calendar year. The indicator includes all IFR flights with an activated flight plan submitted to the Network Manager landing at the destination airport and covers all ATFM delay causes excluding exceptional events.

ATM performance targets for Belgium are set in the FABEC Reference Period performance plan. The Third Reference Period (RP3) ended in 2024 and 2025 is part of the new Fourth Reference Period (RP4) that will last until 2029. For this new period, new KPIs are define and new objectives are established airspace. For skeyes, Brussels Airport remains the only Belgian airport contributing to the national target for ATFM arrival delay per flight at airport level.

Whereas in the previous Reference Period, the target was set on minutes/flight for CRSTMP causes, the new targets set for RP4, covering 2025 to 2029, are set on minutes/flight for all causes.[17]

Despite not having its own target, skeyes registers the arrival delays for Brussels South Charleroi Airport as part of a continuous monitoring of the ANSP's performance and as an internal performance indicator. This indicator is the average time, expressed in minutes, of ATFM arrival delay per inbound IFR flight and is calculated for the whole calendar year. The indicator includes all IFR flights with an activated flight plan submitted to the Network Manager landing at the destination airport and covers all ATFM delay causes excluding exceptional events.[18]

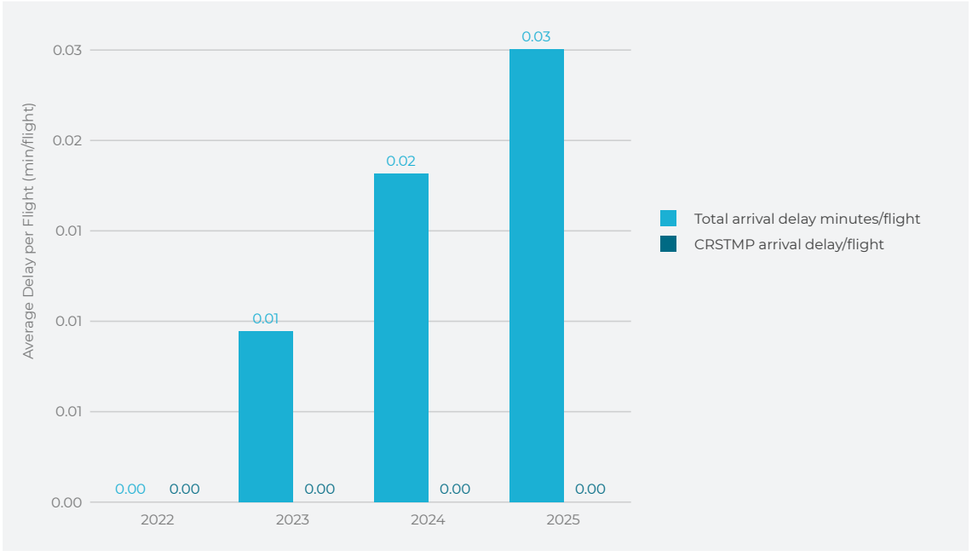
For this performance indicator, a comparison has been made over the last four years. ***Table 3.3*** gives the amount of arrival delay at Brussels South Charleroi Airport – i.e. the delay caused by regulations placed on arrivals to Brussels South Charleroi Airport - and the total number of arrivals per year. Note that in this section, the number of arrivals and the ATFM arrival delay for each flight are calculated by the Network Manager and have been provided by EUROCONTROL's Performance Review Unit (PRU).[19]

Table 3.3: *Number of IFR arrivals and minutes of ATFM arrival delay per reason and per year (with flight plan) (PRU)*

	Minutes of ATFM Arrival Delay				IFR Arrivals
	CRSTMP	Weather	Other categories	Total	(with flight plan)
2022	0	0	0	0	28,744
2023	0	0	285	285	30,136
2024	0	0	611	611	33,658
2025	0	167	727	894	35,712

16. The Fourth Reference Period (RP4) FABEC Performance plan is available as a draft but has not yet been published.
17. 'SES Performance Scheme Reference Period 4 (2025-2029) - Single European Sky Portal', accessed on 24 February 2026, https://www.sesperformance.eu/dataportal/metadata/rp4/.
18. European Commission, "Regulations," Official Journal of the European Union, p. 67, 2019
19. Hence the difference with figures in Chapter 1, where movements are counted using the AMS and the BCAA criteria. In this chapter, the Network Manager (EUROCONTROL) is taken as source for traffic numbers and only accounts for flights with a registered flight plan.

Figure 3.5: *Yearly arrival delay KPI (rate of ATFM delay per IFR arrival) target and actual (PRU)*



In 2025, 894 minutes of delay were registered by the Network Manager at Brussels South Charleroi Airport. Most regulations are attributed to 'A-Accident/Incident (runway blocked), 'W-Weather' (low visibility) and 'O-Other' (Skydiving championship). The runway was closed after an aircraft experienced a landing gear collapse. These regulation reasons generated an average of 0.03 minutes per flight.

***Table* 3.4** shows the impact of the regulations placed at Brussels South Charleroi Airport on each IFR arrival to the airport grouped by no delay, delay up to 15 min and delay of more than 15 min. It presents a different picture for 2025, as the overall volume of IFR arrivals increased by 6% from 2024. The "Delay up to 15 min" category showed a notable change, with 39 flights in 2025 compared to just one in the prior year. The Skydiving Championship and sporadic weather conditions (low visibility) usually result in short-term flow restrictions rather than long-duration closures, which is consistent with the irregular pattern of delay observed this year. On the other hand, the category of "Delay more than 15 min" also experienced a rise (+92%), mainly due to the closure of the runway after the aircraft landing gear collapsed.

Table 3.4: *Delayed IFR arrivals per category of delayed time, according to PRU*

	No delay	Delay up to 15 min	Delay more than 15 min	Total
2022	28,744	0	0	**28,744**
2023	30,122	8	6	**30,136**
2024	33,644	1	13	**33,658**
2025	35,648	39	25	**35,712**
2025 *vs* 2024	+6%	>999%	+92%	+6%

All ATFM impact on traffic at Brussel South Charleroi Airport

In this section of the report, the ATFM delay for all departing and arriving traffic in Brussels South Charleroi Airport is analysed. The impact of ATFM measures go beyond the restrictions placed by the airport of destination. Flights departing from and arriving at an airport can be delayed by ATFM measures in any of the sectors they cross on their route. The impact of all these regulations gives the total ATFM delay of the airport.

Figure 3.6 and ***Figure 3.7*** show the total ATFM impact for all traffic arriving and departing (respectively) in Brussels South Charleroi Airport for the years 2022 to 2025. The delay is attributed to the regulation originating it. For the flights with Brussels South Charleroi Airport as origin and destination, if they are impacted by any regulation, the delay is counted in the arrival delay and in the departure delay, as those flights are considered arrivals and departures to/from the airport. As a result, the total ATFM delay is not the sum of delays recorded for arrivals and departures, as this will count delays for the flights with origin and destination Brussels South Charleroi Airport twice. In 2025, a total of 115,343 minutes of delay was generated on arrivals. Thereof, 5% (5,402 minutes) is attributable to skeyes, while 95% (109,941 minutes) is attributable to other ANSPs. For departing traffic, a total of 112,622 minutes of delay was generated, of which, 4% (4,829 minutes) is attributable to skeyes, while 96% (107,793 minutes) is attributable to other ANSPs.

Figure 3.6: *ATFM delay for IFR arrivals per year and delay origin* (NMIR)

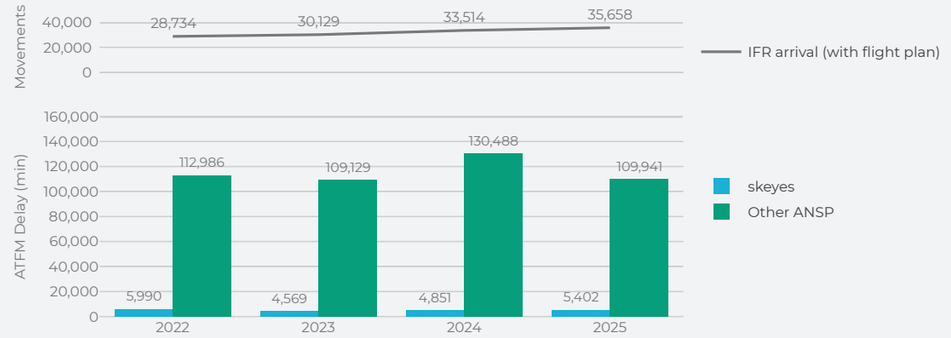
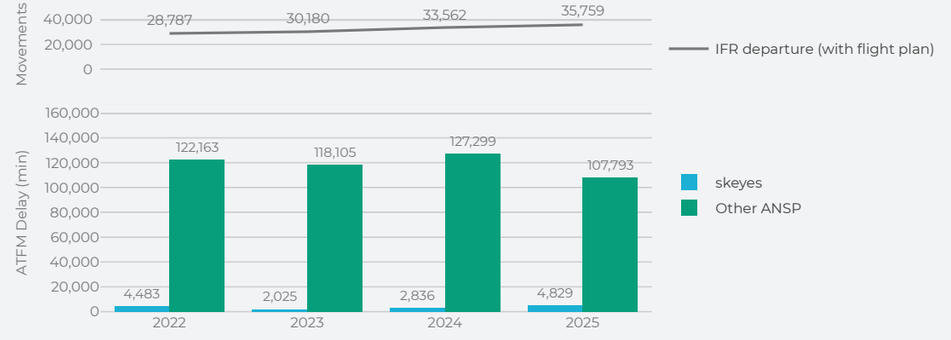


Figure 3.7*: ATFM delay for IFR departures per year and delay origin* (NMIR)



11 ENVIRONMENT

- **Preferential Runway System**
- **Continuous Descent Operations**
- **Night Movements**
- **Wind Patterns**
- **Considerations and Improvements**

The first part of this chapter is dedicated to the runway configuration scheme in use at Brussels South Charleroi Airport. The airport is geographically located near populated areas, it is therefore all the more important to consider noise and its reduction, as far as possible, in the vicinity of the airport. For that purpose, a monthly and yearly overview of the use of the Preferential Runway System (PRS) is included in this chapter. Considering that wind is a predominant factor in the choice of runway use, wind data is provided in this section.

The second part focuses on Continuous Descent Operations (CDO). The objective of CDOs is to reduce aircraft noise, fuel burn, and emissions by means of a continuous descent, to fly the approach glide path at an appropriate altitude for the distance to touchdown. skeyes put in place indicators to monitor the use of CDOs, in collaboration with the other members of FABEC.

Night movements are also part of this chapter.

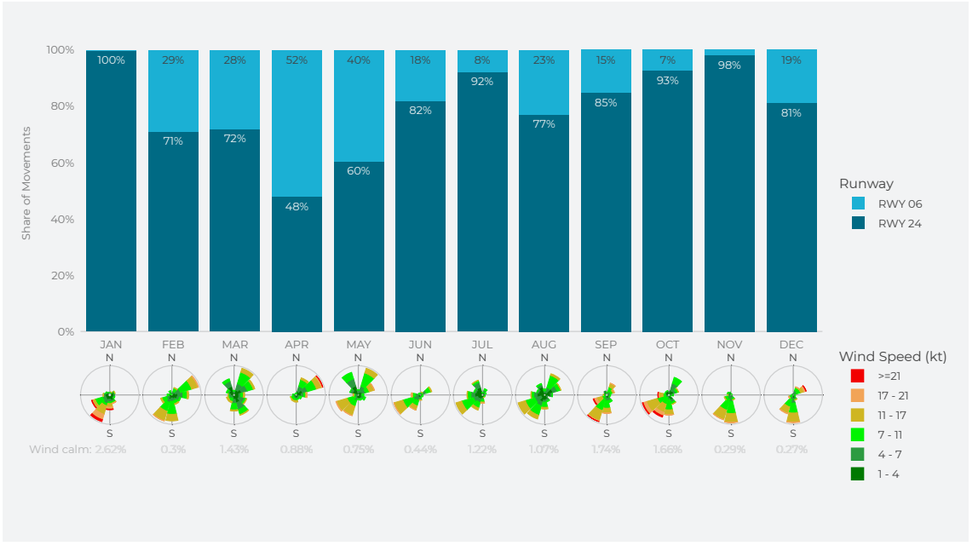
Preferential Runway System

A basic aerodynamic principle is that an airplane should take off and land against the wind direction. In addition to the speed and surface wind direction, there are many more factors to consider when choosing the runway in use, such as environmental regulations, runway length, available navigation aids for approach and landing, the weather conditions, the available instrument approach procedures, or simply the availability of runways and taxiways.

According to the Aeronautical Information Publication (AIP) for Brussels South Charleroi Airport, runway 24 shall be used as preferred runway for take-off and landing in case it is dry and the cross or tailwind components do not exceed ten and eight knots, respectively. When the runway is wet, the maximum tailwind threshold is five knots. For safety reasons, if one of the above-mentioned criteria is not met, the Preferential Runway System (PRS) will not be followed and the most suitable runway in the given case will be used.

The runway use was already discussed in ***Chapter 1 .Traffic***, in ***Figure 1.10*** and ***Figure 1.11*** They show the runway usage from 2022 until 2025 and the runway use per month in 2025. These fractions are based on the number of movements on each runway. As shown in Figure 4.1 below, 80% of the movements used the preferential runway in 2025.

Figure 4.1: *Runway use (based on % of movements) in 2025*



Continuous Descent Operations

A continuous descent operation (CDO) is an aircraft operating technique enabled by airspace design, instrument procedure design and facilitated by air traffic control to allow aircraft to follow an optimum flight path that delivers environmental and economic benefits (reduced fuel burn, gaseous emissions, noise and fuel costs) without any adverse effect on safety. A CDO allows arriving aircraft to descend continuously from an optimal position with minimum thrust. By doing so, the intermediate level-offs are reduced and more time is spent at more fuel-efficient higher cruising levels, hence reducing fuel burn (i.e., lowering emissions and fuel costs) and producing less noise.[20]

skeyes uses two methods to measure CDOs. For the first method, a descent is considered as a CDO if no level off lasting more than 30 seconds is detected. A level off is considered as a segment during which the aircraft has a rate of descent of less than 300 ft/minute. Based on the recommendations made by EUROCONTROL, two CDO performance indicators were developed in 2016:

- *CDO Fuel: binary indicator (yes/no) indicating if a CDO was flown from FL100 to 3000 ft;*
- *CDO Noise: binary indicator (yes/no) indicating if a CDO was flown from FL60 to 3000 ft.*

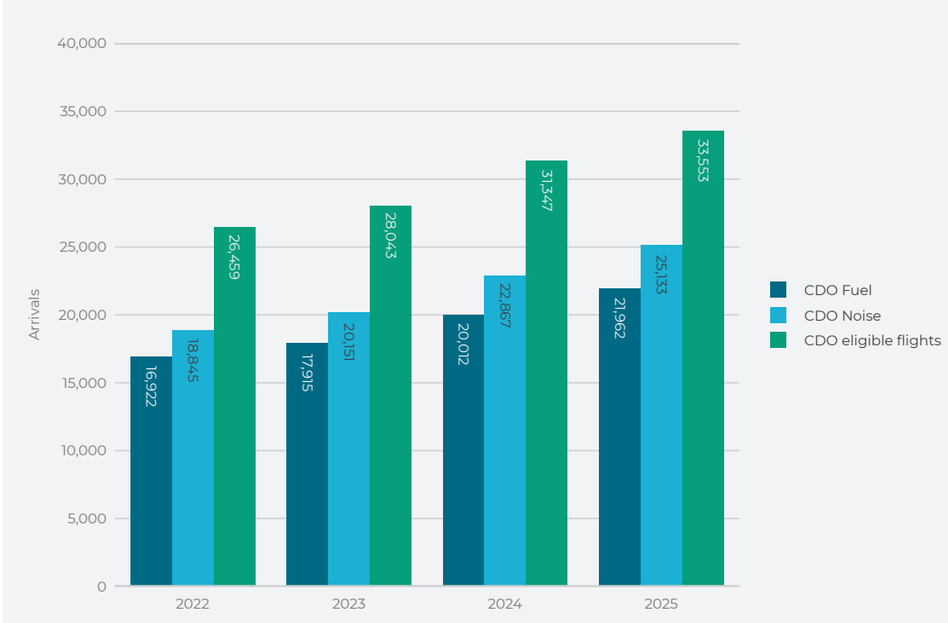
Only 'CDO eligible flights' are considered in this section, therefore the total of arrivals is different than the figures given in ***Chapter 1 Traffic***. The following criteria have been defined for CDO eligible flights:

- *It is an IFR arrival;*
- *The aircraft is not categorized as "light", meaning its maximum take-off weight (MTOW) is above 7000 kg;*
- *It is not a helicopter;*
- *It is not a military flight;*
- *It is not a touch-and-go, i.e. the flight does not involve landing briefly and taking off again;*
- *The observed flight level during the flight must be at or above FL 60 (6,000 ft or 1.8 km).*

As shown in ***Figure 4.2*** in 2025, there were a total of 33,553 'CDO eligible flights'. In total numbers, the number of CDO fuel and noise has increased compared to previous years, along with the 'CDO eligible flights which are higher in 2025 than in previous years.

20. European Continuous Climb and Descent Operations Action Plan | EUROCONTROL," accessed on February 5, 2026, https://www.eurocontrol.int/publication/european-cco-cdo-action-plan.

Figure 4.2: *Yearly comparison CDO indicators*



In order to be able to compare the evolution of the use of CDOs over the years, ***Figure 4.3*** and ***Figure 4.4*** provide the rate of CDO fuel and CDO noise per year for runway 24 and runway 06. The overall CDO rates remain stable over the last years. The increase in traffic and the mix with other types of traffic (VFR or light traffic) didn't have an impact on the arriving performance, including CDOs. The restrictions put in place for VFR traffic between May and September allowed to maintain the rate of CDO fuel and CDO noise by reducing the complexity of the traffic mix (IFR and VFR) during that period.

Figure 4.3: *Yearly CDO noise adherence per runway*

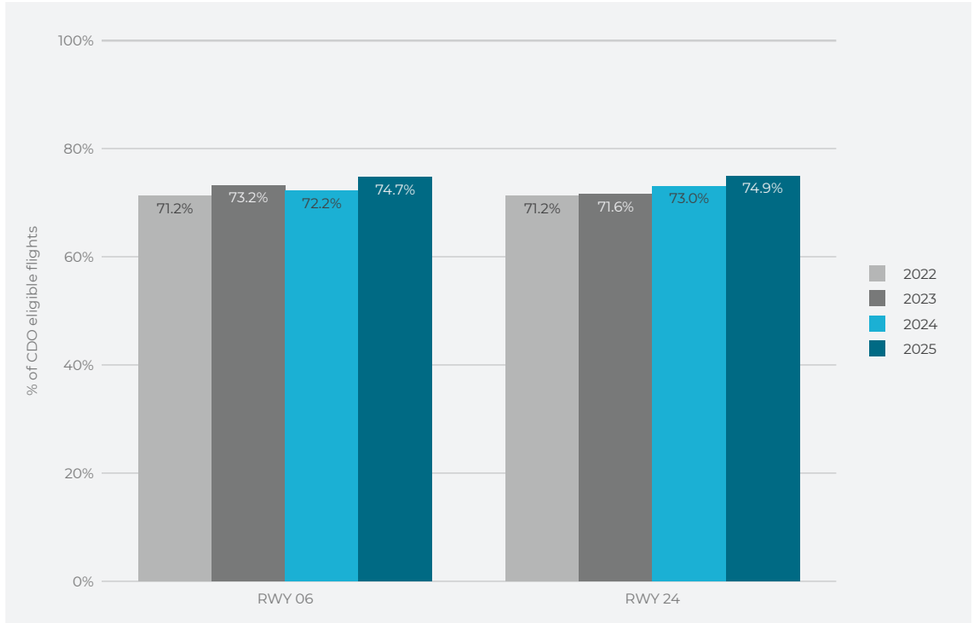


Figure 4.4: *Yearly CDO Fuel per runway*

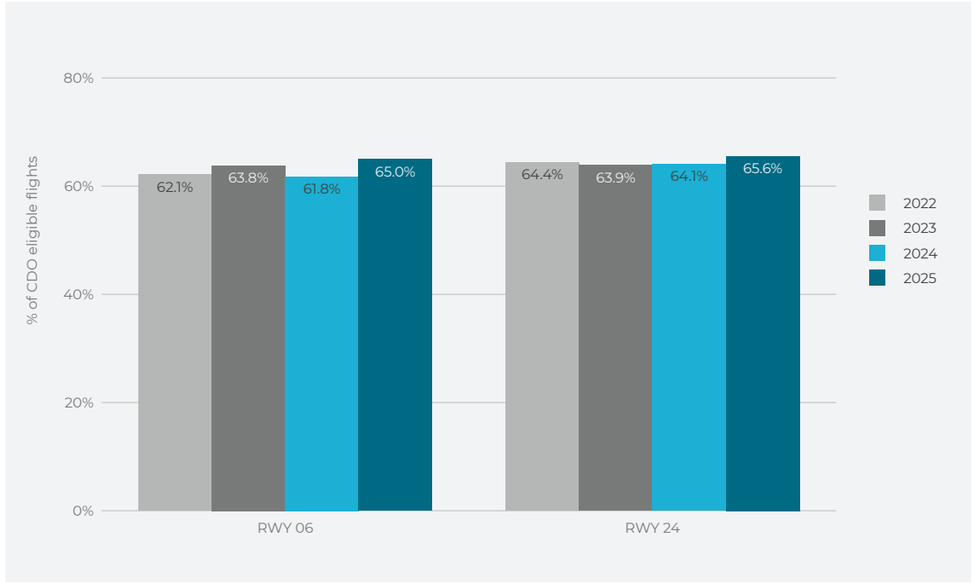
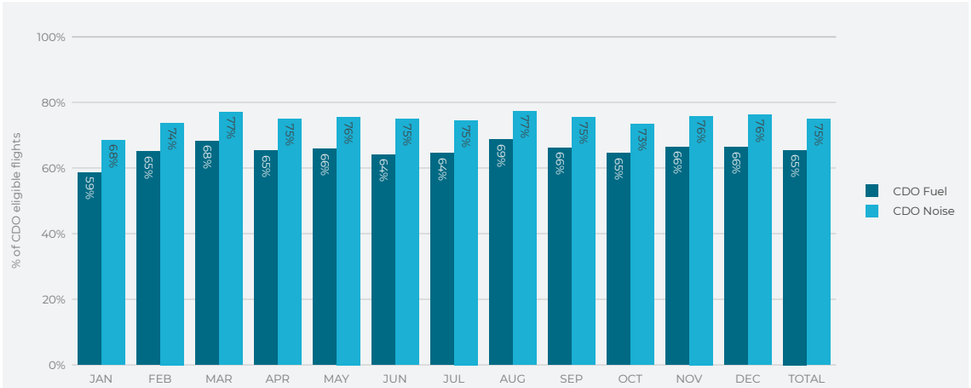


Figure 4.5 shows a view per month of CDO Fuel and Noise, respectively. The lowest number of CDO rates in 2025 was in the month of January. A multitude of external factors influence CDO statistics, such as:

- *Pilots' CDO flying experience;*
- *Pilots' experience with the airport;*
- *ATC experience;*
- *Equipment of the runway;*
- *Aircraft type and equipment;*
- *Military airspace being open or closed;*
- *Traffic flows and traffic streams that can have an impact on the arriving traffic.*

Figure 4.5: *Monthly CDO indicators in 2025*



The second method to measure CDOs used by skeyes considers CDO performance in a non-binary means, delving into the duration during which an aircraft operates in level-off segment(s). The indicator used by skeyes is the 'Average level-off time below certain altitude'.

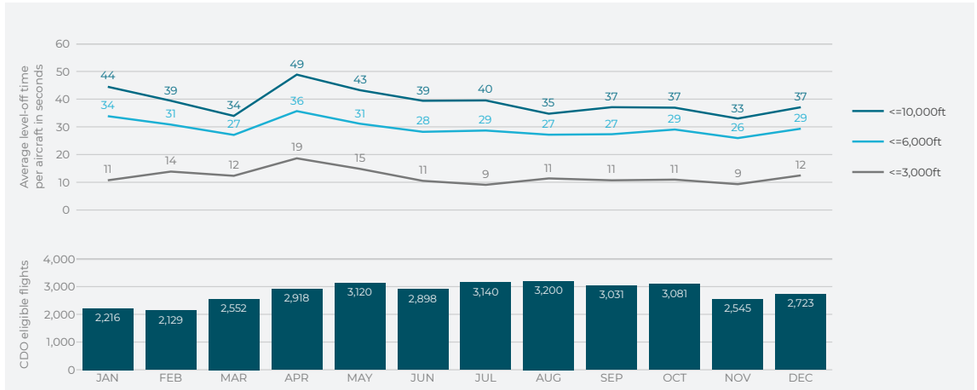
The 'Average level-off time below certain altitude' indicator provides a value representing the average time a descending aircraft spends flying level-off within specific altitude ranges. Three distinct altitude ranges are monitored:

- **10,000 *ft* to Ground (GND)**
  (where 10,000 ft aligns with the altitude ceiling of CDO Fuel);
- **6,000 *ft* to GND**
  (where 6,000 ft aligns with the altitude ceiling of CDO Noise);
- **3,000 *ft* to GND**
  (This altitude range focuses on level-off segments in low altitudes, which are excluded from 'CDO Fuel' and 'CDO Noise').

This indicator is based on recommendations from the European CCO/CDO Action Plan and EUROCONTROL ENV Transparency Working Group, emphasizing its alignment with industry best practices and standards.[21]

Figure 4.6 shows the monthly evolution of average level-off time in 2025, below the three monitored altitudes at Brussels South Charleroi Airport. The chart is accompanied by the count of CDO eligible flights, considered for the calculation of the average values. The highest average of level—off time occurred in April for all ranges (<= 3,000ft, <= 6,000ft and <= 10,000ft). This month had the lowest use of RWY 24 due to north-easterly winds (Chapter 1. Traffic).

Figure 4.6: *Monthly average level-off time in 2025*

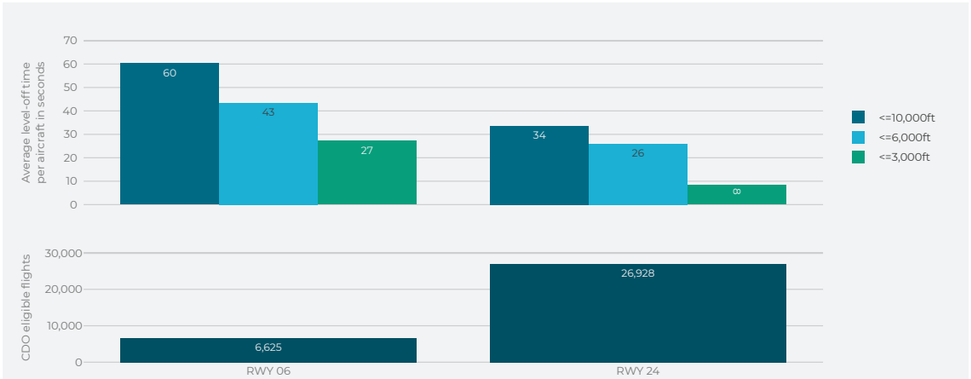


21. 'European Continuous Climb and Descent Operations Action Plan | EUROCONTROL', accessed on 5 February 2026, https://www.eurocontrol.int/publication/european-cco-cdo-action-plan.

In ***Figure 4.7*** the distribution of average level-off time across runways in 2025 is depicted, along with the number of considered 'CDO eligible flights'. Arrivals on RWY 06 had an average level-off time of 27 seconds at the lower altitude band (≤ 3,000 ft), which was more than three times longer than the average of eight seconds for RWY 24. The longest level-offs on RWY 06 occur around 2,500 ft. The type of approach (RNAV) and the surrounding airspace layout, which necessitates that aircraft stay lower during the arrival, are the primary causes. This is further supported by the procedure design: aircraft level at this altitude because the Final Approach Fix is at 2,500 ft, while the Initial Approach Fix is published at or above 2,500 ft.

Interpreting these numbers considering traffic distribution is essential, though. With four times as many CDO eligible flights (26,928) as RWY 06 (6,625), RWY 24 is still the main operational runway. As a result, RWY 24's superior performance, which continuously maintained lower level-off times across all altitude bands, benefited most arrivals.

Figure 4.7: *Average level-off time per runway*



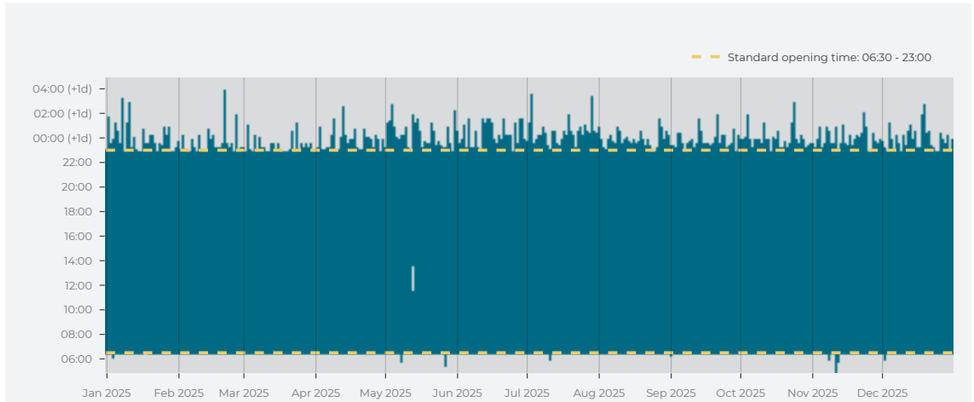
Opening times and night movements

The usual operational opening hours of Brussels South Charleroi Airport are from 06:30 until 23:00 local time. Several reasons can lead to adapted opening and/or closing times, as for example works at or in the vicinity of the airport, or aircraft arriving outside the defined hours. In the latter case, air traffic services operational hours are extended until the last flight has landed.

A visualisation of the opening hours is given in ***Figure 4.8*** below. There are often extensions of the opening hours in Brussels South Charleroi Airport. Around Christmas and between the months of May to September, the airport's closing time is frequently delayed to 00:00 or later, mainly due to late arrivals of Ryanair flights.

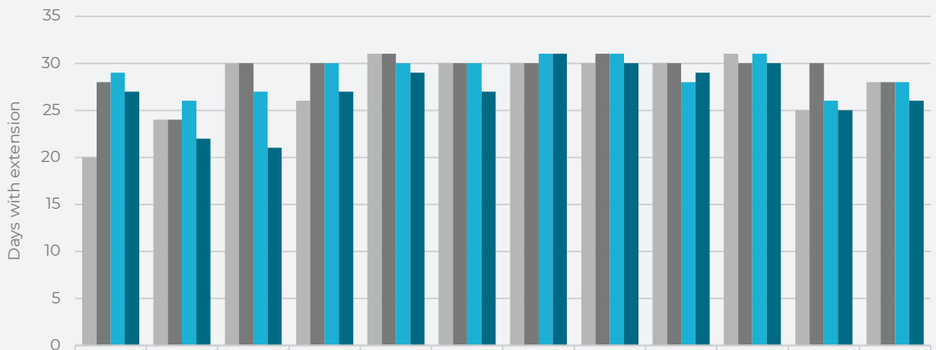
Besides these typical extensions, there was a disruption on May 13, 2025, which caused the airport to close between 11:30 and 13:45. This was due to a bomb alert triggered on a Ryanair flight arriving from Faro, Portugal. Authorities had to set up a safety perimeter around the aircraft, which meant closing the runway and suspending all flights until the situation was resolved.

Figure 4.8: *Opening and closing times of Brussels South Charleroi Airport in 2025*



In 2025, there were a total of 324 days where the operational hours of the airport were extended. ***Figure 4.9*** shows the number of days with an extension of the opening times per month, for the years 2022 to 2025. The number of days with extension is close to previous year's levels, with 347 days with extensions in 2024, 352 days in 2023 and 335 days of extensions in 2022.

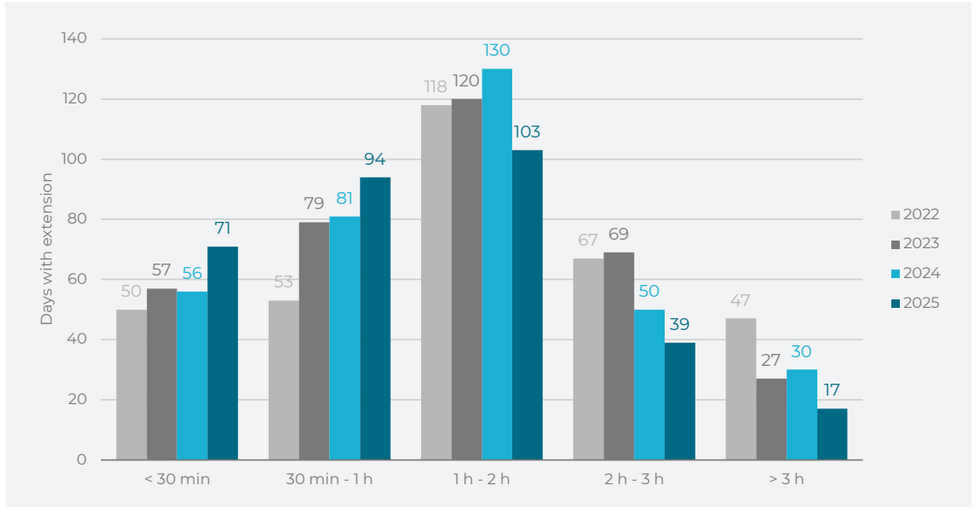
Figure 4.9: *Days with extension of operational hours in Brussels South Charleroi Airport per year*



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2022	20	24	30	26	31	30	30	30	30	31	25	28
2023	28	24	30	30	31	30	30	31	30	30	30	28
2024	29	26	27	30	30	30	31	31	28	31	26	28
2025	27	22	21	27	29	27	31	30	29	30	25	26

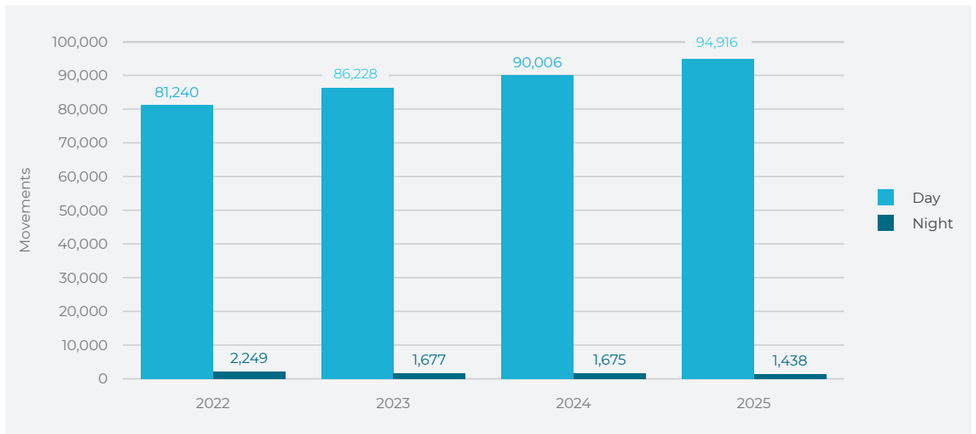
Figure 4.10 depicts the duration of those extensions per category of time: <30 min, 30 – 60 min, 1 – 2 h, 2 – 3 h and >3 h. In 2025, most of the extensions, 103 occurrences representing 32% of the total, lasted between one and two hours. On 17 occasions (5% of the total) the opening times were extended by more than three hours.

Figure 4.10: *Duration of opening hours extensions in Brussels South Charleroi Airport per year*



There is a strong correlation between the opening times, extensions, and the number of night movements. The nighttime is defined as from 23:00 to 06:00 local time. ***Figure 4.11*** shows the number of movements separated between day movements and night movements for the years 2022 to 2025. During the night's hours, the movements are only traffic stationed in Brussels South Charleroi Airport, as that is the agreement for requesting the extensions. Despite the increase on traffic, the night traffic in 2025 decreased by 239 movements (-14%) compared to 2023 and by 811 movements (-36%) compared to 2022.

Figure 4.11: *Yearly day and night movements*



The following graph and table show the distribution of hourly movements through the night (***Figure 4.12*** and ***Table 4.1***). Night traffic shows a continuous decrease compared to previous years. The number of movements at 23:00 dropped to 1,198 in 2025, compared to 1,271 in 2024 and 1,673 in 2022 (a reduction of 6% and 28% respectively). This downward trend is also visible in the later hours, with movements at 00:00 decreasing significantly from 294 last year to 177 this year. This reduction shows the coordination between skeyes and airlines to improve schedule adherence and limit the number of night movements.

Figure 4.12: *Yearly night movements per hour (the hour indicates the start of the hour)*

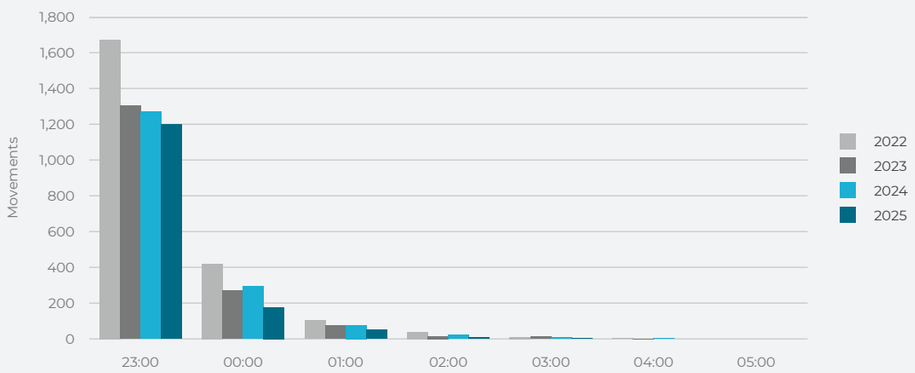


Table 4.1: *Yearly night movements per hour (the hour indicates the start of the hour)*

Year	23:00	00:00	01:00	02:00	03:00	04:00	05:00
2022	1,673	421	102	39	11	3	
2023	1,304	270	74	16	12	1	
2024	1,271	294	78	23	7	2	
2025	1,198	177	50	9	4		

Wind Patterns

One of the factors that plays a key role in the selection of the runway is the wind direction and speed. This is also confirmed in ***Chapter 1 Traffic***, in the Runway Use section, where the relation between wind and runway use can be seen in the present charts. According to the wind rose diagram in ***Figure 4.13***, which shows the wind roses from 2022 to 2025, south-westerly winds are frequent at Brussels South Charleroi Airport, resulting in a high share of the use of runway 24. Additionally, the wind profile in 2025 appears more evenly distributed compared to the previous year. While 2024 was an exceptional year characterized by a lack of north-easterly winds, 2025 sees a return of these wind patterns.

Figure 4.14 provides a detailed monthly breakdown of the wind conditions for 2025. While south-westerly winds prevailed during most of the year, specific months showed north-easterly patterns which impacted the runway selection. January stands out in this regard, characterized by strong south-westerly winds; this correlates with the runway utilisation, which shows a 100% usage of runway 24 for that month. Similarly, April and May experienced frequent winds from the north-east, leading to a higher-than-average use of runway 06 (52% and 40% respectively). In contrast, months with south-westerly winds, such as July and October, recorded utilisation rates for RWY 24 exceeding 90%.

Figure 4.13: *Yearly wind roses*

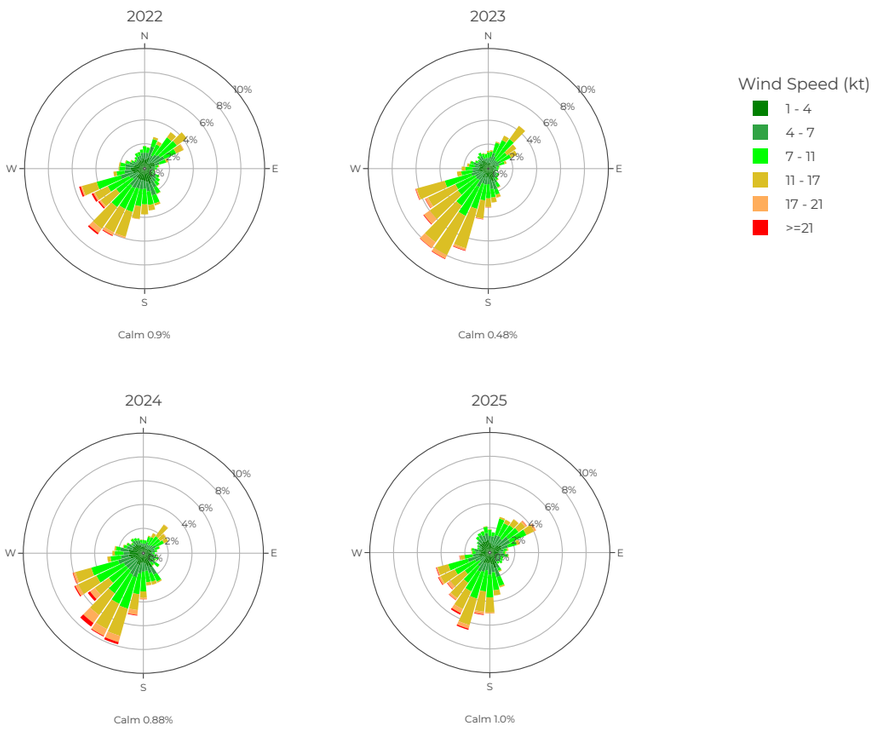
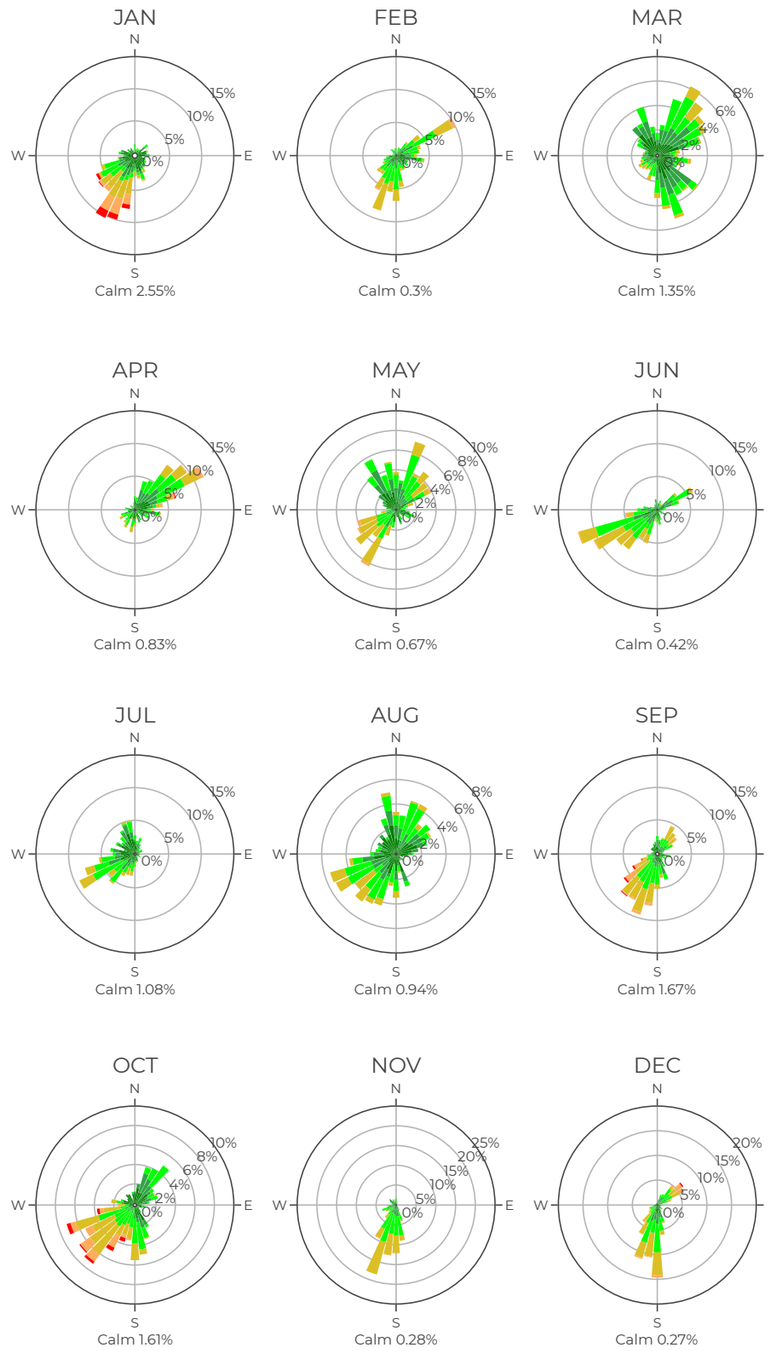


Figure 4.14: *Monthly wind roses of 2025*



Considerations and Improvements

Ongoing efforts to support sustainable operations

- The deployment of Performance-Based Navigation (PBN) is a central element of the long-term noise mitigation strategy. PBN and Required Navigation Performance (RNP) approach procedures improve traffic predictability, situational awareness, and vertical flight efficiency, enabling more stable and optimised descent profiles with reduced noise dispersion. In December 2020, skeyes published Belgium's national PBN implementation and transition plan for the 2024–2030 period, aiming to establish a full PBN environment across the Belgian FIR and major aerodromes, including Charleroi Airport. Once the full PBN is implemented, an optimization of the PBN environment will be initiated - this includes reworking the airspace and routes, which can then be redesigned apart from the ground-based infrastructure and positioned in the most advantageous strategic location. It is anticipated that such procedures will significantly enhance flight predictability, situational awareness, and aircraft vertical performance, among others; thereby reducing the environmental effect (less noise, reduced fuel consumption, etc.).

- In 2025, skeyes became the first Air Navigation Service Provider worldwide to obtain CANSO GreenATM Level 4 accreditation. This achievement follows the attainment of Level 3. The GreenATM programme assesses both the environmental footprint of ANSP operations and the extent to which ANSPs enable more efficient aircraft operations, confirming skeyes' leadership in sustainable air traffic management.

- On the 22nd of July 2025, the Walloon government granted Brussels South Charleroi Airport a single permit for a 20-year duration, confirming the airport's strategic role in Wallonia. The airport is enabled to continue its operations under a clarified and strengthened framework, particularly about the management of late returns and noise pollution limits. Charleroi Airport remains committed to sustainable development and environmental responsibility.[22]

Stakeholder cooperation

- skeyes is engaging with airlines to present CDO statistics and communicate the relevant phraseology, and is increasing awareness amongst ATCOs through courses, and by informing them of the current statistics and performance.

- As a member of FABEC, skeyes actively participates in workshops and initiatives to improve – amongst others – CDO performance. skeyes also participates in the AVENIR working group, an element in the EUROCONTROL – EASA Joint Working Program, discussing environmental improvements. An output of these discussions is the creation of the Level-off indicators.

- Additionally, the agreement on 'collaborative environmental management' (CEM) at Brussels South Charleroi Airport continues to show benefits.

22. 'Environmental Permit', Brussels South Charleroi Airport, accessed on 25 February 2026, https://www.brussels-charleroi-airport.com/en/environmental-permit.

Taxi times

This year's report adds a new section on Additional Taxi Time to further improve the monitoring of airport surface performance and environmental impact. This indicator, aligned with the methodologies defined by the EUROCONTROL Performance Review Unit (PRU), provides a quantitative measure of ground operation efficiency. From an environmental perspective, additional taxi time is directly associated with increased fuel burn and emissions while aircraft engines are operating on the ground. Prolonged taxi-out and taxi-in phases lead to higher carbon dioxide (CO_2) emissions, as well as local air pollutants such as nitrogen oxides (NO_x) and particulate matter, which affect air quality in and around airports. By capturing inefficiencies in surface movements, this indicator offers valuable insights into both operational performance and the environmental footprint of airport operations, supporting efforts to reduce emissions through improved ground handling, traffic management, and infrastructure planning.[23]

The metric is defined as the difference between the Actual Taxi Time and the Unimpeded Taxi Time:

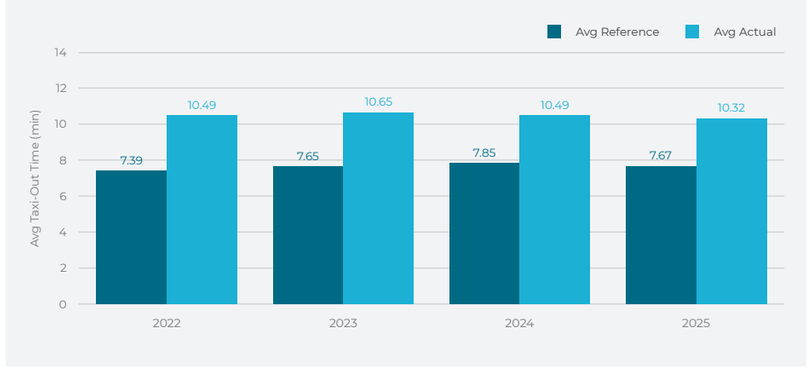
- **Taxi-Out Time:** The time elapsed between the Actual Off-Block Time (AOBT) and the Actual Take-Off Time (ATOT);
- **Taxi-In Time:** The time elapsed between the Actual Landing Time (ALDT) and the Actual In-Block Time (AIBT);
- **Actual Taxi Time:** The total time elapsed between the off-block and take-off (for departures) or landing and in-block (for arrivals);
- **Unimpeded Time (labelled as "Reference" in the charts):** A statistical reference representing the taxi time in non-congested conditions (e.g., low traffic periods), accounting for the specific distance between the stand and the runway configuration.

Any time spent beyond this unimpeded reference is considered "Additional Time," usually caused by queuing at the departure runway, congestion on the apron, or other operational constraints. Minimizing this additional time is crucial for reducing fuel burn, CO_2 emissions, and delays.

23. 'EUROCONTROL Performance Review Report 2024', accessed on 24 February 2026, https://www.eurocontrol.int/sites/default/files/2025-03/eurocontrol-performance-review-report-2024.pdf.

As illustrated in ***Figure 4.15***, the reference taxi-out time (the theoretical time required without congestion) remains stable over the last four years, ranging from 7.39 to 7.85 minutes. The Average Actual Taxi-Out Time for 2025 was recorded at 10.32 minutes which represents a slight decrease in total time compared to the peak observed in 2023 (10.65 minutes).

Figure 4.15: *Yearly average actual vs reference taxi-out time*



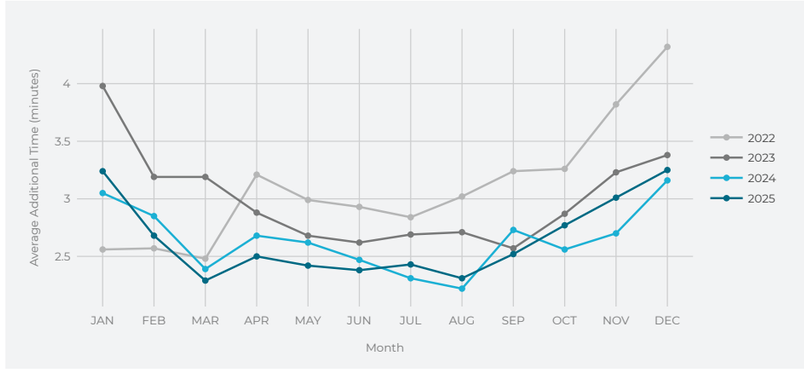
According to the monthly breakdown shown in ***Table 4.2***, the average additional taxi-out time for 2025 stands at 2.65 minutes per departure. This is the same as 2024 but remains below the levels observed in 2022 (3.1 minutes).

Table 4.2: *Monthly average additional taxi-out times*

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total
2022	2.56	2.57	2.48	3.21	2.99	2.93	2.84	3.02	3.24	3.26	3.82	4.32	**3.10**
2023	3.98	3.19	3.19	2.88	2.68	2.62	2.69	2.71	2.57	2.87	3.23	3.38	**3.00**
2024	3.05	2.85	2.39	2.68	2.62	2.47	2.31	2.22	2.73	2.56	2.70	3.16	**2.65**
2025	3.24	2.68	2.29	2.50	2.42	2.38	2.43	2.31	2.52	2.77	3.01	3.25	**2.65**
2025 vs 2024	+6%	-6%	-4%	-7%	-8%	-4%	+5%	+4%	-8%	+8%	+11%	+3%	+0%

The monthly evolution highlights the impact of seasonality on ground operations. As seen in ***Figure 4.16***, additional time peaked significantly in from September to December, reaching 3.25 minutes. This correlates with the high winter traffic demand of Brussels South Charleroi, leading to increased saturation at the runway holding points. On the other hand, the indicator remained below the 2.5 minutes mark during the spring/summer period.

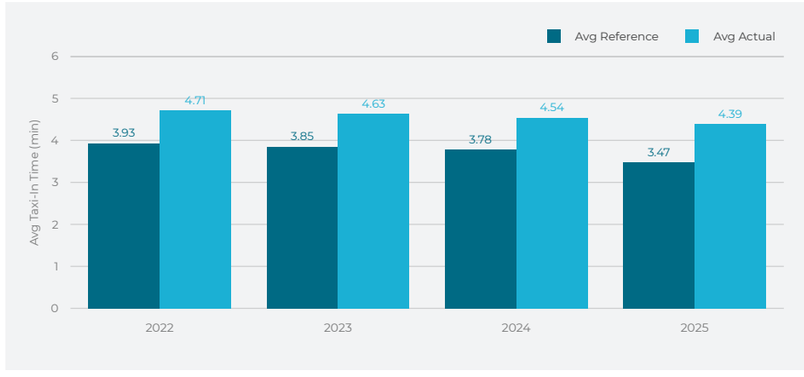
Figure 4.16: *Monthly average additional taxi-out times evolution per year*



The additional taxi-in time measures the efficiency of the arrival process, from touchdown to the parking stand. This phase is less susceptible to queuing than the departure phase but is influenced by stand availability and apron congestion.

In 2025, the Average Actual Taxi-In Time was 4.39 minutes, showing an improvement compared to the 4.54 minutes recorded in 2024. The reference time for 2025 was calculated at 3.47 minutes, indicating an optimized use of stands closer to the runway exits compared to previous years.

Figure 4.17: *Yearly average actual vs reference taxi-in time*



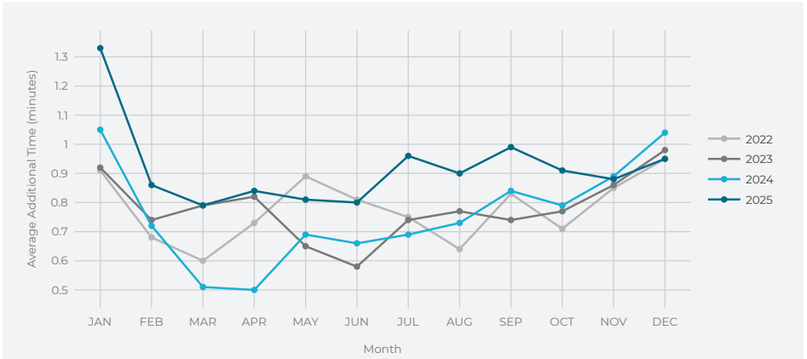
As detailed in ***Table 4.3***, the 2025 performance are increasing compared to the levels identified in the previous years (0.92 min compared to a range between 0.76 and 0.78).

Table 4.3: *Monthly average additional taxi-in times*

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total
2022	0.91	0.68	0.60	0.73	0.89	0.81	0.75	0.64	0.83	0.71	0.85	0.95	**0.78**
2023	0.92	0.74	0.79	0.82	0.65	0.58	0.74	0.77	0.74	0.77	0.86	0.98	**0.78**
2024	1.05	0.72	0.51	0.50	0.69	0.66	0.69	0.73	0.84	0.79	0.89	1.04	**0.76**
2025	1.33	0.86	0.79	0.84	0.81	0.80	0.96	0.90	0.99	0.91	0.88	0.95	**0.92**
2025 vs 2024	+27%	+19%	+55%	+68%	+17%	+21%	+39%	+23%	+18%	+15%	-1%	-9%	+21%

The monthly evolution for 2025 reveals a similar pattern compared to previous years in ***Figure 4.18***. The year began with the highest peak of the analysed period, reaching 1.33 minutes in January. Following a decrease in February, the metric stabilized between 0.80 and 0.85 minutes throughout the spring. 2025 maintained a consistently higher baseline throughout the first three quarters of the year, in contrast to 2024, which saw improvements in efficiency during the spring months (dropping to nearly 0.5 minutes). During the busiest time of year, there was a second wave of longer taxi, which started in July and peaked in September at almost one minute.

Figure 4.18: *Monthly average additional taxi-in times evolution per year*



ANNEX

Annex A: Missed Approaches

Table 0.1: *Missed approaches per category per runway*

	Reasons	2022	2023	2024	2025
RWY 06	FOD on the runway	-	1	-	-
	aircraft with technical problems	-	1	-	-
	authorized vehicle still on runway	1	-	1	-
	cabin crew not ready	-	-	1	-
	departing traffic on the runway	1	1	1	3
	other	2	-	1	2
	pilot's error	-	-	-	-
	previous landing on the runway	-	1	1	1
	runway incursion	-	1	1	-
	tail wind	-	-	1	-
	technical problems of ground equipment	-	-	1	-
	too close behind preceding	-	-	1	-
	unstable approach	5	7	5	6
	weather - thunderstorm - windshear	-	-	1	-
	weather - visibility	3	10	4	3
	Total	**12**	**22**	**19**	**15**
RWY 24	FOD on the runway	-	2	6	4
	aircraft with technical problems	-	1	2	4
	authorized vehicle still on runway	-	1	-	1
	cabin crew not ready	-	2	1	-
	departing traffic on the runway	1	3	3	6
	other	2	4	7	8
	pilot's error	-	1	2	4
	previous landing on the runway	1	2	-	5
	runway incursion	-	-	-	-
	tail wind	2	2	4	3
	technical problems of ground equipment	-	-	2	-
	too close behind preceding	-	-	1	-
	unstable approach	16	24	40	54
	weather - thunderstorm - windshear	14	15	16	19
	weather - visibility	2	1	7	6
	Total	**38**	**58**	**91**	**114**

Annex B: Fact sheet

TRAFFIC

Yearly Evolution

- *5% increase in movements compared to 2024.*

Movements	2022	2023	2024	2025	2025 vs 2024
IFR	57,674	60,364	67,415	71,571	+6%
VFR	25,815	27,541	24,266	24,783	+2%
Total	83,489	87,905	91,681	96,354	+5%

Quarterly comparison

- *Largest increase in Q4 compared to 2024.*

Movements	2022	2023	2024	2025	2025 vs 2024
Q1	18,385	18,645	21,902	21,985	-4%
Q2	22,560	23,900	24,322	25,682	+6%
Q3	23,366	24,774	24,335	25,703	+6%
Q4	19,178	20,586	21,122	23,984	+14%

SAFETY

Missed Approaches

129 missed approaches in 2025 (+16% vs. 2024);

TOP three causes in 2025:

1. Unstable approach (60);
2. I: Wx - thunderstorm - Windshear (19);
3. Other (ten).

Safety Occurrences

- six runway incursions;
- 10 TWY/Apron event, five TWY incursion and eight RWY events.

CAPACITY & PUNCTUALITY

Capacity

- Capacity exceeded on 13 days for 24-24 and on four days for 06-06 only due to majority VFR traffic. IFR capacity was not exceeded.

Runway configuration	*Declared IFR Capacity*	*Maximum Movements/Hour in 2025*
24-24	*42 movements/hour*	*46 movements/hour*
06-06	*42 movements/hour*	*43 movements/hour*

Punctuality

Arrival delay:

- Arrival Delay: 894 min/flight due to A-Accident/Incident (RWY blocked), W-Weather (visibility) and O-Other (Skydiving championship);
- CRSTMP delay: 0 min/flight.

ATFM impact:

- Departures 112,622 minutes ATFM delay, 4% (4,829 min) due to skeyes' regulations;
- Arrivals: 115,343 minutes ATFM delay, 5% (5,402 min) due to skeyes' regulations.

ENVIRONMENT

PRS

80% of the movements used the PRS.

Extensions of operational times

- 324 days with extension of operational times, with 210 extensions > one hour;
- 1,438 night movements, with 1,198 before 00:00.

CDO

- Increase in CDO numbers in comparison with previous years, due to the increase in total movements, but similar CDO rates (percentage of arrivals) as in previous years;
- The Average level-off time below certain altitude shows an increase of level-offs during the months with more north-easterly winds.

skeyes nice to guide you

Runway Performance Report **2025**

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