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Runway Performance Report **2023**

KORTIJK-WEVELGEM AIRPORT

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Runway performance report

Kortrijk-Wevelgem Airport

EXECUTIVE SUMMARY

skeyes has been publishing runway performance reports since 2014, for all airports at which Air Traffic Control (ATC) services are provided. Since the end of 2017, Aerodrome Flight Information Services (AFIS) are provided at Kortrijk-Wevelgem International Airport (ICAO code: EBKT), and since the installation of skeyes' Airport Movement System at the end of 2018, sufficient data has been collected to produce annual Runway Performance Reports, which provide information on key performance indicators in terms of traffic figures, safety occurrences, and punctuality.

This report focuses on skeyes' operations at Kortrijk-Wevelgem in the year 2023 in comparison to the previous years.

Traffic

2023 traffic chapter states that the airport's total aircraft movements have improved considerably in the past year, reaching 92% of the 2019 activities, despite the pandemic's impact on air travel.
There was a 5% decrease in Instrument Flight Rules (IFR) movements and a 4% decrease in Visual Flight Rules compared to 2022. Despite these decreases and in comparison, to 2019, the airport showed an increase of +57% in IFR flights. This increase of IFR flights was mainly driven by a growth in private/charter IFR flights demand. The Flemish Government and the Province West-Vlaanderen invested in the airport, which resulted in more parking space and better gate systems. Two new hangars were built by key Belgian private jet operators, contributing to the growth of IFR traffic. In addition, the new IFR procedure for runway 06 introduced in October 2021 allowed more instrument flights to land, leading to an increase in IFR traffic.
The report shows that weather conditions impact VFR traffic, causing fluctuations in the number of movements. From May to September 2023, those months were the most active in terms of movements, showing a 13% increase in VFR flights for this period compared to 2022 (May-September). Sundays were the least busy days of the week, as training flights are not allowed on that day. The report concludes that the airport's performance is decreasing compared to last year.

Safety

The 2023 safety chapter covers runway safety occurrences, investigations, and actions taken to improve safety. Since 2019, there have been 28 runway safety occurrences, with 8 happening in 2023. An increase of safety reports can show a shift in the reporting culture, reflecting positive changes and improvements. This report also includes a summary of safety-related events.

Punctuality

The 2023 punctuality chapter examines the causes and impact of ATFM delay on arriving and departing flights. The FABEC Performance Plan classifies ATFM delay into different categories, with ATC Capacity being the most common.
In 2023, 14,387 minutes of delay (7,298 minutes for departures, 7,089 for arrivals) were observed. The share of delay attributable to skeyes decreased in 2023, both for arrivals (538 of 7,089 minutes) and departures (343 of 7,298 minutes). These figures indicate a positive trend, showcasing improved efficiency in air traffic control services. The majority of delayed flights experienced a delay of 1 to 15 minutes, while severe delays of over an hour mostly resulted from other ANSP.

SAMENVATTING

Sinds 2014 publiceert skeyes Runway Performance Reports voor alle luchthavens waar luchtverkeersleidingsdiensten (ATC, Air Traffic Control) worden verleend. Sinds eind 2017 worden vluchtinformatiediensten (AFIS, Aerodrome Flight Information Services) verleend op de internationale luchthaven van Kortrijk-Wevelgem (ICAO-code: EBKT). Sedert de installatie van het Airport Movement System (AMS) van skeyes eind 2018 zijn voldoende gegevens verzameld om jaarverslagen over de baanprestaties op te stellen, met informatie over de kernprestatie-indicatoren inzake verkeerscijfers, veiligheidsvoorvallen en stiptheid.

Dit verslag belicht de activiteiten van skeyes in Kortrijk-Wevelgem in het jaar 2023 in vergelijking met de voorgaande jaren.

Verkeer

Als we de balans opmaken van het totale aantal vliegbewegingen op de luchthaven in 2023, stellen we vast dat er aanzienlijk veel vooruitgang geboekt werd in het afgelopen jaar en bereiken ze bijna 92% van de activiteiten van 2019, ondanks de impact van de pandemie op het vliegverkeer.
Het aantal vliegbewegingen volgens instrumentvliegvoorschriften (Instrument Flight Rules, IFR) liep met 5% terug, het VFR-verkeer (Visual Flight Rules, VFR) met 4% ten opzichte van 2022. Ondanks die afnemende volumes en in vergelijking met 2019 vertoonde de luchthaven een stijgende trend met +57% in IFR-vluchten. Die toename werd voornamelijk in de hand gewerkt door een groeiende vraag naar IFR-vluchten (private en chartervluchten). De Vlaamse overheid en de Provincie West-Vlaanderen investeerden in de luchthaven, wat uitmondde in meer parkeerruimte en betere gate-systemen. Er werden twee nieuwe hangars gebouwd door vooraanstaande Belgische privéjetoperatoren, wat bijdroeg tot de groei van het IFR-verkeer. Bovendien konden er meer IFR-vluchten landen dankzij de nieuwe IFR-procedure voor baan 06, die in oktober 2021 werd ingevoerd. Dat leidde tot een toename van het IFR-verkeer.
Uit het verslag blijkt dat de weersomstandigheden een impact hebben op het VFR-verkeer, waardoor het aantal bewegingen fluctueert. De maanden van mei tot september 2023 waren de drukste op het vlak van vliegbewegingen: in die periode namen de VFR-vluchten toe met +13%, vergeleken met mei-september 2022. De zondagen waren de minst drukke dagen van de week, omdat trainingsvluchten op die dagen niet toegestaan zijn. De conclusie van het verslag luidt dat de prestaties van de luchthaven erop achteruitgegaan zijn ten opzichte van het jaar voordien.

Veiligheid

Het hoofdstuk ‘veiligheid 2023’ omvat veiligheidsvoorvallen op de banen, onderzoeken en acties die werden/worden ondernomen om de veiligheid te verbeteren. Sinds 2019 hebben er zich 28 veiligheidsvoorvallen op de banen voorgedaan, waarvan 8 in 2023. Een groeiend aantal veiligheidsrapporten kan wijzen op een verschuiving in de rapporteringscultuur, hetgeen positieve veranderingen en verbeteringen weerspiegelt. Dit verslag bevat ook een samenvatting van veiligheidsgerelateerde gebeurtenissen.

Stiptheid

In het hoofdstuk ‘stiptheid 2022’ worden de oorzaken en de impact van ATFM-vertraging op aankomende en vertrekkende vluchten onderzocht. Het FABEC-prestatieplan brengt ATFM-vertraging onder in verschillende categorieën, waarvan ATC-capaciteit de meest voorkomende is. In 2023 werden 14.387 minuten vertraging vastgesteld (7.298 voor vertrekkende vluchten, 7.089 voor aankomende vluchten). Het aandeel in de vertraging die aan skeyes kan worden toegeschreven, werd kleiner in 2023, zowel voor aankomsten (538 van 7.089 minuten) als voor vertrekken (343 van 7.298 minuten). Die cijfers wijzen op een positieve trend, die illustreert dat de luchtverkeersleidingsdiensten efficiënter worden. Het merendeel van de vertraagde vluchten liep een vertraging van 1 tot 15 minuten op, terwijl ernstige vertragingen van meer dan een uur meestal konden worden toegeschreven aan andere luchtvaartnavigatiedienstverleners.

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GLOSSARY

AAE: — Above Aerodrome Elevation
AFISO: — Aerodrome Flight Information Services Officer
AIP: — Aeronautical Information Publication
AMC: — Acceptable Means of Compliance
AMS: — Airport Movement System
ANSP: — Air Navigation Service Provider
ATC: — Air Traffic Control
ATFM: — Air Traffic Flow Management
ATM: — Air Traffic Management
CAA — Civil Aviation Authority
BCAA: — Belgian Civil Aviation Authority
COVID-19: — Coronavirus Disease 2019
CTOT: — Calculated Take-off Time
CTR: — Control Zone
DSA: — Drone Service Application
EASA: — European Union Aviation Safety Agency
EBAW: — Antwerp International Airport ICAO Code
EBBR: — Brussels Airport ICAO Code
EBCI: — Brussels South Charleroi ICAO Code
EBKT: — Kortrijk-Wevelgem International Airport ICAO Code
EBLG: — Liège Airport ICAO Code
EBOS: — Ostend–Bruges International Airport ICAO Code
ETOT: — Estimated Take-off Time
EU: — European Union
FABEC — Functional Airspace Block Europe Central
IAP — Instrument Approach Procedures
ICAO: — International Civil Aviation Organization
IFR: — Instrument Flight Rules
LRST: — Local Runway Safety Team
NM: — Network Manager
NOTAM — Notice to Airmen
PANS — Procedures for Air Navigation Services
RAT — Risk Analysis Tool
RMZ: — Radio Mandatory Zone
RPAS — Remotely Piloted Aircraft Systems
RWY: — Runway
SID — Standard Instrument Departures
TCAS RA — Traffic Alert and Collision Avoidance System Resolution Advisory
TMZ — Transponder Mandatory Zone
TWY — Taxiway
UAS: — Unmanned Aircraft System
VFR: — Visual Flight Rules

TRAFFIC

In this chapter, traffic at Kortrijk-Wevelgem Airport (International Civil Aviation Organization (ICAO code: EBKT) is presented as recorded by the Airport Movement System (AMS). The AMS is an in-house developed tower air traffic control (ATC) system and records the movements at an aerodrome and within its Radio Mandatory Zone/Transponder mandatory zone (RMZ/TMZ). The movements are defined as an aircraft either crossing the RMZ/TMZ, landing or taking off at the aerodrome.

The figures presented throughout the report consider a movement as a take-off or landing of all traffic (flights under Visual Flight Rules (VFR) and Instrument Flight Rules (IFR), helicopters and airplanes, commercial, military or general aviation). As this report considers runway performance, movements such as crossings of RMZ/TMZ are not considered. As per BCAA's (Belgian Civil Aviation Authority) aerodrome movement definition:

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

Traffic Overview

YEARLY FIGURES

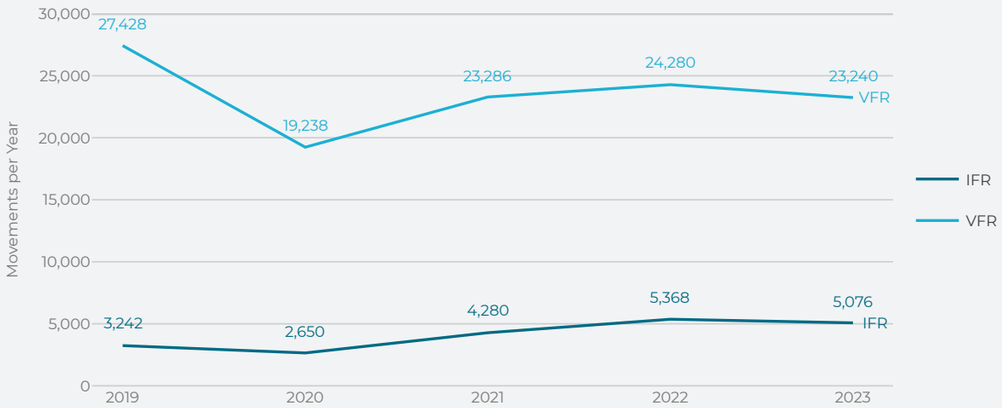
The total number of aircraft movements at Kortrijk-Wevelgem for the last five years is as follows:

2019:	**30,670**	(3,242 IFR; 27,428 VFR)
2020:	**21,888**	(2,650 IFR; 19,238 VFR)
2021:	**27,566**	(4,280 IFR; 23,286 VFR)
2022:	**29,648**	(5,368 IFR; 24,880 VFR)
2023:	**28,316**	(5,076 IFR; 23,240VFR)

In 2021, EBKT largely recovered from the 2020 COVID-19 pandemic drop and was back at around 90% of the movements of 2019. In 2022, traffic reached almost 97% of 2019 activities, with a noticeable IFR movements raise of 25% compared to 2021. IFR flights already overtook 2019 figures last year and went up to +66% of 2019 figures in 2022.

For 2023, the total number of aircraft movements at Kortrijk-Wevelgem was 28,316, consisting of 5,076 IFR movements and 23,240 VFR movements. When compared to 2022, there was a slight decrease of 4% in total movements, with IFR movements experiencing a 5% reduction, while VFR movements saw a 4% decline.

Figure 1.1: *Kortrijk-Wevelgem airport historical traffic overview*



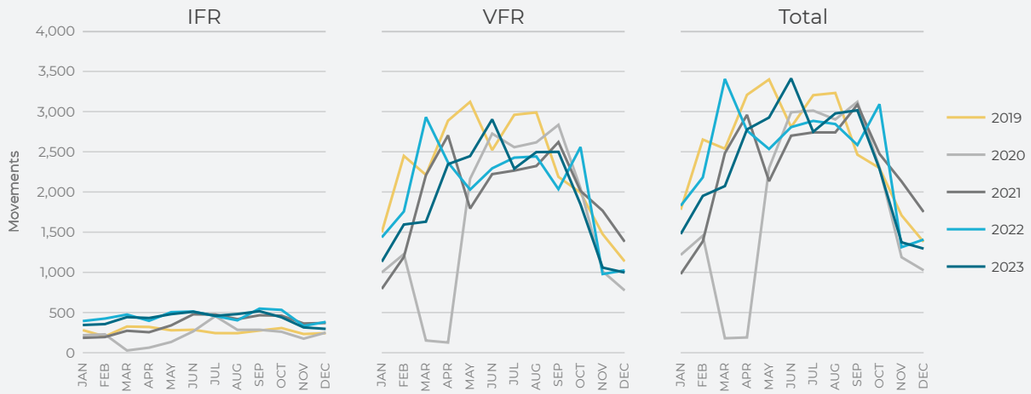
MONTHLY FIGURES

Figure 1.2 shows the details on the development per month. From April to September in 2023, overall movements at the airport remained relatively stable, aligning with the patterns observed in the preceding year. However, the overall movements in 2023 decreased by 4%, while Instrument Flight Rules (IFR) movements remained above 2019 levels by 52%. The sustained growth in private and charter IFR flights underscored a rising demand in this segment of air travel.

In March 2023, a significant month for Kortrijk-Wevelgem Airport, a striking 39% decrease was observed compared to the same period in 2022. However, it's essential to note that 2022 experienced particularly high air traffic, attributed to good weather conditions during that time. Considering Kortrijk airport's primary use for general aviation and VFR (Visual Flight Rules) traffic, favourable weather conditions play a crucial role in its activity levels. March 2023 might have been notably challenging in comparison to the elevated figures of 2022.

In June 2023, there was a significant increase of 27% in VFR flights at Kortrijk-Wevelgem Airport. This boost in activity happened most probably, because it was a month with good weather.

Figure 1.2: *Monthly Movements per year*



The last quarter of 2023 exhibited significant fluctuations in air traffic. October 2023 witnessed a notable decrease in VFR flights, resulting in a substantial drop of approximately -28% compared to the same month in 2022. Additionally, it shows an increase of +44% in IFR flights compared to October 2019. In contrast, November 2023 presented a distinct scenario characterized by a slight increase of traffic compared to the previous year.

It is noteworthy that from September 19th to October 25th, 2022, Antwerp Airport was temporarily closed and one school relocated its activity to Kortrijk Airport during this period. In addition, a small number of privately owned General Aviation aircraft moved to Kortrijk Airport during this period. As a result of this closure, October 2022 witnessed an exceptionally high volume of air traffic. There is a noticeable decline in traffic when comparing October 2022 to October 2023, with the latter returning to normal air traffic activity.

Table 1.1: *Monthly movements per year at Kortrijk-Wevelgem airport*

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total
IFR	**2019**	281	203	326	321	279	286	244	243	276	307	233	243	**3,242**
	2020	218	229	28	63	134	266	455	285	286	261	175	250	**2,650**
	2021	185	195	273	255	340	478	475	418	466	461	364	370	**4,280**
	2022	394	425	475	397	505	513	457	403	549	533	334	383	**5,368**
	2023	345	356	443	432	480	510	459	481	517	441	315	297	**5,076**
	2023 vs 2019	+23%	+75%	+36%	+35%	+72%	+78%	+88%	+98%	+87%	+44%	+35%	+22%	+57%
	2023 vs 2022	-12%	-16%	-7%	+9%	-5%	-1%	+0%	+19%	-6%	-17%	-6%	-22%	-5%
VFR	**2019**	1,498	2,449	2,212	2,887	3,121	2,521	2,960	2,989	2,188	1,991	1,476	1,136	**27,428**
	2020	999	1,227	152	127	2,164	2,726	2,557	2,617	2,835	2,046	1,013	775	**19,238**
	2021	794	1,191	2,210	2,704	1,794	2,222	2,266	2,323	2,621	2,013	1,767	1,381	**23,286**
	2022	1,435	1,757	2,931	2,367	2,029	2,294	2,427	2,442	2,035	2,559	979	1,025	**24,280**
	2023	1,132	1,595	1,630	2,346	2,446	2,903	2,290	2,496	2,499	1,846	1,059	998	**23,240**
	2023 vs 2019	-24%	-35%	-26%	-19%	-22%	+15%	-23%	-16%	+14%	-7%	-28%	-12%	-15%
	2023 vs 2022	-21%	-9%	-44%	-1%	+21%	+27%	-6%	+2%	+23%	-28%	+8%	-3%	-4%
Total	**2019**	1,779	2,652	2,538	3,208	3,400	2,807	3,204	3,232	2,464	2,298	1,709	1,379	**30,670**
	2020	1,217	1,456	180	190	2,298	2,992	3,012	2,902	3,121	2,307	1,188	1,025	**21,888**
	2021	979	1,386	2,483	2,959	2,134	2,700	2,741	2,741	3,087	2,474	2,131	1,751	**27,566**
	2022	1,829	2,182	3,406	2,764	2,534	2,807	2,884	2,845	2,584	3,092	1,313	1,408	**29,648**
	2023	1,477	1,951	2,073	2,778	2,926	3,413	2,749	2,977	3,016	2,287	1,374	1,295	**28,316**
	2023 vs 2019	-17%	-26%	-18%	-13%	-14%	+22%	-14%	-8%	+22%	-0%	-20%	-6%	-8%
	2023 vs 2022	-19%	-11%	-39%	+1%	+15%	+22%	-5%	+5%	+17%	-26%	+5%	-8%	-4%

Table 1.2: *Yearly monthly arrivals and departures*

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total
Arrivals	**2019**	886	1,324	1,269	1,603	1,689	1,404	1,586	1,619	1,236	1,142	848	686	**15,292**
	2020	613	718	94	98	1,149	1,484	1,499	1,453	1,554	1,152	593	518	**10,925**
	2021	490	685	1,230	1,474	1,067	1,336	1,359	1,366	1,541	1,239	1,062	879	**13,728**
	2022	919	1,079	1,697	1,375	1,263	1,389	1,436	1,422	1,293	1,542	656	703	**14,774**
	2023	738	977	1,041	1,385	1,470	1,703	1,370	1,486	1,508	1,144	682	651	**14,155**
	2023 vs 2019	-17%	-26%	-18%	-14%	-13%	+21%	-14%	-8%	+22%	+0%	-20%	-5%	-7%
	2023 vs 2022	-20%	-9%	-39%	+1%	+16%	+23%	-5%	+5%	+17%	-26%	+4%	-7%	-4%
Departures	**2019**	893	1,328	1,269	1,605	1,711	1,403	1,618	1,613	1,228	1,156	861	693	**15,378**
	2020	604	738	86	92	1,149	1,508	1,513	1,449	1,567	1,155	595	507	**10,963**
	2021	489	701	1,253	1,485	1,067	1,364	1,382	1,375	1,546	1,235	1,069	872	**13,838**
	2022	910	1,103	1,709	1,389	1,271	1,418	1,448	1,423	1,291	1,550	657	705	**14,874**
	2023	739	974	1,032	1,393	1,456	1,710	1,379	1,491	1,508	1,143	692	644	**14,161**
	2023 vs 2019	-17%	-27%	-19%	-13%	-15%	+22%	-15%	-8%	+23%	-1%	-20%	-7%	-8%
	2023 vs 2022	-19%	-12%	-40%	+0%	+15%	+21%	-5%	+5%	+17%	-26%	+5%	-9%	-5%

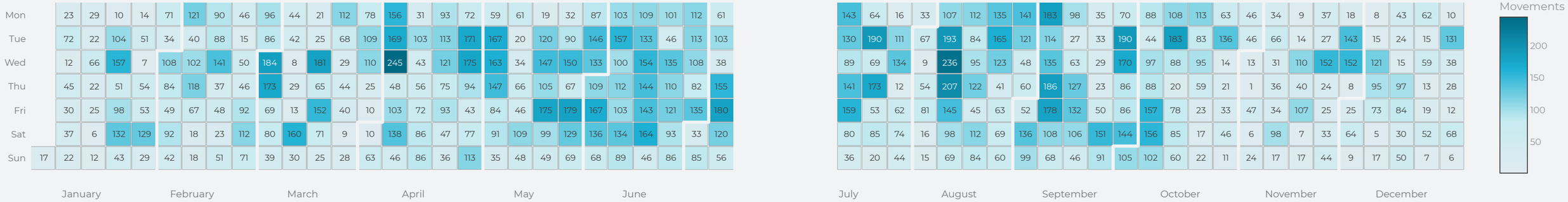


Figure 1.3: *Calendar view of daily movements at EBKT in 2023*

Overall, the air traffic performance at Kortrijk-Wevelgem Airport in 2023 showcased a dynamic landscape, with varying influences from seasonal conditions and demand patterns in both, VFR and IFR segments. The positive trends observed in the second quarter and the challenges faced in the first and last quarter highlight the multifaceted nature of factors influencing movements at Kortrijk-Wevelgem Airport throughout the year.

Figure 1.3 allows us to observe once again how seasons impact air traffic at Kortrijk-Wevelgem International Airport. The spring-summer period is the most active in terms of movements. During autumn and winter, there are fewer VFR movements due to weather conditions not permitting VFR flights and the shorter days, as almost all VFR flying is conducted during daylight hours.

Consistent with historical patterns, Sundays persist as the quieter day of the week, likely due to restrictions on training flights. In contrast, Wednesdays and Saturdays continue to stand out as the busiest days, suggesting a correlation between heightened aviation activity and specific days of the week. This correlation may be influenced by regulatory constraints and weather conditions.

Traffic Patterns

The following figures illustrate the average hourly movements (in local time) throughout the day at the airport. ***Figure 1.4*** provides insights into the distinct traffic patterns observed for total traffic (IFR and VFR) during the years 2019 to 2023.

Figure 1.5 shows the traffic pattern through the day for VFR traffic over the years. Two prominent peaks persist over the years. The first peak occurs around 11:30, while the second is observed around 15:00. A noticeable drop in VFR movements is observed during the lunchtime period. The fact that no training flights are allowed on Saturdays between 12:00 and 14:00 and the whole afternoon in summer also contributes to the observed decrease of movements in that period of the day. Additionally, there is a significant limitation at 17:00 local time: after this time training is only possible for aircraft with a noise certificate of <72dB.This, coupled with the sunset, contributes to the observed plateau around 17:00.

In contrast, IFR flights exhibit a more evenly spread distribution throughout the day shown in ***Figure 1.6.***

Figure 1.4: *Average hourly movements (2019-2023)*

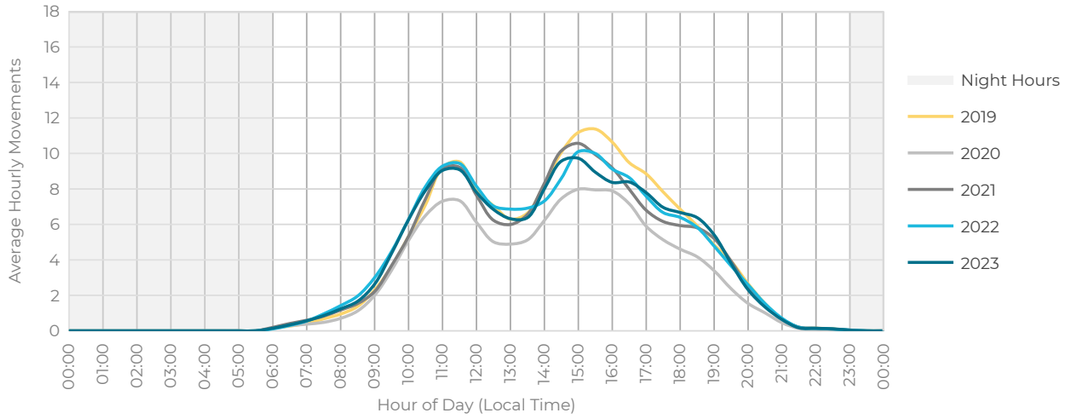


Figure 1.5: *Average hourly movements (2019-2023) VFR*

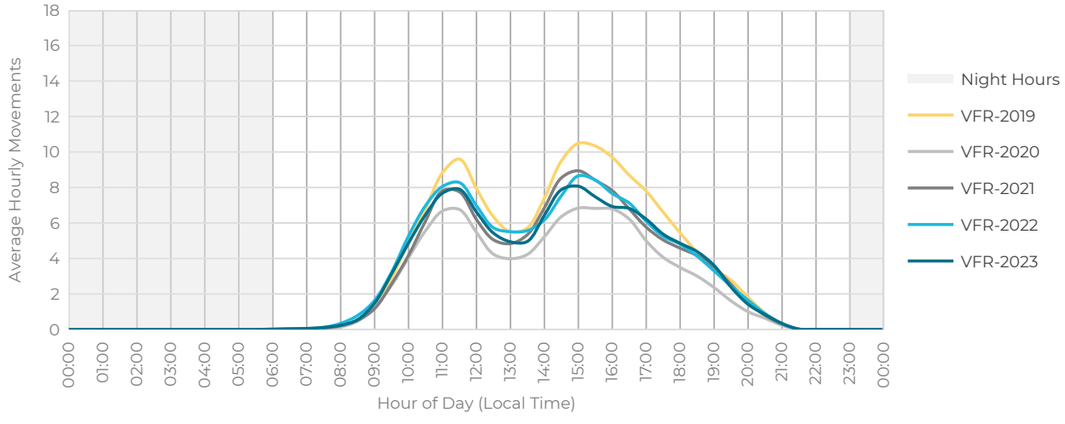


Figure 1.7 offers a comprehensive perspective on the airport's busiest times throughout the day, with a specific focus on each season's distinct characteristics. The analysis unveils interesting trends that shape air traffic dynamics:

Spring and Fall - The morning peak aligns with the afternoon one, especially during the fall season, suggesting a balanced distribution of movements. A plateau from 16:00 to 18:00 shows activity during late afternoon and early evening. The winter peak persists in Spring and Fall, fading slightly in Summer, possibly due to day-tripper arrivals later in the afternoon.

Winter - The season with less traffic, linked to the characteristic of the traffic at Kortrijk-Wevelgem Airport (mainly VFR). For VFR traffic daylight and weather conditions are a key factor for their operations, therefore the reduced traffic during this season. A peak between 14:00 and 15:00 can be observed.

Summer - Here, a unique pattern emerges as the morning peak surpasses the afternoon. Long, sunny days in Summer enable extended VFR flight hours into the evening. The plateau from 16:00 to 18:00 indicates heightened VFR activity during these hours, a phenomenon shared with other seasons, especially similar to the one during Spring.

Figure 1.6: *Average hourly movements (2019-2023) IFR*

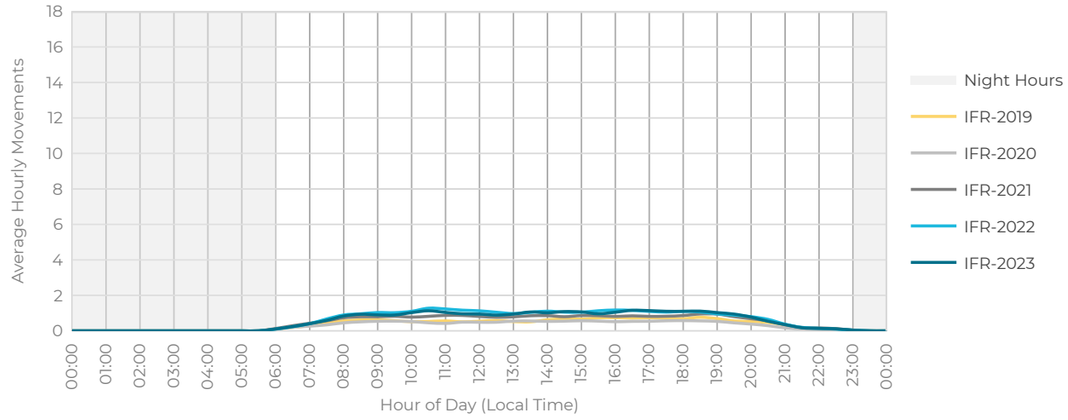


Figure 1.7: *Average hourly movements per season in 2023*

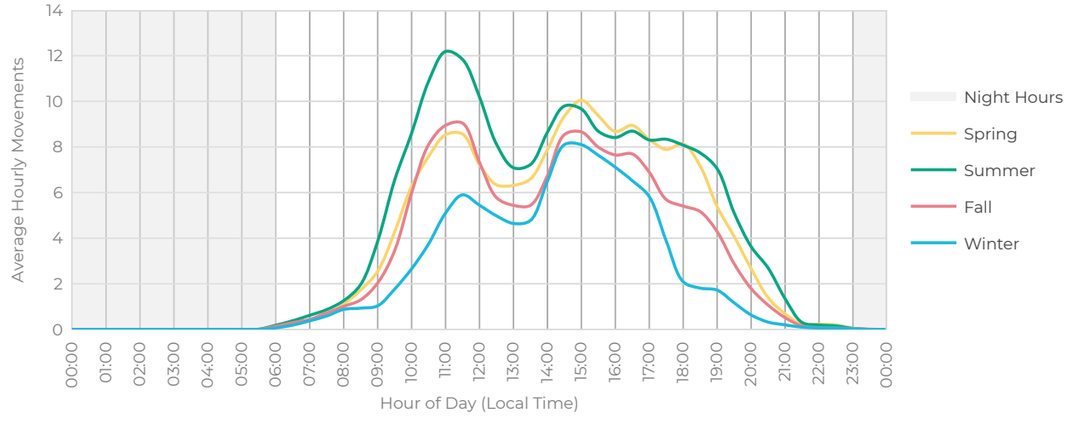
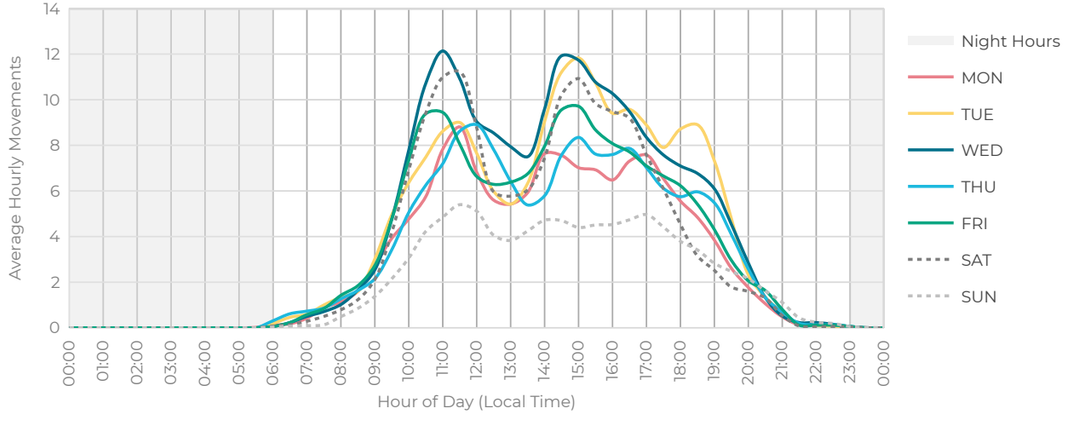


Figure 1.8 shows the daily variations in air traffic movements for both IFR and VFR flights. The data is presented with a focus on different hours of the day on the different days of the week.

Monday and Sunday: Both days show similar trends, considering that the traffic on Sundays is lower than on Mondays. The biggest peak occurs in the morning at 11:30, and after the valley during lunch time, smaller peaks appear at 14:00 and at 17:00.
Tuesdays and Thursdays: In addition to the morning and afternoon peak, there is a third peak (less pronounce on Thursdays) at 18:30, moving the decrease of traffic a bit later in the evening.

Wednesday, Friday and Saturday: These days show the highest morning peaks. In the afternoon, they show a similar pattern to the one on Tuesdays, having a faster reduction of traffic in the evening Saturdays, and having a barely noticeable peak at 18:0 and 19:000 for Wednesdays and Fridays.

Figure 1.8: *Average hourly movements per weekday in 2023*



Drone Activities

The emerging activities of unmanned aircraft systems (UAS) and the variety of their operations is one of the challenges driving the future of Air Navigation Service Providers (ANSP). To enable a reliable and efficient UAS integration, a framework is designed at EU 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 available the common information required to enable the operation and provision of U-space services in U-space airspaces wherever it has been designated.[1]

skeyes is playing a central role in the development of the U-space as manager of UAS geographical zones in Belgium and by actively participating in the BURDI Project. The BURDI project which stands for Belgium-Netherlands U-space Reference Design Implementation, is dedicated to implementing a U-space airspace concept to ensure a reliable and efficient UAS integration.[2] Additionally, since 2023, skeyes has been working on obtaining the certification to become the CISP in Belgium.

The controlled airspace above and around an airport is a UAS geographical zones, also called “GeoZone”. UAS geographical zone are zones that 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 of Kortrijk.[3,4]

skeydrone, created in 2020 as subsidiary of skeyes, envisages to play a central role in the implementation of U-space as USSP by offering a wide variety of services that enable safe and efficient drone operations in all types of airspace. This is how in 2022, skeydrone, in collaboration with the local development company, facilitated the implementation of the first marine GeoZone at an offshore test platform in the North Sea. Following that success, a project, implicating skeydrone, the port of Ostend and other European partners, was launched. Its aim is to develop offshore logistics solutions to support the transition from fossil fuels to renewable energy sources in the North Sea. In this context, skeydrone’s contributions include implementing U-space drone corridors between land and offshore renewable energy platforms and managing offshore drone traffic as a USSP.[5]

One of the other services proposed by skeydrone is a web application: the Drone Service Application (DSA) 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 DSA tool.

1. **https://www.ecac-ceac.org/activities/unmanned-aircraft-systems/uas-bulletin/22-uas-bulletin/504-uas-bulletin-2-what-is-u-space**
   (URL retrieved 16/02/2024)
2. **https://www.sesarju.eu/projects/BURDI**
   (URL retrieved 16/02/2024)
3. **UAS geographical zone statuses can be seen at https://map.droneguide.be**
   (URL retrieved 21/04/2024)
4. **skeyes, “skeyes drone service application, https://www.skeyes.be/en/services/drone-home-page/you-and-your-drone/drone-service-application/**
   (URL retrieved on 21/02/2024).
5. **https://www.unmannedairspace.info/uncategorized/west-flanders-drone-ecosystem-expands-with-skydrone-support/**
   (URL retrieved on 10/02/2024)

Table 1.3 displays the number of drone activities and the level of risk involved in the operations per airport. These categories are defined by the risk the drone activity forms for manned aviation in very low level (VLL) zones. For Kortrijk-Wevelgem, where there is a Radio Mandatory Zone (RMZ), the categories are defined as:

high risk — runway and surroundings

moderate risk — departure/approach track, visual circuits and rest of the control zone above 400 ft above aerodrome elevation (AAE), excluding the high-risk zone.

low risk — on the edge of the control zone below 400 ft AAE, outside the moderate and high-risk zone

Table 1.3: *Drone activity in Kortrijk-Wevelgem Airport per VLL zone risk level in 2023*

	Low	Moderate	High	Total
2021	439	27	0	**466**
2022	504	0	0	**504**
2023	850	14	0	**864**
2023 *vs* 2021	+94%	-48%	-	+85%
2023 *vs* 2022	+69%	-	-	+71%

As per European Union Aviation Safety Agency (EASA) definition[6] , activities can furthermore be categorized into a different risk classification scheme that considers the complexity of the operation. The following three classes exist:

OPEN — Presents low risk to third parties. An authorisation 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. Authorisation is required from the CAA.

FORMER CLASS 1 — Very complex operations, presenting an equivalent risk to that of manned aviation.

6. EASA, "Drones - regulatory framework background". https://www.easa.europa.eu/domains/civil-drones/drones-regulatory-framework-background (URL retrieved on 02/02/2024)

It can be observed that drone activities continue to grow In Kortrijk-Wevelgem Airport, there were 864 drone activities recorded in 2023, a 71% more than in 2022 and an 85% more than in 2019. As per European Union Aviation Safety Agency (EASA) definition , activities can furthermore be categorized into a different risk classification scheme that considers the complexity of the operation.

Table 1.4 shows the drone operations recorded in Kortrijk-Wevelgem Airport following the EASA risk category. More than two-thirds of the drone activities – 628 – operated under the Open category. 229 (27%) were registered as Specific and 7 (1%) were flown as Certified.

Table 1.4: *Authorized drone activities per EASA risk category in 2023*

	Open	Specific	Former Class 1	Total
2021	295	139	32	**466**
2022	333	163	8	**504**
2023	628	229	7	**864**
2023 *vs* 2021	+113%	+65%	-78%	+85%
2023 *vs* 2022	+89%	+40%	-12%	+71%

Figure 1.9 provides a detailed view of the activities around EBKT in 2023, displaying the initial coordinates of all UAS. In addition, ***Figure 1.10*** shows the airspace polygons that were authorized for drone operations in Kortrijk Airport in 2023. There is a focus of operations over the city of Kortrijk, but also along the N8 road.

The missions of these activities are oftentimes related to photo- and videography, but also serve security reasons (e.g., crowd or road traffic management), scientific research, mapping purposes, or maintenance and inspection missions (e.g., of power lines, solar panels, wind turbines, air quality), etc.

Figure 1.9: *EBKT Drone positions in 2023*

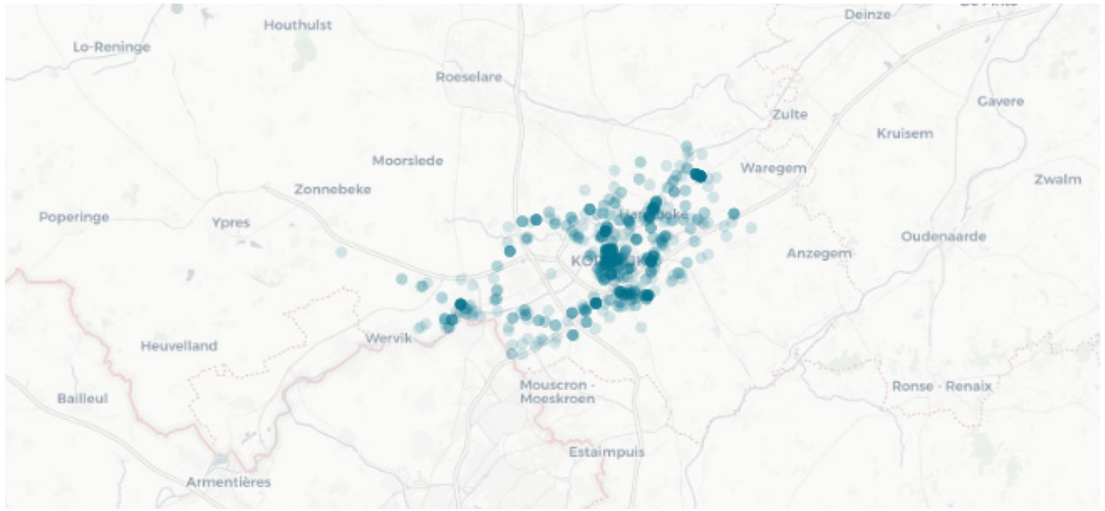
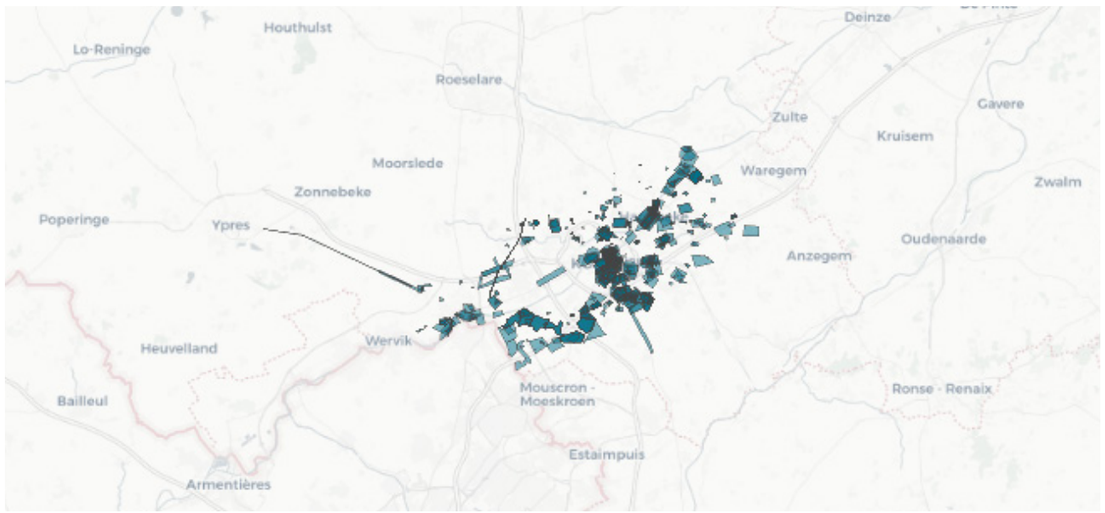


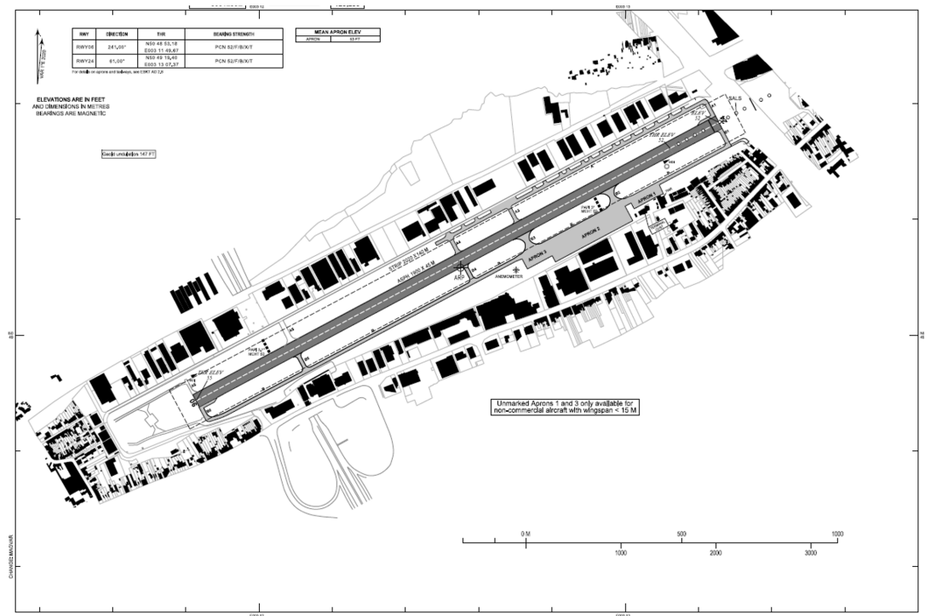
Figure 1.10: *EBKT Drone polygons in 2023*



Runway Use

The layout of Kortrijk-Wevelgem airport with its two reciprocal runways (RWY) is depicted in the International Civil Aviation Organization (ICAO) chart of ***Figure 1.11***.

Figure 1.11: *ICAO chart of EBKT*



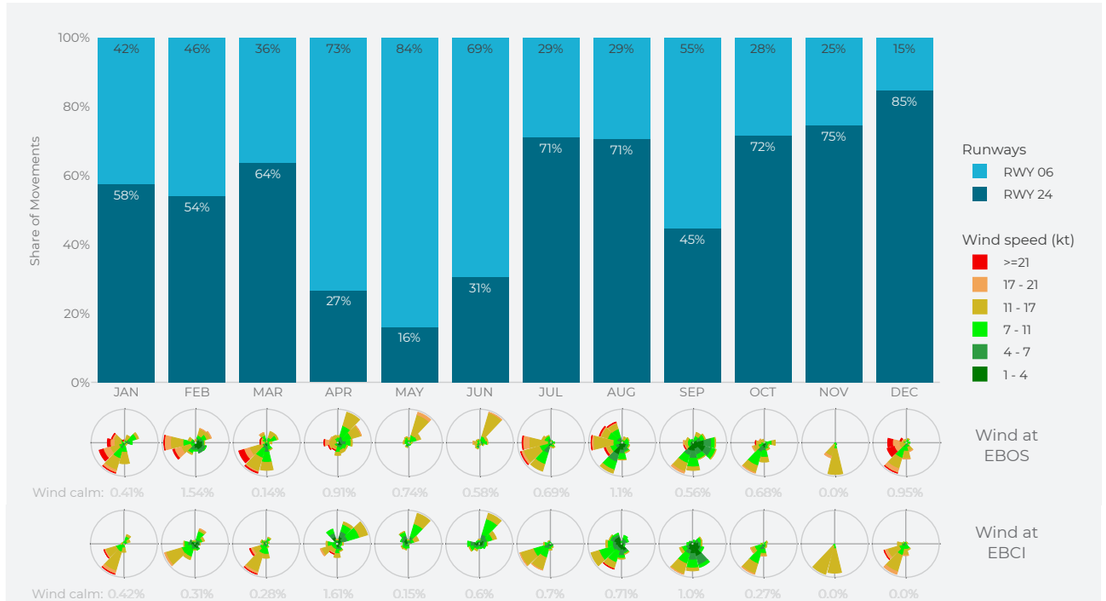
The selection of a particular runway configuration is influenced by various factors, with wind direction often playing a pivotal role. Runway configurations 06 and 24 are utilized throughout the year, and their frequencies vary each month.

The IFR procedures were introduced for RWY 06 on 8th October 2020. Standard instrument departures (SID) and instrument approach procedures (IAP) allow IFR flights to use RWY 06 when the wind favours it. Accordingly, the usage of RWY 06 increased from 6,735 movements in 2020 to 13,664 movements in 2023. This can be seen in ***Figure 1.12*** along with additional data on wind conditions, providing insights into the dynamic factors influencing runway choices during this period.

No wind data is available at skeyes for Kortrijk-Wevelgem itself, but the wind-roses from nearby airports of Ostend (EBOS) and Charleroi (EBCI) give an indication of the weather in Kortrijk-Wevelgem. In ***Figure 1.12*** it can be seen that in Belgium winds are predominantly blowing from South-West, which explains the more frequent use of RWY 24. In ***Figure 1.13*** it can be seen that July, November and December had prevalent south and south-westerly winds with almost no northeasterly winds resulting in a high usage of runway 24. In April, May and June, there is a substantial increase in movements on RWY 06 compared to RWY 24, due to predominant North-East winds. The first trimester of the year also shows a lower usage of runway 24, despite having winds with a strong South-West component, there were also some North-East winds. September was a particular month regarding wind, as South, South-East and East winds can be appreciated.

Figure 1.12: *Yearly Runway use 2019-2023*

Figure 1.13: *Monthly Runway use 2019-2023 and wind roses EBOS and EBCI*



Opening Hours

Kortrijk-Wevelgem airport operates within specific time frames, primarily from 06:00 to 21:00 (local time). However, flexibility is offered, and upon request, the airport's opening hours can be extended, allowing operations until 23:00. ***Figure 1.14*** illustrates the extensions of the airport's opening hours throughout the year 2023.

The chart for 2023 showcases a varying closing time pattern, with identifiable periods of extensions. typically utilized by IFR commercial operators.

Instrument Flight Rules (IFR) flights predominantly drive the extension pattern, with peaks coinciding around holidays. The summer season sees increased activity, and there is a notable surge in spring, particularly for ski vacations, primarily requested by business jets. Additionally, a limited number of extensions are requested for medical flights, reflecting the diverse operational needs of the airport.

In order to ensure the timely opening of the airport at the designated hour, Aerodrome Flight Information Services Officers (AFISOs) commence their duties before 06:00, logging the entry in the system sometimes earlier than the opening times.

Figure 1.14: *Opening times of Kortrijk-Wevelgem airport in local time*

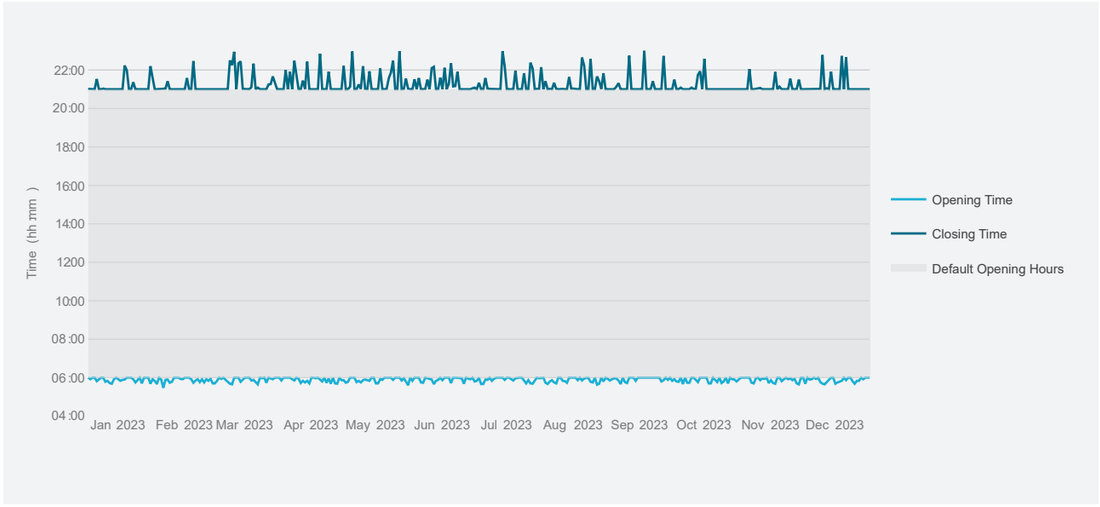
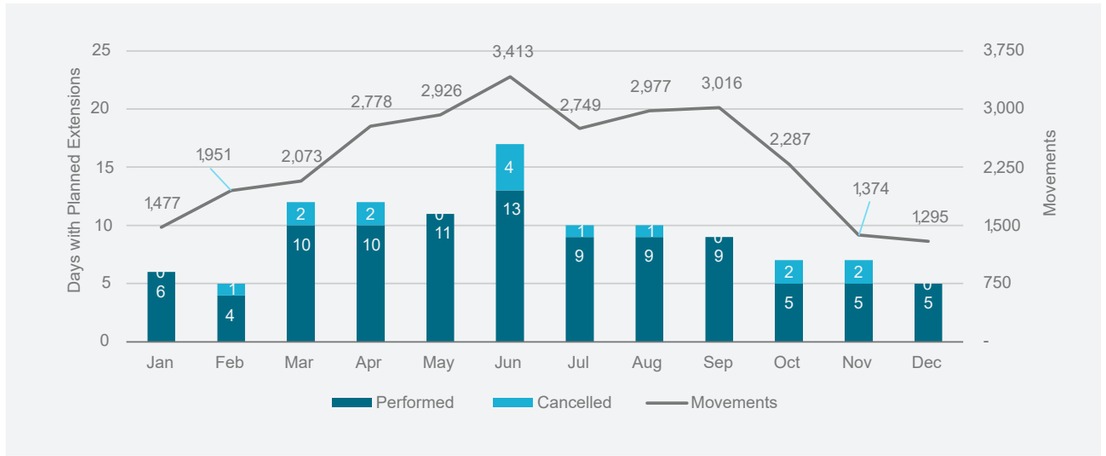


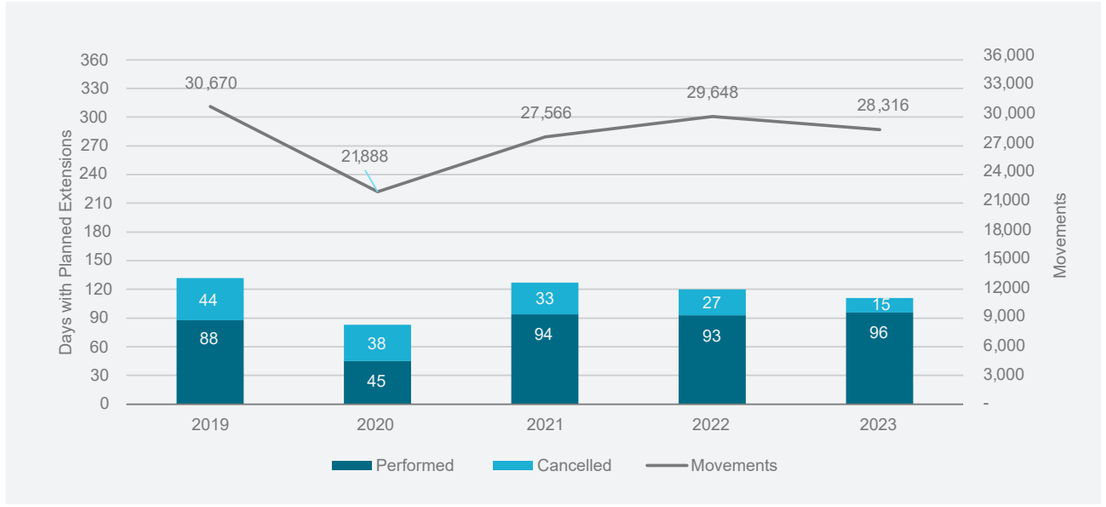
Figure 1.15 shows in dark blue the number of days per month in 2023 where at least one extension was planned (that is, days where the closing time of the airport was expected to be later than 21:00). Light blue refers to the days were all the requested extensions were cancelled. The number of extensions are correlated with the number of movements, reaching the highest activity during summer months.

Figure 1.15: *Days with extension per month of 2023*



From ***Figure 1.16,*** one can derive that there were less days with extension in 2023 than there were in 2019 or 2021. In 2023 nearly one in three days was a day with an extension, compared to 2019 or 2021 were almost two days of every five were days with extensions. In 2020 less than one every seven days had an extension.

Figure 1.16: *Days with extension per year*



And to conclude this chapter, it is important to mention that skeyes obtained the GreenATM level 3 accreditation in 2023. CANSO GreenATM is an environmental accreditation programme to provide air navigation service providers (ANSPs) with an independent, industry-endorsed, accreditation of their environmental efforts.

SAFETY

This chapter gives an overview of runway incursions & events, and safety recommendations. The runway incursions and occurrences discussed in the chapter are safety occurrences. The runway incursions 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 definitions apply for the severity classification (in accordance with EASA AMC).

Table 2.1: *Severity classification*

Severity Classification	Description
A – Serious incident	An incident involving circumstances indicating that an accident nearly occurred.
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 severity, or inconclusive or conflicting evidence precluded such determination (RAT RF < 70 %).
E – No safety effect	An incident which has no safety effect.
N – No ATM ground contribution	No system, procedure or person involved in the provision of ATC services initiated or contributed to the incident.

Runway Incursions

According to ICAO[8], a runway incursion 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". According to the Acceptable Means of Compliance (AMC)[9], an incorrect presence is hereby defined as the unsafe, unauthorised, or undesirable presence or movement of an aircraft, vehicle, or pedestrian – irrespective of the main contributor (e.g., AFISO, pilot, driver, technical system).

When a deviation from the aerodrome manual occurs, a runway incursion report is made.

Moreover, if a situation on the runway is deemed unsafe by a pilot or an AFISO, even without a deviation from the aerodrome manual, a safety report is made as well. Such situations are classified as runway events.

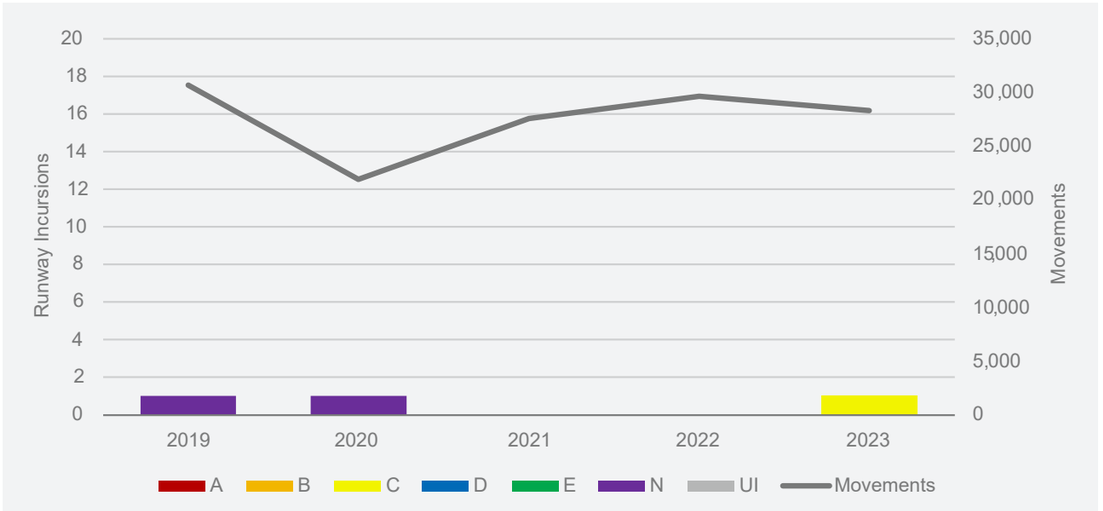
Runway events and incursions are investigated, and the results of these investigations are discussed at the Local Runway Safety Team (LRST) meetings, which bring together all partners related to the airport. During such LRST meetings, skeyes as well as the airport present their respective view and focus on actions to be taken. The purpose of the LRST is hence to make all partners aware, to share lessons learned, and to take action in the sake of safety.

As it can be seen in Figure 2 1, there was one runway incursion in Kortrijk Airport in 2023. It was classified as a significant incident (C) where a bird control vehicle entered the runway while an aircraft was still in the departing phase and was assumed airborne.

7. ICAO Doc 4444 – PANS–ATM

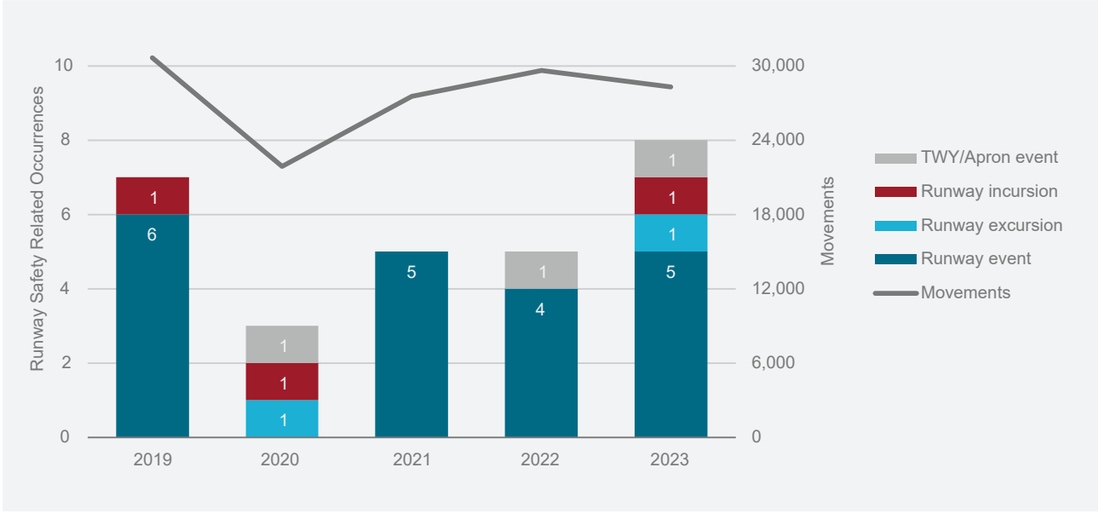
8. AMC 3 of EU Reg 2019/317

Figure 2.1: *Runway Incursions at EBKT per year*



There were a total of eight runway safety occurrences in 2023, as illustrated in ***Figure 2.2***. There was one TWY/Apron event reported: an aircraft departed the runway via taxiway B3 while a tow truck was holding at this position to cross the runway. One runway excursion was reported: In April, an aircraft had a runway excursion and ended up upside down in the grass within the runway strip next to the concrete runway. The other five of the runway safety occurrences were classified as runway events, involving either (aircraft or helicopters).

Figure 2.2: *Runway safety occurrences at EBKT per year*



The increase of safety reports shows an ongoing shift in the reporting culture at Kortrijk Airport, reflecting positive changes and improvements. Some incidents reported might not have been disclosed in previous years, highlighting the continuous improvement of the safety reporting culture at Kortrijk-Wevelgem International Airport.

Table 2.2 highlights a concise overview of safety-related events at Kortrijk-Wevelgem International airport, with a specific focus on the year 2023. During this period, the aviation unit faced a total of 45 safety occurrences. Analysing the overall trend in safety occurrences, it is noteworthy that 2023 experienced an increase compared to previous years, being the biggest increase on safety occurrences classified as Deviations from ATM procedures (from five events in 2022 to twelve in 2023) and ACFT tech issues (from two events in 2022 to seven in 2023). Eight of the Deviations from ATM procedures were linked to ground occurrences, being deviations from the AIP reported by the airport.

Understanding the nuances of safety data for the year 2023 is crucial for the unit's continuous efforts to enhance safety measures. This analysis serves as a foundation for targeted interventions and improvements, ensuring that the unit remains steadfast in its dedication to maintaining a secure and reliable aviation environment.

As a conclusion and worth mentioning, the increase in occurrences indicates an ongoing shift in the reporting culture at Kortrijk Airport, reflecting positive changes and improvements. Some incidents reported might not have been disclosed in previous years, highlighting the continuous improvement of the safety reporting culture at Kortrijk-Wevelgem International Airport.

To wrap up this chapter, in 2023 skeyes implemented a common transition layer in all Belgian airspace to ensure 1,000 ft separation between traffic below and above this layer (the transition layer separates traffic which vertical position is defined based on local altitude and traffic which vertical altitude is defined based on Average Sea Level). This is in line with ICAO DOC 7030 EUR and Commission Implementing Regulation (EU) 2020/469 of 14 February 2020.

Table 2.2: *Descriptions of the Missed Approaches with Reason O: Other*

Safety occurrences	**2019**	**2020**	**2021**	**2022**	**2023**	
Accident report	4	1	1	1	1	
w	5	4	6	2	7	
Airspace Infringement		1		1		
Deviation from ATM procedures	12	9	2	5	12	
Deviation from mandated equipment	2	2				
Inadequate separation		1	1	3	4	
Interference with ACFT					1	
Internal Coordination		2	1	1		
Laser beam			1	1		
Other			1	1	1	
RPAS		1	1	2	1	
Runway event	6		5	4	5	
Runway excursion		1			1	
Runway incursion	1	1			1	
TCAS RA		1	4	3	2	
TWY/Apron event		1		1	1	
Wildlife report	5	5	5	3	7	
TOTAL	**35**	**30**	**28**	**28**	**45**	**166**

CAPACITY & PUNCTUALITY

In this chapter, the punctuality at Kortrijk-Wevelgem International Airport is studied. The arrival delay, delay due to regulations placed by ATC units or other airports 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 Kortrijk-Wevelgem International Airport caused by regulations in the Belgian en-route airspace and by other Air Navigation Service Providers (ANSPs).

Punctuality

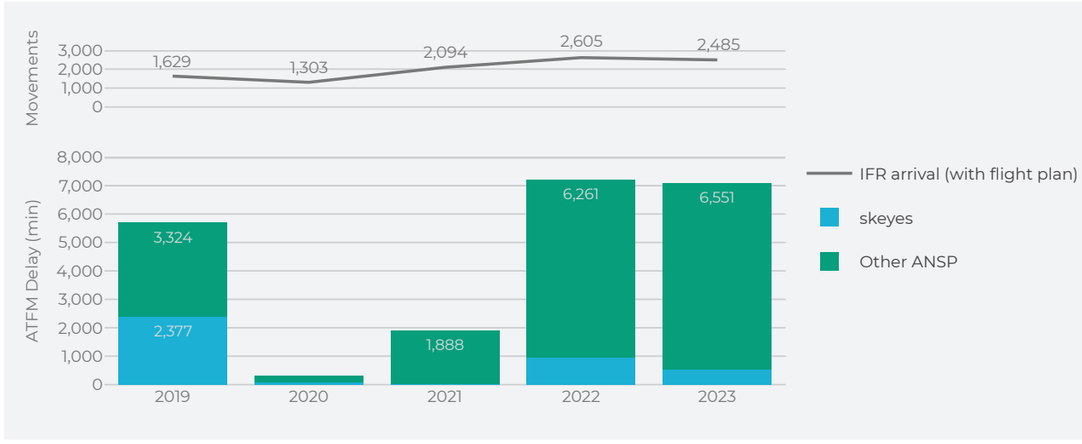
ATFM delay can be caused by many different reasons. According to the FABEC Performance Plan the causes with ANSP contribution are (in the order listed in the Performance Plan):

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

As part of the Flight Information Service at Kortrijk-Wevelgem International Airport, skeyes cannot place restrictions on traffic at the airport. However, IFR flights with a flight plan can be affected by ATFM delay along their routes. This section gives an overview of the influence of ATFM measures on departing and arriving traffic at Kortrijk-Wevelgem International Airport.

A breakdown of the ATFM delay statistics into arrivals and departures, as well as the origin of the delay-affecting regulations, is given in ***Figure 3.1*** and ***Figure 3.2***. In 2023, a total of 14,387 minutes of delay (7,298 minutes for departures, of which 343 - 5% -minutes were attributable to skeyes, and 7,089 minutes for arrivals, of which 538 – 8% - minutes were attributable to skeyes) were observed.

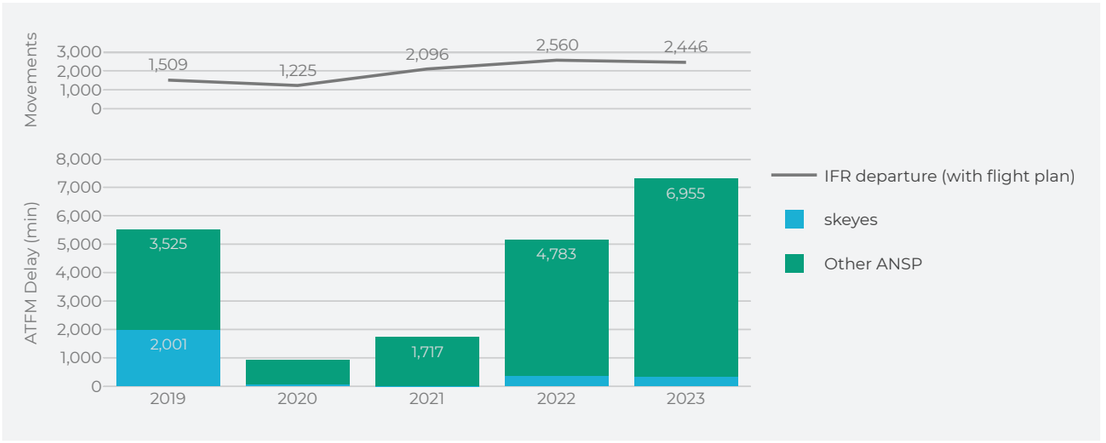
Figure 3.1: *EBKT arrivals ATFM delays*



The traffic was mainly impacted by ATC disruptions due to weather related reasons, Capacity and Industrial actions (ATC) in France during the summer. Other events that impacted the punctuality in Kortrijk Airport were the trials for the implementation of 4-Flight in France (4-Flight is the new ATM system that will be implemented by the French ANSP for their traffic management) or the implementation of iCAS (also a new ATM system) in Germany. Some regulations were put in place to protect the different airspaces, but also the neighbouring countries.

9. FABEC stands for 'Functional Airspace Block Europe Central', comprising the airspace of the six FABEC States of Belgium, France, Germany, Luxembourg, the Netherlands and Switzerland

Figure 3.2: *EBKT departures ATFM delays*



The low delay numbers in 2020 and 2021 can be explained by the large traffic decrease worldwide caused by the COVID-19 pandemic. The air traffic network had many bottlenecks, which were not suited for the traffic volumes of the previous years and, therefore, causing much delay. With the removal of these bottlenecks due to the low traffic, local factors, such as weather at the airport, became the most dominant factors in terms of delay. Hence, the very low amount of delay perceived in 2020 and 2021. Comparing 2023 with 2022, there was a slight decrease in delay on arrivals and a significant increase in delay on departures (-2% for arrivals, +41% for departures).

Even with the increase in the number of movements since 2019, ATFM delays due to skeyes have seen a continued reduction in their ratio in 2023:

- *Departures' delays due to skeyes: 36% in 2019 vs. 5% in 2023.*
- *Arrivals' delays due to skeyes: 42% in 2019 vs 8% in 2023*

To give a view of the severity of the impact, the delayed flights can be categorised based on the magnitude of the delay. There are four categories:

- *Little Delay: 1-15 minutes*
- *Medium Delay: 15-30 minutes*
- *Heavy Delay: 30-60 minutes*
- *Severe Delay: more than 60 minutes*

Analysing the delay per flight based on ***Figures 3.3*** and ***Figure 3.4***, a noticeable trend emerges: the majority of flights experience delays ranging from one to fifteen minutes. This pattern holds true for both skeyes-related delays and delays caused by other ANSPs, 54% of the delayed arrivals and 46% of the delayed departures were delayed for a maximum of 15 minutes. 5% of the delayed departure and arrival flights had a delay above one. It's noteworthy that a significant portion of such delays is still attributed to other ANSPs. This suggests potential areas for improvement within the broader air traffic management system.

Figure 3.3: *Distribution of Delayed Arrivals per Delay Interval*

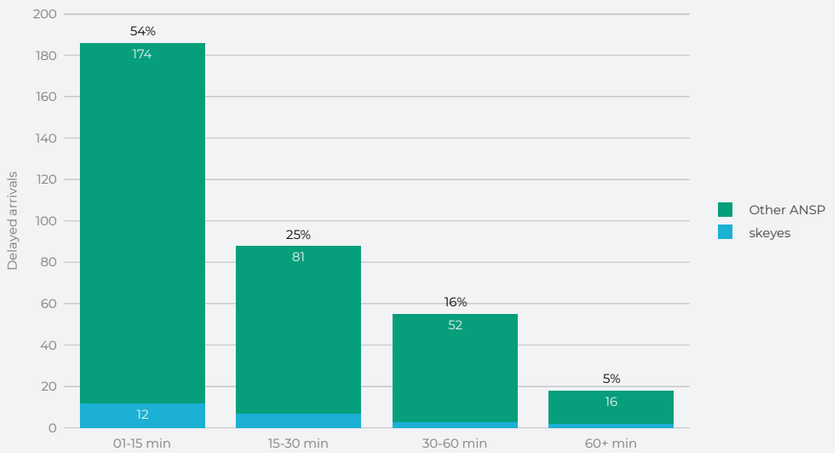
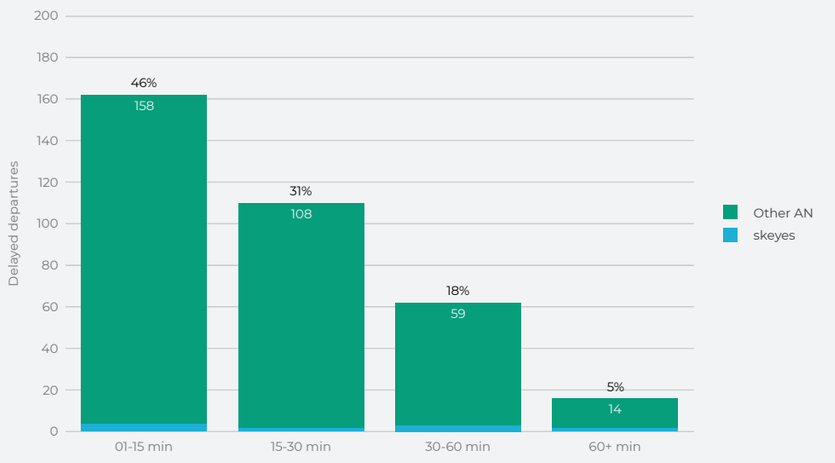


Figure 3.4: *Distribution of Delayed Departures per Delay Interval*



ANNEX Fact sheet

TRAFFIC

Yearly Evolution

- *2023 movement figures are lower compared to 2019's level (-8%) and -4% vs 2022.*
- *IFR market shares continue their progression following infrastructure improvements and private/charter flights demand increase, started the wakes of COVID-19*

Movements	2019	2020	2021	2022	2023	2023 vs 2022	2023 vs 2019
IFR	3,242	2,650	4,280	5,368	5,076	-5%	+57%
VFR	27,428	19,238	23,286	24,280	23,240	-4%	-15%
Total	30,670	21,888	27,566	29,648	28,316	-4%	-8%

Quarterly comparison

- *Decrease (-26%) during Q1 in comparison with 2022.*
- *High traffic in June (3,413 movements) and September (3,016 movements)*

Movements	2019	2020	2021	2022	2023	2023 vs 2022	2023 vs 2019
Q1	6,969	2,853	4,848	7,417	5,501	-26%	-21%
Q2	9,415	5,480	7,793	8,105	9,117	+12%	-3%
Q3	8,900	9,035	8,569	8,313	8,742	+5%	-2%
Q3	5,386	4,520	6,356	5,813	5,813	-15%	-8%

SAFETY

Safety Occurrences

- 5 runway events
- 1 runway incursions
- 1 runway excursions
- 1 TWY/Apron event

PUNCTUALITY

Punctuality

- *Total minutes of ATFM delay: 14.387minutes (881 minutes due to skeyes' regulations)*
- *Departures: 7,298 minutes (thereof 343 minutes due to skeyes' regulations)*
- *Arrivals: 7.089 minutes (thereof 538 minutes due to skeyes' regulations)*

skeyes nice to guide you

Runway Performance Report **2023**

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