



AIRPORT INDUSTRY CONNECTIVITY REPORT 2024





FOREWORD

Analysing and reporting air connectivity trends across the European airport network is something ACI EUROPE has been doing for more than 10 years. We do so by using a range of indicators measuring the performance of airports individually and at different levels of aggregation, along with the performance of European States and the contribution of the different airline business models to European air connectivity. For the first time, this report also introduces an additional air connectivity index – the *Power City Access index*, which brings in more qualitative input along with the usual quantitative measures.

Each year comes with valuable insights, and 2024 is no exception. If anything, this year's report shows that air connectivity should not be taken for granted. Four years have passed since the onset of the pandemic, yet air connectivity levels have still not fully recovered. Also plain to see is the fact that structural changes in the aviation market and geopolitics are re-shaping air connectivity patterns, with significant performance gaps amongst both geographies and individual airport markets. In other words, there are winners and losers.

Looking ahead, there is no escaping the fact that the massive transition costs and disruptions involved in decarbonising aviation will increase the cost of flying, lower future demand growth and thus impact air connectivity. Along with climate action, airline consolidation and technological progress will also keep reshaping air connectivity.

These are all factors – or 'air connectivity determinants' - that policy makers at all levels should be paying attention to, for +10% increase in air connectivity automatically yields a +0.5% increase in GDP per capita.

Indeed, air connectivity is an essential part of competitiveness, be it at local, national or European level. And surely, the cohesion it enables within Europe and the access to external markets it affords are worth safeguarding and nurturing.

This means that we have no choice but to progress towards decarbonizing aviation while at the same time safeguarding the socio-economic benefits of air connectivity. Ultimately, this is also about securing wide societal and political support for climate action.

This is a major challenge, which Europe's airports have embraced together with the whole aviation industry, as evidenced by the DESTINATION 2050 alliance. But there is no escaping the fact that the massive transition costs and disruptions involved in decarbonizing aviation require further political, regulatory, and financial support if we want to succeed.



Together with the whole ACI EUROPE team, I hope this report will not just be of use for our airport members, but also contribute to a better understanding of air connectivity dynamics for policy makers and regulators.

Olivier Jankovec
ACI EUROPE Director General



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PASSENGER PERSPECTIVE OF AIR CONNECTIVITY

The “Airport Connectivity Index” is created by SEO Amsterdam Economics using their proprietary NetScan model.

Air connectivity is best considered from the perspective of the air traveller. The one who wants to get from A to B. Or sometimes, from A via B to C. The following definitions describe them and together they provide a comprehensive picture of connectivity provided by an airport – and how it links its communities to the rest of the world.

A. Direct connectivity

These are the direct air services available from the airport – measured not just in terms of destinations, but also factoring in the frequency of flights to the same destination (so for example, an airport with 5 daily flights to another airport, will register a higher score than one with only 4).

B. Indirect connectivity

This measures the number of destinations available through an onward connecting flight at hub airports from a particular airport. For example, if you fly from Malaga, Spain to a hub airport such as Amsterdam Schiphol, that’s a direct flight from A to B. But the large number of available onward connections from these second airports expands the range of destinations available from the airport of origin. Indirect connections are weighted according to their quality, based on connecting time and detour involved with the indirect routing. For example, a flight from Hamburg to Johannesburg via Frankfurt will register a higher score than an alternative routing via Doha, which is geographically a longer diversion from the direct flight path.

C. Airport connectivity / Total air connectivity

As the name suggests, this is the most comprehensive metric for airport connectivity – taking into account both direct and indirect connectivity from the airport in question. Airport connectivity is defined as the sum of direct and indirect connectivity – thus measuring the overall level to which an airport is connected to the rest of the world, either by direct flights or indirect connections via other airports.

D. Hub connectivity

Hub connectivity is the key metric for any hub airport, big or small, alongside their direct destinations offered. It measures the number of connecting flights that can be facilitated by the hub airport in question – taking into account a minimum and maximum connecting time, and weighing the quality of the connections by the detour involved and connecting times.

The airport grouping system is based on the total annual passengers in 2023. **Majors** include airports with over 40 million passengers. **Mega airports** consist of airports with 25 to 40 million passengers.

Large airports are comprised of airports with 10 to 25 million passengers. **Medium airports** include airports with 1 to 10 million passengers. **Small airports** cover airports with less than 1 million passengers.

1.
EUROPEAN
AIR CONNECTIVITY
— *OVERVIEW*



1.1 AIR CONNECTIVITY RECOVERY INCOMPLETE | NON-EU+ MARKET & INDIRECT AIR CONNECTIVITY UNDERPERFORMING

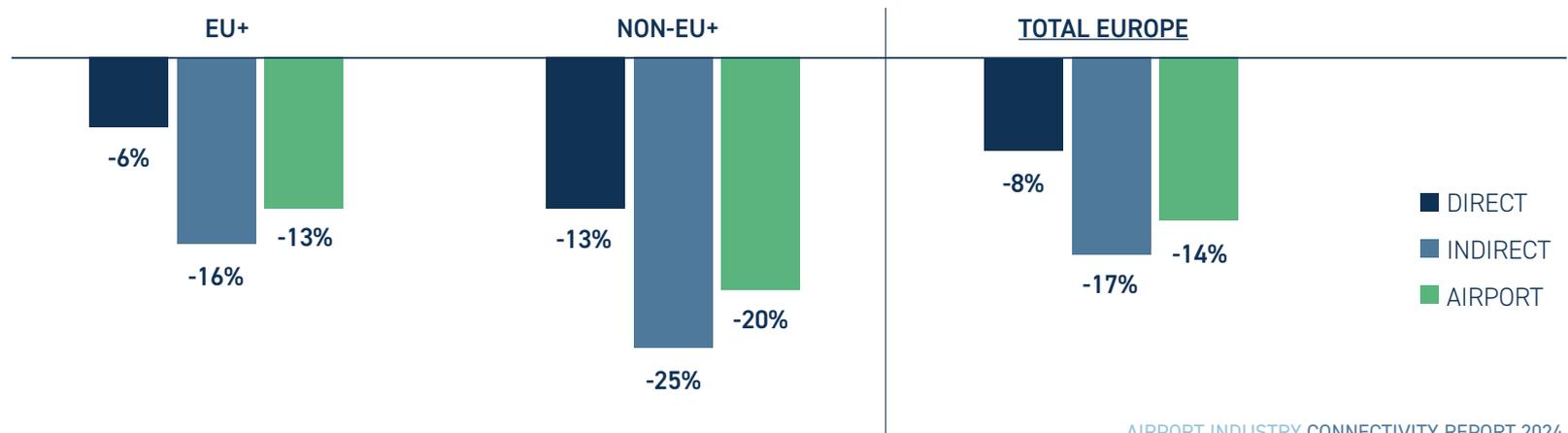
More than 4 years since the onset of the COVID-19 pandemic **total air connectivity** (direct + indirect connectivity) **remains -14% below pre-pandemic (2019) levels**. While this is an improvement over last year's performance (2023 at -16%), air connectivity keeps underperforming passenger volumes — which in Q1 2024 stood at just -1.3% below pre-pandemic.

The **non-EU+ market is underperforming (-20%)** compared to the **EU+ market (-13%)**, mainly due to the impact of geopolitics, in particular:

- The war in Ukraine: Ukrainian airports have lost all air connectivity, whilst those in **Russia (-43%)** and **Belarus (-87%)** keep reporting dramatic drops in their *total air connectivity*.
- The conflict in Gaza: **Israel (-42%)** suffered major losses in *total air connectivity*.

The **continued performance gap between direct connectivity (-8%) and indirect connectivity (-17%)** reflects the evolving structure of the European aviation market — in particular the expansion of Ultra-Low Cost Carriers (LCCs) during the recovery from the COVID-19 pandemic and the relative retrenchment of Full Service Carriers (FSCs).

Chart 1: **DIRECT, INDIRECT & AIRPORT CONNECTIVITY (EU+, NON-EU+ AND ALL EUROPEAN AIRPORTS – JUNE 2024 VS. JUNE 2019)**



1.2 SIGNIFICANT PERFORMANCE GAPS AMONGST NATIONAL MARKETS

The structural changes in the aviation market — in particular the prominence of leisure & Visiting Friends & Relatives (VFR) demand and the above-mentioned expansion of Ultra-LCCs — as well as geopolitics are shaping the performance of individual national markets:

- Within the **EU+ market**, only 3 countries have fully recovered and exceeded their pre-pandemic (2019) total air connectivity levels: **Greece (+22%), Iceland (+7%)** and **Portugal (+4%)**.

At the other end of the spectrum, **Finland (-37%), Sweden (-31%), Slovenia (-29%)** along with the **Czech Republic** and **Austria (both at -28%)** remain the farthest from a full recovery.

Amongst the largest EU+ market, the best performance came from heavily tourism-reliant **Spain (-2%)** followed by the **UK (-12%), France (-15%)** and **Germany (-24%)**.

- In the non-EU+ market, the best performances were reported by **Albania (+55%), Uzbekistan (+29%)** and **Türkiye (+24%)**.

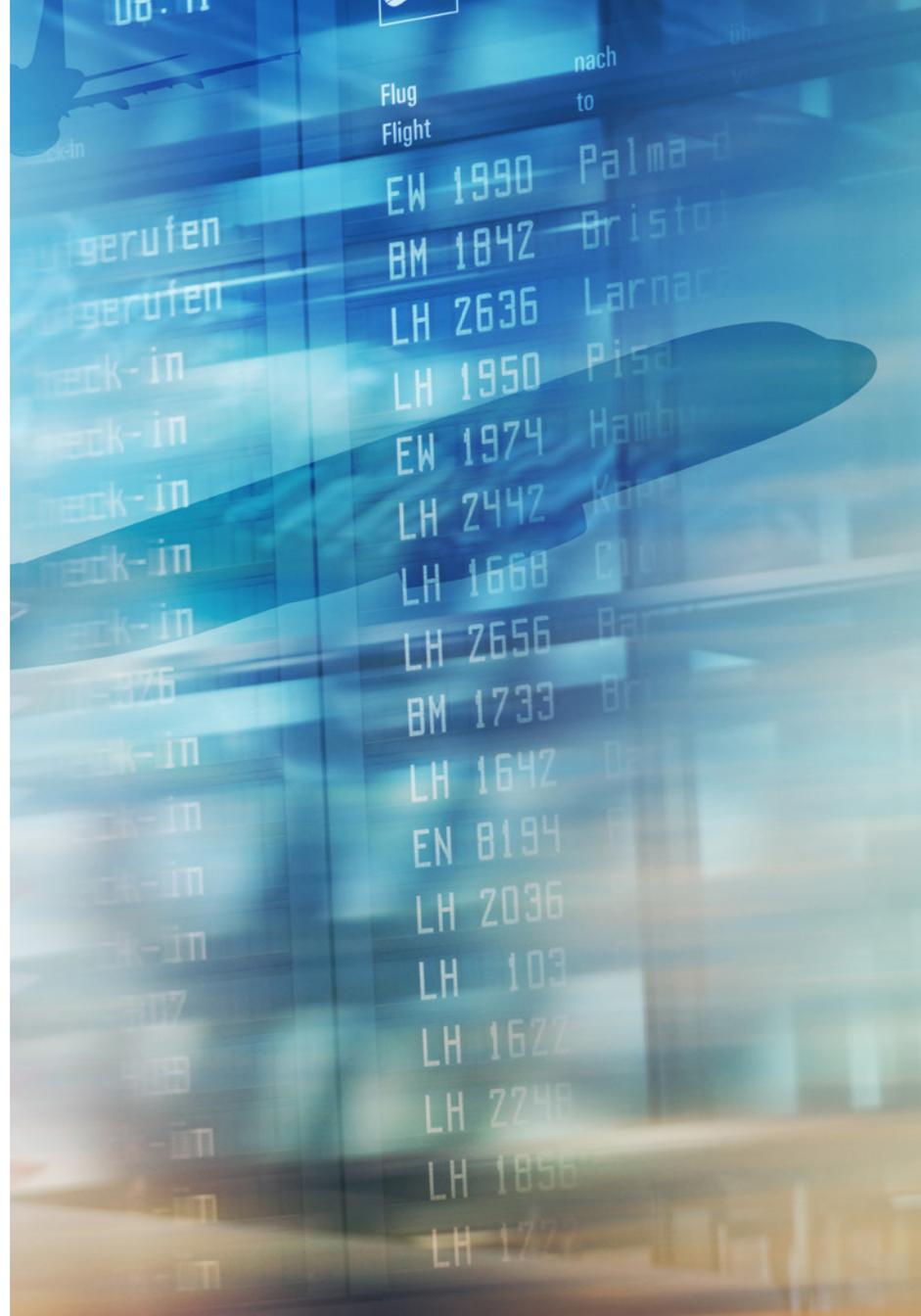


Chart 2: **RANKING OF EUROPEAN COUNTRIES BASED ON TOTAL AIR CONNECTIVITY CHANGE**
(2024 VS. JUNE 2019 & JUNE 2023)

EU+

	Country	2024 vs. 2019	2024 vs. 2023		Country	2024 vs. 2019	2024 vs. 2023
1	Greece	+22%	+16%	17	Luxembourg	-16%	+1%
2	Iceland	+7%	+27%	18	Switzerland	-16%	+10%
3	Portugal	+4%	+7%	19	Netherlands	-17%	+3%
4	Spain	-2%	+10%	20	Belgium	-19%	+6%
5	Estonia	-3%	+37%	21	Slovakia	-22%	+18%
6	Cyprus	-4%	+4%	22	Bulgaria	-23%	+19%
7	Ireland	-4%	+6%	23	Hungary	-23%	+7%
8	Croatia	-7%	+14%	24	Malta	-23%	+24%
9	Italy	-8%	+16%	25	Germany	-24%	+6%
10	Poland	-8%	+15%	26	Latvia	-24%	+5%
11	Lithuania	-11%	+22%	27	Austria	-28%	+4%
12	Romania	-12%	+3%	28	Czech Republic	-28%	+27%
13	United Kingdom	-12%	+8%	29	Slovenia	-29%	+6%
14	Denmark	-13%	+9%	30	Sweden	-31%	-2%
15	Norway	-13%	-4%	31	Finland	-37%	+6%
16	France	-15%	+7%	32	Monaco	-44%	—

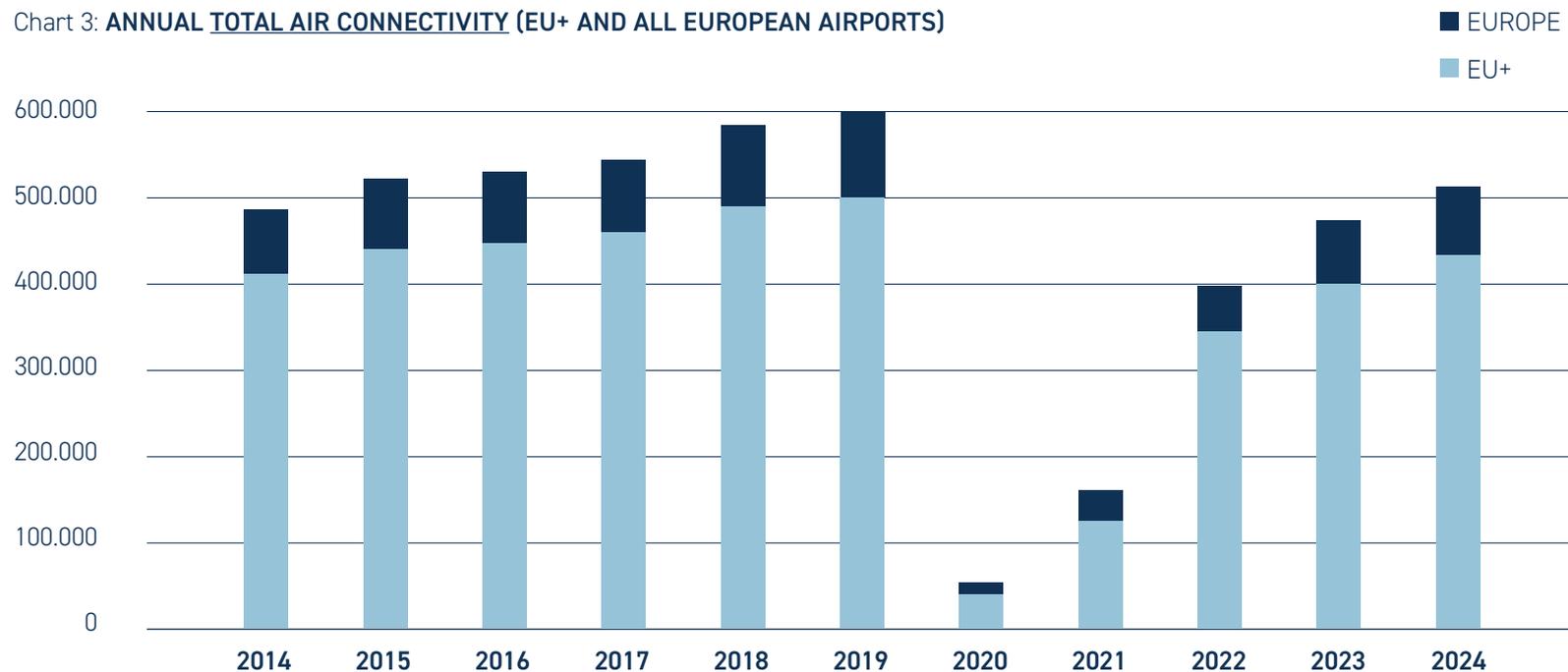
NON-EU+

	Country	2024 vs. 2019	2024 vs. 2023
1	Albania	+55%	+44%
2	Uzbekistan	+29%	+42%
3	Türkiye	+24%	+4%
4	Azerbaijan	+18%	+47%
5	Bosnia and Herzegovina	+18%	+16%
6	Armenia	+13%	+4%
7	Greenland	+2%	-22%
8	Georgia	+1%	+18%
9	North Macedonia	+1%	+1%
10	Serbia	-1%	+6%
11	Montenegro	-14%	+45%
12	Kosovo	-17%	+10%
13	Kazakhstan	-21%	-1%
14	Moldova	-21%	+46%
15	Israel	-42%	-40%
16	Russian Federation	-43%	+26%
17	Belarus	-87%	-30%
18	Ukraine	-100%	-100%

1.3 LOOKING BACK – THE TEN YEAR PERSPECTIVE

The evolution of air connectivity over the past decade shows the dramatic impact of the COVID-19 pandemic as well as how structural aviation market changes and geopolitics are redefining air connectivity.

Chart 3: **ANNUAL TOTAL AIR CONNECTIVITY (EU+ AND ALL EUROPEAN AIRPORTS)**



2. DIRECT CONNECTIVITY

IST | AMS | LHR on top

Best performance amongst
TOP 20 vs. 2019: **ATH | IST | PMI**

Best performance amongst
TOP 20 vs. 2023: **SVO | FCO | MUC**

1st to Europe: **AMS**

1st to North America: **LHR**

1st to Latin America: **MAD**

1st to Asia-Pacific: **ALA**

1st to Middle East: **IST**

1st to Africa: **CDG**

2.1 TOP 20 DIRECT CONNECTIVITY RANKING

Istanbul (+9% since 2019) remains on top of the European ranking for *direct connectivity*, having moved up from the 5th position pre-pandemic (2019). The Turkish hub enjoys the best *direct connectivity* to the Middle East and second best to Asia-Pacific, with the latter having increased by +23% compared to last year.

Amsterdam-Schiphol (-6%) comes second, largely thanks to its excellent connectivity to Europe – although compared to last year, it has not seen its *direct connectivity* to Asia-Pacific (-1%) making gains and has also experienced a significant decrease in its *direct connectivity* to Latin America (-28%).

London-Heathrow (-2%) is now almost at the same level as Amsterdam-Schiphol and has nearly fully recovered its *direct connectivity* levels compared to pre-pandemic (2019). It remains unrivalled for its *direct connectivity* to North America, which is nearly twice that of its next competitor (Paris-CDG).

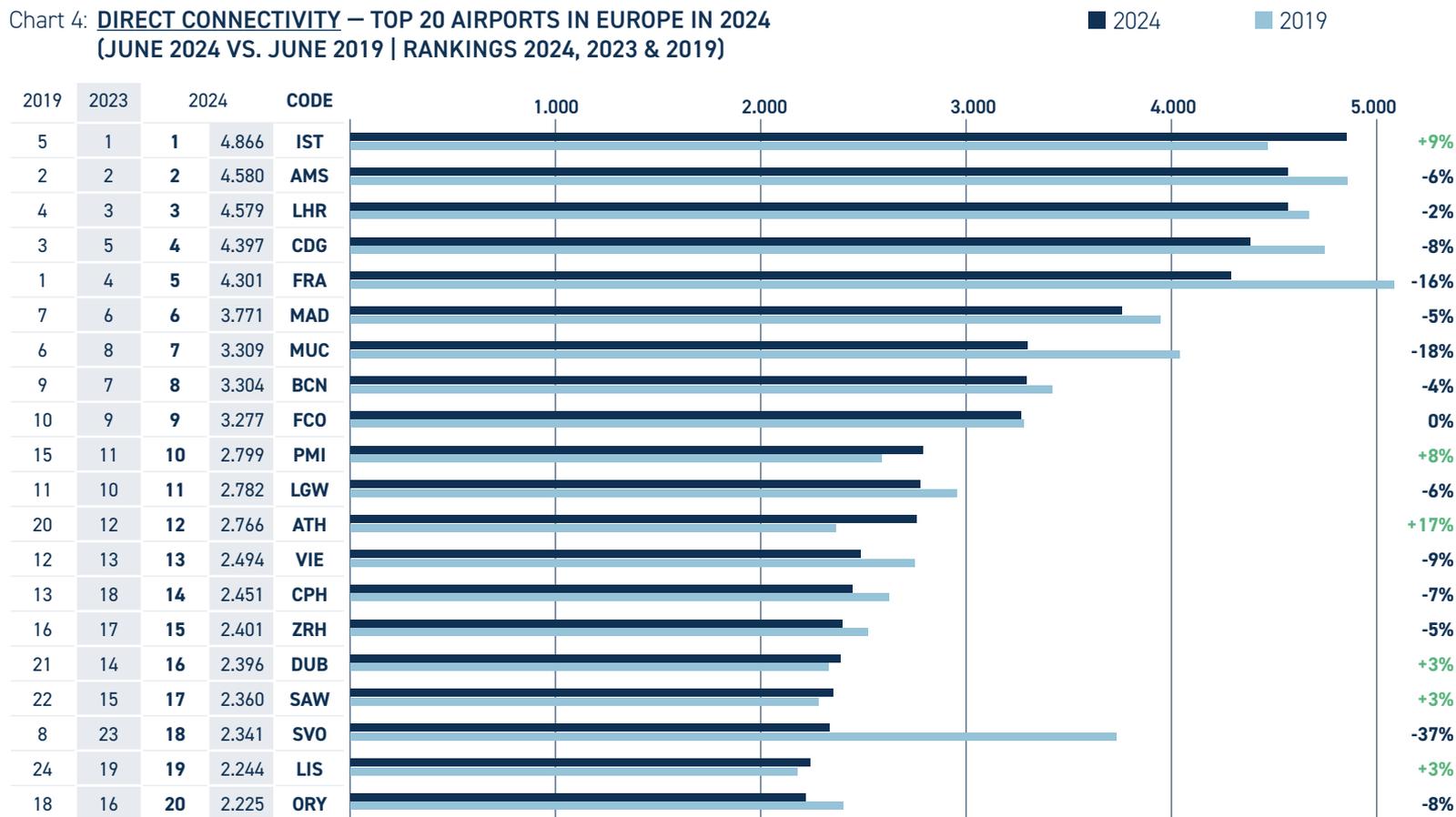
Paris-CDG (-8%) has moved up from the 5th to the 4th position this year. Compared to last year, the French hub has made significant gains in its *direct connectivity* to Asia-Pacific (+19%) and North America (+11%) – and is now the second best connected airport to both North America and Latin America, in addition to being the best connected airport to Africa.

Frankfurt (-16%) still remains some way off from recovering its *direct connectivity*. The German hub used to be in the top position before the pandemic (2019) and has further moved down from the 4th to the 5th position compared to last year.

Along with Istanbul, only the following airports have recovered and/or exceeded their pre-pandemic (2019) *direct connectivity*: **Athens (+17%), Palma de Mallorca (+8%), Dublin (+3%), Istanbul-Sabiha Gökçen (+3%), Lisbon (+3%) and Rome-Fiumicino (0%)**. This clearly reflects the evolving structure of the European aviation market – with both traffic and connectivity largely driven by leisure & VFR demand as well as the expansion of Low Cost Carriers (LCCs) and Turkish air carriers.

Compared to 2019, the impact of geopolitics is particularly evident for **Moscow-Sheremetyevo (-37%)**, as the Russian hub has lost a significant share of its *direct connectivity* and thus went from the 8th to the 18th position.

Chart 4: **DIRECT CONNECTIVITY – TOP 20 AIRPORTS IN EUROPE IN 2024**
 (JUNE 2024 VS. JUNE 2019 | RANKINGS 2024, 2023 & 2019)



When compared to last year, **Moscow-Sheremetyevo (+27%)** has experienced the highest increase in *direct connectivity* – reflecting traffic shifting and, to some extent, bouncing back away from the EU and North America. **Rome-Fiumicino (+20%)** also saw an impressive jump in its *direct connectivity* – thanks notably to a bumper increase

in its *direct connectivity* to North America (+41%), resulting in the Italian hub joining the top 5 ranking of European airports with the best connectivity to that region. Along with Rome-Fiumicino, **Munich (+14%)**, **Athens (+12%)** and **Copenhagen (+10%)** also posted significant gains in their *direct connectivity*.

Chart 5: **DIRECT CONNECTIVITY – TOP 20 AIRPORTS IN EUROPE IN 2024**
(JUNE 2024 VS. JUNE 2023)

■ 2024 ■ 2023

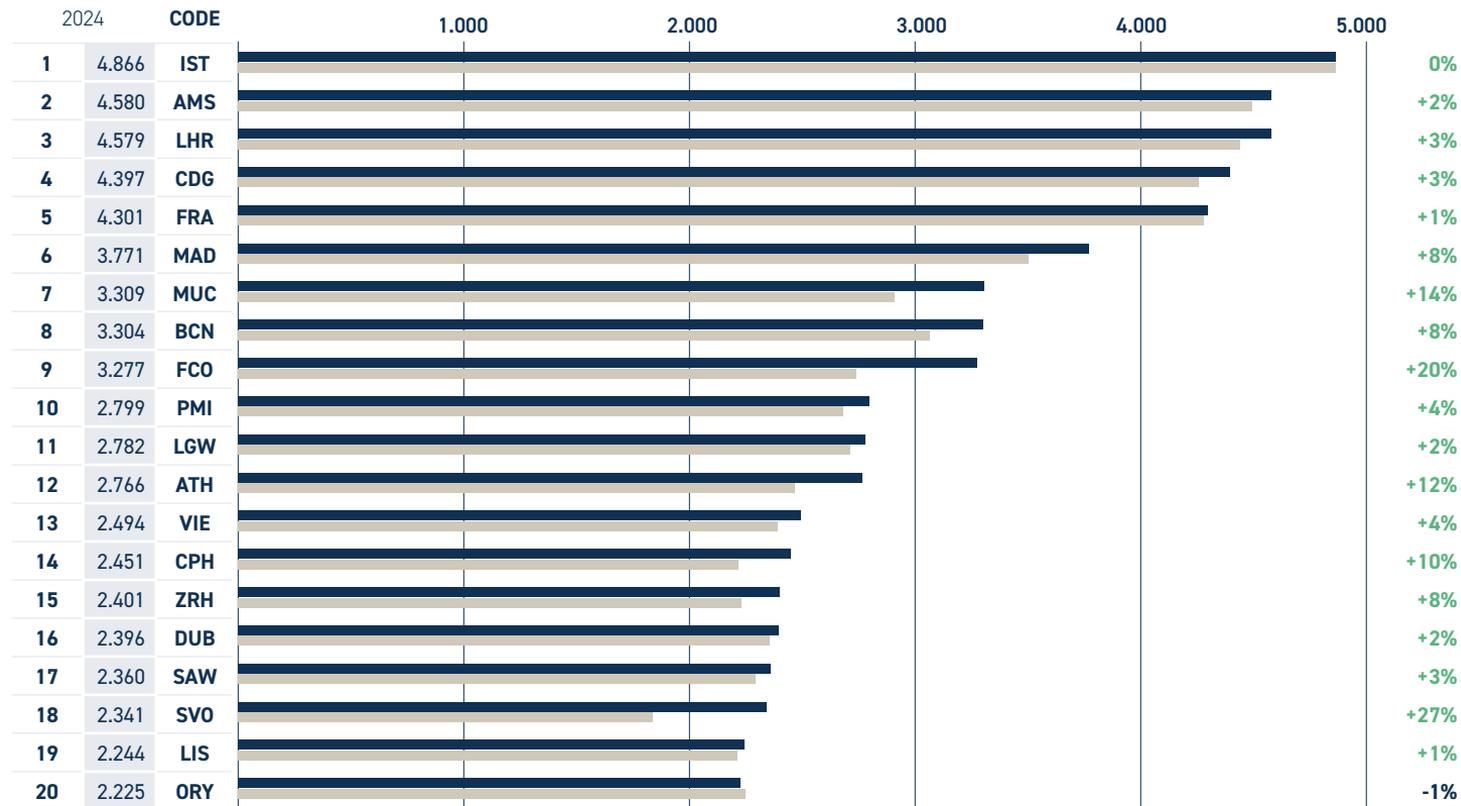


Chart 6.1: **TOP 5 AIRPORTS BY DIRECT CONNECTIVITY TO AFRICA IN 2024 & % CHANGE VS 2023**



Chart 6.4: **TOP 5 AIRPORTS BY DIRECT CONNECTIVITY TO LATIN AMERICA & CARIBBEAN IN 2024 & % CHANGE VS 2023**

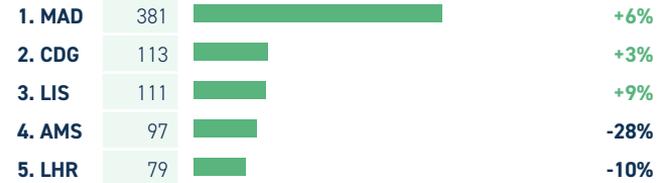


Chart 6.2: **TOP 5 AIRPORTS BY DIRECT CONNECTIVITY TO ASIA-PACIFIC IN 2024 & % CHANGE VS 2023**

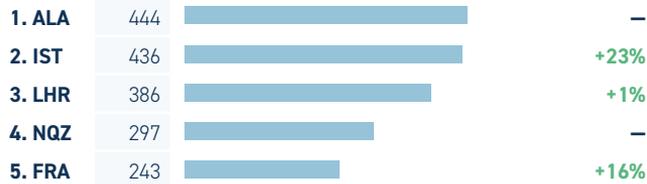


Chart 6.5: **TOP 5 AIRPORTS BY DIRECT CONNECTIVITY TO MIDDLE EAST IN 2024 & % CHANGE VS 2023**

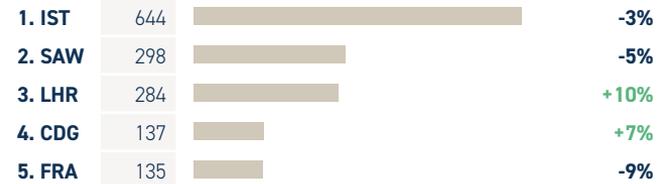
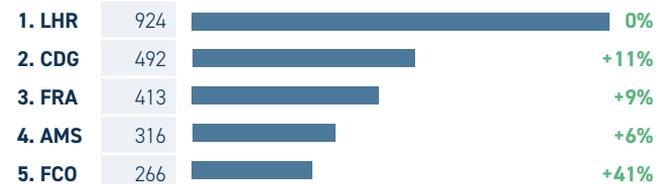


Chart 6.3: **TOP 5 AIRPORTS BY DIRECT CONNECTIVITY TO EUROPE IN 2024 & % CHANGE VS 2023**



Chart 6.6: **TOP 5 AIRPORTS BY DIRECT CONNECTIVITY TO NORTH AMERICA IN 2024 & % CHANGE VS 2023**



2.2 BEST PERFORMANCES AMONGST LARGE, MEDIUM & SMALL AIRPORTS

When compared to pre-pandemic (2019) levels, the following airports posted the highest increases in *direct connectivity*:

- **Large airports** (25 to 10 million passengers per annum): **Bergamo (+38%), Sochi (+35%), Tenerife-South (+26%), Málaga (+15%)** and **Naples (+15%)**.
- **Medium airports** (10 to 1 million passengers per annum): **Tirana (+186%), Trapani (+143%), Zadar (+108%), Samarkand (+103%)** and **Beauvais (+78%)**.
- **Small airports** (Less than 1 million passengers per annum): **Pardubice (+350%), Karlovy Vary (+300%), Perugia (+240%)** and **Castellón (+178%)**.

When compared to 2023 levels, the following airports posted the highest increases in *direct connectivity*:

- **Large airports** (25 to 10 million passengers per annum): **Prague (+29%), Nice (+15%), Alicante (+14%), Bergamo (+12%)** and **Málaga (+12%)**.
- **Medium airports** (10 to 1 million passengers per annum): **Samarkand (+79%), Tirana (+58%), Sarajevo (+54%), Poznań (+33%)** and **Tallinn (+32%)**.
- **Small airports** (Less than 1 million passengers per annum): **Pardubice (+1250%), Bacau (+467%), Ceuta (+363%), Qarshi (+250%)** and **Brno (+106%)**.

Despite the impressive gains from some smaller airports, this segment of the airport industry has underperformed when it comes to recovering its *direct, indirect* and *total connectivity*. This reflects the fact airlines have generally favoured larger markets – with LCCs in particular developing medium sized markets where significant route development opportunities have arisen.

Chart 7: **DIRECT, INDIRECT & AIRPORT CONNECTIVITY**
(EUROPEAN AIRPORTS BY TRAFFIC CATEGORIES – JUNE 2024 VS. JUNE 2019)

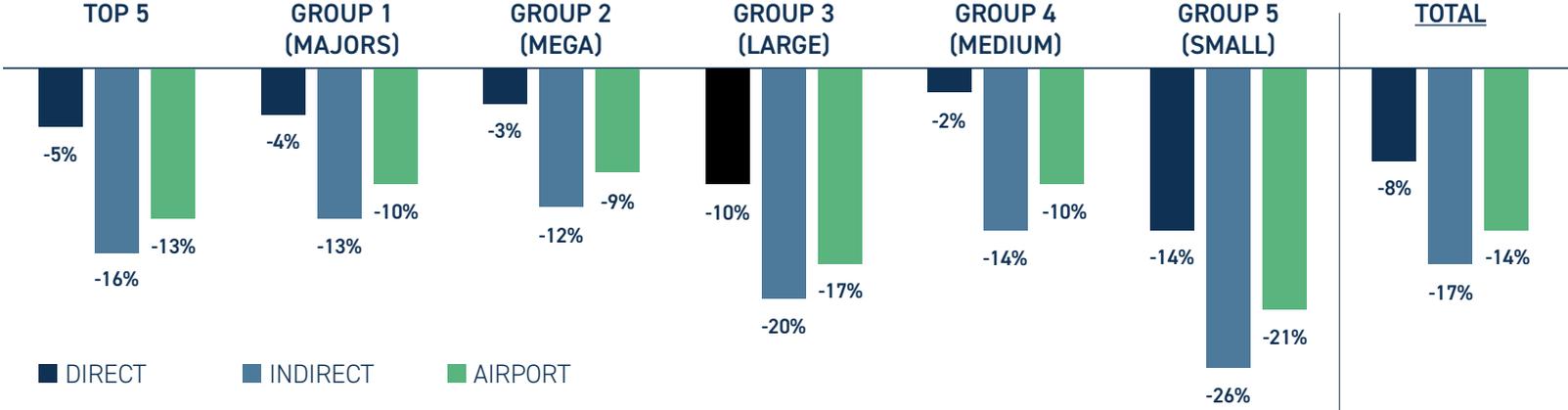
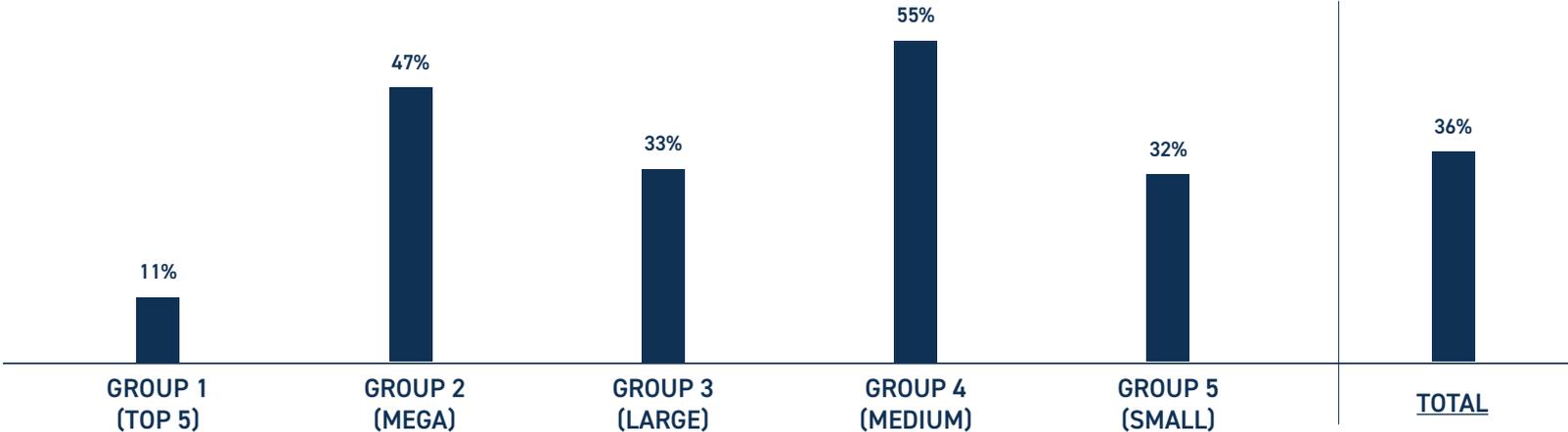


Chart 8: **% OF EUROPEAN AIRPORTS WITH FULLY RECOVERED DIRECT CONNECTIVITY COMPARED TO 2019 (JUNE 2024)**



2.3 REGIONAL VARIATIONS IN DIRECT CONNECTIVITY RECOVERY REMAIN

While **intra-European direct connectivity** has made further gains compared to last year, it still remains **-9%** below pre-pandemic (2019) levels, in part due to the impact of geopolitics with the war between Ukraine and Russia and the conflict in Gaza.

Direct connectivity to **Asia-Pacific (-8%)** remains below pre-pandemic (2019) levels, along with *direct connectivity* to **Latin America (-9%)**.

Conversely, *direct connectivity* to **Africa (+13%)**, the **Middle East (+11%)** and **North America (+8%)** all exceed pre-pandemic (2019) levels.

Chart 9: **DIRECT CONNECTIVITY FROM EUROPEAN AIRPORTS – INTRA-EUROPE**



Chart 10: **DIRECT CONNECTIVITY FROM EUROPEAN AIRPORTS BY WORLD REGION**

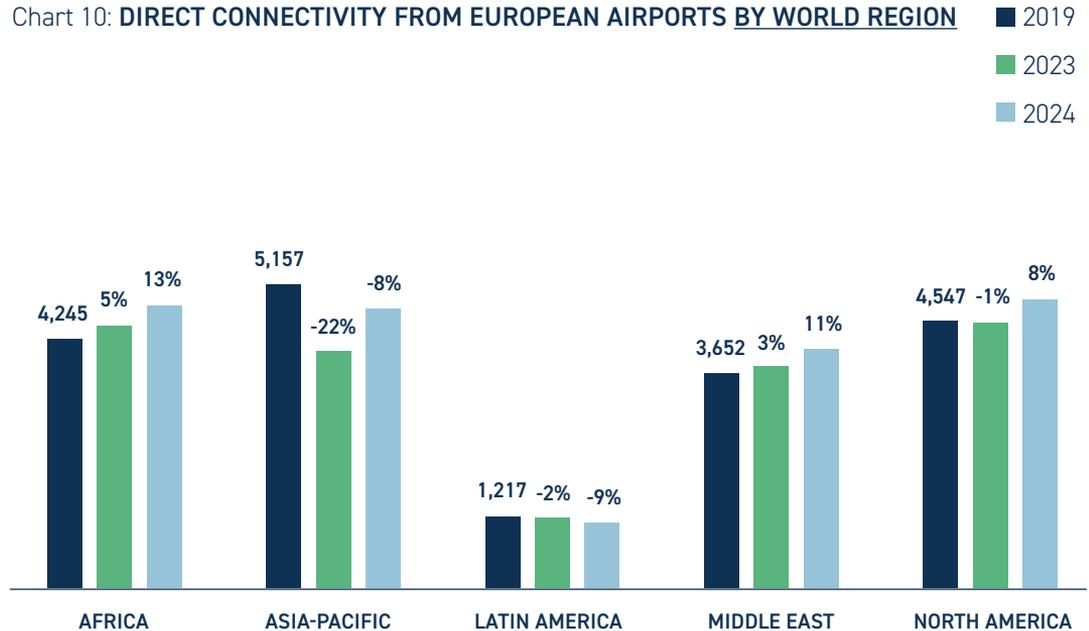


Chart 11: **DIRECT CONNECTIVITY FROM EUROPEAN AIRPORTS BY WORLD REGIONS IN 2019**

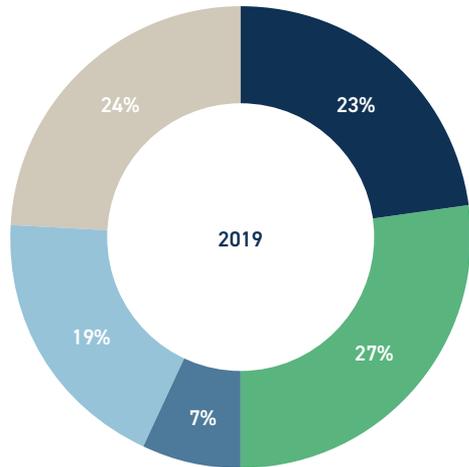
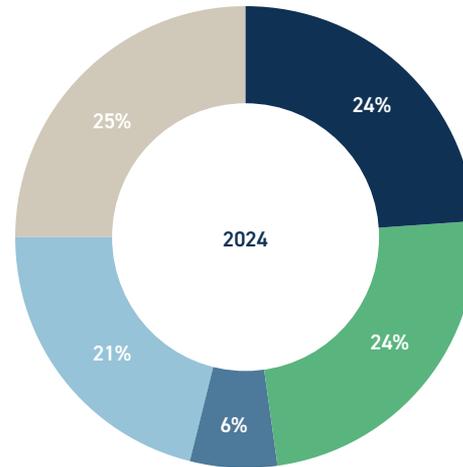


Chart 12: **DIRECT CONNECTIVITY FROM EUROPEAN AIRPORTS BY WORLD REGIONS IN 2024**



- AFRICA
- ASIA-PACIFIC
- LATIN AMERICA
- MIDDLE EAST
- NORTH AMERICA

3. HUB CONNECTIVITY



Systemic hub shrinkage and weaker recovery in *hub connectivity* reflecting structural changes in aviation market and connectivity patterns

FRA | DFW | IST top the global *hub connectivity* ranking

Best *hub connectivity* performance amongst TOP 20 vs. 2019:

DOH | HND | IST

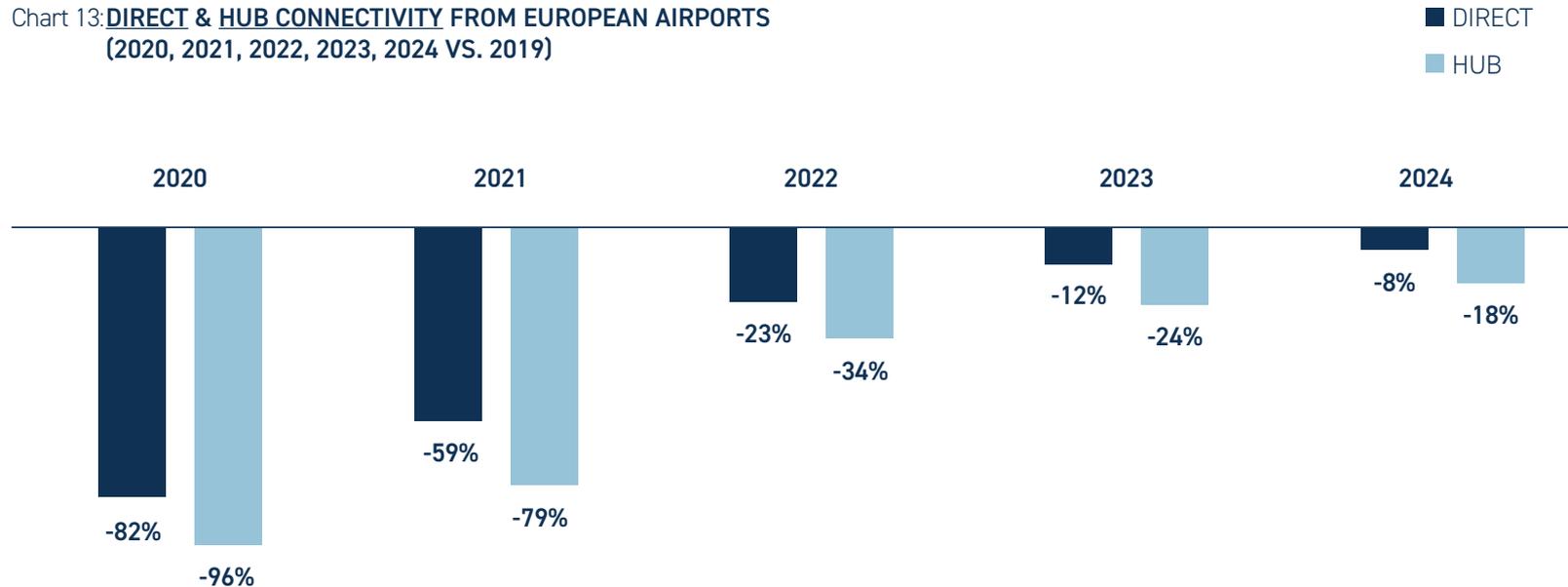
IST | LIS | ATH | SAW | DUB | KEF
the only European hubs having recovered/exceeded their pre-pandemic *hub connectivity* levels

3.1 STRUCTURALLY LOWER HUB CONNECTIVITY

Hub connectivity is where we see the full value of air transport networks. In simple terms, for an airport that has a wave of 10 flights leaving at 10.00 am, one additional flight arriving at 09.00 am increases its *hub connectivity* by 10, reflective of the onward connecting options for passengers arriving on that additional flight.

Hub connectivity remains **-18%** below its pre-pandemic (2019) level this year, and thus keeps significantly underperforming against *direct connectivity* (-8%). Although the gap has narrowed somewhat over the past 3 years, this has been a consistent pattern in the recovery since 2020 — reflecting structural changes in the aviation market and thus pointing to changed connectivity patterns in Europe.

Chart 13: **DIRECT & HUB CONNECTIVITY FROM EUROPEAN AIRPORTS (2020, 2021, 2022, 2023, 2024 VS. 2019)**



3.2 GLOBAL HUB CONNECTIVITY PERFORMANCE

As was the case last year, **8 European airports are amongst the top 20 global airports for hub connectivity** — along with 8 from North America, 2 from the Middle East and 2 from Asia-Pacific.

Frankfurt continues to be the **top airport globally for hub connectivity** — despite its hub connectivity remaining **-23%** below its pre-pandemic (2019) level. The airport has held this position every year since 2019 with the exception of 2021, when Dallas Fort Worth came on top.

Dallas Fort Worth (-4%) has replaced **Istanbul** in the second position this year, but the performance of the Turkish hub remains impressive with its *hub connectivity* having increased by **+37%** when compared to its pre-pandemic (2019) level.

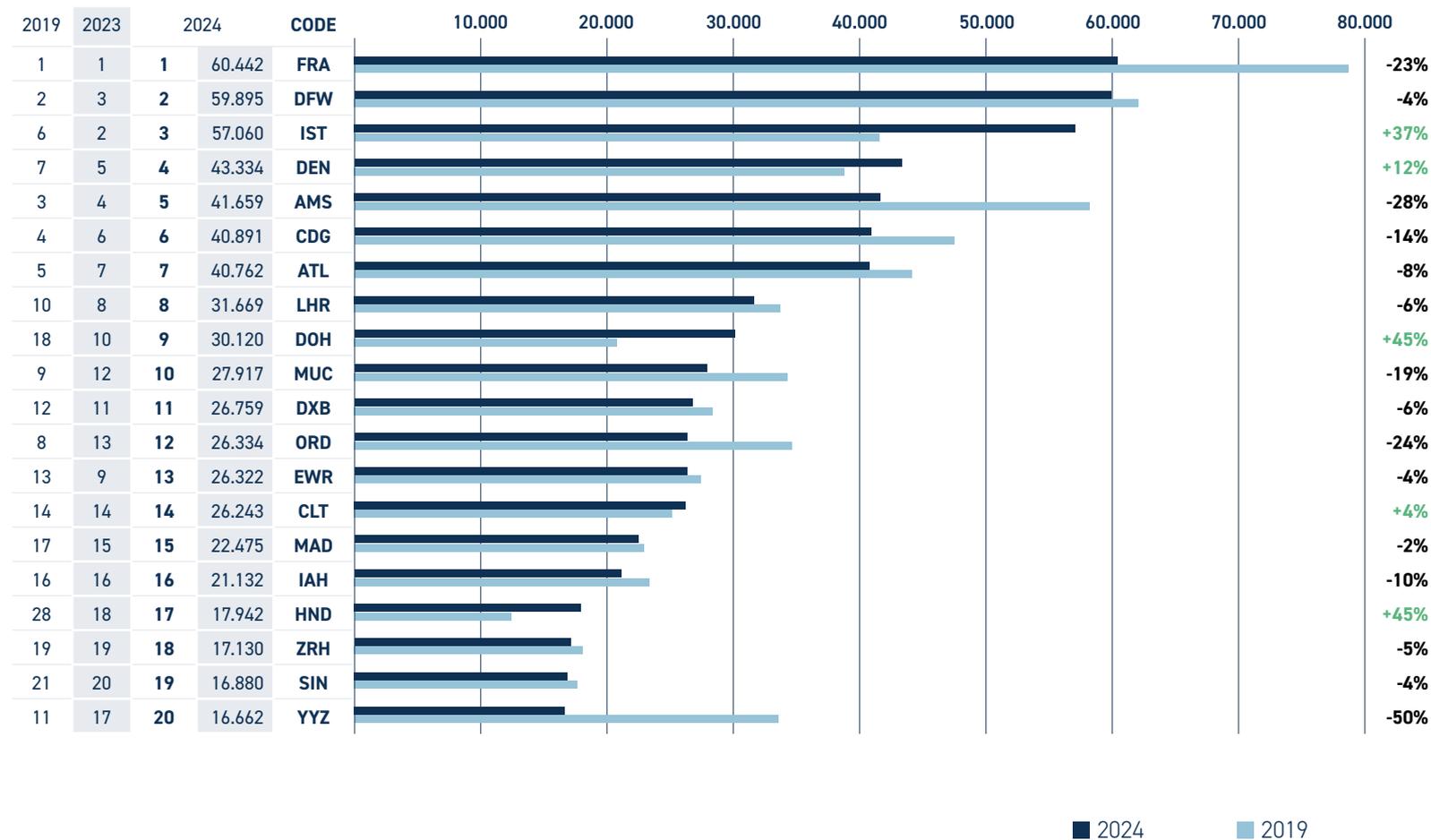
Amongst the other airports in the top 20 global *hub connectivity* ranking, worth noting are:

- The remarkable performances of **Doha (+45%)** and **Tokyo-Haneda (+45%)**.
- The significant decreases at **Toronto (-50%)**, **Amsterdam (-28%)** and **Chicago (-24%)**.

Looking at European airports specifically and leaving aside Istanbul (the only airport in the top 20 list having recovered and exceeded its pre-pandemic levels), **Madrid (-2%)** comes closest to a full recovery in *hub connectivity*, followed by **Zurich (-5%)** and **London-Heathrow (-6%)**.



Chart 14: HUB CONNECTIVITY – TOP 20 AIRPORTS GLOBALLY IN 2024 (JUNE 2024 VS. JUNE 2019 | RANKINGS 2024, 2023 & 2019)



3.3 EUROPEAN HUB CONNECTIVITY PERFORMANCE

An even closer look at European airports shows continued “**hub shrinkage**” and **significant performance variations** in terms of *hub connectivity*.

While the **Major Hubs** group (**-11%**) is closest to its pre-pandemic (2019) level, it has made modest gains (**+3%**) when compared to last year. This indicates that a full recovery in *hub connectivity* for the Major Hubs is still some way off.

Chart 15.1: HUB CONNECTIVITY – MAJOR HUBS | JUNE 2024 VS. 2019

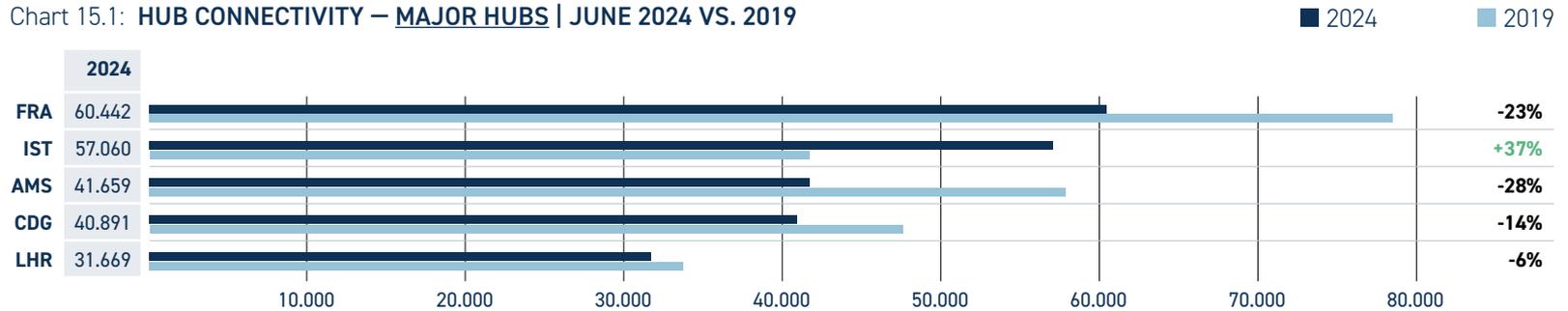


Chart 15.2: HUB CONNECTIVITY – MAJOR HUBS | JUNE 2024 VS. 2023

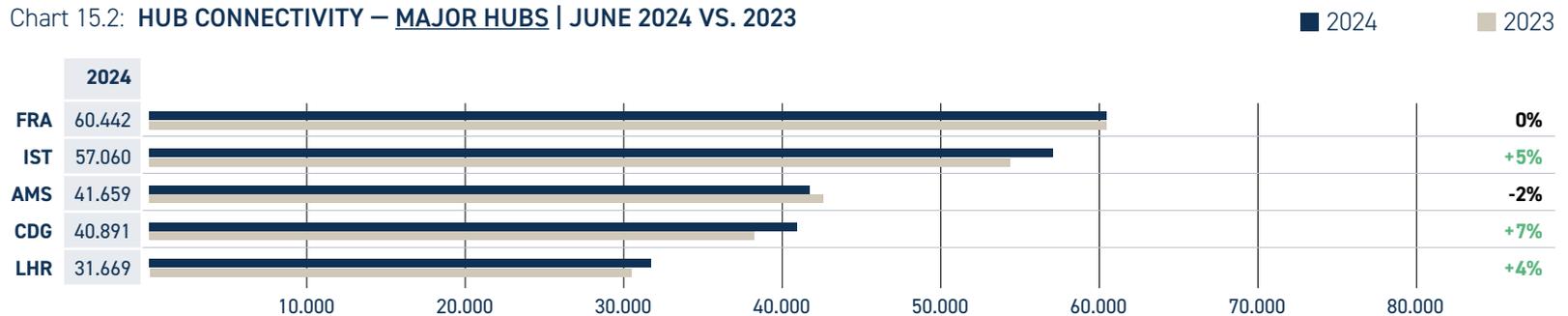


Chart 15.3: HUB CONNECTIVITY — SECONDARY HUBS | JUNE 2024 VS. 2019

■ 2024 ■ 2019

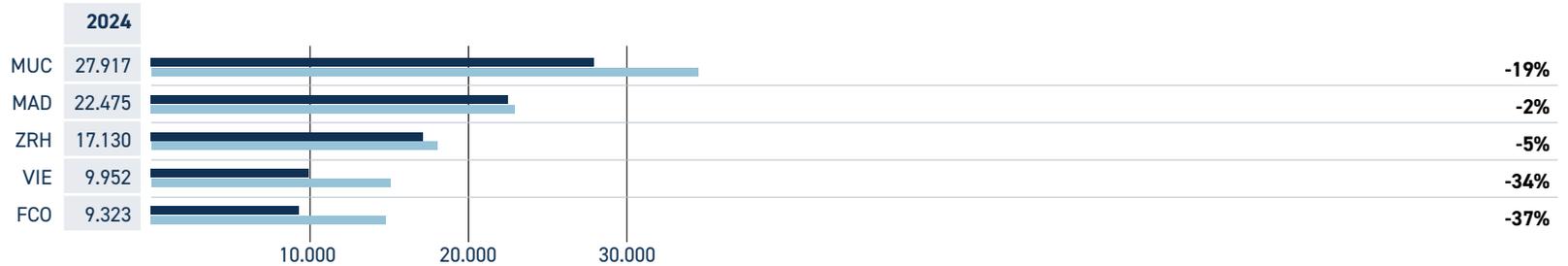


Chart 15.4: HUB CONNECTIVITY — SECONDARY HUBS | JUNE 2024 VS. 2023

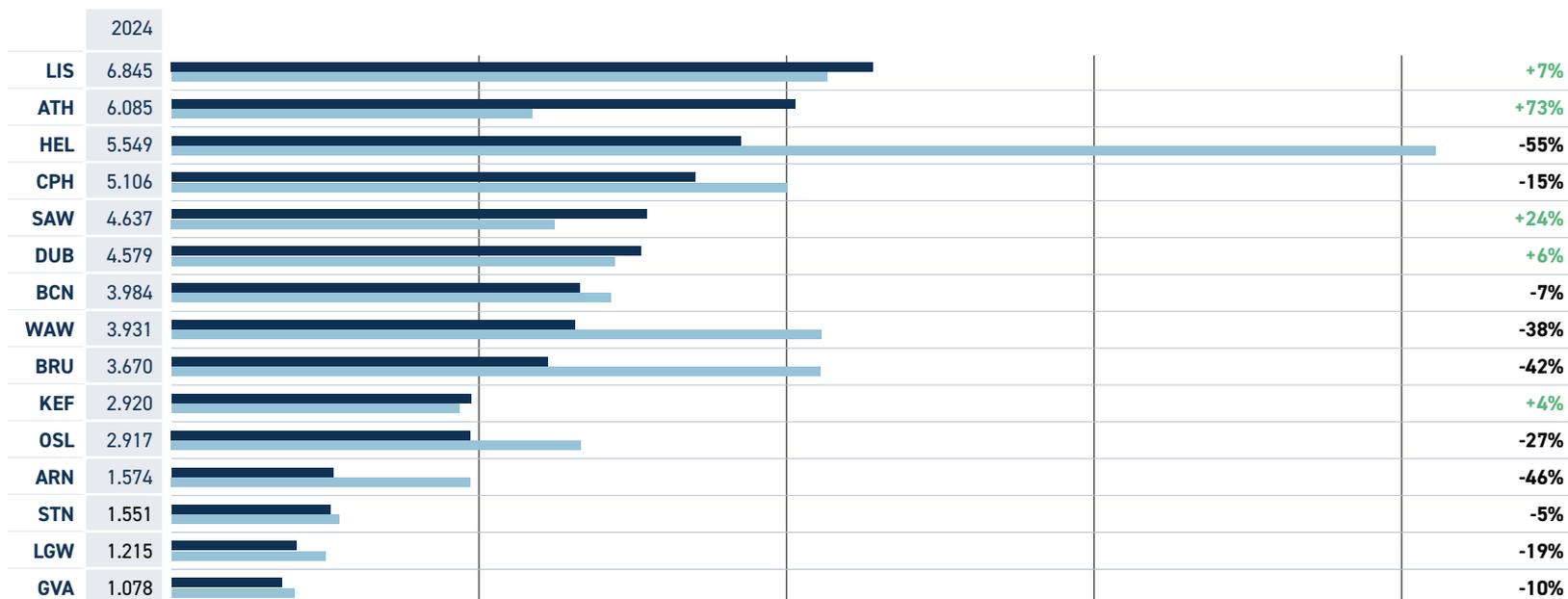
■ 2024 ■ 2023



Conversely, the **Secondary Hubs** group has seen *hub connectivity* increasing by **+21%** when compared to last year, but remains **-18%** below its pre-pandemic level. When compared to last year, **Rome-Fiumicino (+59%)**, **Munich (+23%)** and **Zurich (+18%)** have seen dynamic increases in their *hub connectivity*.

Chart 16: HUB CONNECTIVITY – NICHE AND SMALLER HUBS | JUNE 2024 VS. 2019

■ 2024 ■ 2019

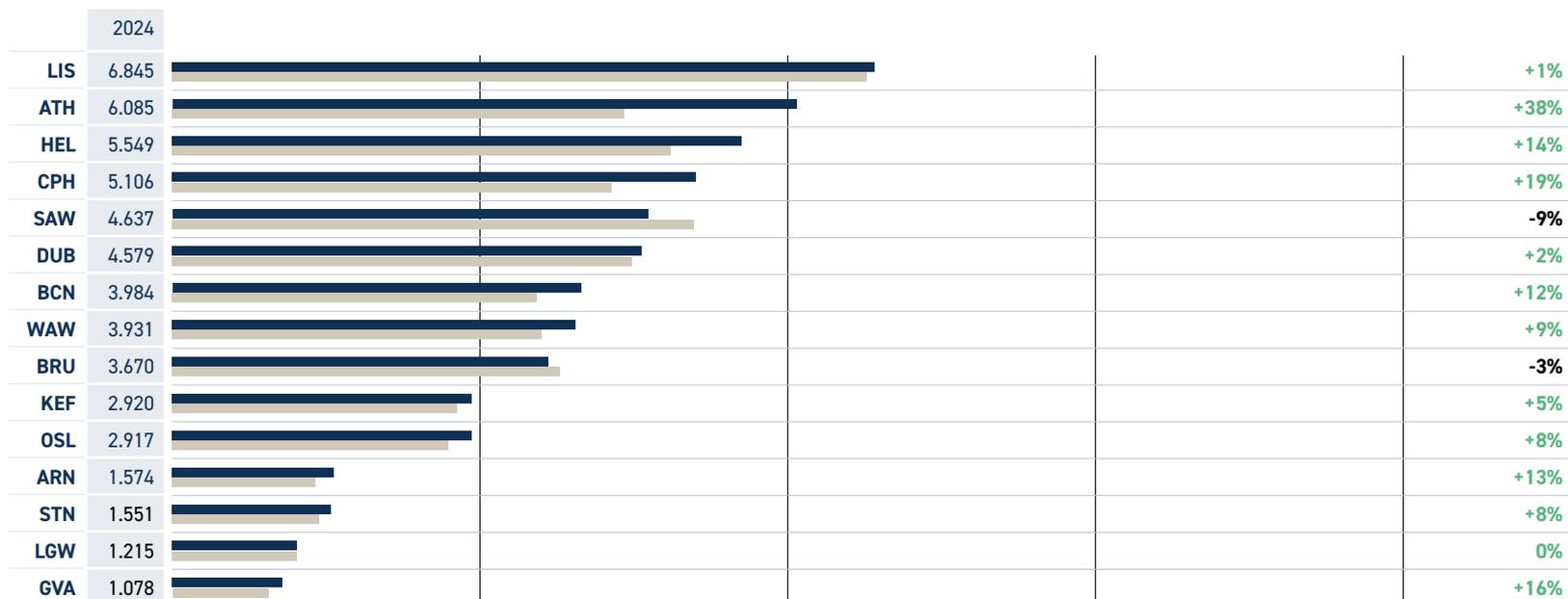


Looking at the **Niche & Smaller Hubs**² group, **Athens** stands out — with a **+38%** increase in hub connectivity compared to last year and **+73%** compared to pre-pandemic (2019).

Apart from Athens, only **Istanbul-Sabiha Gökçen (+24%)**, **Lisbon (+7%)**, **Dublin (+6%)** and **Keflavik (+4%)** have exceeded their pre-pandemic (2019) *hub connectivity* levels. This reflects both the penetration of Low Cost Carriers at these airports and the dynamism of the transatlantic market.

Chart 17: HUB CONNECTIVITY – NICHE AND SMALLER HUBS | JUNE 2024 VS. 2023

■ 2024 ■ 2023



Copenhagen (+19%), Geneva (+16%), Helsinki (+14%), Stockholm-Arlanda (+13%) and Barcelona (+12%) have seen a significant increase in their *hub connectivity* compared to last year – but they all remain significantly below pre-pandemic.

4. CONNECTIVITY & AIRLINE BUSINESS MODELS



LCCs' *direct connectivity* way above pre-pandemic levels — with the resulting increase focused on the wider middle of the airport market

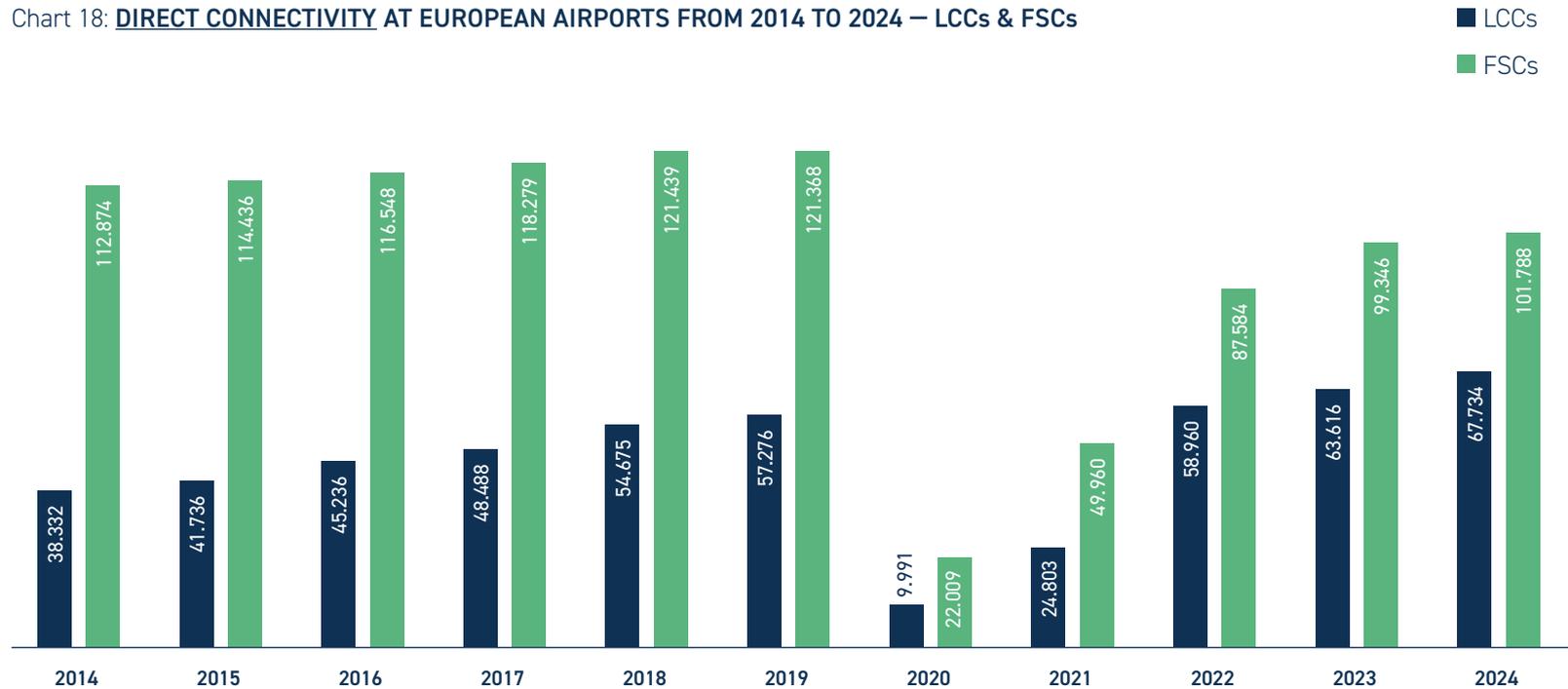
FSCs' *direct connectivity* still below pre-pandemic levels across all segments of the airport market — with the decrease being particularly sharp at small airports

FSCs account for 76% of *direct connectivity* at the top 5 European airports (up two percentage points compared to 2019)

Testimony of the changing structure of the European aviation market is the fact that the **direct connectivity** offered by **Low Cost Carriers (LCCs)** has expanded by **+18%** since 2019, while the **direct connectivity** offered by **Full Service Carriers (FSCs)** has shrunk by **-16%**.

The same structural dynamic is also evident when looking at the performance of LCCs (+6%) and FSCs (+2%) over the past year.

Chart 18: **DIRECT CONNECTIVITY AT EUROPEAN AIRPORTS FROM 2014 TO 2024 – LCCs & FSCs**



LCCs now account for **47% of intra-European direct connectivity** – up from 38% pre-pandemic (2019) and 31% back in 2014. LCCs have grown their **intra-European direct connectivity** by **+11%** since 2019, while FSCs have seen theirs decreasing by **-21%**.

Conversely, **FSCs'** share of **direct connectivity to North America** remains predominant at **92%** and these carriers now exceed their pre-pandemic level of *direct connectivity* to North America by **+9%**. LCCs are back to where they were pre-pandemic (2019) in terms of market share – and have increased their *direct connectivity* to the region by **+6%** since then.

When compared to pre-pandemic (2019) levels, **LCCs have been expanding their direct connectivity mostly at mega, large and medium airports** (airports welcoming between 40 and 1 million passengers per annum). Their *direct connectivity* levels have expanded more modestly (+5%) at *major* airports and have decreased at the top 5 airports (-8%), as well as at *small* airports (-6%).

Meanwhile, **FSCs have seen their direct connectivity decreasing across all segments of the airport industry** – with the decrease being the lowest at the top 5 airports (-5%) and the sharpest at small airports (-32%). This reflects their strategy to focus on their hub airports and larger markets delivering higher yields.

Chart 19: **SHARE & LEVEL OF LCCs AND FSCs DIRECT CONNECTIVITY ON INTRA-EUROPEAN AND NORTH AMERICAN ROUTES IN 2014, 2019 AND 2024**

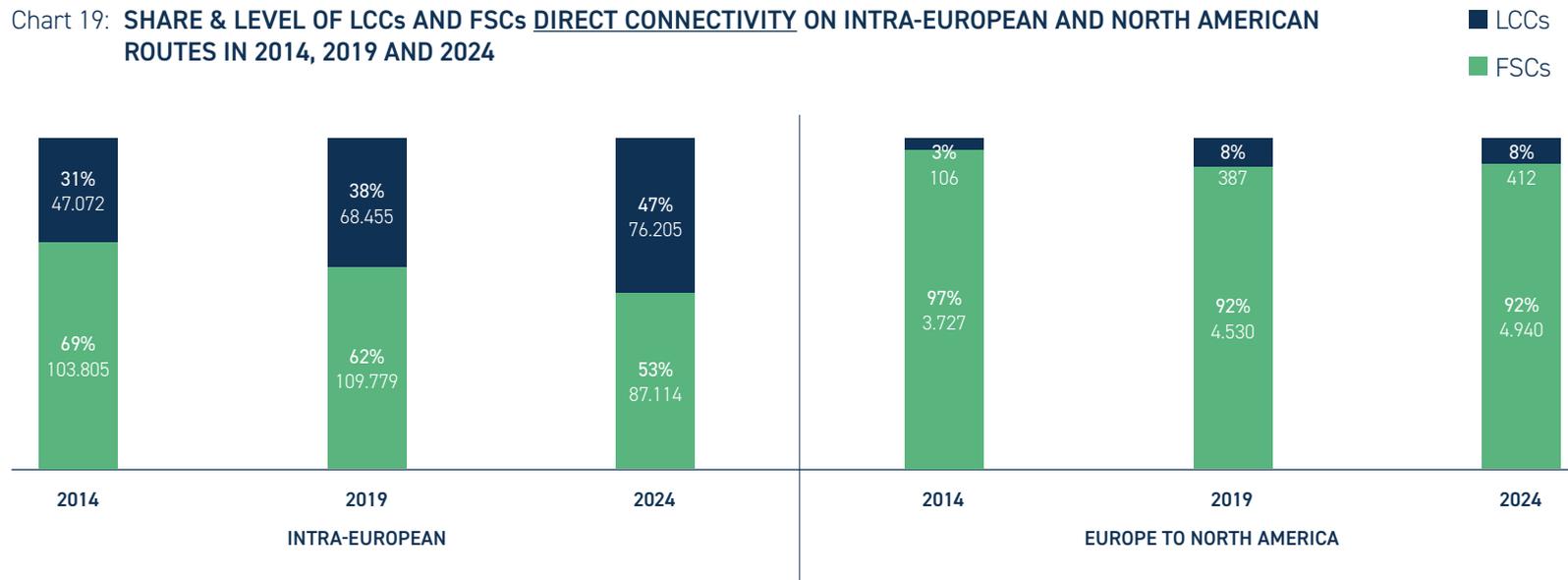
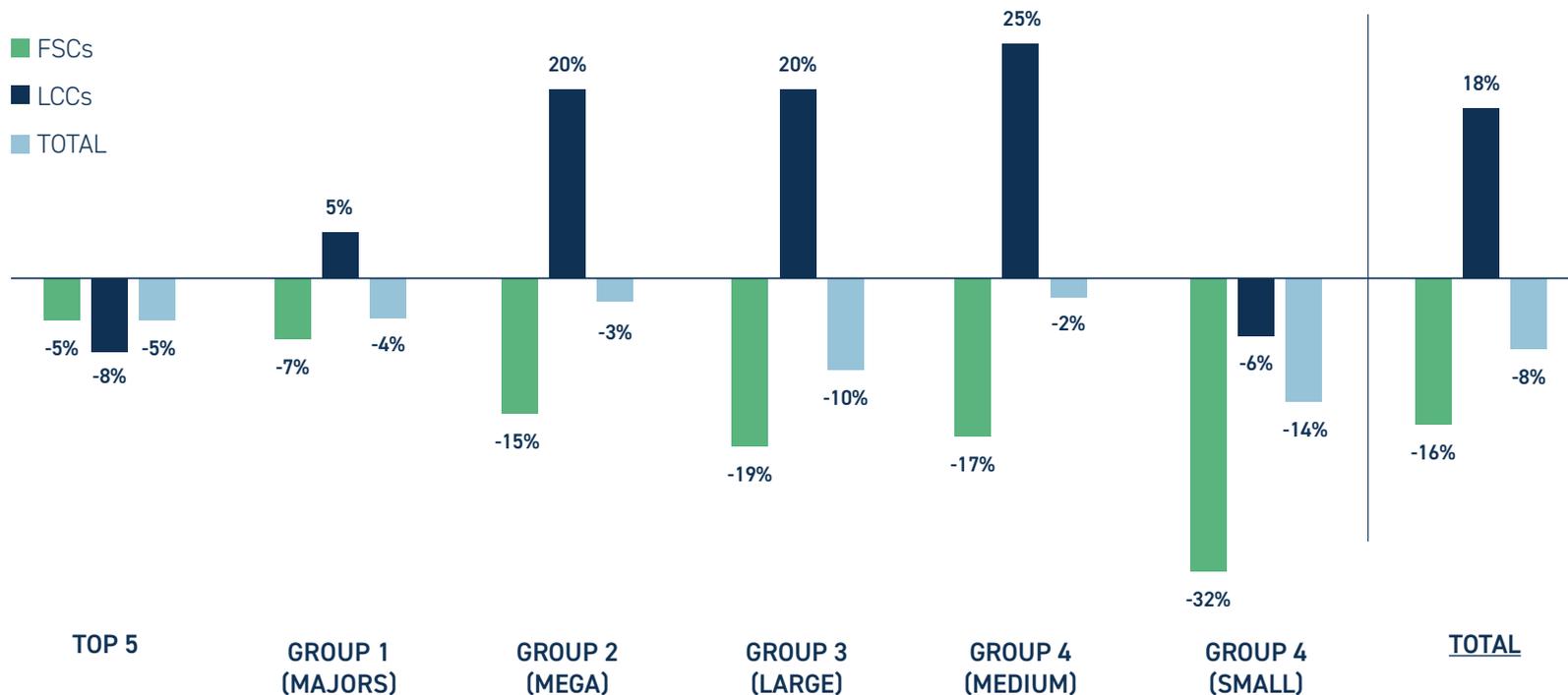


Chart 20: **DIRECT CONNECTIVITY AT EUROPEAN AIRPORTS – LCCs & FSCs LEVELS (JUNE 2024 VS. 2019)**



Overall, the share of *direct connectivity* offered by **hub based airline groups (66%)** at their main hubs¹ has increased when compared to pre-pandemic (2019), with:

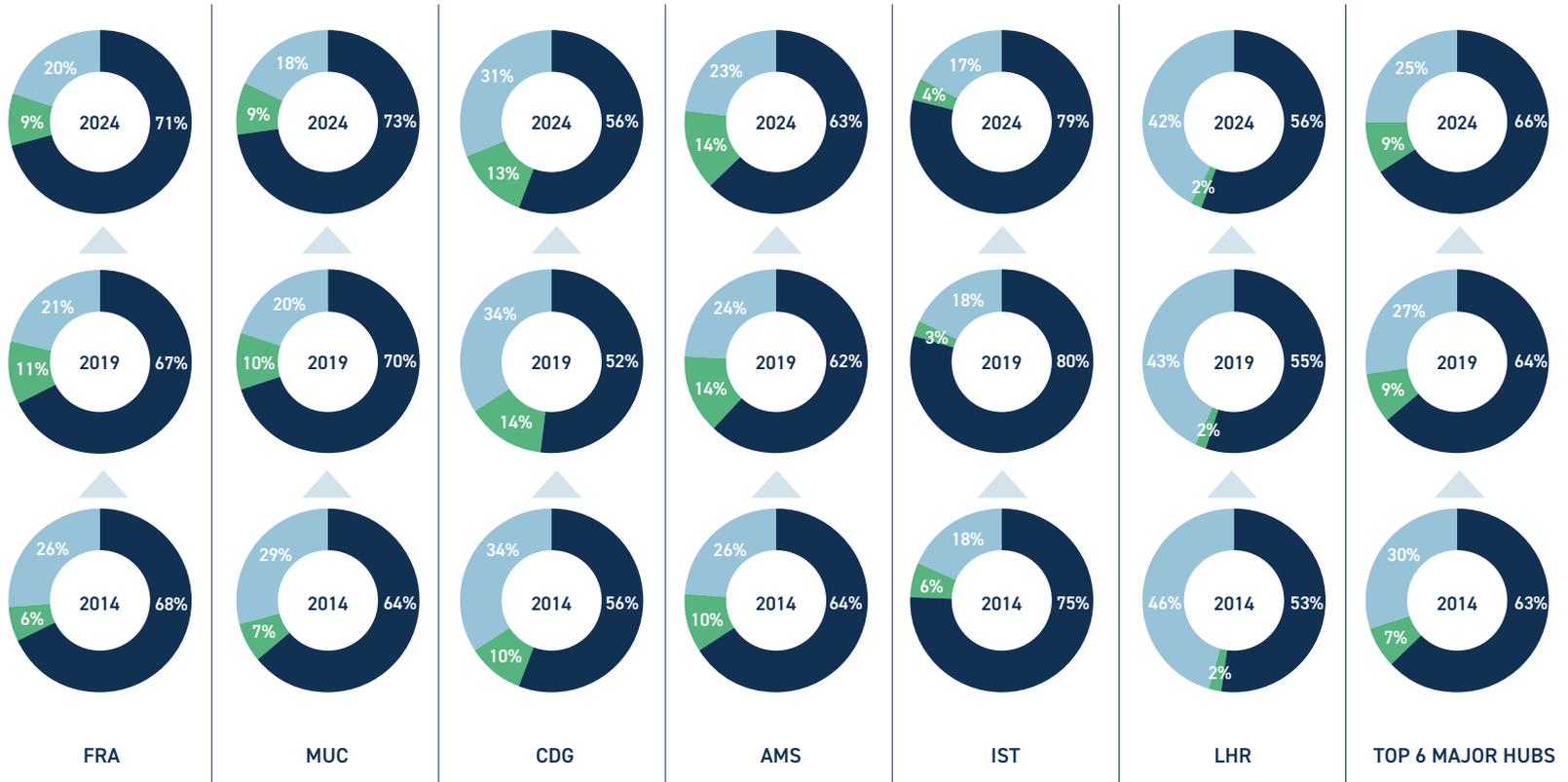
- The increase of the Lufthansa Group at **Frankfurt** (from 67% to 71%) and **Munich** (from 70% to 73%) being the highest – and at the expense of both independent LCCs and other FSCs.

- **Istanbul** being the only top 6 European hub where the share of *direct connectivity* of its hub based airline group has (slightly) decreased in favour of independent LCCs, although still remaining the highest (79%) amongst top European hubs.
- **Amsterdam-Schiphol** and **Paris-CDG** having the highest *direct connectivity* offered by independent LCCs – respectively 14% and 13%, while **London-Heathrow** has the lowest (2%).

¹ FRA, AMS, CDG, IST, MUC, LHR

Chart 21: MAJOR HUBS: DIRECT CONNECTIVITY MARKET SHARE BY AIRLINE TYPES
(HUB BASED AIRLINE GROUP, LCCs & OTHER FSCs)

- HUB BASED AIRLINE GROUP
- INDEPENDENT LCCs
- OTHER FSCs



5.

ADJUSTED CONNECTIVITY:
POWER CITY ACCESS INDEX



SEO Amsterdam Economics has prepared for ACI EUROPE a measure that combines airport connectivity volumes with service sector linkages and the importance of cities: the **Power City Access** (PCA) Index.

The SEO NetScan model, used in this report to create the Airport Connectivity Indexes (direct, indirect, total and hub connectivity), focuses on how many destinations and frequencies a traveller has access to from their airport of choice. It thus provides a directly relevant and understandable way of measuring connectivity.

However, the SEO NetScan model does not take any metrics regarding the destinations into account. Put simply, two different airports may have a connectivity score of 1000 as a result of the number of flights offered. But if the first airport services only a few destinations, which are small cities with less economic output, industry, culture or tourism value, while the second airport serves a variety of destinations with high economic output, deep value chains, and tourism attractions, then arguably the second city has a higher *quality* of connectivity.

Evaluating that real-term value of connectivity requires a complex analysis of the scope, time frame and factors beyond the airport network. However, using the features of the destination as a weighted mark of value can offer another dimension of connectivity that factors in the human benefit of such connections.

Connectivity with “Power Cities”

There are multiple methods to weight or adjust connectivity based on this idea of quality. Two measures that are well established in the scientific literature are GDP and population of the destination region. However, these measures have drawbacks in terms of interpretation and calculation. For example, large airports tend to be located in wealthier regions with higher domestic product output, so using GDP as a quality adjustment inflates the scores of larger airports simply

due to their size. This may not necessarily reflect a tangible benefit to the traveller in terms of destination alone.

The *Power City Access* index combines airport connectivity with its linkages to the service sector and the economic importance of the destinations. Based on the Globalisation and World Cities measure, a global city — also known as a *power city, world city, alpha city, or world centre* — is a city that serves as a primary node in global economic networks. While it is related to GDP and population, it also emphasises that the importance of a city as a relevant economic powerhouse is not captured by these measures alone. For example, a city in a developing country could be considered a power city if it is important to the origin of connectivity.

Power City Access by airport can provide many insights. Figure 1 gives an example for a few of the main airports in Europe:

- **London-Heathrow** has the pole position in *Power City Access* as a combination of its own dominance in leading corporates' presence with both quality and direct flights to cities with matching leading corporates of high importance. Only considering *direct connectivity*, London-Heathrow ranks 3rd.
- Also boosted by the presence of top level firms, **Paris-CDG** ranks 2nd by *Power City Access* while on *direct connectivity*, the French hub ranks 4th.
- **Amsterdam-Schiphol** airport outperforms in *direct connectivity*, but drops to 3rd place when weighted by access to global Power Cities.
- **Istanbul**, while the leader in *direct connectivity*, takes the 6th position when ranked by *Power City Access*.

Figure 1: POWER CITY ACCESS | LEADERS – TOP TEN

IATA Code	Airport	Country	Airport Connectivity Index	Power City Access	Airport Connectivity Rank	Power City Access Rank	Rank difference
LHR	London-Heathrow	UK	4.579	1,921.318	3	1	+2
CDG	Paris Charles de Gaulle	France	4.397	1,264.884	4	2	+2
AMS	Amsterdam Schiphol	Netherlands	4.581	1,011.578	2	3	-1
FRA	Frankfurt	Germany	4.300	953.550	5	4	+1
MAD	Madrid	Spain	3.770	773.967	6	5	+1
IST	Istanbul	Türkiye	4.868	677.239	1	6	-5
LGW	London-Gatwick	UK	2.781	667.561	11	7	+4
BCN	Barcelona	Spain	3.305	586.948	8	8	0
MUC	Munich	Germany	3.309	533.485	7	9	-2
DUB	Dublin	Ireland	2.396	493.174	16	10	+6

Smaller airports that manage to maximise their network from a quality point of view rank much higher in terms of *Power City Access*, despite relatively low *direct connectivity*. Examples of airports for which the *Power City Access* significantly outperforms their *direct connectivity* are reported below.

Figure 2: POWER CITY ACCESS | POTENTIAL – TOP TEN

IATA Code	Airport	Country	Airport Connectivity Index	Power City Access	Airport Connectivity Rank	Power City Access Rank	Rank difference
VST	Stockholm-Vasteras	Sweden	6	1,362	647	145	+502
LEN	León	Spain	8	283	614	203	+411
LNZ	Linz	Austria	10	155	597	227	+370
LCJ	Łódź	Poland	19	890	485	154	+331
NYO	Stockholm Skavsta	Sweden	24	3,915	452	130	+322
CFE	Clermont-Ferrand	France	25	679	448	165	+283
ANR	Antwerp	Belgium	33	2,069	389	138	+251
LGG	Liege	Belgium	13	54	536	329	+207
NWI	Norwich	United Kingdom	56	1,486	311	143	+168
AAR	Aarhus	Denmark	77	5,941	267	119	+148

6.
NATIONAL
MARKETS
RANKING



Chart 22.1: **RANKING OF EUROPEAN COUNTRIES BASED ON TOTAL AIR CONNECTIVITY LEVELS**
(JUNE 2024, 2023 & 2019)

EU+

	Country	2024	2023	2019
1	United Kingdom	59.235	55.084	67.388
2	Germany	57.404	54.197	75.934
3	Spain	52.133	47.293	53.180
4	Italy	46.397	40.121	50.180
5	France	40.925	38.383	48.030
6	Greece	18.645	16.131	15.242
7	Switzerland	16.899	15.419	20.132
8	Portugal	15.567	14.602	14.983
9	Netherlands	14.470	14.059	17.503
10	Norway	13.773	14.275	15.789
11	Poland	11.771	10.208	12.752
12	Denmark	10.544	9.656	12.151
13	Sweden	10.273	10.499	14.797
14	Ireland	9.991	9.464	10.439
15	Austria	8.778	8.460	12.186
16	Belgium	7.413	7.003	9.107

	Country	2024	2023	2019
17	Finland	5.625	5.322	8.912
18	Croatia	4.921	4.327	5.270
19	Romania	4.429	4.299	5.006
20	Czech Republic	4.234	3.337	5.875
21	Hungary	3.435	3.217	4.462
22	Cyprus	2.727	2.615	2.851
23	Bulgaria	2.326	1.948	3.037
24	Iceland	2.287	1.804	2.133
25	Luxembourg	2.093	2.068	2.503
26	Latvia	1.737	1.648	2.297
27	Estonia	1.719	1.259	1.767
28	Malta	1.663	1.341	2.173
29	Lithuania	1.469	1.205	1.652
30	Slovenia	977	921	1.378
31	Slovakia	342	291	441
32	Monaco	182	0	326

NON-EU+

	Country	2024	2023	2019
1	Türkiye	34.269	32.864	27.555
2	Russian Federation	22.315	17.772	39.321
3	Israel	3.991	6.650	6.897
4	Kazakhstan	2.843	2.868	3.583
5	Serbia	2.395	2.249	2.428
6	Georgia	1.693	1.432	1.684
7	Uzbekistan	1.634	1.148	1.265
8	Albania	1.542	1.068	995
9	Azerbaijan	1.486	1.012	1.260
10	Bosnia and Herzegovina	933	805	788
11	Armenia	927	892	824
12	Montenegro	808	558	938
13	Moldova	685	470	866
14	North Macedonia	591	587	586
15	Kosovo	559	510	671
16	Greenland	545	701	532
17	Belarus	195	280	1.548
18	Ukraine	0	0	5.667

Chart 22.2: **RANKING OF EUROPEAN COUNTRIES BASED ON DIRECT CONNECTIVITY LEVELS**
(JUNE 2024, 2023 & 2019)

EU+

	Country	2024	2023	2019
1	Spain	21.431	20.058	20.413
2	United Kingdom	20.814	20.298	23.479
3	Germany	16.165	15.395	20.185
4	Italy	15.875	14.649	15.391
5	France	13.845	13.625	15.694
6	Greece	7.742	7.246	6.576
7	Norway	6.307	7.027	7.249
8	Netherlands	5.221	5.132	5.536
9	Portugal	5.188	5.202	4.706
10	Switzerland	4.383	4.064	4.681
11	Poland	3.894	3.510	3.781
12	Sweden	3.508	3.672	4.910
13	Denmark	3.242	2.981	3.471
14	Ireland	2.894	2.840	2.831
15	Austria	2.781	2.697	3.178
16	Belgium	2.418	2.392	2.643

	Country	2024	2023	2019
17	Finland	1.774	1.686	2.463
18	Romania	1.689	1.704	1.754
19	Croatia	1.534	1.407	1.409
20	Czech Republic	1.459	1.051	1.572
21	Cyprus	1.127	1.067	1.091
22	Hungary	1.059	990	1.115
23	Iceland	812	832	797
24	Bulgaria	790	794	978
25	Malta	600	546	551
26	Latvia	598	582	847
27	Luxembourg	561	556	560
28	Lithuania	468	392	510
29	Estonia	389	282	389
30	Slovakia	226	210	236
31	Monaco	182	0	326
32	Slovenia	143	123	248

NON-EU+

	Country	2024	2023	2019
1	Türkiye	14.096	13.718	13.141
2	Russian Federation	13.268	12.000	17.777
3	Kazakhstan	1.583	1.597	1.601
4	Israel	965	1.618	1.607
5	Serbia	813	826	654
6	Albania	729	469	255
7	Uzbekistan	670	498	443
8	Azerbaijan	591	430	422
9	Greenland	505	646	519
10	Georgia	492	436	501
11	Armenia	354	371	229
12	Montenegro	291	240	294
13	Moldova	253	231	280
14	North Macedonia	237	228	186
15	Bosnia and Herzegovina	235	209	172
16	Kosovo	177	156	133
17	Belarus	46	155	508
18	Ukraine	0	0	2.071

Chart 22.3: **RANKING OF EUROPEAN COUNTRIES BASED ON DIRECT CONNECTIVITY CHANGE (JUNE 2024 VS. JUNE 2019 AND JUNE 2023)**

EU+

	Country	2024 vs. 2019	2024 vs. 2023
1	Greece	+18%	+7%
2	Portugal	+10%	0%
3	Croatia	+9%	+9%
4	Malta	+9%	+10%
5	Spain	+5%	+7%
6	Cyprus	+3%	+6%
7	Italy	+3%	+8%
8	Poland	+3%	+11%
9	Iceland	+2%	-2%
10	Ireland	+2%	+2%
11	Estonia	0%	+38%
12	Luxembourg	0%	+1%
13	Romania	-4%	-1%
14	Slovakia	-4%	+8%
15	Hungary	-5%	+7%
16	Switzerland	-6%	+8%

	Country	2024 vs. 2019	2024 vs. 2023
17	Netherlands	-6%	+2%
18	Denmark	-7%	+9%
19	Czech Republic	-7%	+39%
20	Lithuania	-8%	+19%
21	Belgium	-9%	+1%
22	United Kingdom	-11%	+3%
23	France	-12%	+2%
24	Austria	-12%	+3%
25	Norway	-13%	-10%
26	Bulgaria	-19%	-1%
27	Germany	-20%	+5%
28	Finland	-28%	+5%
29	Latvia	-29%	+3%
30	Sweden	-29%	-4%
31	Slovenia	-42%	+16%
32	Monaco	-44%	—

NON-EU+

	Country	2024 vs. 2019	2024 vs. 2023
1	Albania	+186%	+55%
2	Armenia	+55%	-5%
3	Uzbekistan	+51%	+35%
4	Azerbaijan	+40%	+37%
5	Bosnia and Herzegovina	+37%	+12%
6	Kosovo	+33%	+13%
7	North Macedonia	+27%	+4%
8	Serbia	+24%	-2%
9	Türkiye	+7%	+3%
10	Montenegro	-1%	+21%
11	Kazakhstan	-1%	-1%
12	Georgia	-2%	+13%
13	Greenland	-3%	-22%
14	Moldova	-10%	+10%
15	Russian Federation	-25%	+11%
16	Israel	-40%	-40%
17	Belarus	-91%	-70%
18	Ukraine	-100%	-100%



Want to know more about YOUR airport's connectivity performance?

Additional appendices detailing individual airport data on air connectivity are available to download.

Simply scan the QR code below to access the webpage storing the data:





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For the 11th year, ACI EUROPE published its annual European Airport Industry Connectivity Report – a comprehensive overview and analysis on airport connectivity measured in many dimensions. The report is based on data from SEO's NetScan connectivity model.

ACI EUROPE is the European region of Airports Council International (ACI), the only worldwide professional association of airport operators.

ACI EUROPE represents over 500 airports in 55 countries. Our members facilitate over 90% of commercial air traffic in Europe. Air transport supports 13.5 million jobs, generating €886 billion in European economic activity (4.4% of GDP). In response to the Climate Emergency, in June 2019 our members committed to achieving Net Zero carbon emissions for operations under their control by 2050, without offsetting.

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Please note that with the 2024 release the methodology was updated to include all airports in the ACI EUROPE region as the aggregation basis for overall values. In the past, these values included solely ACI EUROPE member airports; therefore values have been occasionally restated resulting in an increased accuracy and overall depiction of the state of European airports' connectivity.