ACI EUROPE
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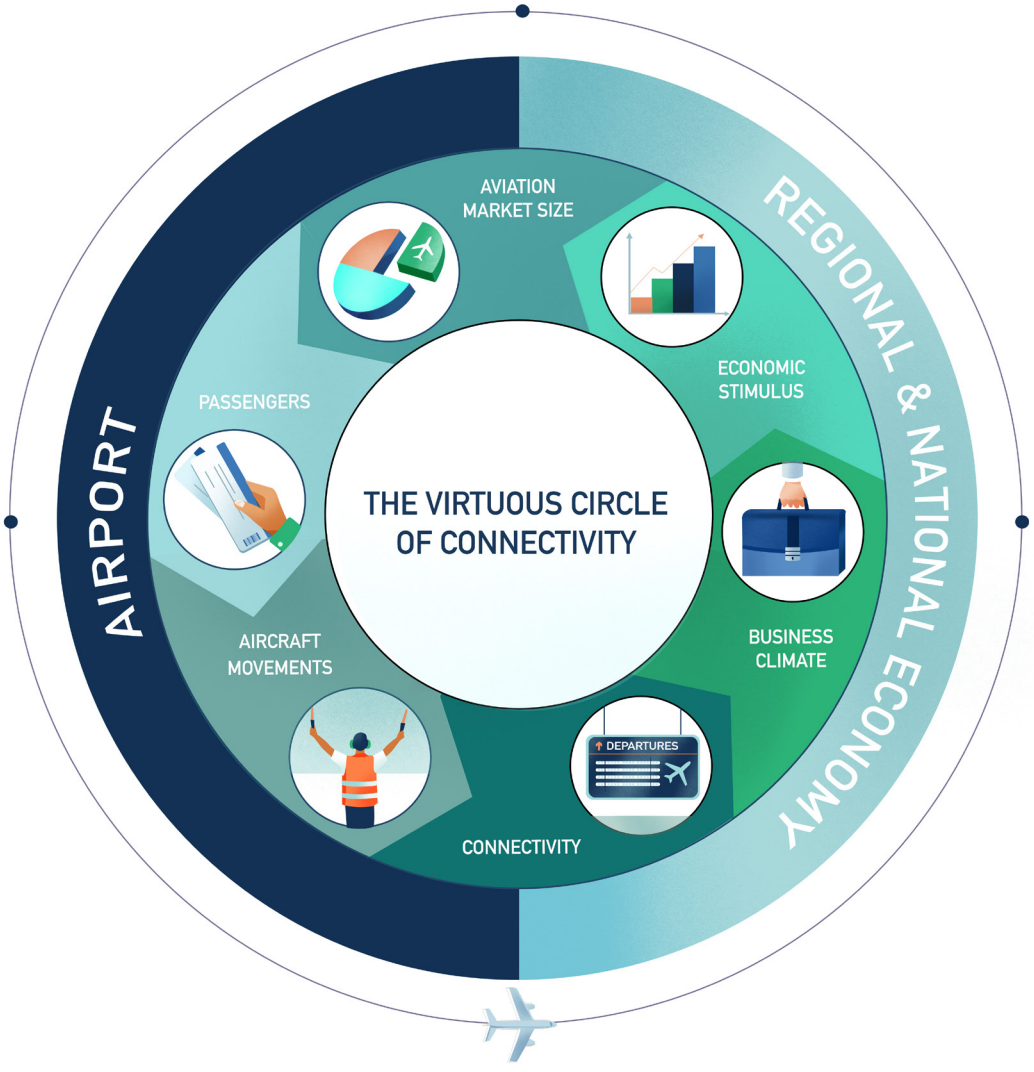
AIRPORT INDUSTRY CONNECTIVITY REPORT 2019


AIRPORT
REGIONAL & NATIONAL ECONOMY
AVIATION MARKET SIZE
ECONOMIC STIMULUS
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INTRODUCTION

Air connectivity is the essence of international mobility, the lifeblood of our globalised world – and an essential element of both national and regional accessibility & development. The exercise of boarding or disembarking from an aircraft may seem quite banal to so many people now, but this report is about taking a step back and looking at the bigger picture. What does air connectivity recoup and involve? How do we measure which airports have the best direct connectivity? Which ones facilitate the most connecting flights and what are the underlying competitive dynamics? And what do we gain from measuring it?

This report delves into the dynamics and performance of air connectivity for and across our continent – down to each individual airport that is part of the European aviation system. As such, the different types of air connectivity indexes we use - direct, indirect and hub connectivity – are useful metrics for airports themselves, but also for policy makers who may want to include connectivity data as part of their assessments and decision-making process.

While traffic figures account for the mere size and volumes involved in air transport, our connectivity data provides a measure that is arguably more directly related to its societal benefits – in particular in economic terms. Indeed, a 10% increase in direct air connectivity comes with a 0.5% additional increase in GDP per capita. It is thus no surprise that citizens' access to air connectivity is a fundamental part of the equation for economic and social cohesion – one of the reasons why Europe's regions are mindful of the positive externalities a well-connected airport can bring – as vital infrastructure that facilitates tourism, foreign direct investment and more.

As with previous editions, this year's report comprehensively measures and analyses the way Europe's air connectivity has evolved over the past decade. Using the SEO NetScan connectivity model, the report provides the indexes that matter most in analysing citizens' access to direct, indirect and hub connectivity, based on both quantitative and qualitative metrics. This means that this is not simply a measure of how many city pairs there are, or how many direct services there are. For the purposes of this report, connectivity is a composite measure of the number of destinations, the frequency of services and the quality of the connections (in the case of hubbing or indirect services).

THE PASSENGER PERSPECTIVE OF AIR CONNECTIVITY

Let's begin by outlining **the various types of air connectivity** from the perspective of the air traveller.
The one who wants to get from A to B.
Or sometimes, from A to 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.

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).

INDIRECT CONNECTIVITY

This measures the number of places people can fly to, through a connecting flight at hub airports from a particular airport. For example, if you fly from Cork to a hub airport such as Amsterdam Schiphol, that's a direct flight from to A to B. But with the vast choice of onward destinations you can fly to from there – the large number of available onward connections from these 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 Manchester to Johannesburg via Paris-Charles de Gaulle will register a higher score than an alternative routing via Doha.

AIRPORT 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.

HUB CONNECTIVITY

Hub connectivity is the key metric for any hub airport big or smaller. Essentially, 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.

DIRECT CONNECTIVITY

1

WEAK DIRECT CONNECTIVITY GAINS IN 2019

Compared with previous years, direct connectivity from Europe's airports is rather weak in 2019 **(+1.2%)**. This is happening despite the fact that passenger traffic, while moderating this year compared to previous ones, is still expanding by +4.4% (Q1 2019).

Passenger traffic and direct connectivity tend to be closely correlated, so this year's gap between the two indicators is a rather unusual pattern. This weak expansion in direct connectivity is the result of the following factors:

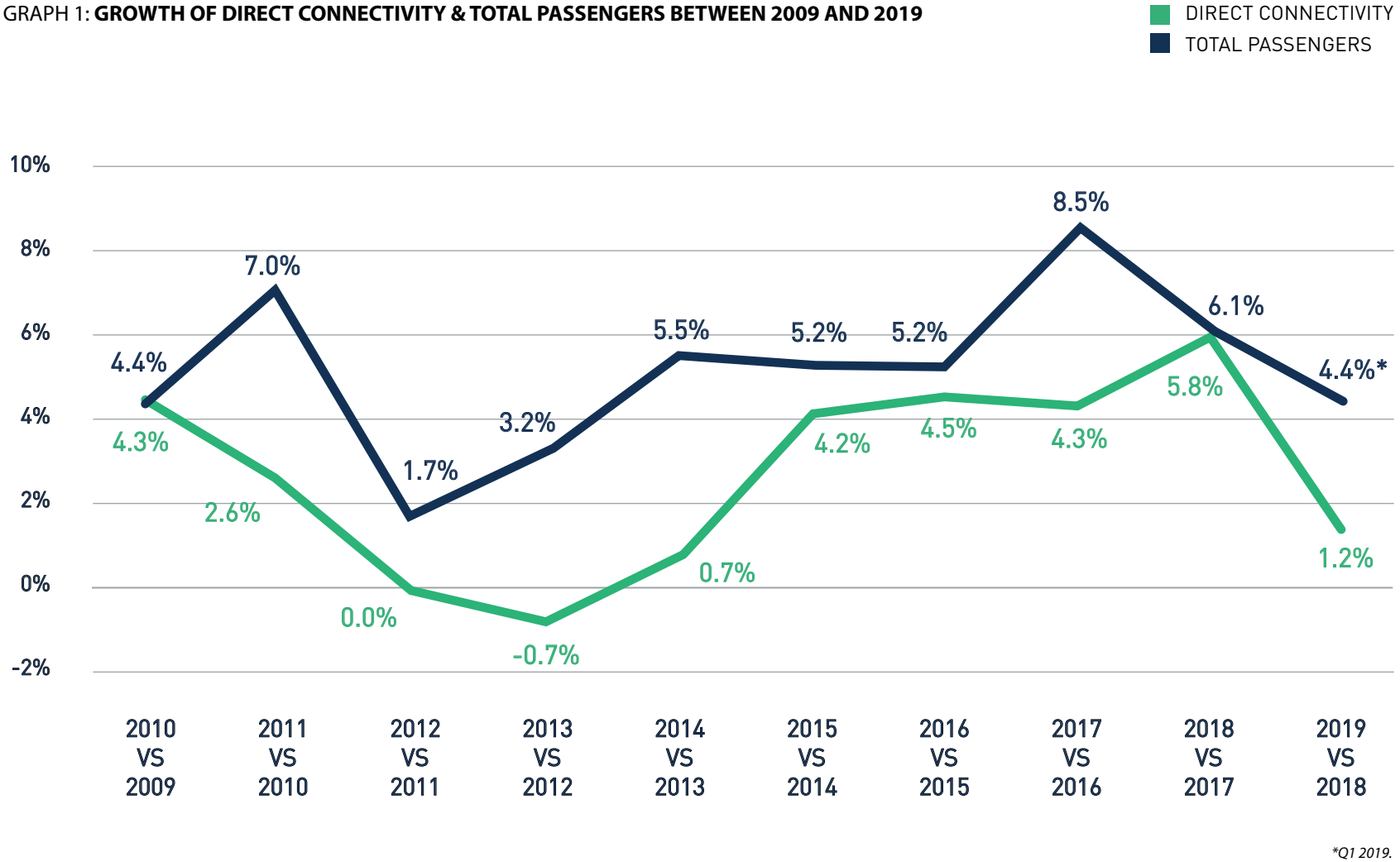
- **Airline consolidation.** Since June 2018, several European airlines have gone out of business including Azur Air Germany, VLM, Primera Air, Cobalt, Small Planet, BMI, Germania and WOW.
- **Airlines becoming risk averse in their network development & capacity expansion.** This reflects **oil prices volatility**, increased costs & missed opportunities associated with **ATM disruptions** (including the need to schedule buffer times to compensate for delays and allocate more aircraft in reserve) as well as a more **uncertain economic outlook** and **continued geopolitical risks**.
- **Increasing capacity constraints at European airports** – especially at peak times. This is leading airlines to prioritise growth through larger aircraft & higher load factors on existing routes & frequencies rather than network expansion.

Geographically, a near stall in direct connectivity is affecting the biggest markets: **intra-Europe (+0.7%)** and **Europe-North America (-0.8%)**, which are also those where the impact of airline consolidation are felt. Direct connectivity from Europe to the rest of the World keeps increasing with **Europe-Africa (+11.1%) leading, followed by Europe-Middle East (+9.9%), Europe-Asia Pacific (+6.9%)** and **Europe-Latin America (+4.5%).**

Amongst the different categories of airports, **smaller regional airports** (less than 5 million passengers per annum) **are experiencing a significant drop in direct connectivity (-2.9%)** this year. Indeed, route & network development is becoming harder to secure for these airports, as in addition to the above-mentioned factors (airline consolidation & risk aversity in capacity expansion), Low Cost Carriers (LCCs) moving up market into larger airports also impacts their direct connectivity. Conversely, **larger airports (more than 25 million passengers) are performing the best (+2%).**

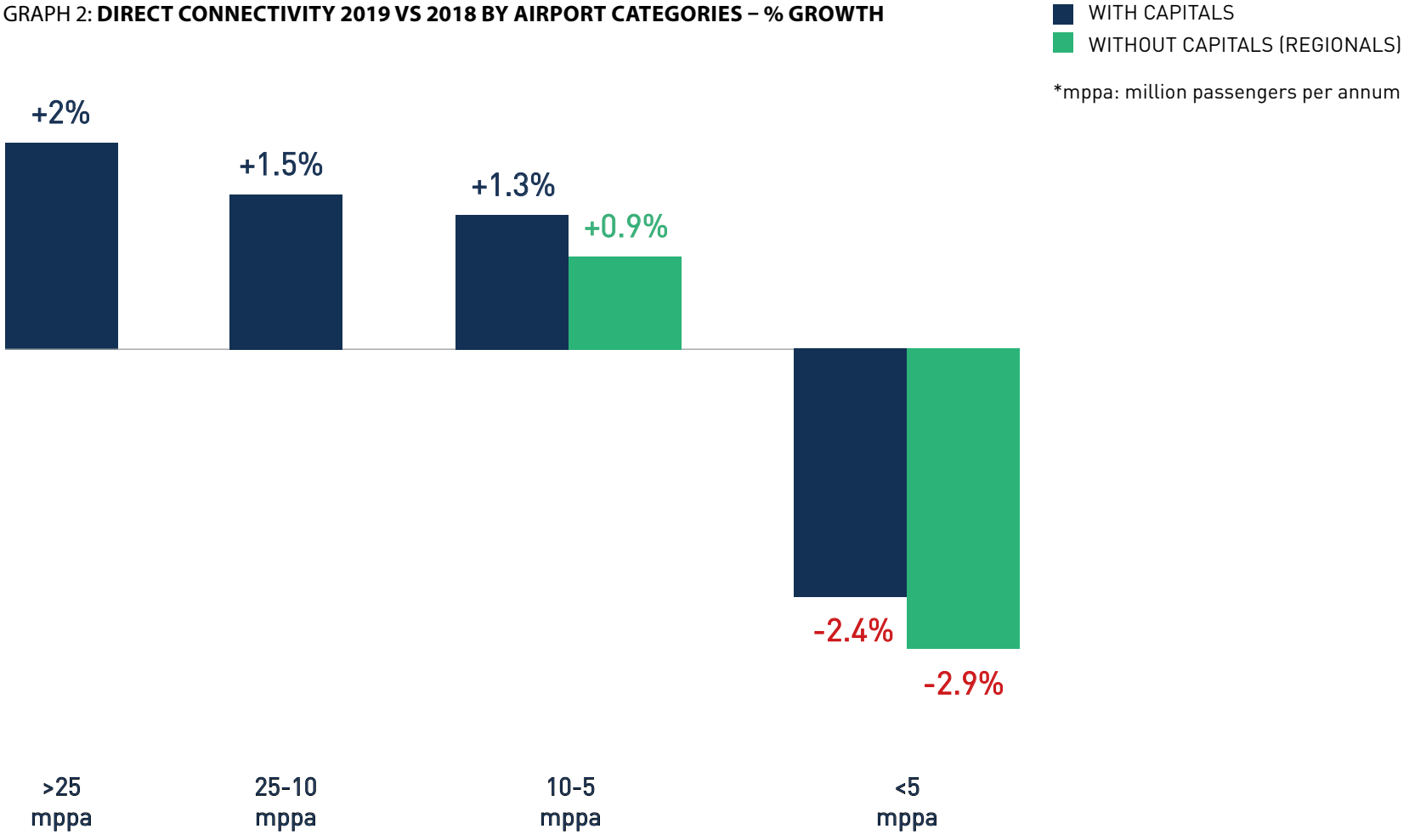
This weakness in direct connectivity comes after 4 years of significant gains (+20.1% between 2014 and 2018). The last dip in direct connectivity levels coincided with the European sovereign debt crisis and much lower demand for air transport.

GRAPH 1: **GROWTH OF DIRECT CONNECTIVITY & TOTAL PASSENGERS BETWEEN 2009 AND 2019**



**Q1 2019.*

GRAPH 2: **DIRECT CONNECTIVITY 2019 VS 2018 BY AIRPORT CATEGORIES – % GROWTH**



2.

FRANKFURT STAYS ON TOP

PARIS-CDG SURPASSES LONDON-HEATHROW

Frankfurt remains the No.1 airport in Europe in terms of direct connectivity in 2019, a position it acquired last year on the back of significant network expansion of both Lufthansa and Low Cost Carriers. However, the airport is not seeing its direct connectivity increasing this year compared to 2018 – with Lufthansa's direct connectivity at its primary hub actually decreasing by -1.9%.

Likewise, **Amsterdam-Schiphol** also confirms its position as **No.2** without seeing its direct connectivity increasing this year – due to the airport having reached its capacity limits. Over the past 10 years, Amsterdam-Schiphol has gone from the 6th to the 2nd position, growing its direct connectivity by **+30%.**

Direct connectivity gains at **Paris-CDG (+3.2%** – mainly driven by Low Cost Carriers as Air France's direct connectivity at the airport is almost flat) sees the airports **taking over the 3rd position from London-Heathrow (+0.3%)** – with the latter having thus retrenched from the 2nd to the 4th position since 2009 as a result of capacity limitations – followed by the **new Istanbul airport (+3.6%** compared to Istanbul-Ataturk – No.5).

Amongst the top 20 European airports for direct connectivity, the best performances in 2019 come from the following:

- **Moscow Sheremetyevo: +17.1%** on the back of the continued expansion of Aeroflot – jumping from the 10th to the 8th position and now surpassing Barcelona (No.9) and Rome-Fiumicino (No.10).
- **Vienna: +13.8%** fuelled by Low Cost Carriers entering the market and Austrian Airlines responding – jumping from the 18th to the 12th position.
- **Athens: +7.7%** – jumping from the 20th to the 19th position and now surpassing Dublin.

At the other end of the spectrum, **Stockholm-Arlanda (-5.2%)** is experiencing a significant drop in direct connectivity as a result of the combination of the bankruptcy of Nextjet, the national aviation tax introduced last year and changing public attitudes towards aviation. This decrease in direct connectivity is estimated to be associated with a 0.25% slower growth in GDP per capita, involving an estimated €1.2 billion of foregone economic output locally. **Oslo (-2.8%)**, **Copenhagen (-2.3%)** and **Munich (-1.6%**, mainly due to the impact of the bankruptcy of BMI) are also seeing a decrease in direct connectivity this year.

GRAPH 3: **DIRECT CONNECTIVITY – TOP 20 AIRPORTS IN EUROPE 2019 (% GROWTH OVER 2018 & RANKING IN 2018 & 2009)**

2009	2018	2019	CODE		
3	1	1	FRA	5,098	+0.0%
6	2	2	AMS	4,869	+0.2%
1	4	3	CDG	4,759	+3.2%
2	3	4	LHR	4,681	+0.3%
11	5	5	IST	4,474	+3.6%
5	6	6	MUC	4,051	-1.6%
4	7	7	MAD	3,977	+4.2%
30	10	8	SVO	3,740	+17.1%
8	8	9	BCN	3,452	+1.9%
7	9	10	FCO	3,289	+2.6%
9	11	11	LGW	2,961	+0.4%
10	18	12	VIE	2,754	+13.8%
12	12	13	CPH	2,629	-2.3%
19	15	14	PMI	2,623	+3.9%
13	16	15	ZRH	2,527	+0.3%
16	13	16	OSL	2,494	-2.8%
14	17	17	ORY	2,405	-1.8%
21	14	18	ARN	2,402	-5.2%
17	20	19	ATH	2,376	+7.7%
23	19	20	DUB	2,353	+0.9%

3.

TOP PERFORMERS – BY AIRPORT TRAFFIC CATEGORIES

GRAPH 4: **TOP 5s DIRECT CONNECTIVITY: 2019 VS 2018**

	RANK	CODE	CITY	
GROUP 1	1	AYT	Antalya	+22.7%
	2	SVO	Moscow	+17.1%
	3	VIE	Vienna	+13.8%
	4	SAW	Istanbul	+8.0%
	5	MAD	Madrid	+4.2%

	RANK	CODE	CITY	
GROUP 2	1	KBP	Kyiv	+17.7%
	2	TXL	Berlin	+12.3%
	3	TLV	Tel-Aviv	+10.4%
	4	TFS	Tenerife	+9.6%
	5	MXP	Milan	+8.4%

	RANK	CODE	CITY	
GROUP 3	1	SVQ	Sevilla	+20.4%
	2	KRK	Kraków	+16.5%
	3	AER	Sochi	+15.0%
	4	EIN	Eindhoven	+10.9%
	5	BRI	Bari	+9.2%

	RANK	CODE	CITY	
GROUP 4	1	TGM	Târgu Mures	+798.6%
	2	JTY	Astypalaia	+114.9%
	3	VIT	Vitoria-Gasteiz	+83.3%
	4	LRS	Leros	+67.6%
	5	PXO	Porto Santo	+66.7%

GRAPH 5: **TOP 5s DIRECT CONNECTIVITY: 2019 VS 2014**

	RANK	CODE	CITY	
GROUP 1	1	AYT	Antalya	+91.5%
	2	SVO	Moscow	+61.5%
	3	LIS	Lisbon	+44.3%
	4	SAW	Istanbul	+37.9%
	5	DUB	Dublin	+37.5%
GROUP 2	1	ATH	Athens	+63.6%
	2	OPO	Porto	+63.2%
	3	TLV	Tel-Aviv	+58.8%
	4	OTP	Bucharest	+56.2%
	5	WAW	Warsaw	+51.5%
GROUP 3	1	KRK	Kraków	+83.4%
	2	LCA	Larnaca	+81.1%
	3	SVQ	Sevilla	+66.6%
	4	NAP	Naples	+61.2%
	5	TFN	Tenerife	+58.2%
GROUP 4	1	OHD	Ohrid	+750.9%
	2	JNX	Naxos	+455.6%
	3	BUS	Batumi	+396.0%
	4	YEI	Yenisehir	+350.0%
	5	OSI	Osijek	+331.2%

GRAPH 6: **TOP 5s DIRECT CONNECTIVITY: 2019 VS 2009**

	RANK	CODE	CITY	
GROUP 1	1	SAW	Istanbul	+523.7%
	2	AYT	Antalya	+257.6%
	3	SVO	Moscow	+178.2%
	4	IST	Istanbul	+89.6%
	5	LIS	Lisbon	+80.2%
GROUP 2	1	TLV	Tel-Aviv	+122.1%
	2	OPO	Porto	+118.7%
	3	ADB	Izmir	+116.0%
	4	TFS	Tenerife	+112.2%
	5	ESB	Ankara	+102.7%
GROUP 3	1	EIN	Eindhoven	+257.6%
	2	KEF	Keflavik	+187.8%
	3	ADA	Adana	+149.8%
	4	NTE	Nantes	+114.2%
	5	CRL	Charleroi	+104.3%
GROUP 4	1	KLX	Kalamata	+1467.1%
	2	BUS	Batumi	+817.0%
	3	OSI	Osijek	+799.4%
	4	INI	Nis	+633.3%
	5	JNX	Naxos	+525.0%

HUB CONNECTIVITY

1.

FRA REMAINS ON TOP

DFW SURPASSES AMS

IST & SVO CLIMBING UP

This year's findings reveal that **Europe continues to dominate the global league of hub airports** – with 9 airports coming from Europe amongst the top 20 Global league for hub connectivity.

In 2019, Frankfurt remains the airport offering the best hub connectivity worldwide – although not increasing compared to the preceding year **(-0.2%)**. This reflects the decision of the Lufthansa Group to prioritise Munich Airport for its network development.

Amsterdam-Schiphol (+0.8%) cedes second place to Dallas-Fort Worth (+18.3%) as capacity constraints limit development of connectivity, while **Paris-CDG** remains No.4 **(-2.1%)** and **Atlanta** No.5 **(+4.5%).** Meanwhile, **Munich (+2.2%)** confirms its No. 8 position and **London-Heathrow (+0.8%)** further retrenches from No.9 to No.10.

Apart from Dallas-Fort Worth, the **best performers amongst the top 20 Global Hub Connectivity league** are:

- **Istanbul (+16.9%)** – from the 7th to the 6th position, replacing **Chicago-O'Hare (-3.8%** – now No.9).
- **Denver (+23%)**, which is seeing the highest increase in hub connectivity and has now jumped to the 7th position from the 10th.
- **Toronto-Pearson (+20.1%)** improves its position from 12th to 11th. **Moscow-Sheremetyevo (+22.1%)** makes it to the 15th position from the 17th.
- **Doha (+14.4%)** bounces back after a sharp decrease last year (-20.5% in 2018) and remains in the 18th position.

Conversely, the performance of the **6 EU hubs (FRA, AMS, CDG, MUC, LHR & MAD – *the Majors*)** included in this top 20 league is more subdued. While their hub connectivity increased +8.9% in 2018, it is only growing by **+0.9%** this year – with **Madrid-Barajas (+9.9%)** achieving the best result, in large part driven by the expansion of Air Europa (the airline's direct connectivity at the airport increased by +20%).

GRAPH 7: **HUB CONNECTIVITY – TOP 20 AIRPORTS WORLDWIDE 2019 (% GROWTH OVER 2018 & RANKING IN 2018 AND 2009)**

2009	2018	2019	CODE		
1	1	1	FRA	78,773	-0.2%
4	3	2	DFW	62,093	+18.3%
7	2	3	AMS	58,263	+0.8%
2	4	4	CDG	47,556	-2.1%
3	5	5	ATL	44,108	+4.5%
21	7	6	IST	41,539	+16.9%
8	10	7	DEN	38,807	+23.0%
12	8	8	MUC	36,058	+2.2%
5	6	9	ORD	34,656	-3.8%
9	9	10	LHR	33,904	+0.8%
15	12	11	YYZ	33,544	+20.1%
22	11	12	DXB	28,387	-2.4%
11	13	13	EWR	27,412	-0.4%
14	14	14	CLT	25,145	-0.4%
39	17	15	SVO	24,879	+22.1%
6	15	16	IAH	23,366	-2.6%
13	16	17	MAD	22,933	+9.9%
41	18	18	DOH	20,799	+14.4%
17	19	19	ZRH	18,392	+8.7%
40	20	20	PVG	17,743	+9.5%

2.

HUB DYNAMICS – GLOBAL COMPETITION

Looking at the performance of the top 20 Global hubs over the past 10 years, **competitive dynamics** are pretty obvious with the **impressive rise in hub connectivity** achieved by **Doha (+501.0%), Moscow-Sheremetyevo (+446.3%), Istanbul (+353.3%), Shanghai (+340.2%) and Dubai (+250.8%)** – and the retrenchment of **Paris-CDG (-7.7%), Atlanta (-11.3%)** and **Houston (-31.2%)**.

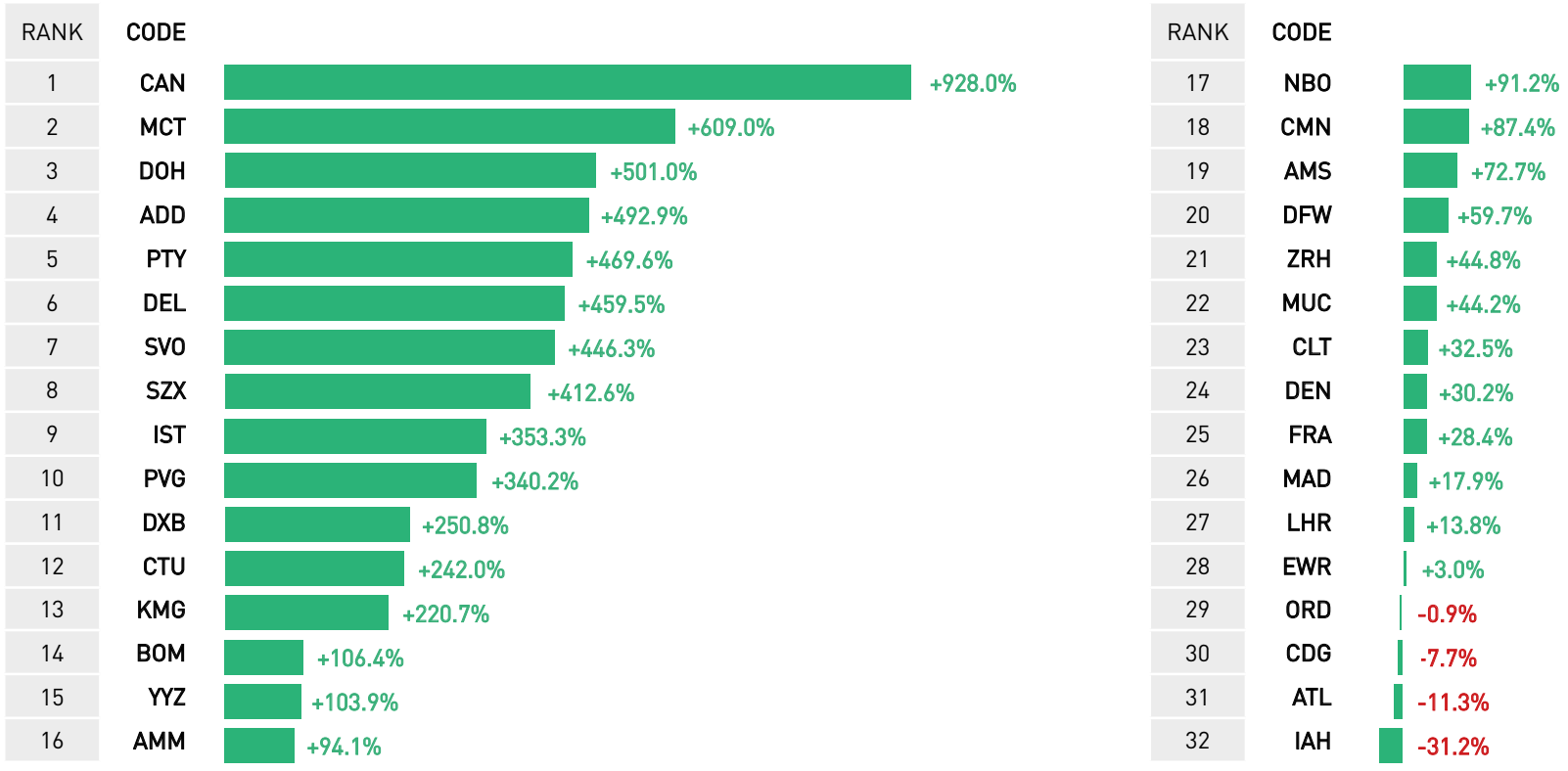
Amongst EU hubs, **Amsterdam-Schiphol (+72.7%)**, **Zurich (+44.8%)** and **Munich (+44.2%)** still achieved significant gains in hub connectivity over the same period, followed by **Frankfurt (+28.4%), Madrid-Barajas (+17.9%)** and **London-Heathrow (+13.8%).**

Beyond the top 20 Global hubs and other well established hubs (Singapore, Hong Kong, Bangkok, Beijing, Kuala Lumpur and Abu Dhabi), **several airports in emerging markets** have also developed their hub connectivity aggressively since 2009 – positioning themselves as **new competitors & challengers for European hubs** on specific traffic flows. This is the case in particular of:

- **Guangzhou (+928.0%)**, leading hub connectivity growth in China along with **Shenzhen (+412.6%)**, **Chengdu (+242.0%)** and **Kunming (+220.7%)**.
- **Muscat (+609.0%)** – the hub newcomer in the Middle East serving demand between Europe and Asia, along with **Amman (+94.1%)**.
- **Addis Ababa (+492.9%)** and **Nairobi (+91.2%)** – increasingly capturing demand between North America/Europe and Africa.
- **Casablanca (+87.4%)** – steadily reinforcing its niche on traffic flows between Europe and Western Africa.
- **New Delhi (+459.5%)** and **Mumbai Chhatrapati Shivaji Maharaj (+106.4%)** – on traffic flows between Europe and India & Southeast Asia.
- **Panama City (+469.9%)** – although not really a competitor for European hubs due to its geographical location and the fact that Copa – its home based network carrier – is not flying into Europe.

This shows that **the hub competition battleground is expanding globally** – and that it is no longer limited to airports in Europe, the Gulf and North America.

GRAPH 8: **HUB CONNECTIVITY – TOP 20 AIRPORTS WORLDWIDE & EMERGING HUBS (% GROWTH 2019 OVER 2009)**



3.

HUB DYNAMICS – EUROPEAN COMPETITION

Within the European market, **hub competition has also diversified and intensified over the past 10 years** with ***the Majors*** **(+40.6%** – but just +26.4% without Istanbul) facing increasing pressures not just from ***Secondary Hubs*** **(+67.6%)** but also from ***Niche & Smaller Hubs*** **(+83.2%)** – both having significantly increased their hub connectivity.

- Amongst *Secondary Hubs*, the performance of **Moscow-Sheremetyevo (+446.3%), Helsinki (+140.0%)** and **Zurich (+44.8%)** stands out.
- Amongst *Niche & Smaller Hubs*, **Istanbul-Sabiha Gokcen (+2333.9%)** and **Keflavik (+923.8%)** have now established themselves as fully fledged hubs, while **Dublin (+408.8%), Warsaw (+336.1%), Moscow-Domodedovo (+304.3%), Lisbon (+155.5%)** and **Stockholm-Arlanda (+129.1%)** have also taken a leading position in hub connectivity growth since 2009.
- *LCCs & Self Connectors* – a new hub breed. Apart from the above airports, the recent development of connecting products by easyJet and Ryanair at **London-Gatwick, Bergamo, Brussels-South (Charleroi)** and **Porto** is also giving to these airports new hubbing capabilities, in addition to their initial point-to-point focus. Similarly, the initiative launched this June by **Nice Côte d'Azur** (*'Nice Connect'* – 23.000 weekly connecting opportunities) to facilitate self-connections is also putting the airport on the hub map. The associated hub connectivity performance of these airports is however not fully captured by the hub connectivity index used for this report – as it does not take into account connections between airlines without a codeshare agreement on the respective route. However, the hub connectivity index does take into account potential connections between two easyJet or Ryanair flights.

The above developments essentially reflect an **increasingly diversified market where hub connectivity is no longer the preserve of the largest airports**. Accordingly, the hub connectivity share of the Majors (top 6 airports by hub connectivity) has decreased since 2009 from 65.1% to 60.5%, while that of secondary and niche & smaller hubs has increased from 30.5% to 34.9% .

GRAPH 9: **HUBS: MAJORS | SECONDARY | NICHE & SMALL | LCCS & SELF-CONNECTORS (RANKING IN 2019 & GROWTH BY GROUPS 2019 VS 2009)**

	RANK	CODE
MAJORS	1	FRA
	2	AMS
	3	CDG
	4	IST
	5	MUC
	6	LHR

40.6%

GROWTH RATE 2019 VS 2009

SECONDARY HUBS	7	SVO
	8	MAD
	9	ZRH
	10	VIE
	11	FCO
	12	HEL

67.6%

GROWTH RATE 2019 VS 2009

NICHE AND SMALLER HUBS	13	LIS
	14	WAW
	15	BRU
	16	CPH
	17	DUB
	18	BCN
	19	DME
	20	OSL
	21	SAW
	22	ATH
	23	DUS
	24	ARN
	25	KEF
	26	PRG
	27	STN

83.2%

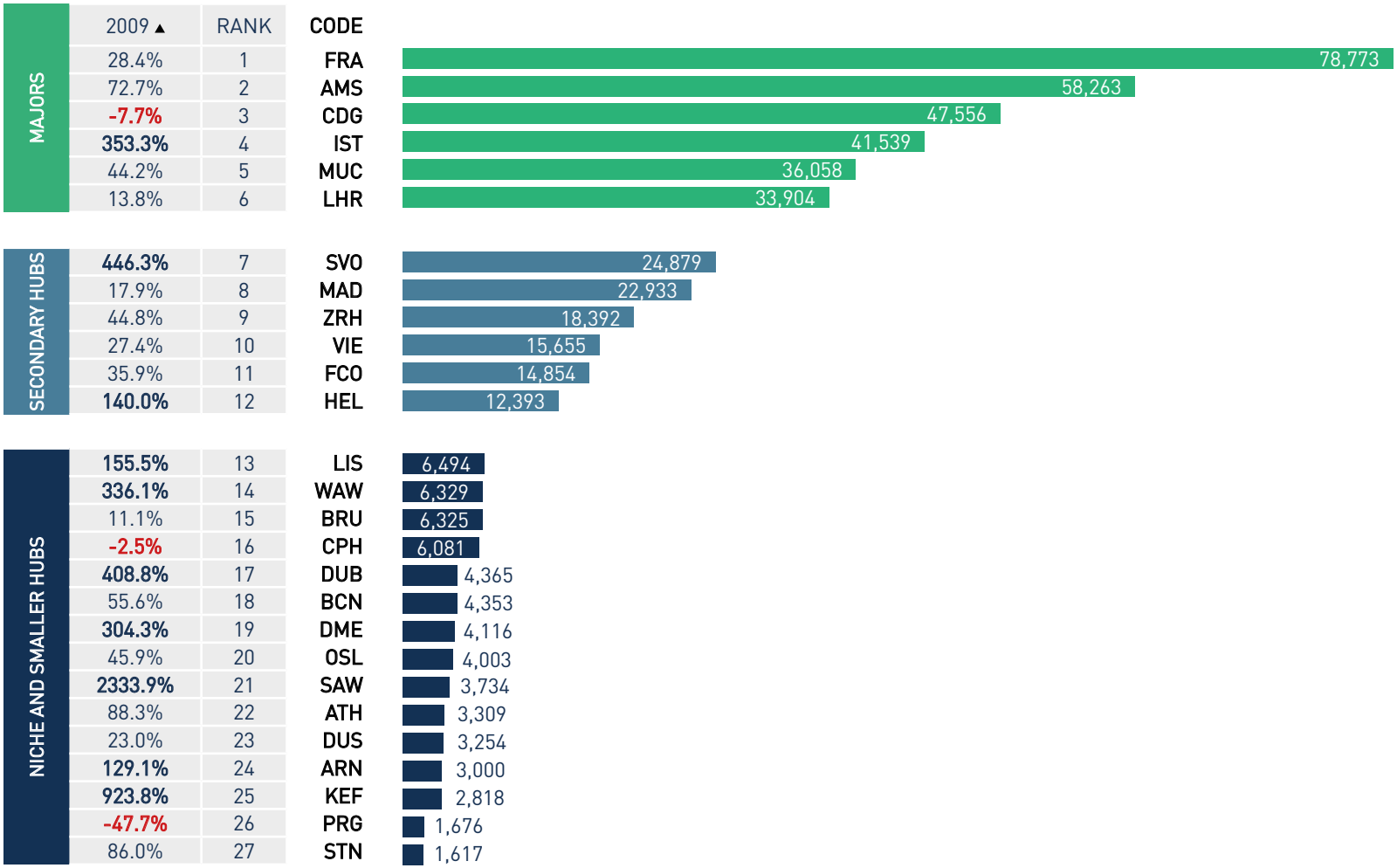
GROWTH RATE 2019 VS 2009

LCC & SELF-CONNECTORS	CODE
	LGW
	NCE
	OPO
	CRL
	BGY

185.9%*

**Hub connectivity of LCCs and Self-Connectors is not fully captured by the hub connectivity index used in this report.*

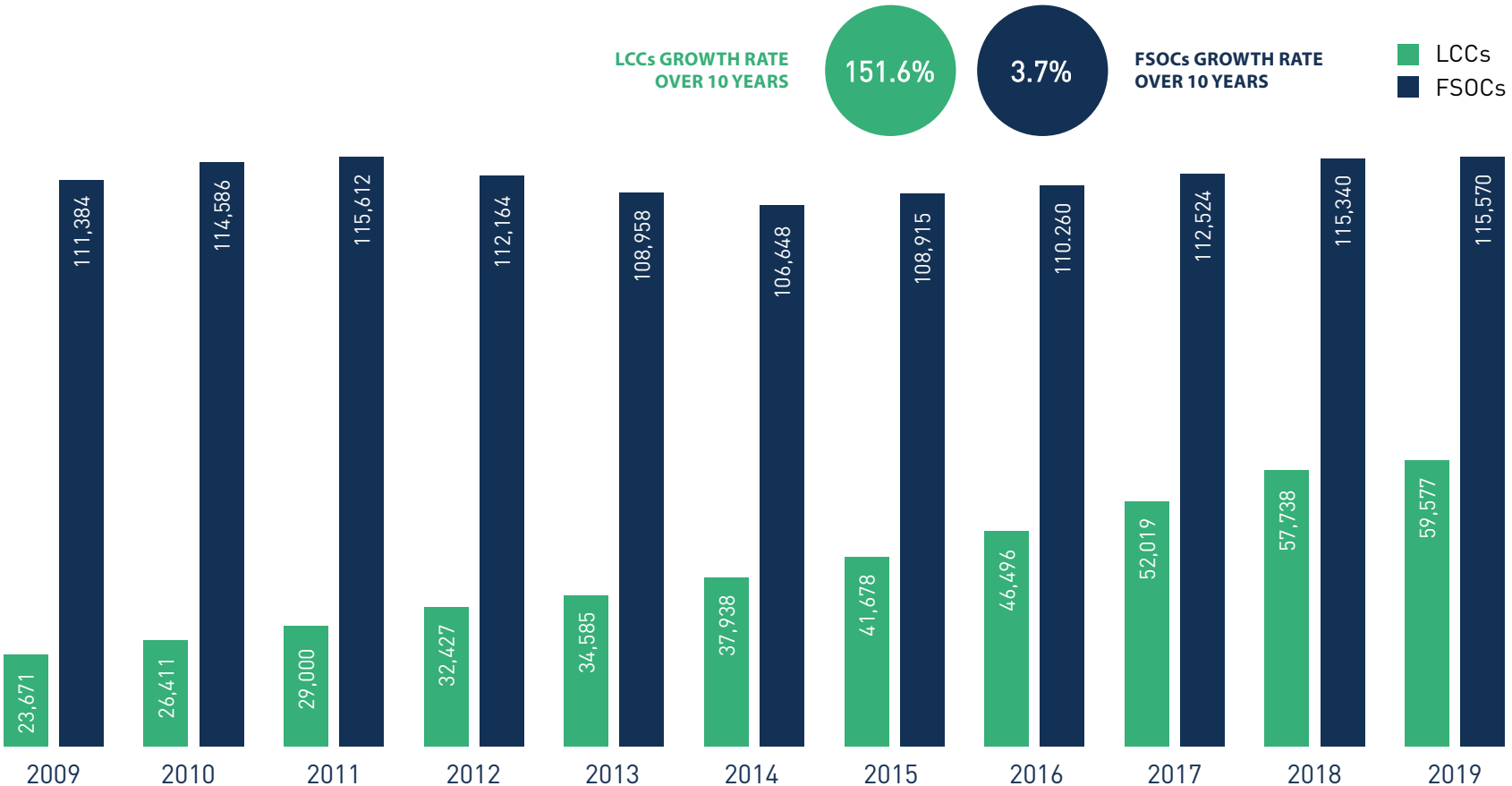
GRAPH 10: **HUB CONNECTIVITY LEVELS AT THE TOP 27 HUBS IN EUROPE (2019 VS 2009)**



AIR CONNECTIVITY & AIRLINE BUSINESS MODELS

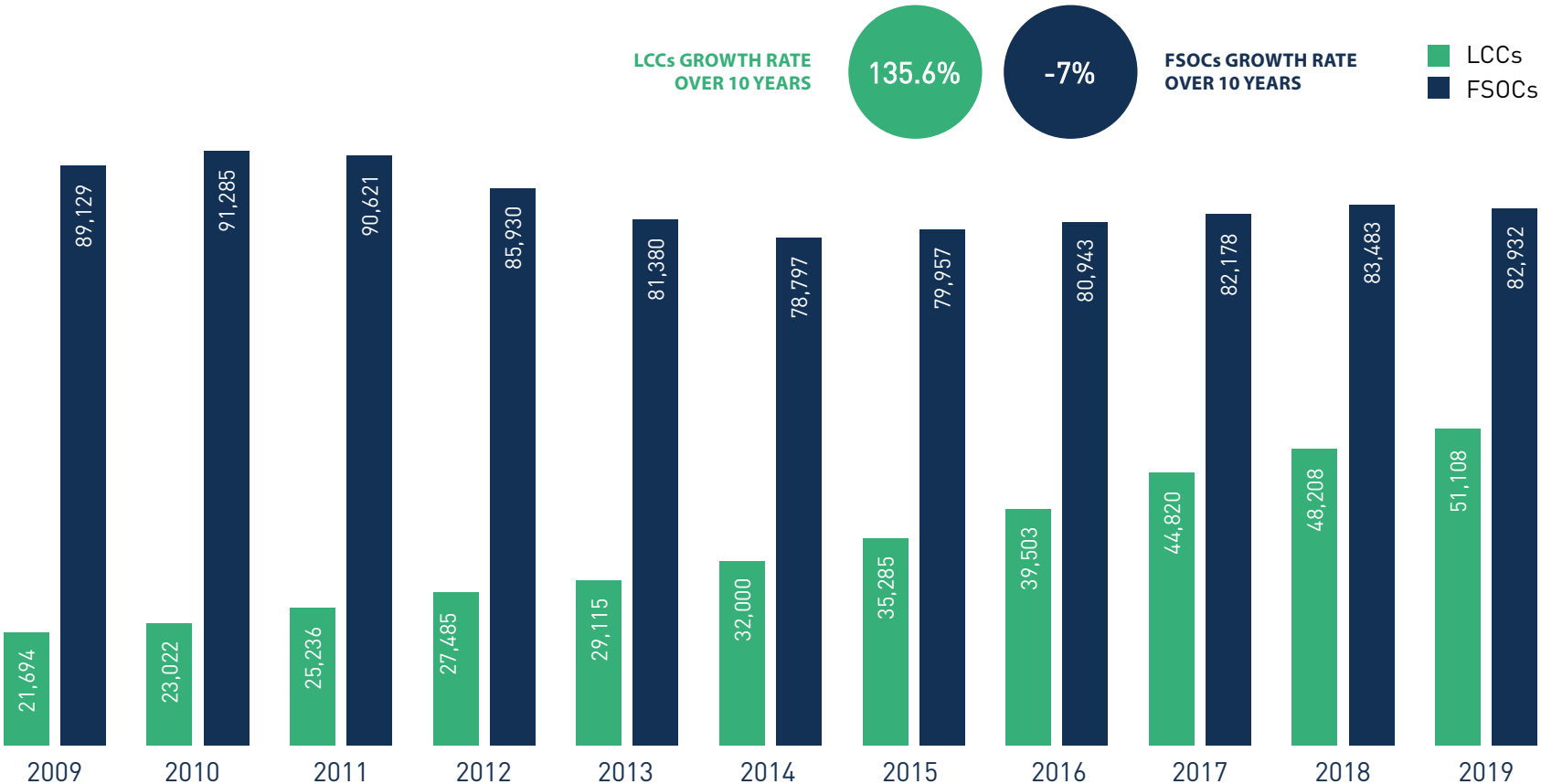
Over the past 10 years, **Europe's direct connectivity gains (+29.7%)** are almost entirely attributed to **Low Cost Carriers (LCCs, +151.6%)** as a result of their dynamic expansion and the **near stagnation (+3.7%) of Full Service & Other Carriers (FSOCs)**.

GRAPH 11: **EUROPE DIRECT CONNECTIVITY GROWTH (2019 VS 2009 – LCCs & FSOCs)**



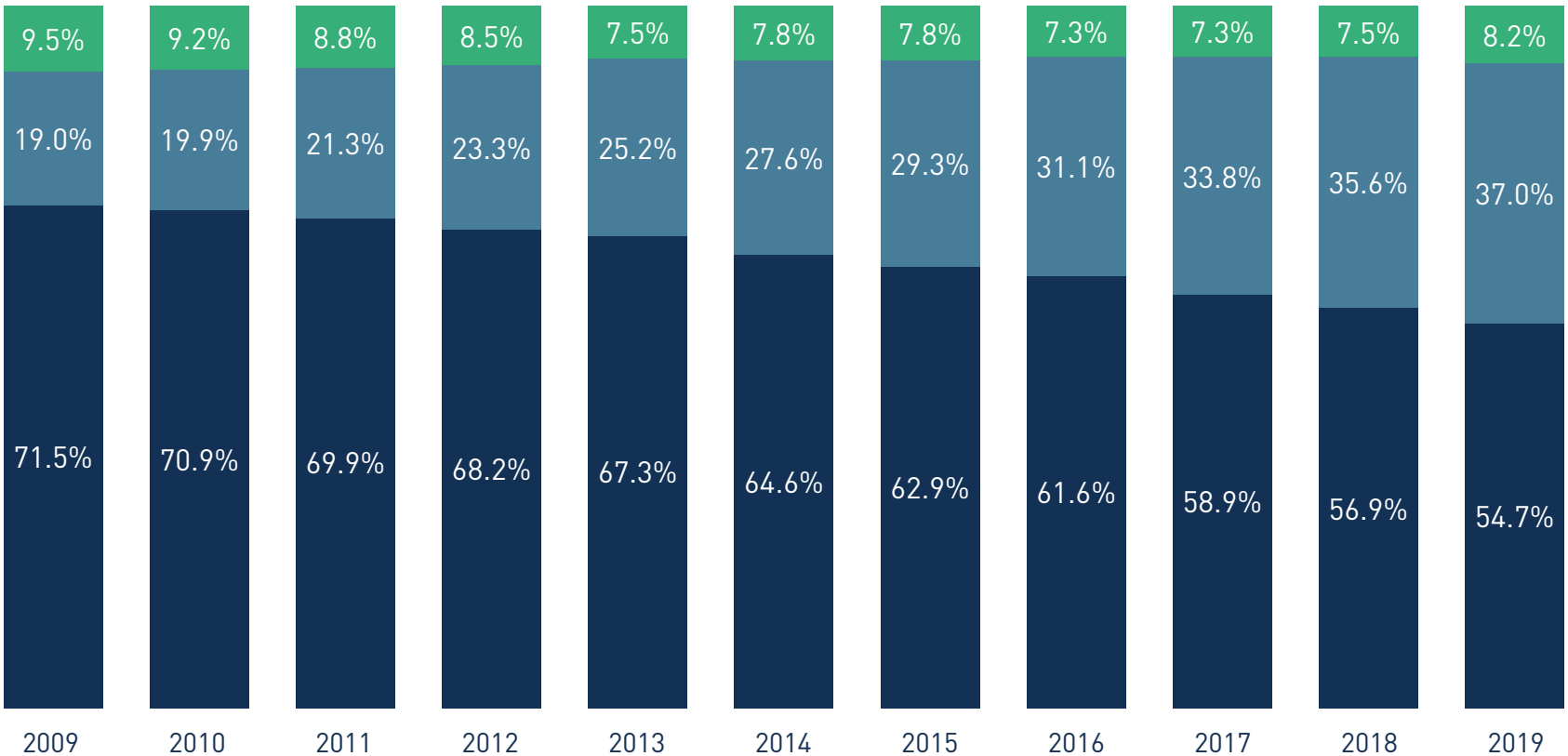
Looking at the **EU market** alone, **LCCs** have increased their direct connectivity **by +135.6%**, while **FSOCs** have actually decreased theirs **by -7%**.

GRAPH 12: **EU DIRECT CONNECTIVITY GROWTH (2019 VS 2009 – LCCs & FSOCs)**



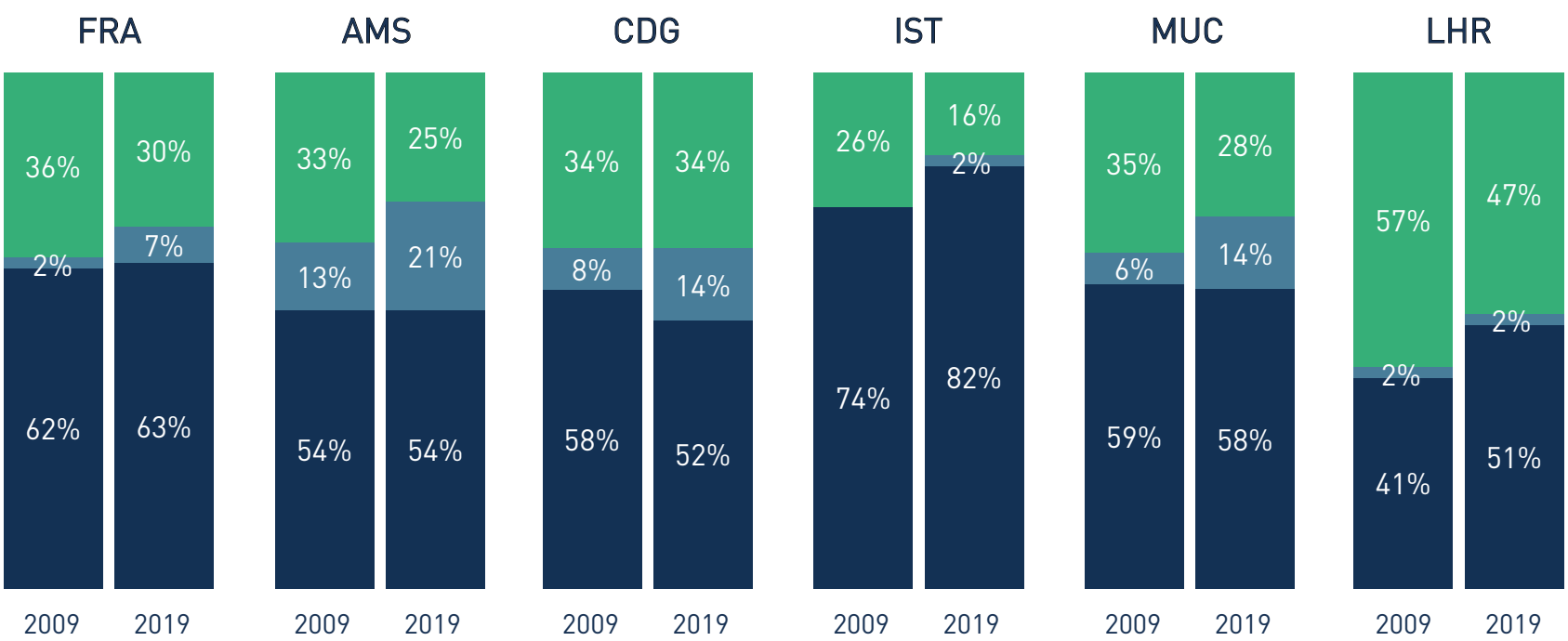
Delving deeper into the **EU market** and looking at the direct connectivity offered by **EU and non-EU airlines**, it is interesting to note that the increased liberalisation of traffic rights (pursued either bilaterally by EU States or through EU-negotiated aviation agreements) has not significantly altered market shares between EU and non-EU airlines over the past 10 years. In fact, the combined market share of EU LCCs & FSOCs is now slightly higher than what it was back in 2009.

GRAPH 13: **EU AIRPORTS – DIRECT CONNECTIVITY MARKET SHARE BY AIRLINE TYPES (EU FSOCs, EU LCCs, OTHERS (NON-EU AIRLINES)**

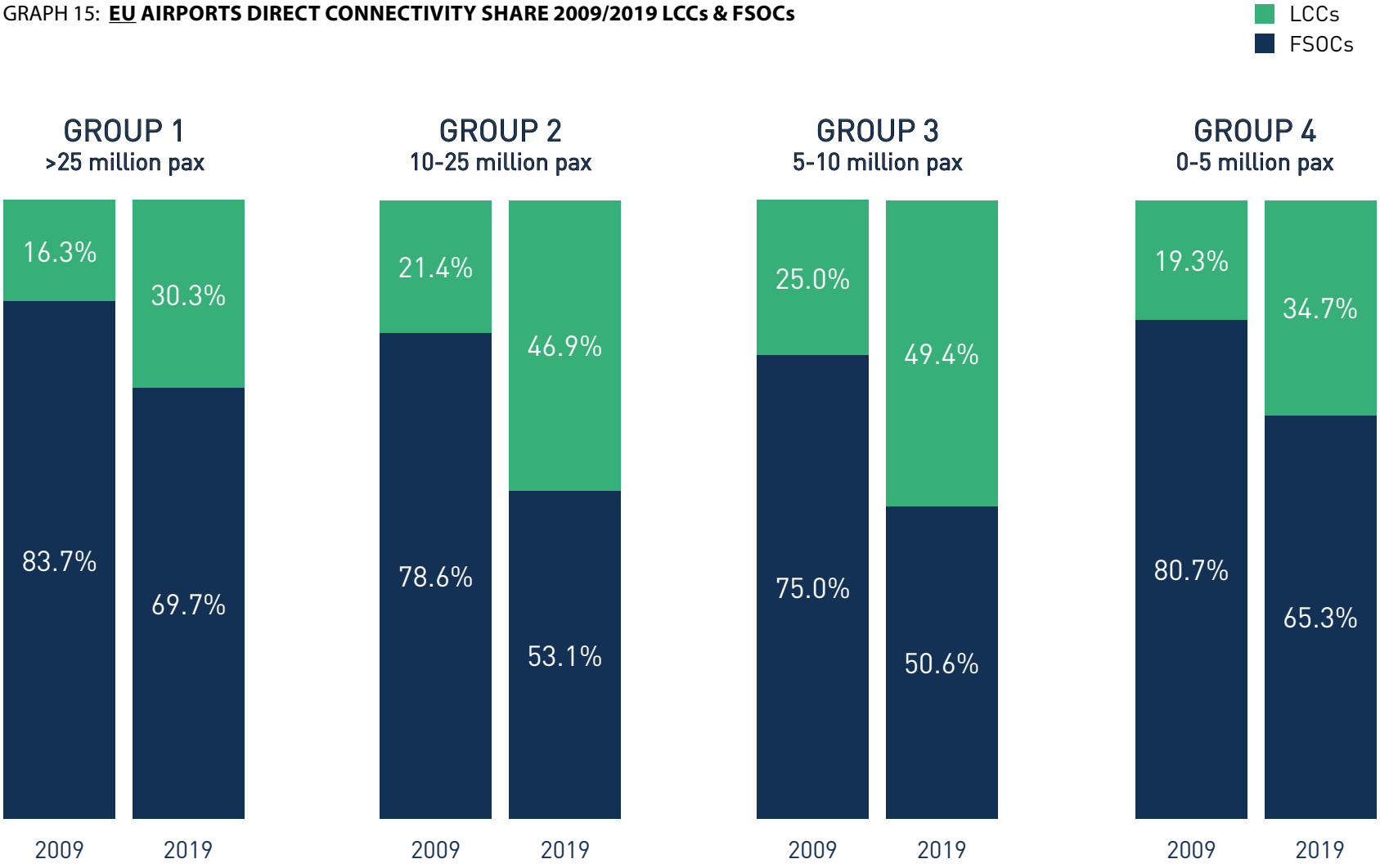


The share of direct connectivity offered by **LCCs** at the **Major hubs** (Frankfurt, Amsterdam-Schiphol, Paris-CDG, Istanbul, Munich and London-Heathrow) has increased **from 5% to 10%** over the past 10 years, reflecting their move upmarket. Their highest penetration has been achieved at Amsterdam-Schiphol (21%), Paris-CDG (14%) and Munich (14%). The increase in direct connectivity offered by LCCs at Major hubs **has generally not been achieved at the expense of the share of direct connectivity offered by their home based hub carriers** – the notable exception being Paris-CDG, where Air France's share of direct connectivity decreased from 58% in 2009 to 52% in 2019. However, where LCCs have been unable to increase significantly their share of direct connectivity (Istanbul and London-Heathrow), home based hub carriers have seen their own share of direct connectivity increasing very significantly.

GRAPH 14: **MAJOR HUBS : DIRECT CONNECTIVITY MARKET SHARE BY AIRLINE TYPES (BASED HUB CARRIER, LCCs & OTHERS)**



GRAPH 15: **EU AIRPORTS DIRECT CONNECTIVITY SHARE 2009/2019 LCCs & FSOCs**



GRAPH 16: **EU COUNTRIES – DIRECT CONNECTIVITY: MARKET SHARE BY AIRLINE TYPES (BASED HUB CARRIERS, LCCs & OTHERS)**

		2009			2019		
Country	**HB carrier[1]**	**HB**	**LCCs**	**Others**	**HB**	**LCCs**	**Others**
Austria	OS	50.6%	13.8%	35.6%	50.6%	25.8%	23.6%
Belgium	SN	32.2%	14.1%	53.7%	32.3%	37.2%	30.5%
Bulgaria	FB	32.1%	17.3%	50.6%	19.8%	36.2%	44.0%
Croatia	OU	53.8%	20.5%	25.7%	30.6%	37.1%	32.3%
Cyprus	CY*	37.2%	20.0%	42.8%	5.0%	46.8%	48.2%
Czech Republic	OK	59.2%	14.2%	26.6%	39.3%	23.6%	37.1%
Denmark	SK	40.3%	10.4%	49.3%	37.5%	29.4%	33.1%
Estonia	OV/LO*	47.0%	3.5%	49.5%	20.5%	11.2%	68.3%
Finland	AY	45.3%	2.1%	52.6%	71.0%	10.8%	18.2%
France	AF	53.9%	11.6%	34.5%	29.3%	29.2%	41.5%
Germany	LH	44.2%	12.9%	42.9%	34.2%	36.5%	29.3%
Greece	OA/A3*	60.0%	11.7%	28.3%	30%	32.1%	37.9%
Hungary	MA/LO*	53.1%	15.5%	31.4%	6.0%	55.9%	38.1%
Ireland	EI	31.5%	43.1%	25.4%	38.6%	41.1%	20.3%
Italy	AZ	19.0%	23.6%	57.4%	22.4%	45.7%	31.9%
Latvia	BT	75.2%	12.1%	12.7%	69.9%	14.0%	16.1%
Lithuania	BT	38.3%	12.7%	49.0%	15.1%	38.4%	46.5%
Luxembourg	LG	75.9%	-	24.1%	57.4%	13.8%	28.8%
Malta	KM	64.3%	18.3%	17.4%	33.3%	47.8%	18.9%
Netherlands	KL	50.5%	16.5%	33.0%	47.4%	29.2%	23.4%
Poland	LO	46.7%	24.7%	28.6%	42.0%	34.0%	24.0%
Portugal	TP	43.4%	23.9%	32.7%	35.1%	38.6%	26.3%
Romania	RO	33.0%	22.0%	45.0%	27.7%	50.5%	21.8%
Slovakia	QS&6D*	-	70.9%	29.1%	33.9%	40.0%	26.1%
Slovenia	JP	80.0%	2.4%	17.6%	66.4%	9.6%	24.0%
Spain	IB	28.9%	29.3%	41.8%	15.5%	54.1%	30.4%
Sweden	SK	28.7%	8.4%	62.9%	33.7%	22.5%	43.8%
United Kingdom	BA	18.4%	28.9%	52.6%	18.9%	46.6%	34.5%
Total		36.0%	19.6%	44.4%	28.8%	40.5%	30.7%

1. IATA designator

HB = Based hub carrier or home carrier

LCC = Low Cost Carrier

Others = Regional carriers and others

**CY - Charlie Airlines, operating as Cyprus Airways, founded in 2016.*
**OV - Estonian Air was the flag carrier in Estonia until 2015. Nordica (LO) was established immediately after.*
**Malév ceased operations in 2012.*
**Slovakia did not have a FSC home based carrier in 2009. By 2019, SmartwingsSlovakia (QS&6D) has taken the leading role.*

GRAPH 17: **NON-EU COUNTRIES – DIRECT CONNECTIVITY: MARKET SHARE BY AIRLINE TYPES (BASED HUB CARRIERS, LCCs & OTHERS)**

		2009			2019		
Country	**HB carrier[1]**	**HB**	**LCCs**	**Others**	**HB**	**LCCs**	**Others**
Iceland	FI	67.5%	2.1%	30.4%	71.7%	10.7%	17.6%
Norway	SK	35.2%	15.8%	49.0%	30.5%	23.5%	46.0%
Switzerland	LX	37.3%	12.9%	49.8%	34.8%	31.3%	33.9%
Russian Federation	SU	19.7%	0.3%	80.0%	35.6%	6.8%	57.6%
Turkey	TK	60.7%	6.2%	33.1%	55.2%	32.2%	12.6%
Ukraine	PS	14.6%	0.8%	84.6%	51.5%	8.1%	40.4%
Belarus	B2	65.4%	-	34.6%	72.0%	0.2%	27.8%
Israel	LY	32.7%	2.1%	65.3%	22.6%	16.6%	60.8%
Moldova	9U	47.9%	-	52.1%	44.8%	21.2%	34.0%
Georgia	A9	27.8%	-	72.2%	18.4%	21.8%	59.8%
Bosnia & Herzegovina	JA*	21.8%	6.3%	71.9%	-	34.1%	65.9%
Serbia	JU	51.1%	2.7%	46.2%	50.4%	13.8%	35.8%
Montenegro	YM	58.1%	-	41.9%	34.1%	17.1%	48.8%
Albania	-	-	8.8%	91.2%	-	34.9%	65.1%
North Macedonia	-	-	1.0%	99.0%	-	51.2%	48.8%
Kosovo	-	-	-	-	-	50.7%	49.3%
Total		36.9%	8.3%	54.8%	43.4%	22.4%	34.2%

1. IATA designator

HB = Based hub carrier or home carrier

LCC = Low Cost Carrier

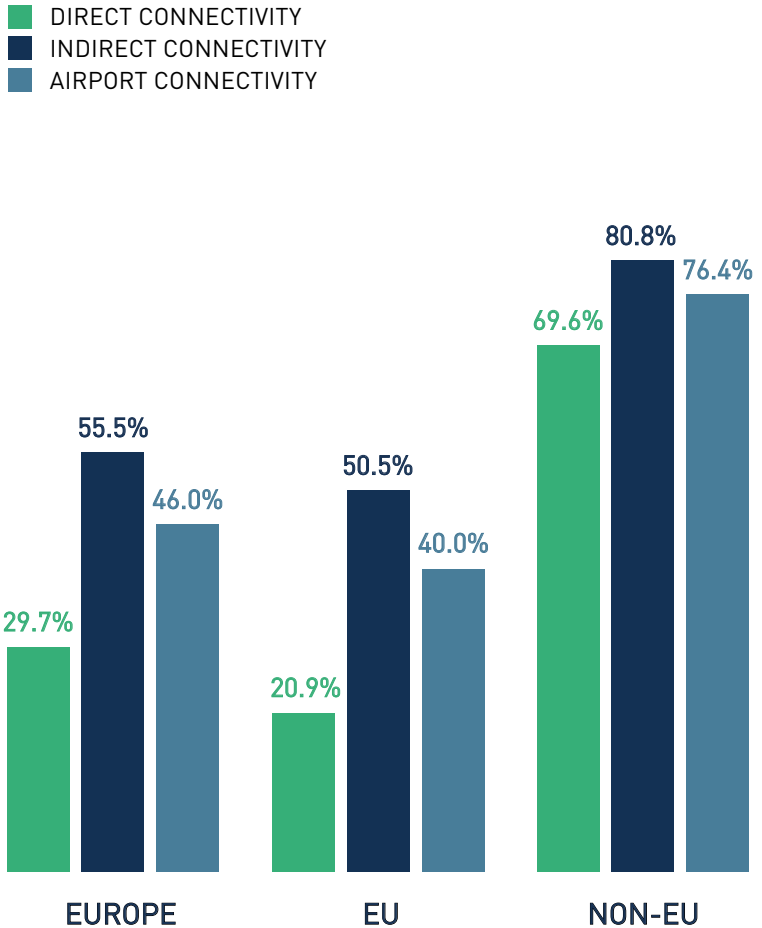
Others = Regional carriers and others

**B&H Airlines (JA) was the flag carrier of Bosnia and Herzegovina until 2015.*
**Albania, North Macedonia and Kosovo do not have hub carrier.*

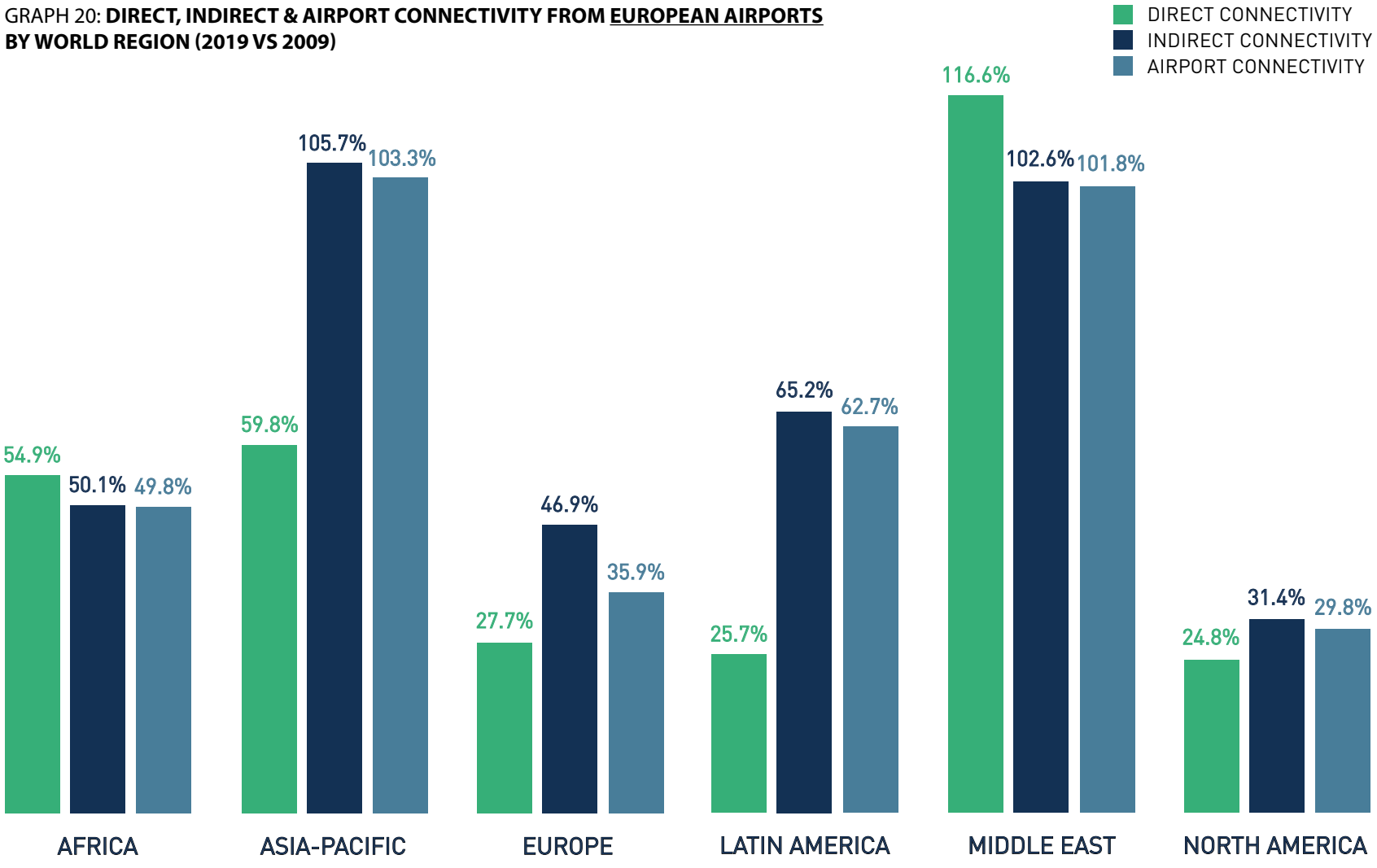
EUROPEAN & EU MARKETS
OVERVIEW

GRAPH 18: **DIRECT, INDIRECT & AIRPORT CONNECTIVITY (2019 VS 2018)**

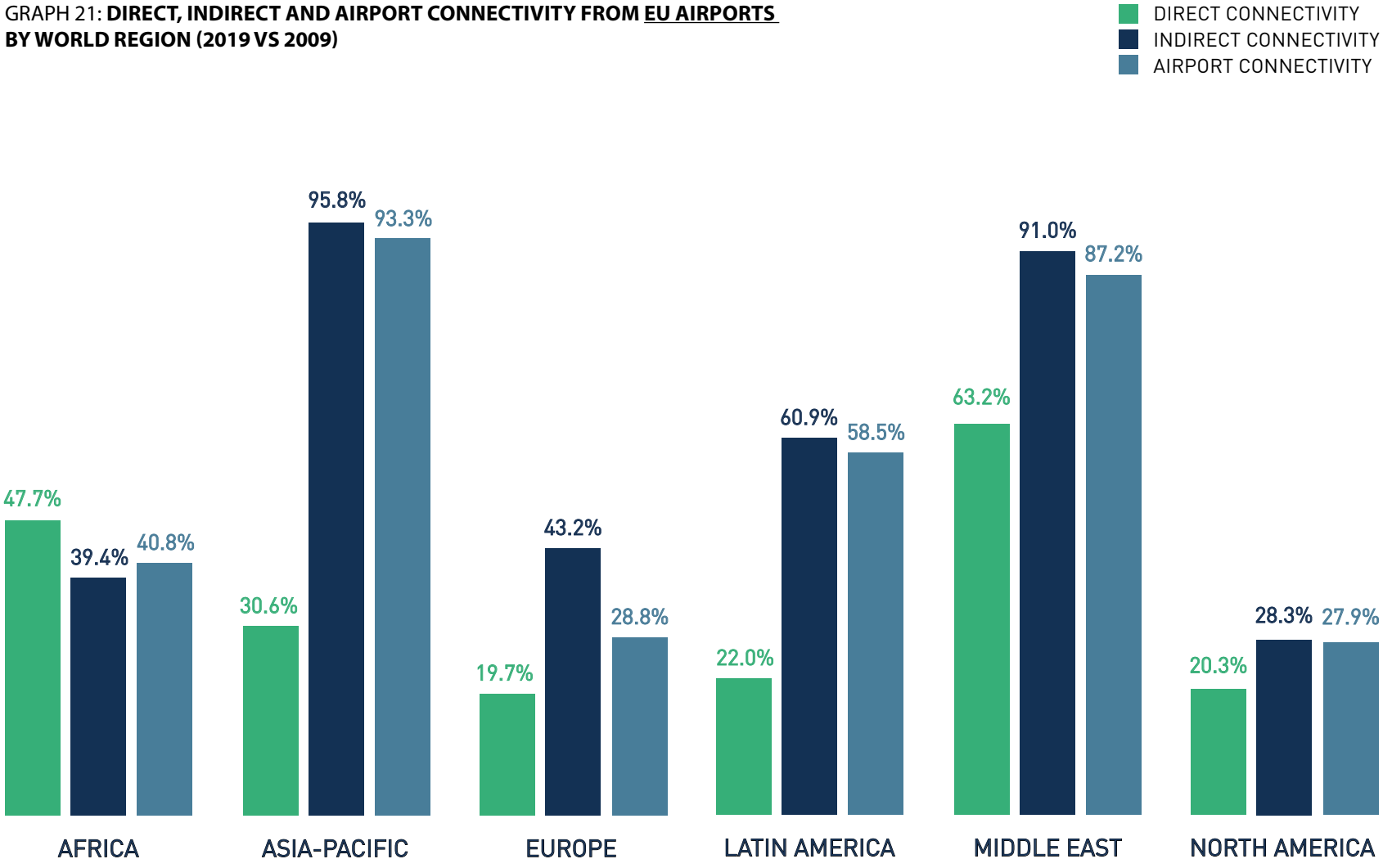
GRAPH 19: **DIRECT, INDIRECT & AIRPORT CONNECTIVITY (2019 VS 2009)**



GRAPH 20: **DIRECT, INDIRECT & AIRPORT CONNECTIVITY FROM EUROPEAN AIRPORTS BY WORLD REGION (2019 VS 2009)**



GRAPH 21: **DIRECT, INDIRECT AND AIRPORT CONNECTIVITY FROM EU AIRPORTS BY WORLD REGION (2019 VS 2009)**



APPENDIXES

APPENDIX 1: CONNECTIVITY BY COUNTRY

	CONNECTIVITY TYPE				GDP 2018	GROWTH 2019 VS 2018				GROWTH 2019 VS 2014				GROWTH 2019 VS 2009			
Country	**Direct**	**Indirect**	**Airport**	**Hub**	**(euros)**	**Direct**	**Indirect**	**Airport**	**Hub**	**Direct**	**Indirect**	**Airport**	**Hub**	**Direct**	**Indirect**	**Airport**	**Hub**
Spain	20,393	33,058	53,451	27,994	1,208,248	2.7%	6.4%	5.0%	9.2%	31.8%	43.8%	39.0%	49.0%	19.0%	55.0%	39.0%	18.1%
Germany	19,164	54,687	73,851	121,141	3,386,000	0.0%	2.8%	2.1%	0.2%	12.8%	18.6%	17.0%	15.9%	8.1%	41.6%	31.1%	33.2%
United Kingdom	18,151	39,680	57,832	39,652	2,393,693	-0.8%	0.4%	0.0%	0.9%	9.6%	19.3%	16.1%	7.6%	11.0%	42.4%	30.7%	21.2%
France	14,604	31,531	46,135	49,972	2,348,991	0.7%	4.6%	3.3%	-1.5%	9.0%	18.2%	15.1%	-4.2%	8.9%	34.2%	25.0%	-8.0%
Turkey	12,975	14,482	27,457	45,675	753,784	2.5%	13.7%	8.1%	18.1%	26.4%	21.0%	23.5%	34.6%	159.9%	144.5%	151.5%	386.1%
Italy	12,639	30,826	43,465	17,755	1,756,982	3.7%	5.2%	4.8%	8.5%	16.9%	30.1%	26.0%	21.3%	17.5%	50.3%	39.1%	42.6%
Russian Federation	10,230	12,974	23,204	30,043	1,397,200	7.7%	3.2%	5.2%	18.8%	48.7%	30.8%	38.2%	76.9%	103.8%	92.1%	97.1%	393.2%
Norway	7,007	8,350	15,357	4,395	368,389	-6.7%	-0.4%	-3.4%	-3.1%	-7.8%	-5.5%	-6.5%	-2.3%	0.3%	30.9%	14.9%	45.2%
Greece	6,588	8,910	15,498	3,404	184,714	5.3%	8.1%	6.9%	3.1%	61.7%	71.5%	67.2%	65.4%	49.8%	83.8%	67.6%	89.6%
Netherlands	5,517	12,085	17,603	58,354	773,373	1.0%	4.7%	3.5%	0.9%	19.2%	18.1%	18.4%	18.0%	38.1%	35.1%	36.0%	73.0%
Switzerland	4,632	15,249	19,881	19,920	597,314	-0.6%	1.9%	1.3%	8.5%	5.2%	16.0%	13.3%	28.6%	21.0%	47.3%	40.2%	48.5%
Portugal	4,480	10,293	14,773	6,807	201,606	1.2%	2.2%	1.9%	-1.5%	49.7%	68.4%	62.3%	52.0%	77.8%	125.9%	108.8%	156.3%
Sweden	4,206	9,267	13,473	3,458	467,012	-7.5%	0.7%	-2.0%	-13.8%	2.4%	23.9%	16.3%	13.3%	38.1%	56.1%	50.0%	130.3%
Poland	3,238	7,542	10,780	6,426	496,461.8	3.9%	5.3%	4.9%	19.7%	66.5%	47.0%	52.4%	177.0%	74.2%	84.5%	81.3%	337.1%
Austria	3,178	9,074	12,252	15,698	386,094	10.7%	4.7%	6.2%	2.9%	10.2%	22.7%	19.2%	20.1%	4.5%	45.4%	32.0%	27.5%
Denmark	2,983	7,728	10,711	6,103	297,634	-1.8%	-0.1%	-0.6%	7.6%	9.4%	16.2%	14.2%	-2.1%	18.0%	50.2%	39.6%	-2.6%
Ireland	2,832	7,579	10,411	4,416	318,460	0.3%	4.3%	3.2%	4.4%	27.8%	36.0%	33.7%	121.0%	35.2%	75.9%	62.5%	400.7%
Belgium	2,785	6,495	9,280	6,399	450,506	-0.8%	2.7%	1.6%	-8.9%	5.5%	11.5%	9.7%	-1.0%	19.7%	26.0%	24.0%	12.0%
Finland	2,457	6,383	8,840	12,397	233,555	-1.2%	3.2%	1.9%	7.0%	14.3%	22.9%	20.4%	62.2%	20.3%	46.4%	38.1%	140.0%
Romania	1,688	3,255	4,944	354	202,884	-2.1%	-5.8%	-4.5%	3.3%	75.5%	10.6%	26.6%	31.4%	41.8%	23.1%	28.9%	0.4%

	CONNECTIVITY TYPE				GDP 2018	GROWTH 2019 VS 2018				GROWTH 2019 VS 2014				GROWTH 2019 VS 2009			
Country	Direct	Indirect	Airport	Hub	(euros)	Direct	Indirect	Airport	Hub	Direct	Indirect	Airport	Hub	Direct	Indirect	Airport	Hub
Czech Republic	1,575	4,333	5,909	1,678	206,823	-4.5%	5.8%	2.8%	-17.1%	25.0%	41.2%	36.5%	8.8%	4.6%	57.8%	39.0%	-47.6%
Israel	1,519	5,311	6,830	190	312,710	1.4%	6.0%	5.0%	19.3%	35.3%	44.9%	42.7%	109.9%	107.8%	63.8%	71.9%	187.1%
Croatia	1,401	3,915	5,316	114	51,468	7.3%	9.5%	8.9%	-8.6%	61.1%	82.2%	76.1%	1931.8%	104.9%	151.9%	137.5%	1518.6%
Ukraine	1,095	2,346	3,441	1,088	99,278	16.4%	14.5%	15.1%	-9.0%	19.4%	5.3%	9.4%	-16.9%	30.9%	28.7%	29.4%	354.2%
Hungary	1,083	3,302	4,385	223	131,935	4.3%	5.3%	5.0%	13.5%	47.6%	38.3%	40.5%	208.6%	4.7%	37.4%	27.6%	-80.6%
Bulgaria	979	2,067	3,045	48	55,182	-0.3%	11.4%	7.4%	-2.0%	76.3%	46.2%	54.7%	28.7%	84.7%	57.5%	65.4%	32.8%
Latvia	845	1,447	2,292	907	29,524	5.8%	8.1%	7.3%	28.7%	40.7%	60.8%	52.8%	196.0%	47.1%	136.9%	93.4%	160.1%
Cyprus	827	1,407	2,234	33	20,731	-4.6%	-2.5%	-3.3%	-40.5%	70.2%	86.7%	80.2%	15.0%	64.6%	104.4%	87.6%	-65.8%
Serbia	632	1,758	2,390	263	42,780	9.0%	9.0%	9.0%	4.9%	13.9%	31.9%	26.6%	-4.0%	74.1%	79.0%	77.7%	611.0%
Luxembourg	560	1,945	2,505	82	58,869.2	0.1%	-1.3%	-1.0%	2.8%	30.9%	33.0%	32.6%	41.4%	46.0%	75.6%	68.0%	158.2%
Malta	557	1,628	2,185	79	12,320	5.5%	7.5%	7.0%	6.4%	55.7%	124.4%	101.7%	89.7%	97.4%	266.1%	200.6%	130.8%
Iceland	552	1,336	1,888	2,818	21,918	-24.2%	-4.3%	-11.1%	-38.9%	48.4%	361.7%	185.4%	100.5%	187.8%	2268.1%	660.3%	923.8%
Lithuania	511	1,149	1,660	11	45,114	-2.8%	2.4%	0.8%	67.6%	34.2%	100.5%	74.1%	-10.7%	118.6%	157.0%	143.8%	13218.8%
Belarus	505	1,049	1,554	40	48,204	9.8%	9.9%	9.9%	72.0%	71.0%	86.9%	81.4%	132.7%	251.9%	236.8%	241.6%	4164.3%
Georgia	502	1,203	1,705	17	13,350	5.1%	21.9%	16.5%	49.2%	126.5%	104.2%	110.3%	763.6%	281.3%	361.7%	334.7%	196.6%
Estonia	383	1,368	1,751	6	25,657	-5.3%	-4.1%	-4.3%	-70.6%	35.3%	28.9%	30.3%	-27.6%	69.6%	195.6%	154.3%	28.1%
Montenegro	295	648	943	10	4,288	5.2%	-0.6%	1.2%	177.3%	73.3%	125.4%	106.0%	152.3%	96.0%	734.4%	313.1%	161.8%
Moldova	281	589	869	62	7,195	-1.0%	8.7%	5.4%	-2.2%	68.9%	58.2%	61.5%	335.1%	149.2%	251.3%	210.3%	785.3%
Albania	255	743	998	1	12,746	18.3%	23.0%	21.8%	909.2%	-2.3%	52.3%	33.3%	-26.1%	41.4%	126.3%	96.2%	-55.1%
Slovenia	248	1,136	1,383	167	45,948	-9.7%	3.2%	0.6%	-46.3%	23.7%	54.2%	47.7%	69.4%	-15.4%	32.7%	20.4%	-4.6%
North Macedonia	186	401	587	0	10,735	6.4%	1.3%	2.9%	--	49.8%	47.8%	48.4%	--	97.3%	137.4%	123.0%	417.3%
Slovak Republic	168	41	209	9	90,202	-7.3%	-26.3%	-11.7%	-15.1%	95.2%	65.3%	88.5%	1774.1%	17.5%	-39.4%	-0.7%	-9.8%
Bosnia & Herzegovina	115	618	732	1	16,759	15.2%	18.7%	18.2%	-80.7%	12.5%	60.0%	50.1%	-19.4%	22.9%	140.7%	109.3%	--

APPENDIX 2: GLOSSARY OF AIRPORT CODES

1.1 AIRPORTS WITHIN EUROPE

CODE	AIRPORT NAME	COUNTRY
AMS	Amsterdam Schiphol	Netherlands
ARN	Stockholm	Sweden
ATH	Athens	Greece
BCN	Barcelona	Spain
BGY	Milan Bergamo	Italy
BRU	Brussels	Belgium
CDG	Paris-Charles de Gaulle	France
CPH	Copenhagen	Denmark
CRL	Charleroi	Belgium
DME	Moscow Domodedovo	Russian Federation
DUB	Dublin	Ireland
DUS	Düsseldorf	Germany
FCO	Rome Fiumicino	Italy
FRA	Frankfurt	Germany
HEL	Helsinki	Finland
IST	Istanbul	Turkey
KEF	Keflavik	Iceland
LGW	London Gatwick	United Kingdom
LHR	London Heathrow	United Kingdom
LIS	Lisbon	Portugal
MAD	Madrid	Spain
MAN	Manchester	United Kingdom
MUC	Munich	Germany
MXP	Milan Malpensa	Italy
NCE	Nice	France
OPO	Porto	Portugal
ORY	Paris Orly	France
OSL	Oslo	Norway
PMI	Palma De Mallorca	Spain
PRG	Prague	Czech Republic
SAW	Istanbul Sabiha Gokcen	Turkey
STN	London Stansted	United Kingdom
SVO	Moscow Sheremetyevo	Russian Federation
VIE	Vienna	Austria
WAW	Warsaw	Poland
ZRH	Zurich	Switzerland

APPENDIX 2: GLOSSARY OF AIRPORT CODES

1.2 AIRPORTS BEYOND EUROPE

CODE	AIRPORT NAME	COUNTRY
ADD	Addis Ababa Bole	Ethiopia
AMM	Amman Queen Alia	Jordan
ATL	Hartsfield–Jackson Atlanta	United States
BOM	Mumbai Chhatrapati Shivaji Maharaj	India
CAN	Guangzhou Baiyun	China
CLT	Charlotte Douglas	United States
CMN	Casablanca Mohammed V	Morocco
CTU	Chengdu Shuangliu	China
DEL	New Delhi Indira Gandhi	India
DEN	Denver	United States
DFW	Dallas-Fort Worth	United States
DOH	Doha Hamad	Qatar
DXB	Dubai	United Arab Emirates
EWR	Newark Liberty	United States
IAH	Houston George Bush	United States
KMG	Kunming Wujiaba	China
MCT	Muscat	Oman
NBO	Nairobi Jomo Kenyatta	Kenya
ORD	Chicago-O'Hare	United States
PTY	Panama Tocumen	Panama
PVG	Shanghai Pudong	China
SZX	Shenzhen Bao'an	China
YYZ	Toronto-Pearson	Canada

APPENDIX 3: LIST OF SELECTED LOW COST CARRIERS (LCCs)

CODE	AIRLINE NAME
G9	Air Arabia
3O	Air Arabia Maroc
ZM	Air Manas
2B	Albawings
AD	Azul Airlines
OB	Blue Air
BV	Blue Panorama Airlines
SS	Corsair
U2	Easyjet
WK	Edelweiss Air
EW	Eurowings
5F	Fly One
FZ	Flydubai
XY	Flynas - National Air Services
BF	French Bee
4U	germanwings
LS	Jet2.com
OE	Laudamotion
VK/IB/LV	Level
ZB	Monarch Airlines
D8	Norwegian
DY	Norwegian Air Shuttle
8K	Onur Air Tasimacilik A.S.
PC	Pegasus Airlines
DP	Pobeda
PF	Primera Air
FR	Ryanair
TR	Scoot
NE	SkyEurope
NB	Sterling Airlines
SQ	SunExpress
XG	SunExpress Deutschland GmbH
MT	Thomas Cook Airlines
HQ	Thomas Cook Airlines Belgium N.V
DK	Thomas Cook Scandinavia
BY	TUI Airways
HV	Transavia.com
TO	Transavia.com France
TB	TUI fly Belgium
OR	TUI fly Netherlands
X3	TUIfly
6B	TUIfly Nordic AB
V7	Volotea
VY	Vueling Airlines
WS	Westjet
W6	Wizz Air
WW	WOW Air
SE	XL Airways France

APPENDIX 4: LIST OF SELECTED BASED HUB CARRIERS

CODE	AIRLINE NAME
JP	Adria Airways
A3	Aegean Airlines
EI	Aer Lingus
SU	Aeroflot
BT	Air Baltic
AF	Air France
KM	Air Malta
9U	Air Moldova
JU	Air Serbia
AZ	Alitalia
OS	Austrian Airlines
JA	B&H Airlines
B2	Belavia - Belarusian Airlines
BA	British Airways
SN	Brussels Airlines
FB	Bulgaria Air
CY	Charlie Airlines/Cyprus Airways
OU	Croatia Airlines
OK	Czech Airlines
LY	El Al Israel Airlines
OV	Estonian Air
AY	Finnair
A9	Georgian Airways
IB	Iberia
FI	Icelandair
KL	KLM
LO	LOT Polish Airlines
LH	Lufthansa
LG	Luxair
MA	MALÉV
YM	Montenegro Airlines
OA	Olympic Air
SK	Scandinavian Airlines System
QS	Smartwings
LX	SWISS
TP	TAP Portugal
RO	TAROM
6D	Travel Service
TK	Turkish Airlines
PS	Ukraine International Airlines

APPENDIX 5: CONNECTIVITY BY INDIVIDUAL AIRPORTS

		ABSOLUTE 2019			GROWTH 2019 VS 2018			GROWTH 2019 VS 2014			GROWTH 2019 VS 2009		
Code	Airport	Direct	Indirect	Airport	Direct	Indirect	Airport	Direct	Indirect	Airport	Direct	Indirect	Airport
FRA	Frankfurt	5,098	14,145	19,243	0.0%	1.5%	1.1%	10.1%	3.0%	4.8%	13.3%	25.6%	22.1%
AMS	Amsterdam	4,870	11,962	16,832	0.2%	5.1%	3.7%	16.8%	19.6%	18.8%	30.3%	33.9%	32.8%
CDG	Paris Charles de Gaulle	4,760	15,710	20,469	3.2%	4.4%	4.1%	6.4%	16.2%	13.8%	-0.3%	39.7%	27.7%
LHR	London Heathrow	4,682	21,244	25,925	0.3%	2.7%	2.3%	-0.7%	21.0%	16.4%	0.8%	49.8%	37.7%
IST	Istanbul	4,474	5,755	10,229	3.6%	11.3%	7.8%	12.6%	6.7%	9.2%	89.6%	70.4%	78.3%
MUC	Munich	4,051	10,735	14,786	-1.6%	12.8%	8.4%	15.1%	24.7%	21.9%	7.3%	69.3%	46.2%
MAD	Madrid-Barajas	3,977	8,999	12,976	4.2%	6.2%	5.6%	24.5%	24.2%	24.3%	-4.9%	50.6%	27.7%
SVO	Sheremetyevo International Airport	3,740	3,318	7,058	17.1%	-1.6%	7.5%	61.5%	36.0%	48.4%	178.2%	74.0%	117.1%
BCN	Barcelona-El Prat	3,453	7,768	11,221	1.9%	5.5%	4.4%	21.2%	35.5%	30.7%	24.5%	52.8%	42.8%
FCO	Rome Fiumicino	3,289	8,288	11,577	2.6%	2.3%	2.4%	1.0%	25.0%	17.1%	4.6%	43.1%	29.5%
LGW	London Gatwick	2,961	1,721	4,683	0.4%	-1.1%	-0.1%	10.1%	60.7%	24.5%	23.6%	37.1%	28.2%
VIE	Vienna	2,754	6,233	8,987	13.8%	7.8%	9.6%	16.4%	36.9%	29.9%	15.2%	70.2%	48.5%
CPH	Copenhagen	2,630	6,179	8,809	-2.3%	-1.0%	-1.4%	8.4%	12.0%	10.9%	16.2%	40.7%	32.4%
PMI	Palma de Mallorca	2,624	2,058	4,682	3.9%	12.2%	7.4%	33.6%	94.7%	55.0%	45.5%	218.1%	91.1%
ZRH	Zürich	2,528	8,030	10,557	0.3%	0.8%	0.7%	9.3%	14.3%	13.1%	16.2%	47.1%	38.3%
OSL	Oslo	2,494	3,938	6,432	-2.8%	-1.6%	-2.1%	4.8%	4.7%	4.7%	23.1%	29.1%	26.7%
ORY	Paris-Orly	2,406	1,131	3,537	-1.8%	7.8%	1.1%	1.1%	4.5%	2.2%	10.8%	80.6%	26.4%
ARN	Stockholm-Arlanda	2,402	5,792	8,194	-5.2%	1.1%	-0.8%	2.5%	22.8%	16.0%	45.2%	43.0%	43.6%
ATH	Athens	2,377	4,770	7,147	7.7%	11.7%	10.3%	63.6%	55.8%	58.4%	18.4%	52.3%	39.1%
DUB	Dublin	2,353	6,393	8,746	0.9%	5.8%	4.4%	37.5%	42.5%	41.1%	50.8%	95.8%	81.3%

		ABSOLUTE 2019			GROWTH 2019 VS 2018			GROWTH 2019 VS 2014			GROWTH 2019 VS 2009		
Code	Airport	Direct	Indirect	Airport	Direct	Indirect	Airport	Direct	Indirect	Airport	Direct	Indirect	Airport
SAW	Sabiha Gökçen International	2,285	857	3,142	8.0%	21.3%	11.3%	37.9%	340.7%	69.7%	523.7%	2296.1%	681.3%
DUS	Düsseldorf	2,190	6,151	8,340	5.3%	2.0%	2.8%	10.1%	22.9%	19.2%	3.9%	44.5%	31.0%
LIS	Lisbon	2,185	6,442	8,628	-0.8%	1.4%	0.8%	44.3%	51.3%	49.4%	80.2%	103.7%	97.2%
BRU	Brussels	2,155	6,395	8,551	-1.3%	2.6%	1.6%	0.0%	11.3%	8.2%	8.1%	24.7%	20.0%
MAN	Manchester	2,146	5,185	7,331	0.8%	-0.2%	0.1%	23.2%	12.6%	15.5%	41.8%	35.4%	37.2%
DME	Moscow Domodedovo	2,056	2,106	4,163	-6.0%	-1.1%	-3.6%	1.7%	-12.0%	-5.7%	28.1%	3.3%	14.2%
MXP	Milan Malpensa	2,008	5,698	7,705	8.4%	2.4%	3.9%	33.2%	42.5%	40.0%	19.0%	35.7%	30.9%
TXL	Berlin Tegel	1,943	6,041	7,984	12.3%	1.6%	4.0%	8.2%	38.5%	29.6%	30.2%	66.1%	55.7%
HEL	Helsinki	1,894	3,778	5,672	0.0%	3.5%	2.3%	21.7%	22.9%	22.5%	30.6%	35.3%	33.7%
STN	London Stansted	1,846	394	2,239	-0.6%	7.2%	0.7%	31.2%	81.4%	37.9%	24.4%	100.3%	33.2%
WAW	Warsaw	1,744	4,056	5,800	3.7%	8.1%	6.7%	51.5%	30.3%	36.0%	59.3%	64.8%	63.1%
AYT	Fraport TAV Antalya	1,722	1,083	2,805	22.7%	37.0%	27.8%	91.5%	30.8%	62.4%	257.6%	271.8%	262.9%
NCE	Nice Côte d'Azur	1,604	3,426	5,030	3.3%	5.6%	4.9%	6.8%	19.2%	15.0%	10.2%	36.5%	26.9%
LED	St-Petersburg	1,583	3,256	4,839	4.1%	6.2%	5.5%	32.7%	62.2%	51.2%	91.4%	119.8%	109.6%
AGP	Malaga-Costa del Sol	1,520	2,555	4,075	6.4%	13.3%	10.6%	40.7%	62.8%	53.8%	53.9%	99.0%	79.4%
PRG	Prague	1,469	4,322	5,791	-3.3%	7.7%	4.7%	26.1%	44.2%	39.1%	4.2%	68.8%	45.9%
VKO	Vnukovo International Airport	1,438	286	1,724	0.5%	-18.7%	-3.3%	--	--	--	--	--	--
TLV	Tel Aviv Ben Gurion	1,433	5,311	6,745	10.4%	6.0%	6.9%	58.8%	45.0%	47.7%	122.1%	63.9%	73.6%
GVA	Genève	1,404	5,255	6,659	-0.1%	2.1%	1.6%	0.3%	16.0%	12.3%	23.6%	44.8%	39.7%
HAM	Hamburg	1,400	5,548	6,949	-5.6%	-3.7%	-4.1%	1.7%	33.7%	25.7%	0.6%	49.4%	36.1%
EDI	Edinburgh	1,296	3,228	4,523	2.6%	5.3%	4.5%	30.2%	21.9%	24.2%	23.7%	56.4%	45.4%
STR	Stuttgart	1,258	3,203	4,461	6.3%	3.0%	3.9%	29.5%	18.6%	21.5%	6.7%	20.4%	16.2%
LTN	London Luton	1,159	73	1,232	--	--	--	--	--	--	--	--	--

		ABSOLUTE 2019			GROWTH 2019 VS 2018			GROWTH 2019 VS 2014			GROWTH 2019 VS 2009		
Code	Airport	Direct	Indirect	Airport	Direct	Indirect	Airport	Direct	Indirect	Airport	Direct	Indirect	Airport
LYS	Lyon-Saint Exupéry	1,148	2,486	3,634	1.0%	6.2%	4.5%	14.2%	7.4%	9.5%	-3.0%	11.2%	6.3%
OTP	Bucharest Otopeni	1,112	2,436	3,549	-0.5%	-5.8%	-4.2%	56.2%	2.8%	15.1%	66.5%	17.6%	29.6%
BHX	Birmingham	1,108	2,624	3,732	-0.8%	-3.5%	-2.7%	12.6%	11.4%	11.7%	15.7%	21.1%	19.5%
ALC	Alicante-Elche	1,089	964	2,053	6.1%	9.8%	7.8%	47.5%	86.5%	63.5%	42.2%	78.0%	57.0%
BUD	Budapest	1,083	3,302	4,385	4.3%	5.3%	5.0%	47.6%	38.3%	40.5%	4.7%	37.4%	27.6%
CGN	Köln-Bonn	1,019	1,570	2,589	-2.5%	3.0%	0.7%	21.7%	21.8%	21.7%	2.4%	74.4%	36.6%
LIN	Milan Linate	996	2,307	3,303	4.1%	1.6%	2.4%	8.3%	-3.7%	-0.4%	19.7%	25.1%	23.4%
LPA	Gran Canaria	974	796	1,770	-6.1%	-4.7%	-5.4%	44.5%	62.6%	52.1%	28.8%	40.9%	33.9%
ESB	Ankara Esenboga	946	1,160	2,106	-18.4%	2.1%	-8.2%	6.9%	10.3%	8.7%	102.7%	84.8%	92.4%
OPO	Porto	939	2,319	3,257	2.8%	3.3%	3.1%	63.2%	127.8%	104.4%	118.7%	185.2%	162.2%
VCE	Venice	938	3,811	4,749	-2.3%	-1.1%	-1.3%	17.6%	31.5%	28.5%	28.1%	69.8%	59.5%
MRS	Marseille Provence	932	2,150	3,081	2.3%	3.3%	3.0%	10.9%	14.7%	13.5%	11.2%	45.6%	33.2%
KBP	Kiev	880	1,701	2,581	17.7%	11.9%	13.8%	13.3%	-0.8%	3.6%	26.8%	8.9%	14.4%
IBZ	Ibiza	872	763	1,634	-0.2%	19.1%	7.9%	33.9%	110.6%	61.3%	61.5%	273.5%	119.7%
GLA	Glasgow	858	1,566	2,424	-7.4%	-11.6%	-10.2%	11.7%	6.7%	8.4%	14.3%	26.9%	22.1%
NAP	Naples	857	1,653	2,510	5.7%	29.8%	20.4%	61.2%	114.8%	92.9%	44.9%	270.2%	141.8%
RIX	Riga	845	1,447	2,292	5.8%	8.1%	7.3%	40.7%	60.8%	52.8%	47.1%	136.9%	93.4%
TLS	Toulouse-Blagnac	841	--	841	-9.2%	--	--	7.8%	--	--	15.3%	--	--
LCY	London City	821	1,208	2,029	1.4%	9.3%	6.0%	26.0%	42.6%	35.4%	25.2%	13.4%	17.9%
BGY	Bergamo	820	99	919	3.0%	-25.2%	-1.1%	38.5%	-28.5%	25.8%	61.8%	-24.6%	44.0%
CTA	Catania	809	1,164	1,973	5.4%	5.7%	5.6%	--	--	--	--	--	--
BGO	Bergen	762	1,033	1,795	-1.8%	4.3%	1.7%	-3.6%	-5.3%	-4.6%	4.0%	32.9%	18.9%
ADB	Izmir Adnan Menderes	761	1,045	1,806	-1.3%	29.2%	14.3%	27.7%	16.1%	20.7%	116.0%	157.8%	138.3%

		ABSOLUTE 2019			GROWTH 2019 VS 2018			GROWTH 2019 VS 2014			GROWTH 2019 VS 2009		
Code	Airport	Direct	Indirect	Airport	Direct	Indirect	Airport	Direct	Indirect	Airport	Direct	Indirect	Airport
FAO	Faro	732	789	1,521	2.5%	-0.8%	0.7%	39.7%	65.3%	51.9%	75.1%	205.0%	124.8%
SXF	Berlin Schönefeld	721	466	1,187	-17.0%	-5.3%	-12.8%	37.2%	50.0%	42.0%	34.0%	204.9%	71.9%
BLQ	Bologna	717	2,479	3,196	7.4%	12.2%	11.1%	26.0%	25.0%	25.2%	36.8%	59.9%	54.1%
BOD	Bordeaux	713	1,271	1,984	5.4%	5.5%	5.4%	34.9%	80.2%	60.8%	59.8%	57.0%	58.0%
NTE	Nantes	703	1,023	1,727	7.1%	21.5%	15.2%	50.6%	71.9%	62.5%	114.2%	77.0%	90.5%
BSL	Basel-Mulhouse	697	1,964	2,662	5.0%	6.0%	5.7%	15.3%	23.8%	21.5%	43.3%	67.3%	60.3%
BRS	Bristol	685	533	1,218	-8.1%	-41.4%	-26.4%	19.0%	6.9%	13.4%	30.4%	-18.1%	3.6%
HER	Heraklion	676	697	1,373	-3.3%	3.9%	0.2%	52.2%	128.9%	83.4%	97.3%	322.4%	170.4%
VLC	Valencia	657	1,719	2,377	7.3%	7.4%	7.4%	55.1%	69.4%	65.2%	7.5%	79.3%	51.4%
TFN	Tenerife Norte	657	542	1,199	2.5%	2.6%	2.5%	58.2%	62.3%	60.0%	12.8%	54.7%	28.6%
GOT	Göteborg Landvetter	655	2,561	3,216	-6.8%	4.8%	2.2%	16.9%	23.6%	22.2%	33.5%	60.9%	54.5%
BEG	Belgrade	632	1,758	2,390	9.0%	9.0%	9.0%	13.9%	31.9%	26.6%	74.1%	79.0%	77.7%
LCA	Larnaka	621	1,302	1,923	-7.8%	-2.4%	-4.2%	81.1%	86.0%	84.4%	54.9%	106.4%	86.4%
AER	Sochi	599	540	1,139	15.0%	12.0%	13.5%	--	--	--	--	--	--
TRD	Trondheim	591	705	1,296	-4.9%	-0.8%	-2.7%	-9.9%	-7.1%	-8.4%	-5.4%	47.9%	17.7%
SKG	Thessaloniki	590	913	1,502	-1.0%	17.1%	9.3%	37.3%	74.0%	57.5%	19.2%	61.2%	41.6%
HAJ	Hannover	587	2,396	2,983	-0.6%	-8.2%	-6.8%	20.5%	11.0%	12.8%	-4.0%	16.4%	11.7%
KRK	Krakow	585	1,526	2,111	16.5%	2.1%	5.7%	83.5%	75.5%	77.6%	104.0%	107.9%	106.8%
PMO	Palermo	570	721	1,290	3.3%	7.3%	5.5%	30.1%	45.8%	38.4%	15.6%	117.0%	56.5%
LUX	Luxembourg	560	1,945	2,505	0.1%	-1.3%	-1.0%	30.9%	33.0%	32.6%	46.0%	75.6%	68.0%
MLA	Malta	557	1,628	2,185	5.5%	7.5%	7.0%	55.7%	124.4%	101.7%	97.4%	266.1%	200.6%
KEF	Keflavik	552	1,336	1,888	-24.2%	-4.3%	-11.1%	48.4%	361.7%	185.4%	187.8%	2268.1%	660.3%
SVQ	Sevilla	532	852	1,385	20.4%	29.2%	25.7%	66.6%	106.1%	88.9%	37.7%	128.6%	82.3%

		ABSOLUTE 2019			GROWTH 2019 VS 2018			GROWTH 2019 VS 2014			GROWTH 2019 VS 2009		
Code	Airport	Direct	Indirect	Airport	Direct	Indirect	Airport	Direct	Indirect	Airport	Direct	Indirect	Airport
TFS	Tenerife Sur	532	498	1,030	9.6%	36.9%	21.3%	35.1%	132.5%	69.4%	112.2%	130.2%	120.5%
CRL	Charleroi	530	96	626	4.6%	10.9%	5.5%	27.4%	29.3%	27.7%	104.3%	735.2%	131.0%
BIO	Bilbao	527	1,869	2,396	6.5%	-3.4%	-1.4%	31.6%	19.4%	21.8%	17.8%	36.0%	31.5%
SOF	Sofia	525	1,764	2,289	-0.8%	9.8%	7.1%	41.1%	44.2%	43.4%	41.0%	51.2%	48.7%
ACE	Lanzarote	510	287	796	-2.8%	13.6%	2.5%	37.9%	188.7%	69.8%	74.4%	132.3%	91.6%
MSQ	Minsk	505	1,049	1,554	9.8%	9.9%	9.9%	71.0%	86.9%	81.4%	251.9%	236.8%	241.6%
BMA	Stockholm-Bromma	490	211	701	-6.3%	-2.0%	-5.0%	7.9%	108.7%	26.2%	36.9%	254.5%	67.9%
RHO	Rhodes	474	396	870	4.3%	21.5%	11.5%	43.9%	75.1%	56.7%	63.1%	180.6%	101.5%
SVG	Stavanger	466	844	1,310	-7.1%	2.1%	-1.4%	-26.6%	-39.7%	-35.6%	-17.2%	-9.3%	-12.3%
NCL	Newcastle	454	1,023	1,477	-9.1%	-8.9%	-9.0%	--	--	--	--	--	--
TOS	Tromsø	452	292	744	-11.3%	-1.2%	-7.6%	-2.2%	10.7%	2.5%	9.6%	74.9%	28.5%
ZAG	Zagreb	429	2,166	2,595	0.4%	5.7%	4.8%	26.0%	60.0%	53.2%	30.1%	85.6%	73.4%
EIN	Eindhoven	419	62	481	10.9%	49.6%	14.7%	57.8%	101.5%	62.3%	257.6%	1318.5%	295.6%
CAG	Cagliari	416	612	1,028	20.5%	18.2%	19.1%	25.0%	95.9%	59.3%	13.6%	719.9%	133.1%
BOO	Bodø	412	163	575	-10.7%	-10.9%	-10.8%	-9.2%	19.3%	-2.6%	-16.0%	36.0%	-5.8%
ABZ	Aberdeen	409	1,178	1,587	-7.6%	1.8%	-0.8%	-29.9%	-27.0%	-27.8%	-26.7%	10.1%	-2.5%
BRI	Bari	407	593	1,000	9.2%	-0.9%	3.0%	--	--	--	--	--	--
EMA	East Midlands	405	17	423	-5.6%	-64.2%	-11.6%	-9.5%	15.9%	-8.7%	6.2%	-75.7%	-6.8%
MAH	Menorca	402	270	672	7.7%	-2.8%	3.2%	77.1%	191.3%	110.2%	42.7%	87.4%	57.8%
NUE	Nürnberg	401	1,791	2,193	-10.3%	2.5%	-0.1%	8.5%	4.9%	5.5%	-12.7%	17.8%	10.7%
VNO	Vilnius	400	1,044	1,444	-3.2%	4.0%	1.9%	29.7%	107.6%	78.0%	138.6%	172.8%	162.3%
TLL	Tallinn	383	1,368	1,751	-5.3%	-4.1%	-4.3%	35.3%	28.9%	30.3%	69.6%	195.6%	154.3%
FUE	Fuerteventura	379	204	583	-12.1%	11.9%	-5.0%	41.0%	111.7%	59.6%	47.7%	75.5%	56.4%

		ABSOLUTE 2019			GROWTH 2019 VS 2018			GROWTH 2019 VS 2014			GROWTH 2019 VS 2009		
Code	Airport	Direct	Indirect	Airport	Direct	Indirect	Airport	Direct	Indirect	Airport	Direct	Indirect	Airport
SPU	Split	376	642	1,018	9.5%	10.6%	10.2%	88.6%	99.1%	95.1%	179.2%	246.9%	218.4%
OLB	Olbia	371	527	897	12.0%	53.9%	33.3%	35.0%	569.9%	154.1%	59.3%	1680.0%	242.3%
BJV	Mugla Milas - Bodrum	365	433	798	16.2%	55.8%	34.8%	53.3%	58.0%	55.8%	138.0%	253.1%	189.1%
VRN	Verona	358	741	1,098	6.2%	6.0%	6.1%	32.8%	3.9%	11.9%	28.6%	-9.3%	0.3%
BLL	Billund	354	1,549	1,903	1.9%	3.7%	3.4%	17.1%	36.6%	32.5%	33.0%	105.1%	86.3%
TBS	Tbilisi	346	1,096	1,442	-0.4%	24.0%	17.1%	105.7%	109.3%	108.4%	188.3%	346.1%	294.3%
CFU	Corfu	342	229	571	-3.7%	2.1%	-1.4%	62.1%	121.1%	81.6%	138.6%	307.0%	186.2%
TRN	Turin	332	1,346	1,677	-14.0%	-4.7%	-6.7%	-2.1%	-1.1%	-1.3%	-24.9%	9.6%	0.5%
DBV	Dubrovnik	329	845	1,174	6.1%	16.7%	13.5%	85.4%	138.5%	120.8%	169.9%	344.1%	276.0%
MCM	Monaco (Heliport)	326	--	326	0.0%	--	--	-2.4%	--	--	-14.0%	--	--
CIA	Rome Ciampino	319	64	383	-1.5%	-4.6%	-2.1%	12.8%	50.2%	17.6%	0.2%	30.5%	4.2%
FLR	Florence	318	1,938	2,256	0.0%	4.4%	3.7%	-0.1%	22.5%	18.7%	26.8%	42.0%	39.6%
SOU	Southampton	315	246	561	-13.9%	-44.3%	-30.5%	-18.2%	44.2%	0.9%	-32.4%	3341.2%	18.5%
JTR	Santorini	308	304	612	12.8%	0.0%	6.1%	168.6%	74.2%	111.7%	239.1%	222.4%	230.6%
ADA	Adana	306	395	702	-9.2%	-2.6%	-5.6%	10.8%	10.7%	10.7%	149.8%	167.3%	159.4%
BOJ	Bourgas	288	125	413	10.8%	10.5%	10.7%	179.1%	69.0%	133.1%	291.0%	358.0%	309.1%
KZN	Kazan	282	379	661	8.0%	1.1%	4.0%	186.7%	77.7%	112.1%	221.3%	575.3%	359.4%
KIV	Chisinau	281	589	869	-1.0%	8.7%	5.4%	68.9%	58.2%	61.5%	149.2%	251.3%	210.3%
JER	Channel Islands	276	87	363	5.9%	-8.2%	2.2%	-16.5%	41.6%	-7.4%	-39.9%	131.8%	-26.9%
TZX	Trabzon	269	383	651	-5.3%	17.7%	7.0%	59.6%	88.4%	75.3%	269.9%	328.6%	302.3%
WRO	Wroclaw	264	815	1,079	0.7%	5.8%	4.5%	54.6%	124.7%	102.2%	71.0%	204.4%	155.5%
PDL	Ponta Delgada	263	179	442	3.8%	3.8%	3.8%	96.2%	191.7%	126.2%	90.9%	157.2%	113.2%
KGS	Kos	260	199	459	5.0%	13.8%	8.7%	53.7%	98.7%	70.4%	150.9%	134.1%	143.3%

		ABSOLUTE 2019			GROWTH 2019 VS 2018			GROWTH 2019 VS 2014			GROWTH 2019 VS 2009		
Code	Airport	Direct	Indirect	Airport	Direct	Indirect	Airport	Direct	Indirect	Airport	Direct	Indirect	Airport
TIA	Tirana	255	743	998	18.3%	23.0%	21.8%	-2.3%	52.3%	33.3%	41.4%	126.3%	96.2%
LJU	Ljubljana	248	1,136	1,383	-9.7%	3.2%	0.6%	23.7%	54.2%	47.7%	-15.4%	32.7%	20.4%
ORK	Cork	240	549	789	5.1%	3.5%	4.0%	12.4%	32.0%	25.4%	1.3%	43.7%	27.4%
CHQ	Chania	235	255	489	2.3%	4.2%	3.3%	70.1%	138.0%	99.8%	102.5%	120.0%	111.2%
LIL	Lille-Lesquin	231	45	276	-0.1%	-10.4%	-2.0%	10.9%	17.5%	11.9%	45.9%	-21.3%	28.0%
FNC	Madeira	230	499	730	1.9%	14.8%	10.4%	35.0%	90.0%	68.4%	17.8%	127.1%	75.6%
JMK	Mykonos	222	325	547	11.6%	4.6%	7.3%	121.2%	144.5%	134.5%	168.6%	429.0%	279.6%
BRE	Bremen	219	1,645	1,865	-15.1%	7.7%	4.4%	-19.1%	24.3%	16.9%	-21.6%	40.0%	28.1%
CLJ	Cluj Avram Iancu	214	274	488	-4.2%	-11.3%	-8.3%	305.3%	125.4%	179.7%	90.2%	134.4%	112.7%
TRF	Sandefjord	212	244	456	-6.2%	12.4%	2.9%	--	--	--	--	--	--
PFO	Pafos	206	105	311	6.2%	-4.3%	2.4%	44.0%	95.9%	58.2%	102.9%	82.1%	95.3%
MMX	Malmö	204	91	295	-19.3%	-37.9%	-26.1%	-3.1%	-3.9%	-3.4%	55.9%	180.4%	80.6%
BDS	Brindisi	199	371	570	8.8%	7.9%	8.2%	--	--	--	--	--	--
RTM	Rotterdam	198	60	258	8.4%	33.5%	13.4%	8.2%	-71.0%	-33.8%	53.6%	2661.1%	96.8%
SCQ	Santiago	195	397	592	0.6%	6.3%	4.4%	14.4%	64.2%	43.6%	28.3%	69.7%	53.4%
SPC	La Palma	191	64	255	-2.7%	-24.9%	-9.4%	89.0%	71.4%	84.3%	29.7%	66.2%	37.3%
TSF	Treviso	189	12	202	-5.3%	-41.5%	-8.7%	32.1%	-2.1%	29.4%	44.2%	-20.2%	37.5%
ZTH	Zakynthos	187	123	309	-4.4%	-13.3%	-8.2%	168.4%	128.5%	151.0%	196.6%	252.0%	216.4%
SXB	Strasbourg	181	305	486	-10.8%	3.7%	-2.2%	-11.9%	4.9%	-2.1%	-33.1%	-50.3%	-45.1%
AJA	Ajaccio	179	62	241	-2.0%	37.4%	5.8%	11.9%	79.2%	23.9%	60.0%	-0.2%	38.5%
BIA	Bastia	177	95	272	4.5%	28.9%	11.9%	--	--	--	--	--	--
GRO	Girona-Costa Brava	175	33	208	-3.3%	-12.1%	-4.8%	-12.7%	-50.1%	-22.0%	-54.9%	1.7%	-50.5%
SKP	Skopje	169	394	563	3.8%	0.0%	1.1%	38.4%	45.3%	43.2%	88.9%	135.3%	119.1%

		ABSOLUTE 2019			GROWTH 2019 VS 2018			GROWTH 2019 VS 2014			GROWTH 2019 VS 2009		
Code	Airport	Direct	Indirect	Airport	Direct	Indirect	Airport	Direct	Indirect	Airport	Direct	Indirect	Airport
BTS	Bratislava	168	41	209	-7.3%	-26.3%	-11.7%	95.2%	65.3%	88.5%	17.5%	-39.4%	-0.7%
VAR	Varna	163	177	340	-12.2%	31.8%	6.3%	119.7%	57.5%	82.2%	94.0%	50.5%	68.6%
POZ	Poznan	163	582	744	-3.6%	-0.3%	-1.1%	47.0%	31.3%	34.5%	21.1%	58.6%	48.5%
GZT	Gaziantep	162	292	454	0.8%	11.9%	7.7%	22.2%	63.1%	45.7%	230.2%	184.1%	199.0%
TIV	Tivat	159	273	432	9.2%	5.3%	6.7%	100.7%	238.7%	170.2%	108.8%	1318.4%	352.7%
INV	Inverness	151	349	500	10.4%	124.6%	71.1%	44.7%	447.4%	197.5%	13.0%	905.9%	197.2%
KRS	Kristiansand	148	463	610	1.8%	1.5%	1.6%	-4.1%	20.3%	13.3%	0.4%	37.9%	26.4%
ODS	Odessa	147	437	584	11.8%	25.0%	21.4%	49.4%	26.0%	31.1%	34.1%	129.5%	94.7%
ASR	Kayseri	142	380	522	5.4%	43.8%	30.8%	20.5%	30.3%	27.4%	177.9%	270.7%	239.8%
SZG	Salzburg	139	693	832	-0.7%	2.3%	1.8%	-15.6%	-3.6%	-5.9%	-3.4%	15.8%	12.0%
TGD	Podgorica	136	375	511	0.9%	-4.5%	-3.1%	49.4%	81.3%	71.5%	82.9%	542.2%	284.8%
GRZ	Graz	135	996	1,131	-6.2%	0.1%	-0.7%	-5.6%	33.2%	26.9%	-32.2%	46.7%	28.8%
SNN	Shannon	134	540	674	-13.7%	-11.1%	-11.6%	-25.9%	-10.9%	-14.4%	-30.6%	-4.4%	-11.1%
PRN	Prishtina	133	556	689	0.6%	3.9%	3.2%	--	--	--	--	--	--
AES	Ålesund	133	317	450	-3.5%	-1.4%	-2.0%	10.8%	-13.4%	-7.5%	34.3%	170.9%	108.3%
IOM	Isle of Man	129	94	224	-9.0%	23.6%	2.4%	12.5%	52.2%	26.4%	-57.8%	2358.8%	-27.9%
RNS	Rennes	128	408	536	-3.9%	0.4%	-0.7%	36.4%	16.4%	20.6%	19.1%	42.9%	36.4%
OVD	Asturias	127	292	420	5.5%	-6.5%	-3.2%	18.2%	29.7%	26.0%	-12.1%	-37.3%	-31.3%
BES	Brest	126	261	387	-6.7%	8.2%	2.9%	1.6%	32.1%	20.3%	8.2%	9.7%	9.2%
DSA	Doncaster Sheffield	123	20	143	--	--	--	--	--	--	--	--	--
TSR	Timisoara	116	186	302	-3.3%	1.4%	-0.5%	103.1%	1.6%	25.8%	-47.9%	-23.5%	-35.2%
SJJ	Sarajevo	115	618	732	15.2%	18.7%	18.2%	12.5%	60.0%	50.1%	22.9%	140.7%	109.3%
UME	Umeå	114	184	298	-22.2%	-10.6%	-15.4%	-21.1%	37.2%	7.0%	15.3%	348.9%	113.1%

		ABSOLUTE 2019			GROWTH 2019 VS 2018			GROWTH 2019 VS 2014			GROWTH 2019 VS 2009		
Code	Airport	Direct	Indirect	Airport	Direct	Indirect	Airport	Direct	Indirect	Airport	Direct	Indirect	Airport
REU	Reus	113	18	131	4.3%	-11.5%	1.8%	30.9%	127.8%	39.0%	-14.1%	66.5%	-8.0%
FMM	Memmingen	112	9	120	21.9%	15.5%	21.4%	82.4%	85.2%	82.6%	28.2%	-25.0%	22.1%
PUY	Pula	111	136	247	12.6%	18.1%	15.6%	76.0%	144.1%	108.0%	179.7%	4361.0%	479.4%
NQY	Newquay	110	95	205	13.9%	21.7%	17.4%	--	--	--	--	--	--
BIQ	Biarritz	110	255	366	-10.0%	11.7%	4.2%	6.1%	353.2%	128.2%	14.9%	239.6%	113.6%
HFT	Hammerfest	109	7	116	-9.2%	-30.0%	-10.7%	-22.2%	11.5%	-20.8%	-6.6%	101.3%	-3.6%
DIY	Diyarbakir	108	191	299	-18.3%	0.3%	-7.4%	-4.9%	9.0%	3.5%	147.2%	397.2%	264.0%
BUS	Batumi	108	96	204	27.8%	22.1%	25.1%	396.0%	67.7%	157.9%	817.0%	553.4%	670.4%
IAS	Iasi	108	88	196	0.6%	-16.7%	-8.0%	148.2%	7.8%	56.4%	155.5%	13.6%	63.5%
FMO	Münster	106	623	729	-6.1%	-1.7%	-2.4%	23.4%	26.2%	25.7%	-44.4%	-8.7%	-16.5%
ZAD	Zadar	106	79	185	29.1%	9.3%	19.9%	48.8%	48.7%	48.8%	161.9%	5706.5%	341.2%
LEI	Almería	106	128	234	-8.0%	-33.6%	-24.0%	19.1%	-19.7%	-5.8%	11.6%	-43.1%	-26.9%
LCG	A Coruña	103	381	484	5.1%	5.8%	5.7%	5.3%	62.6%	45.7%	-6.4%	26.1%	17.4%
LLA	Luleå	102	145	247	-25.3%	-2.8%	-13.6%	-28.5%	34.0%	-1.6%	-12.3%	77.4%	24.7%
VDS	Vadsø	101	1	102	-7.6%	-84.0%	-12.2%	-10.7%	-57.0%	-11.7%	-5.6%	--	--
VGO	Vigo	101	342	442	1.4%	13.3%	10.4%	34.6%	39.1%	38.1%	-20.0%	-29.4%	-27.5%
GRX	Granada-Jaén F.G.L.	99	164	263	4.0%	-41.6%	-30.1%	39.1%	-16.2%	-1.5%	4.1%	-22.9%	-14.6%
EFL	Kefalonia	97	45	141	7.8%	-15.1%	-0.7%	93.8%	77.8%	88.5%	115.7%	75.8%	101.3%
MLN	Melilla	95	133	228	44.8%	8.1%	20.9%	40.3%	61.4%	51.8%	32.6%	53.7%	44.1%
PUF	Pau-Pyrénées	95	200	295	-6.1%	-21.2%	-16.9%	8.9%	-26.4%	-17.9%	-0.4%	-50.7%	-41.1%
TRS	Trieste	95	499	594	11.7%	82.9%	66.0%	10.7%	96.0%	74.5%	-6.0%	55.6%	40.9%
VBY	Visby	94	65	158	-4.3%	-18.6%	-10.7%	2.0%	13.2%	6.3%	-0.1%	298.5%	43.9%
XRY	Jerez	93	234	327	-3.1%	0.3%	-0.7%	17.0%	14.3%	15.0%	-1.8%	-17.9%	-13.9%

		ABSOLUTE 2019			GROWTH 2019 VS 2018			GROWTH 2019 VS 2014			GROWTH 2019 VS 2009		
Code	Airport	Direct	Indirect	Airport	Direct	Indirect	Airport	Direct	Indirect	Airport	Direct	Indirect	Airport
SZF	Samsun Çarsamba	93	132	225	-11.6%	-1.9%	-6.1%	1.9%	-34.0%	-22.8%	100.9%	50.5%	67.8%
OUL	Oulu	92	406	497	-2.2%	6.6%	4.9%	-8.2%	30.0%	20.8%	-4.2%	84.0%	57.3%
TKU	Turku	90	263	353	17.0%	4.4%	7.3%	17.8%	2.1%	5.7%	38.1%	12.3%	17.9%
EVE	Harstad/Narvik	89	82	171	-5.3%	-22.5%	-14.5%	2.1%	-37.4%	-21.7%	45.6%	-10.0%	12.3%
RMU	Murcia International Airport	88	23	111	--	--	--	--	--	--	--	--	--
HHN	Hahn	86	1	87	--	--	--	--	--	--	--	--	--
SDV	Tel Aviv Dov Hoz	86	--	86	2.1%	--	--	-7.2%	--	--	126.0%	--	--
SDR	Santander–Seve Ballesteros	83	163	246	-5.0%	-2.6%	-3.4%	-0.4%	20.5%	12.5%	-38.6%	-20.0%	-27.4%
VAN	Van Ferit Melen	83	110	193	-5.3%	-11.5%	-9.0%	27.2%	40.9%	34.6%	138.1%	186.1%	163.2%
ALF	Alta	79	67	147	-10.7%	14.2%	-0.7%	-19.7%	-8.8%	-15.0%	-12.0%	77.8%	14.6%
KKN	Kirkenes	79	51	130	-9.9%	14.1%	-1.8%	-15.7%	-11.5%	-14.1%	-30.4%	29.5%	-15.0%
GZP	Alanya – Antalya Gazipasa	79	209	287	16.4%	35.9%	30.0%	92.1%	189.8%	154.5%	--	--	--
OSD	Åre Östersund	73	113	186	-1.9%	-5.1%	-3.9%	-4.7%	2.2%	-0.6%	54.5%	466.2%	176.3%
AGH	Ängelholm-Helsingborg	73	51	124	2.8%	-3.4%	0.1%	--	--	--	--	--	--
HTY	Hatay	72	131	202	-12.2%	-2.4%	-6.1%	-9.2%	-25.2%	-20.2%	170.2%	375.6%	274.5%
INN	Innsbruck	71	599	670	0.0%	1.2%	1.1%	1.2%	9.5%	8.5%	-34.8%	36.8%	22.5%
KUN	Kaunas	71	37	108	6.6%	-8.7%	0.8%	38.2%	100.0%	54.7%	87.0%	140.7%	102.6%
MJT	Mitilini	69	28	97	27.4%	-50.2%	-12.6%	25.4%	-47.7%	-11.1%	-28.2%	-45.5%	-34.3%
NOC	Knock	69	44	112	-2.9%	12.4%	2.5%	-8.9%	25.8%	2.0%	17.5%	16.4%	17.1%
HRK	Kharkiv	69	207	276	10.5%	15.3%	14.1%	59.9%	24.4%	31.6%	107.0%	192.8%	165.4%
KYA	Konya	67	153	220	-17.5%	1.5%	-5.1%	-11.7%	-37.3%	-31.2%	218.4%	303.9%	273.4%
SBZ	Sibiu	67	192	258	4.4%	-10.4%	-7.0%	96.0%	35.9%	47.5%	11.2%	83.9%	57.4%
KSC	Košice	66	170	236	-6.8%	6.7%	2.5%	--	--	--	--	--	--

		ABSOLUTE 2019			GROWTH 2019 VS 2018			GROWTH 2019 VS 2014			GROWTH 2019 VS 2009		
Code	Airport	Direct	Indirect	Airport	Direct	Indirect	Airport	Direct	Indirect	Airport	Direct	Indirect	Airport
CFE	Clermont-Ferrand	65	416	481	-8.2%	38.5%	29.6%	-19.4%	27.3%	18.1%	-54.2%	27.7%	3.0%
JCU	Ceuta (Heliport)	64	--	64	45.3%	--	--	--	--	--	--	--	--
SMI	Samos	63	53	116	14.6%	-21.0%	-4.9%	42.7%	78.9%	57.1%	-2.6%	-29.2%	-16.8%
HOR	Horta	63	40	103	7.0%	24.6%	13.2%	52.8%	35.0%	45.3%	16.8%	79.8%	35.4%
BRQ	Brno	61	7	68	-7.6%	-89.0%	-46.7%	60.0%	12.2%	53.5%	47.4%	-90.8%	-41.0%
PAS	Paros	61	82	143	17.3%	-6.5%	2.4%	125.9%	458.6%	243.1%	221.1%	224.1%	222.8%
PVK	Aktion	61	64	124	26.8%	28.5%	27.7%	147.0%	472.1%	247.8%	149.6%	2255.9%	358.9%
TLN	Toulon-Hyères	61	55	116	-15.5%	-64.8%	-49.4%	10.2%	112.4%	43.1%	12.5%	104.8%	43.3%
JSI	Skiathos	60	43	104	13.2%	-18.6%	-2.6%	180.9%	82.1%	129.1%	336.8%	1181.6%	502.2%
EZS	Elazig	59	90	149	-6.1%	24.1%	10.0%	-1.0%	52.2%	25.4%	229.9%	195.3%	208.1%
JKH	Chios	59	53	112	7.2%	-13.4%	-3.6%	72.8%	9.6%	35.9%	13.6%	40.0%	24.6%
ERZ	Erzurum	58	72	130	-30.6%	-25.1%	-27.7%	-7.2%	-13.4%	-10.8%	192.5%	213.1%	203.5%
SOG	Sogndal	57	3	61	-6.8%	41.1%	-5.2%	3.9%	156.6%	7.1%	-7.3%	36.8%	-5.8%
MOL	Molde	57	77	134	3.6%	13.3%	9.0%	-25.8%	-9.4%	-17.2%	-6.6%	133.5%	42.6%
FDH	Friedrichshafen	56	365	421	-8.1%	6.3%	4.1%	-21.0%	43.8%	29.7%	-56.0%	52.1%	14.7%
VAA	Vaasa	56	240	295	3.2%	4.8%	4.5%	-13.1%	22.7%	13.9%	-13.1%	47.6%	30.5%
HAU	Haugesund	55	81	136	-0.2%	0.9%	0.5%	-22.7%	-29.5%	-26.9%	-11.7%	11.2%	0.7%
TMP	Tampere-Pirkkala	54	270	324	-10.0%	6.6%	3.4%	-28.2%	38.3%	19.9%	-45.7%	55.8%	18.9%
FRO	Florø	53	12	65	-10.4%	2082.3%	9.7%	-27.2%	845.8%	-11.6%	-0.9%	--	--
KSU	Kristiansund	51	42	93	-27.8%	-28.2%	-28.0%	-32.4%	-28.9%	-30.8%	-13.8%	-18.6%	-16.1%
CLY	Calvi Sainte-Catherine	51	26	77	6.2%	10.5%	7.6%	--	--	--	--	--	--
JNX	Naxos	50	43	93	31.6%	-28.0%	-4.8%	455.6%	1232.3%	660.3%	525.0%	714.2%	600.1%
LRH	La Rochelle – Ile de Ré	50	14	64	-4.7%	-1.3%	-4.0%	-1.2%	42.0%	6.0%	14.0%	162.8%	30.4%

		ABSOLUTE 2019			GROWTH 2019 VS 2018			GROWTH 2019 VS 2014			GROWTH 2019 VS 2009		
Code	Airport	Direct	Indirect	Airport	Direct	Indirect	Airport	Direct	Indirect	Airport	Direct	Indirect	Airport
SDL	Sundsvall-Timrå	49	80	129	-34.7%	-10.7%	-21.7%	--	--	--	--	--	--
HOV	Ørsta-Volda	49	7	56	-15.4%	736.1%	-4.9%	0.8%	281.5%	10.9%	3.2%	477.3%	14.8%
KUT	Kutaisi	49	10	59	5.4%	-56.5%	-15.4%	52.6%	30.7%	48.3%	--	--	--
LKN	Leknes	48	7	54	-32.4%	76.3%	-26.8%	-6.1%	111.7%	0.8%	-14.8%	289.1%	-5.8%
MEH	Mehamn	47	--	47	-9.7%	--	--	-11.4%	--	--	-16.6%	--	--
KLR	Kalmar	47	39	86	-7.8%	-20.6%	-14.2%	--	--	--	--	--	--
EAS	San Sebastian	47	143	189	-3.6%	-21.4%	-17.7%	10.8%	8.2%	8.8%	-32.0%	-22.3%	-25.0%
MLX	Malatya	46	80	126	-17.9%	-6.1%	-10.8%	-0.8%	-22.9%	-16.1%	78.4%	329.1%	183.2%
RNB	Ronneby	46	44	90	-8.0%	-23.2%	-16.1%	0.0%	9.3%	4.4%	36.8%	218.3%	90.0%
CFR	Caen-Carpiquet	46	12	58	-16.2%	-22.3%	-17.5%	99.8%	-38.3%	37.3%	26.7%	-56.9%	-9.2%
KVA	Kavala	46	42	87	-0.1%	-32.3%	-18.6%	55.6%	50.0%	52.9%	-0.2%	-8.8%	-4.5%
PGF	Perpignan	45	37	83	-4.3%	62.7%	17.5%	6.9%	97.4%	34.7%	-2.1%	103.9%	27.8%
BJF	Båtsfjord	45	--	45	-6.9%	--	--	-10.2%	--	--	-10.5%	--	--
LNZ	Linz	45	329	373	-22.5%	-16.2%	-17.0%	-54.1%	-45.4%	-46.6%	-62.8%	-41.3%	-45.1%
GNY	Sanliurfa Gap	44	134	179	-17.0%	-9.8%	-11.7%	-13.2%	98.1%	50.5%	216.7%	318.1%	287.5%
KUO	Kuopio	44	273	317	4.8%	11.4%	10.5%	-8.3%	12.3%	8.9%	-10.8%	59.1%	43.5%
SKN	Stokmarknes	44	13	57	-27.3%	155.2%	-13.3%	-25.8%	146.2%	-11.9%	-28.2%	728.8%	-9.6%
KLX	Kalamata	44	67	111	16.1%	17.0%	16.6%	58.1%	94.6%	78.3%	1467.1%	14011.9%	3291.3%
MQN	Mo i Rana	44	4	48	-8.4%	282.7%	-1.9%	-40.2%	741.3%	-34.9%	-43.3%	537.5%	-38.4%
OST	Ostend-Bruges	43	2	45	8.4%	92.5%	10.4%	176.8%	45.2%	166.6%	387.1%	219.2%	376.6%
SVJ	Svolvær	43	3	46	-36.4%	-9.2%	-35.3%	11.7%	-56.8%	2.1%	-7.5%	156.0%	-3.9%
OSR	Ostrava	43	1	44	-29.5%	-92.5%	-42.9%	-12.4%	-92.7%	-32.9%	-6.6%	-98.4%	-63.9%
MLO	Milos	42	44	86	10.5%	11.0%	10.8%	250.0%	323.9%	284.4%	200.0%	526.7%	309.6%

		ABSOLUTE 2019			GROWTH 2019 VS 2018			GROWTH 2019 VS 2014			GROWTH 2019 VS 2009		
Code	Airport	Direct	Indirect	Airport	Direct	Indirect	Airport	Direct	Indirect	Airport	Direct	Indirect	Airport
VDE	El Hierro	42	4	46	0.0%	-31.6%	-4.0%	44.8%	50023.9%	59.3%	13.5%	--	--
TPS	Trapani Birgi	42	33	75	-17.0%	6.1%	-8.2%	-67.9%	80.2%	-49.6%	-59.5%	110.0%	-37.0%
GIB	Gibraltar	42	113	155	16.8%	46.3%	37.0%	--	--	--	--	--	--
LIG	Limoges	41	10	51	-12.0%	-2.4%	-10.3%	-19.5%	-12.2%	-18.2%	-38.7%	-65.6%	-46.7%
HVG	Honningsvåg	41	0	41	-8.3%	--	--	-19.4%	-88.0%	-22.0%	-17.0%	-62.8%	-17.6%
FDE	Førde	40	2	42	-2.4%	1296.7%	1.4%	0.1%	224.6%	2.9%	0.1%	68.7%	1.7%
AOK	Karpathos	40	17	57	-10.7%	-53.5%	-30.2%	-6.7%	-40.0%	-20.2%	-4.9%	48.6%	6.8%
PLQ	Palanga	40	68	108	-12.4%	-12.4%	-12.4%	90.1%	31.8%	48.7%	42.1%	38.8%	40.0%
VXO	Växjö	39	89	128	-9.2%	12.7%	5.0%	--	--	--	--	--	--
ANR	Antwerp-Deurne	38	1	39	-41.3%	--	--	48.6%	55.4%	48.7%	-21.8%	-96.3%	-38.7%
VAW	Vardø	38	--	38	-9.0%	--	--	-10.0%	--	--	-8.5%	--	--
LDE	Tarbes	37	18	55	12.1%	15.5%	13.2%	41.5%	70.4%	50.0%	75.0%	66.9%	72.2%
BNN	Brønnøysund	37	0	37	-18.0%	-99.8%	-24.6%	-57.3%	-98.6%	-57.6%	-55.0%	-97.1%	-55.2%
EDO	Balikesir Koca Seyit	36	70	106	-37.6%	28.5%	-5.5%	158.1%	707.2%	368.8%	--	--	--
KIR	Kerry	36	54	90	0.0%	15.9%	9.0%	5.5%	88.3%	43.4%	-22.1%	-11.5%	-16.1%
SSJ	Sandnessjøen	35	3	38	-16.4%	-49.6%	-20.5%	-52.9%	507.1%	-49.2%	-58.5%	--	--
DNZ	Denizli Çardak	35	127	162	-8.1%	33.2%	21.5%	0.4%	-7.3%	-5.7%	152.1%	1188.0%	584.8%
MHQ	Mariehamn	34	28	61	0.0%	-34.8%	-19.4%	24.5%	130.7%	57.2%	29.3%	--	--
RJK	Rijeka	34	42	75	18.7%	42.3%	30.7%	126.4%	421.6%	230.0%	110.1%	499.3%	228.4%
KLU	Klagenfurt	33	225	258	-8.3%	-2.2%	-3.0%	-21.4%	-0.7%	-3.9%	-55.9%	-25.9%	-31.8%
RVN	Rovaniemi	33	256	289	3.5%	11.0%	10.1%	3.3%	38.6%	33.4%	37.5%	76.4%	70.9%
MQM	Mardin	33	99	132	-29.9%	-1.8%	-10.7%	-6.9%	243.8%	106.4%	93.3%	241.9%	187.3%
BCM	Bacau	32	27	60	-2.9%	11.3%	3.1%	-2.5%	--	--	-1.6%	166.3%	38.2%

		ABSOLUTE 2019			GROWTH 2019 VS 2018			GROWTH 2019 VS 2014			GROWTH 2019 VS 2009		
Code	Airport	Direct	Indirect	Airport	Direct	Indirect	Airport	Direct	Indirect	Airport	Direct	Indirect	Airport
PNA	Pamplona	32	255	287	-1.6%	58.0%	47.9%	30.9%	211.1%	169.3%	-56.6%	26.7%	4.2%
AEI	Algeciras (Heliport)	32	--	32	14.3%	--	--	--	--	--	--	--	--
SFT	Skellefteå	32	69	101	-33.3%	-15.5%	-22.1%	--	--	--	--	--	--
JOE	Joensuu	32	105	137	3.2%	-10.0%	-7.2%	6.7%	15.0%	12.9%	23.1%	79.8%	62.3%
ZAZ	Zaragoza	32	9	41	-15.8%	11.4%	-10.9%	46.3%	112.5%	57.3%	-40.8%	-84.3%	-63.5%
FLW	Flores	32	1	32	4.7%	-2.4%	4.6%	114.1%	417.1%	117.1%	56.7%	477.7%	59.4%
HAA	Hasvik	32	5	36	-5.0%	6.3%	-3.7%	86.0%	714.3%	107.1%	70.3%	--	--
VAS	Sivas Nuri Demirag	32	50	82	-16.0%	-25.4%	-22.1%	-1.3%	-36.9%	-26.8%	351.0%	43.4%	94.5%
CRA	Craiova	31	--	31	6.2%	--	--	--	--	--	424.1%	--	--
ANX	Andøya	31	15	46	-39.7%	99.8%	-22.5%	-6.2%	-14.1%	-8.9%	-20.0%	356.9%	8.4%
NAV	Nevsehir Kapadokya	31	113	144	34.9%	24.2%	26.3%	2.8%	-12.0%	-9.2%	340.3%	398.3%	384.7%
SDN	Sandane	30	--	30	-19.1%	--	--	-12.1%	--	--	-18.8%	--	--
GRQ	Groningen	30	1	32	-32.0%	-98.4%	-74.0%	160.4%	101.5%	157.4%	164.5%	--	--
BAL	Batman	29	79	108	-25.1%	-28.0%	-27.3%	-23.9%	0.5%	-7.6%	112.7%	343.7%	242.5%
KSY	Kars	29	51	80	-14.9%	-12.5%	-13.4%	10.3%	123.5%	62.4%	84.8%	236.2%	158.6%
BVG	Berlevåg	29	--	29	-13.4%	--	--	-9.8%	--	--	-26.5%	--	--
AXD	Alexandroupoli	28	17	45	-24.1%	-18.4%	-22.1%	35.1%	26.8%	31.8%	-37.7%	-30.3%	-35.1%
PIS	Poitiers-Biard	28	5	33	-0.5%	-36.6%	-8.6%	-0.7%	-31.2%	-7.1%	-9.1%	44.7%	-3.5%
LXS	Limnos	27	7	34	49.1%	-40.1%	13.6%	-9.4%	-65.2%	-32.3%	-25.9%	-65.6%	-40.3%
KAJ	Kajaani	27	150	177	0.0%	-3.9%	-3.4%	18.1%	45.0%	40.1%	53.8%	63.1%	61.7%
MJF	Mosjøen	27	0	27	-15.4%	-98.6%	-29.5%	-62.4%	-61.2%	-62.4%	-63.5%	-90.2%	-63.8%
RVK	Rørvik	27	--	27	-17.1%	--	--	-28.6%	--	--	-5.3%	--	--
VBS	Brescia	26	--	26	--	--	--	--	--	--	-38.3%	--	--

		ABSOLUTE 2019			GROWTH 2019 VS 2018			GROWTH 2019 VS 2014			GROWTH 2019 VS 2009		
Code	Airport	Direct	Indirect	Airport	Direct	Indirect	Airport	Direct	Indirect	Airport	Direct	Indirect	Airport
ERC	Erzincan	26	60	86	-21.8%	-11.8%	-15.1%	21.9%	-3.3%	3.0%	135.9%	186.2%	169.1%
OSY	Namsos	25	--	25	-16.6%	--	--	-34.4%	--	--	-36.0%	--	--
LUZ	Lublin	25	38	62	-36.4%	-25.9%	-30.5%	279.2%	896.5%	505.4%	--	--	--
KRN	Kiruna	24	61	86	-3.9%	-1.3%	-2.0%	-31.2%	34.9%	5.9%	19.6%	116.6%	76.0%
SOJ	Sørkjosen	24	--	24	-11.2%	--	--	-21.0%	--	--	-16.0%	--	--
KEM	Kemi-Tornio	23	100	124	-16.9%	-26.6%	-25.0%	19.2%	20.1%	19.9%	-21.2%	19974.9%	310.8%
HAD	Halmstad	23	19	42	-18.3%	-21.3%	-19.7%	--	--	--	--	--	--
AJI	Agri	23	32	55	28.1%	14.9%	20.0%	62.8%	12.0%	28.6%	--	--	--
MSR	Mus	23	18	41	-17.3%	-11.7%	-14.9%	9.4%	-28.0%	-11.3%	190.0%	211.5%	199.3%
KOK	Kokkola-Pietarsaari	22	139	161	-53.4%	-14.2%	-23.1%	-50.7%	12.7%	-4.3%	-10.1%	34.6%	25.9%
AJR	Arvidsjaur	22	36	58	10.6%	154.8%	71.0%	--	--	--	--	--	--
INI	Niš	22	23	45	5.0%	214.5%	58.6%	--	--	--	633.3%	3565.1%	1134.2%
KCM	Kahramanmaras	22	87	109	-14.7%	10.3%	4.2%	29.6%	172.4%	123.4%	120.3%	211.1%	187.5%
NKT	Sirnak	22	31	53	-15.8%	-32.8%	-26.7%	--	--	--	--	--	--
OER	Örnsköldsvik	22	36	57	-55.5%	-7.6%	-34.3%	--	--	--	--	--	--
LYC	Lycksele	22	--	22	-1.4%	--	--	--	--	--	--	--	--
UIP	Quimper	21	17	38	0.0%	57.3%	19.0%	-11.1%	13.6%	-1.8%	-14.7%	5.3%	-6.9%
GEV	Gällivare	21	28	50	3.4%	--	--	--	--	--	--	--	--
CIY	Comiso	21	4	25	--	--	--	--	--	--	--	--	--
JYV	Jyväskylä	21	173	193	0.0%	3.8%	3.4%	21.4%	44.0%	41.2%	-37.5%	66.0%	41.1%
LYR	Svalbard	20	85	105	5.1%	3.5%	3.8%	32.8%	78.0%	67.0%	13.1%	90.5%	68.1%
LRS	Leros	20	27	47	67.6%	39.9%	50.6%	-5.4%	342.7%	71.2%	25.4%	260.0%	99.3%
HFS	Hagfors	20	--	20	0.0%	--	--	--	--	--	--	--	--

		ABSOLUTE 2019			GROWTH 2019 VS 2018			GROWTH 2019 VS 2014			GROWTH 2019 VS 2009		
Code	Airport	Direct	Indirect	Airport	Direct	Indirect	Airport	Direct	Indirect	Airport	Direct	Indirect	Airport
IOA	Ioannina	20	18	38	25.0%	-8.5%	6.3%	66.7%	88.4%	76.4%	-13.0%	36.3%	5.2%
PXO	Porto Santo	20	19	39	66.7%	-43.0%	-13.9%	233.3%	2140.3%	469.0%	-48.2%	228.3%	-12.2%
THN	Trollhättan	20	3	23	-4.8%	-51.0%	-16.3%	--	--	--	--	--	--
VHM	Vilhelmina	19	--	19	9.6%	--	--	--	--	--	--	--	--
JIK	Ikaria	19	11	30	0.0%	116.0%	23.5%	3.8%	2.8%	3.4%	218.5%	362.5%	258.1%
BDU	Bardufoss	19	29	48	-13.6%	-2.0%	-7.0%	-5.0%	-36.7%	-27.0%	72.7%	133.1%	104.6%
LKL	Lakselv	19	1	20	-24.0%	-93.1%	-39.8%	-17.4%	-82.0%	-24.5%	-24.0%	-80.2%	-29.3%
LPI	Linköping	19	221	240	0.0%	1.3%	1.2%	--	--	--	--	--	--
TYF	Torsby	18	--	18	0.0%	--	--	--	--	--	--	--	--
LGG	Liège	18	2	20	27.1%	26.4%	27.0%	-27.5%	-53.0%	-30.6%	11.3%	79.2%	14.9%
FOG	Foggia	18	--	18	5.9%	--	--	--	--	--	--	--	--
YEI	Bursa Yenisehir	18	--	18	20.0%	--	--	350.0%	--	--	--	--	--
KRF	Höga Kusten	18	--	18	62.0%	--	--	--	--	--	--	--	--
FNI	Nîmes	18	6	24	12.4%	94.7%	25.5%	12.3%	468.9%	40.2%	19.0%	255.5%	42.5%
OSI	Osijek	17	5	22	-0.1%	4.5%	0.9%	331.2%	138.0%	265.2%	799.4%	1929.1%	926.7%
SMA	Santa Maria	17	4	21	6.3%	-45.6%	-9.7%	44.0%	100.4%	51.9%	14.7%	36.8%	18.3%
OHD	Ohrid	17	7	24	42.0%	438.7%	79.5%	750.9%	--	--	256.2%	406.9%	289.0%
ADF	Adiyaman	17	31	48	-19.4%	16.5%	1.0%	20.7%	8.6%	12.5%	112.0%	53.0%	69.3%
IGD	Iğdir	17	81	98	-6.4%	10.8%	7.5%	18.7%	112.4%	87.3%	--	--	--
KID	Kristianstad	16	3	18	32.5%	--	--	--	--	--	--	--	--
KIT	Kythira	16	9	25	-6.0%	34.7%	6.0%	0.8%	37.1%	11.8%	125.7%	77.4%	104.9%
JKL	Kalimnos	16	0	16	--	--	--	-24.2%	-97.8%	-39.9%	94.9%	-96.7%	33.3%
GPA	Araxos	16	16	32	22.3%	24.4%	23.4%	74.0%	146.0%	104.6%	29.4%	202.4%	82.8%

		ABSOLUTE 2019			GROWTH 2019 VS 2018			GROWTH 2019 VS 2014			GROWTH 2019 VS 2009		
Code	Airport	Direct	Indirect	Airport	Direct	Indirect	Airport	Direct	Indirect	Airport	Direct	Indirect	Airport
BJZ	Badajoz	15	95	110	50.0%	154.1%	132.2%	31.9%	687.6%	369.5%	-33.6%	42.6%	23.3%
KSD	Karlstad	15	--	15	-64.2%	--	--	--	--	--	--	--	--
LCJ	Lodz	15	47	62	-6.1%	-12.9%	-11.3%	-20.7%	114.9%	51.8%	-51.1%	706.6%	69.2%
RET	Røst	15	--	15	-6.3%	--	--	-4.7%	--	--	-14.6%	--	--
GMZ	La Gomera	14	2	16	0.0%	-12.9%	-1.6%	0.0%	--	--	0.0%	--	--
KLF	Kaluga	14	2	16	-12.9%	-48.2%	-19.6%	--	--	--	--	--	--
VLL	Valladolid	14	10	24	7.7%	-13.0%	-2.0%	-6.7%	-28.4%	-17.1%	-71.4%	-71.2%	-71.3%
BGG	Bingöl	14	48	62	-5.9%	295.9%	131.2%	--	--	--	--	--	--
YKO	Hakkari Yüksekova	14	44	58	-0.8%	-6.4%	-5.1%	--	--	--	--	--	--
JTY	Astypalaia	13	0	13	114.9%	--	--	12.5%	-91.2%	-12.1%	19.7%	-91.6%	-9.2%
TUF	Tours	13	4	17	0.0%	5.2%	1.2%	0.0%	20.2%	4.3%	42.4%	25.8%	37.9%
HMV	Hemavan	12	--	12	-1.9%	--	--	--	--	--	--	--	--
JKG	Jönköping	12	1	13	-75.0%	-99.5%	-93.7%	--	--	--	--	--	--
EVG	Sveg	12	--	12	0.0%	--	--	--	--	--	--	--	--
JSH	Sitia	12	7	19	-20.4%	25.5%	-7.2%	-56.0%	8966.9%	-28.4%	-57.8%	63.5%	-40.7%
NOP	Sinop	11	57	68	-27.9%	-16.3%	-18.5%	61.9%	18.7%	24.2%	--	--	--
IVL	Ivalo	11	43	55	-14.9%	2.4%	-1.7%	-13.6%	-22.2%	-20.6%	29.7%	40.0%	37.7%
PJA	Pajala	11	--	11	0.0%	--	--	--	--	--	--	--	--
RRS	Røros	11	--	11	-8.3%	--	--	-8.3%	--	--	0.0%	--	--
VIT	Vitoria	11	2	13	83.3%	9.3%	66.1%	--	--	--	-4.8%	-94.3%	-71.9%
SUJ	Satu Mare	11	0	11	-7.9%	-48.4%	-10.8%	85.7%	-77.2%	42.8%	169.7%	-78.8%	80.7%
OMR	Oradea	10	--	10	-63.2%	--	--	-15.4%	--	--	-47.0%	--	--
KSJ	Kasos	10	--	10	0.0%	--	--	-47.2%	--	--	-58.1%	--	--

		ABSOLUTE 2019			GROWTH 2019 VS 2018			GROWTH 2019 VS 2014			GROWTH 2019 VS 2009		
Code	Airport	Direct	Indirect	Airport	Direct	Indirect	Airport	Direct	Indirect	Airport	Direct	Indirect	Airport
SVL	Savonlinna	10	--	10	-50.0%	--	--	0.0%	--	--	-12.7%	--	--
MZH	Amasya Merzifon	10	16	26	-9.1%	-7.8%	-8.3%	1.9%	-71.7%	-60.7%	243.4%	154.9%	183.1%
CKZ	Çanakkale	10	27	36	-29.2%	3472.4%	147.5%	98.2%	--	--	230.4%	142.2%	161.1%
DNR	Dinard	9	13	22	-10.0%	101.5%	33.6%	-34.9%	166.9%	17.6%	-50.0%	124.1%	-7.7%
TGM	Vidrasau – Mures	9	0	9	798.6%	--	--	50.4%	-90.4%	3.4%	-30.9%	-77.7%	-35.1%
CDT	Castellón	9	3	12	13.6%	84.2%	26.4%	--	--	--	--	--	--
CND	Constanta	9	50	59	-49.8%	82.4%	30.7%	77.7%	61.0%	63.3%	-40.5%	382.1%	133.3%
KAO	Kuusamo	9	98	106	50.0%	50.3%	50.3%	50.0%	81.0%	78.0%	0.5%	104.7%	88.8%
SKU	Skyros	8	3	11	0.0%	-8.9%	-2.7%	33.3%	7.4%	24.7%	33.3%	-67.9%	-29.7%
VST	Stockholm-Västerås	8	9	17	0.0%	-33.4%	-20.9%	--	--	--	--	--	--
SNR	Saint-Nazaire	7	--	7	-22.2%	--	--	0.0%	--	--	-23.4%	--	--
VOL	Nea Anchialos	7	2	9	5.7%	126.2%	21.4%	-24.4%	-69.6%	-44.5%	236.6%	47.0%	156.4%
ISE	Isparta Süleyman Demirel	6	54	60	-17.7%	-1.2%	-3.2%	-11.6%	26.5%	21.2%	--	--	--
JSY	Syros	6	--	6	0.0%	--	--	0.0%	--	--	200.0%	--	--
KTT	Kittilä	6	62	68	-14.3%	9.2%	6.6%	-14.3%	-14.7%	-14.7%	-28.6%	143.2%	100.8%
KZS	Kastelorizo	6	--	6	0.0%	--	--	-14.3%	--	--	0.0%	--	--
PED	Pardubice	6	2	8	-33.3%	23.1%	-24.9%	--	--	--	--	--	--
RJL	Logroño-Agoncillo	6	41	47	0.0%	20.0%	17.0%	0.0%	17.0%	14.5%	-65.9%	-42.0%	-46.8%
KFS	Kastamonu	6	23	29	-36.4%	-51.7%	-49.2%	--	--	--	--	--	--
DLE	Dole Jura	6	--	6	0.8%	--	--	-25.2%	--	--	--	--	--
KZI	Kozani	6	0	6	36.9%	--	--	--	--	--	-29.6%	-95.4%	-34.2%
BAY	Baia Mare	6	3	9	--	--	--	20.0%	-36.7%	-8.0%	-51.7%	-58.9%	-54.4%
BWK	Brac	5	0	5	-43.5%	-86.7%	-52.4%	--	--	--	--	--	--

		ABSOLUTE 2019			GROWTH 2019 VS 2018			GROWTH 2019 VS 2014			GROWTH 2019 VS 2009		
Code	Airport	Direct	Indirect	Airport	Direct	Indirect	Airport	Direct	Indirect	Airport	Direct	Indirect	Airport
LEN	Léon	5	8	13	0.0%	-45.4%	-33.6%	0.0%	57.5%	28.6%	-86.8%	-85.9%	-86.3%
PMF	Parma	5	--	5	-16.7%	--	--	-72.1%	--	--	-73.5%	--	--
OMO	Mostar	5	4	9	-7.5%	132.0%	29.1%	--	--	--	391.4%	--	--
KSO	Kastoria	5	--	5	27.0%	--	--	-21.6%	--	--	-22.5%	--	--
TEQ	Tekirdag Çorlu	4	--	4	-42.9%	--	--	-71.4%	--	--	0.0%	--	--
KCO	Kocaeli Cengiz Topel	3	--	3	-24.5%	--	--	0.0%	--	--	--	--	--
RGS	Burgos	3	6	9	0.0%	41.9%	24.1%	-40.0%	292.3%	35.6%	-70.0%	436.1%	-20.7%
PDV	Plovdiv	3	--	3	-57.1%	--	--	-49.3%	--	--	--	--	--
SXZ	Siirt	3	11	14	--	--	--	--	--	--	--	--	--
KLV	Karlovy Vary	2	3	5	-50.0%	-43.7%	-46.2%	-75.0%	-92.9%	-90.3%	-75.0%	-90.6%	-87.8%
ILD	Lleida	2	0	2	0.0%	-61.4%	-18.9%	-2.6%	130.3%	6.3%	--	--	--
AVN	Avignon	2	--	2	-1.1%	--	--	1.0%	--	--	-75.9%	--	--
SLM	Salamanca	1	--	1	--	--	--	-75.0%	--	--	-94.4%	--	--

APPENDIX 6: HUB CONNECTIVITY

		ABSOLUTE 2019	GROWTH 2019 VS 2018	GROWTH 2019 VS 2014	GROWTH 2019 VS 2009
Code	**Airport**	**Hub**	**Hub**	**Hub**	**Hub**
FRA	Frankfurt	78,773	-0.2%	10.6%	28.4%
AMS	Amsterdam	58,263	0.8%	18.0%	72.7%
CDG	Paris Charles de Gaulle	47,556	-2.1%	-5.2%	-7.7%
IST	Istanbul	41,539	16.9%	31.7%	353.3%
MUC	Munich	36,058	2.2%	37.8%	44.2%
LHR	London Heathrow	33,904	0.8%	2.7%	13.8%
SVO	Sheremetyevo International Airport	24,879	22.1%	80.8%	446.3%
MAD	Madrid-Barajas	22,933	9.9%	53.4%	17.9%
ZRH	Zürich	18,392	8.7%	30.9%	44.8%
VIE	Vienna	15,655	2.9%	20.1%	27.4%
FCO	Rome Fiumicino	14,854	7.4%	17.1%	35.9%
HEL	Helsinki	12,393	7.0%	62.2%	140.0%
LIS	Lisbon	6,494	-2.0%	49.4%	155.5%
WAW	Warsaw	6,329	19.8%	174.4%	336.1%
BRU	Brussels	6,325	-9.0%	-1.4%	11.1%
CPH	Copenhagen	6,081	7.8%	-2.2%	-2.5%
DUB	Dublin	4,365	4.3%	124.8%	408.8%
BCN	Barcelona-El Prat	4,353	6.1%	57.6%	55.6%
DME	Moscow Domodedovo	4,116	6.5%	80.1%	304.3%
OSL	Oslo	4,003	-4.0%	-2.3%	45.9%

		ABSOLUTE 2019	GROWTH 2019 VS 2018	GROWTH 2019 VS 2014	GROWTH 2019 VS 2009
Code	**Airport**	**Hub**	**Hub**	**Hub**	**Hub**
SAW	Sabiha Gökçen International	3,734	32.0%	58.7%	2333.9%
ATH	Athens	3,309	3.6%	66.4%	88.3%
DUS	Düsseldorf	3,254	8.8%	10.5%	23.0%
ARN	Stockholm-Arlanda	3,000	-13.2%	12.1%	129.1%
KEF	Keflavik	2,818	-38.9%	100.5%	923.8%
PRG	Prague	1,676	-17.1%	8.9%	-47.7%
STN	London Stansted	1,617	2.6%	80.3%	86.0%
LGW	London Gatwick	1,492	-4.1%	51.1%	57.2%
MAN	Manchester	1,370	13.2%	41.2%	189.7%
ORY	Paris-Orly	1,289	12.7%	11.5%	20.3%
MXP	Milan Malpensa	1,267	24.2%	62.4%	44.6%
GVA	Genève	1,207	2.9%	-2.4%	83.2%
KBP	Kiev	1,085	-9.1%	-16.8%	354.0%
STR	Stuttgart	908	-3.4%	96.5%	109.5%
RIX	Riga	907	28.7%	196.0%	160.1%
LED	St-Petersburg	886	1.1%	-1.7%	111.6%
TXL	Berlin Tegel	776	20.1%	-70.7%	61.0%
LIN	Milan Linate	596	15.1%	25.2%	130.3%
CGN	Köln-Bonn	592	-44.0%	55.6%	73.3%
HAM	Hamburg	563	-29.2%	16.0%	20.5%
VKO	Vnukovo International Airport	491	-7.5%	--	--
LYS	Lyon-Saint Exupéry	489	9.2%	28.8%	-55.7%
LCY	London City	449	5.8%	7.4%	456.1%

		ABSOLUTE 2019	GROWTH 2019 VS 2018	GROWTH 2019 VS 2014	GROWTH 2019 VS 2009
Code	**Airport**	**Hub**	**Hub**	**Hub**	**Hub**
VCE	Venice	354	-4.0%	21.2%	83.0%
OTP	Bucharest Otopeni	347	4.5%	28.6%	29.6%
BMA	Stockholm-Bromma	341	-21.6%	22.8%	445.6%
BSL	Basel-Mulhouse	321	29.2%	65.3%	455.4%
BGY	Bergamo	302	11.3%	102.6%	278.1%
BRS	Bristol	301	6.8%	50.4%	140.5%
BEG	Belgrade	263	4.9%	-4.0%	611.0%
OPO	Porto	241	11.8%	150.9%	202.2%
BUD	Budapest	223	13.5%	208.6%	-80.6%
BGO	Bergen	205	49.3%	36.9%	76.2%
AYT	Fraport TAV Antalya	204	43.0%	2760.7%	980.0%
PMI	Palma de Mallorca	201	16.1%	-73.7%	-81.7%
BHX	Birmingham	194	-4.4%	64.6%	131.5%
TLV	Tel Aviv Ben Gurion	190	19.3%	109.9%	187.1%
MRS	Marseille Provence	190	22.0%	24.5%	-36.5%
LTN	London Luton	173	--	--	--
NCE	Nice Côte d'Azur	168	5.1%	34.1%	67.9%
LJU	Ljubljana	167	-46.3%	69.4%	-4.6%
EDI	Edinburgh	151	-7.3%	188.6%	141.4%
BLQ	Bologna	150	17.7%	66.4%	379.9%
ADB	ğzmir Adnan Menderes	148	13.4%	732.9%	219.9%
BOD	Bordeaux	120	40.6%	153.1%	-1.7%
GOT	Göteborg Landvetter	115	0.3%	34.7%	-10.4%

		ABSOLUTE 2019	GROWTH 2019 VS 2018	GROWTH 2019 VS 2014	GROWTH 2019 VS 2009
Code	**Airport**	**Hub**	**Hub**	**Hub**	**Hub**
AGP	Malaga-Costa del Sol	102	11.9%	25.6%	137.3%
ZAG	Zagreb	97	-10.0%	--	--
TOS	Tromsø	97	21.1%	46.3%	262.8%
HAJ	Hannover	91	-18.9%	117.5%	31.2%
NAP	Naples	90	51.0%	188.4%	270.1%
EIN	Eindhoven	86	17.4%	43.7%	1783.5%
LUX	Luxembourg	82	2.8%	41.4%	158.2%
MLA	Malta	79	6.4%	89.7%	130.8%
NTE	Nantes	78	12.4%	378.6%	383.3%
SKG	Thessaloniki	77	-0.1%	50.0%	143.2%
CRL	Charleroi	73	2.5%	65.1%	383.0%
KLU	Klagenfurt	68	-16.4%	325.8%	1505.8%
LPA	Gran Canaria	68	-16.4%	325.8%	1505.8%
SVQ	Sevilla	67	50.8%	141.8%	146.1%
GLA	Glasgow	66	-35.6%	65.3%	4.6%
TLS	Toulouse-Blagnac	62	-8.5%	21.0%	40.8%
KIV	Chisinau	62	-2.2%	335.1%	785.3%
VLC	Valencia	61	10.4%	103.5%	18.4%
SOU	Southampton	58	-31.3%	-35.6%	-49.5%
SXF	Berlin Schönefeld	57	-22.1%	132.1%	80.5%
SVG	Stavanger	54	-31.1%	-59.7%	-49.1%
BIO	Bilbao	52	4.0%	18.8%	7.4%
PDL	Ponta Delgada	52	11.8%	83.3%	323.0%

		ABSOLUTE 2019	GROWTH 2019 VS 2018	GROWTH 2019 VS 2014	GROWTH 2019 VS 2009
Code	**Airport**	**Hub**	**Hub**	**Hub**	**Hub**
NUE	Nürnberg	47	-22.2%	10.1%	-62.0%
TFN	Tenerife Norte	46	-8.9%	9277.3%	3193.5%
SOF	Sofia	44	-6.3%	17.8%	24.9%
EMA	East Midlands	43	-13.8%	-18.9%	-44.5%
NCL	Newcastle	43	-2.9%	--	--
IBZ	Ibiza	41	-4.2%	7.5%	772.0%
SNN	Shannon	41	12.9%	-13.2%	85.6%
MSQ	Minsk	40	72.0%	132.7%	4164.3%
CIA	Rome Ciampino	37	-4.4%	-49.0%	563.7%
ALC	Alicante-Elche	37	-4.6%	46.1%	94.3%
ESB	Ankara Esenboğa	34	-12.8%	134.3%	399.9%
LCA	Larnaka	28	-48.9%	-1.0%	-70.8%
TSF	Treviso	28	-3.7%	189.8%	868.8%
CTA	Catania	27	35.7%	--	--
SZG	Salzburg	26	1.2%	40.1%	170.7%
FLR	Florence	25	-32.9%	-4.7%	20.0%
BLL	Billund	22	-18.5%	32.9%	-31.9%
WRO	Wroclaw	22	-1.9%	276.5%	838.7%
BOO	Bodø	19	-63.9%	-41.1%	60.1%
TRN	Turin	18	-52.2%	25.7%	433.1%
FAO	Faro	17	9.4%	270.8%	623.0%
AER	Sochi	17	10.8%	--	--
TBS	Tbilisi	17	46.2%	779.0%	188.4%

		ABSOLUTE 2019	GROWTH 2019 VS 2018	GROWTH 2019 VS 2014	GROWTH 2019 VS 2009
Code	**Airport**	**Hub**	**Hub**	**Hub**	**Hub**
TRD	Trondheim	16	-11.1%	-20.0%	-22.5%
BRE	Bremen	15	-41.9%	-48.2%	-49.9%
KRK	Krakow	14	59.2%	1306.2%	42.3%
PMO	Palermo	14	43.2%	92.8%	12.4%
GRZ	Graz	12	-0.5%	10.2%	139.1%
SCQ	Santiago	11	84.6%	25.2%	333.9%
SPU	Split	10	-2.1%	104.3%	124.9%
VRN	Verona	10	47.0%	12535.8%	95.5%
SXB	Strasbourg	10	-40.9%	-61.1%	-63.2%
VNO	Vilnius	9	55.2%	45.6%	11764.6%
BTS	Bratislava	9	-15.1%	1774.1%	-9.8%
TRF	Sandefjord	9	-22.3%	--	--
ORK	Cork	9	80.6%	-6.3%	313.4%
TIV	Tivat	8	365.2%	202.8%	151.1%
CAG	Cagliari	8	58.9%	47.9%	33.8%
KZN	Kazan	8	317.8%	--	220.4%
GRO	Girona-Costa Brava	7	-19.3%	-66.4%	-94.0%
DBV	Dubrovnik	7	13.4%	1300.2%	10039.0%
HER	Heraklion	7	-46.1%	59.9%	--
TLL	Tallinn	6	-70.6%	-27.6%	28.1%
BRI	Bari	6	220.1%	--	--
POZ	Poznan	6	-11.7%	754.1%	505.2%
LIL	Lille-Lesquin	5	-56.7%	-55.5%	0.7%

		ABSOLUTE 2019	GROWTH 2019 VS 2018	GROWTH 2019 VS 2014	GROWTH 2019 VS 2009
Code	Airport	Hub	Hub	Hub	Hub
ABZ	Aberdeen	5	-51.0%	-69.7%	-71.6%
PFO	Pafos	5	414.7%	769.8%	300.2%
TZX	Trabzon	5	-10.8%	--	--
ADA	Adana	5	218.7%	666.0%	3713.3%
CLJ	Cluj Avram Iancu	5	-34.6%	3730.3%	560.9%
RTM	Rotterdam	4	-14.6%	--	--
HHN	Hahn	4	--	--	--
MHQ	Mariehamn	4	-4.8%	4.9%	--
FMM	Memmingen	4	47.0%	510.6%	-32.2%
BOJ	Bourgas	4	--	--	482.0%
JSI	Skiathos	4	-10.3%	--	--
TFS	Tenerife Sur	4	3.2%	-36.6%	-64.2%
LNZ	Linz	3	-45.4%	-61.1%	-59.5%
ODS	Odessa	3	140.6%	-52.9%	437.6%
CFU	Corfu	2	73.0%	46.5%	-51.3%
PRN	Prishtina	2	55.2%	--	--
ACE	Lanzarote	2	-78.2%	54.5%	-8.5%
MAH	Menorca	2	17.8%	269.6%	--
BJV	Muğla Milas - Bodrum	2	228.4%	--	28.2%
FUE	Fuerteventura	2	-37.1%	-28.2%	-64.9%
FNC	Madeira	2	-70.5%	-51.0%	-89.9%
NOC	Knock	2	82.8%	52.0%	739.8%
INN	Innsbruck	2	-62.1%	73.6%	9438.1%

		ABSOLUTE 2019	GROWTH 2019 VS 2018	GROWTH 2019 VS 2014	GROWTH 2019 VS 2009
Code	Airport	Hub	Hub	Hub	Hub
KYA	Konya	2	1609.6%	1770.4%	--
FMO	Münster	2	-69.9%	2060.9%	-70.5%
CRA	Craiova	2	29.5%	--	--
RHO	Rhodes	2	-57.7%	-76.3%	323.2%
DSA	Doncaster Sheffield	2	--	--	--
JMK	Mykonos	2	-18.0%	69.2%	657.0%
MMX	Malmö	1	-60.4%	883.5%	--
TIA	Tirana	1	909.2%	-26.1%	-55.1%
TGD	Podgorica	1	-21.5%	23.5%	256.6%
FDH	Friedrichshafen	1	32.1%	--	691.6%
RNS	Rennes	1	115.3%	566.0%	--
GZT	Gaziantep	1	193.6%	--	--
SBZ	Sibiu	1	--	--	41.6%
OVD	Asturias	1	5.1%	--	--
KUN	Kaunas	1	383.9%	-78.5%	--
OSR	Ostrava	1	-18.3%	-46.7%	--
CHQ	Chania	1	-68.4%	-55.6%	--
BRQ	Brno	1	32.4%	10.5%	--
SDR	Santander–Seve Ballesteros	1	69.3%	--	--
TSR	Timisoara	1	-14.0%	--	-98.8%
KRS	Kristiansand	1	--	501.5%	--
OST	Ostend-Bruges	1	22.9%	261.3%	--
OLB	Olbia	1	-71.8%	-75.4%	-46.3%

		ABSOLUTE 2019	GROWTH 2019 VS 2018	GROWTH 2019 VS 2014	GROWTH 2019 VS 2009
Code	**Airport**	**Hub**	**Hub**	**Hub**	**Hub**
PGF	Perpignan	1	0.0%	--	--
JTR	Santorini	1	-24.5%	36.7%	447.3%
IAS	Iasi	1	-72.1%	9855.8%	--
GRX	Granada-Jaén F.G.L.	1	-60.9%	--	--
SJJ	Sarajevo	1	-80.7%	-19.4%	--
HAU	Haugesund	1	--	--	13.5%
OSD	Åre Östersund	1	--	--	-58.2%
FNI	Nîmes	1	-35.3%	--	--
VGO	Vigo	1	--	--	--
KUT	Kutaisi	0	415.8%	--	--
ASR	Kayseri	0	--	--	--
SKP	Skopje	0	--	--	417.3%
LCG	A Coruña	0	-48.7%	-8.3%	--
HOR	Horta	0	74.4%	--	493.1%
JER	Channel Islands	0	1456.4%	96.2%	-93.0%
HTY	Hatay	0	71.6%	--	--
TUF	Tours	0	--	--	--
SPC	La Palma	0	--	--	-44.8%
KVA	Kavala	0	-75.5%	--	--
UME	Umeå	0	-16.4%	-95.8%	--
LCJ	Lodz	0	-55.3%	--	--
BDS	Brindisi	0	362.1%	--	--
VAR	Varna	0	-90.6%	--	-33.7%

		ABSOLUTE 2019	GROWTH 2019 VS 2018	GROWTH 2019 VS 2014	GROWTH 2019 VS 2009
Code	**Airport**	**Hub**	**Hub**	**Hub**	**Hub**
LRH	La Rochelle – Ile de Ré	0	--	--	--
SZF	Samsun Çarsamba	0	-33.9%	--	--
LGG	Liège	0	--	-94.4%	-90.3%
KLX	Kalamata	0	--	--	--
BIA	Bastia	0	-64.9%	--	--
VXO	Växjö	0	-89.4%	--	--
AJA	Ajaccio	0	--	211.0%	--
CLY	Calvi Sainte-Catherine	0	--	--	--
KIR	Kerry	0	0.0%	--	--
SMA	Santa Maria	0	--	--	--
CFE	Clermont-Ferrand	0	--	-92.1%	-99.4%
ZAD	Zadar	0	-97.3%	--	--
ADF	Adiyaman	--	--	--	--
AEI	Algeciras (Heliport)	--	--	--	--
AES	Ålesund	--	--	--	--
AGH	Ängelholm-Helsingborg	--	--	--	--
AJI	Agri	--	--	--	--
AJR	Arvidsjaur	--	--	--	--
ALF	Alta	--	--	--	--
ANR	Antwerp-Deurne	--	--	--	--
ANX	Andøya	--	--	--	--
AOK	Karpathos	--	--	--	--
AVN	Avignon	--	--	--	--

		ABSOLUTE 2019	GROWTH 2019 VS 2018	GROWTH 2019 VS 2014	GROWTH 2019 VS 2009
Code	Airport	Hub	Hub	Hub	Hub
AXD	Alexandroupoli	--	--	--	--
BAL	Batman	--	--	--	--
BAY	Baia Mare	--	--	--	--
BCM	Bacau	--	--	--	--
BDU	Bardufoss	--	--	--	--
BES	Brest	--	--	--	--
BGG	Bingöl	--	--	--	--
BIQ	Biarritz	--	--	--	--
BJF	Båtsfjord	--	--	--	--
BJZ	Badajoz	--	--	--	--
BNN	Brønnøysund	--	--	--	--
BUS	Batumi	--	--	--	--
BVG	Berlevåg	--	--	--	--
BWK	Brac	--	--	--	--
CDT	Castellón	--	--	--	--
CFR	Caen-Carpiquet	--	--	--	--
CIY	Comiso	--	--	--	--
CKZ	Çanakkale	--	--	--	--
CND	Constanta	--	--	--	--
DIY	Diyarbakir	--	--	--	--
DLE	Dole Jura	--	--	--	--
DNR	Dinard	--	--	--	--
DNZ	Denizli Çardak	--	--	--	--

		ABSOLUTE 2019	GROWTH 2019 VS 2018	GROWTH 2019 VS 2014	GROWTH 2019 VS 2009
Code	Airport	Hub	Hub	Hub	Hub
EAS	San Sebastian	--	--	--	--
EDO	Balikesir Koca Seyit	--	--	--	--
EFL	Kefalonia	--	--	--	--
ERC	Erzincan	--	--	--	--
ERZ	Erzurum	--	--	--	--
EVE	Harstad/Narvik	--	--	--	--
EVG	Sveg	--	--	--	--
EZS	Elazig	--	--	--	--
FDE	Førde	--	--	--	--
FLW	Flores	--	--	--	--
FOG	Foggia	--	--	--	--
FRO	Florø	--	--	--	--
GEV	Gällivare	--	--	--	--
GIB	Gibraltar	--	--	--	--
GMZ	La Gomera	--	--	--	--
GNY	ğanliurfa Gap	--	--	--	--
GPA	Araxos	--	--	--	--
GRQ	Groningen	--	--	--	--
GZP	Alanya – Antalya Gazipasa	--	--	--	--
HAA	Hasvik	--	--	--	--
HAD	Halmstad	--	--	--	--
HFS	Hagfors	--	--	--	--
HFT	Hammerfest	--	--	--	--

		ABSOLUTE 2019	GROWTH 2019 VS 2018	GROWTH 2019 VS 2014	GROWTH 2019 VS 2009
Code	**Airport**	**Hub**	**Hub**	**Hub**	**Hub**
HMV	Hemavan	--	--	--	--
HOV	Ørsta-Volda	--	--	--	--
HRK	Kharkiv	--	--	--	--
HVG	Honningsvåg	--	--	--	--
IGD	Iğdir	--	--	--	--
ILD	Lleida	--	--	--	--
INI	Niš	--	--	--	--
INV	Inverness	--	--	--	--
IOA	Ioannina	--	--	--	--
IOM	Isle of Man	--	--	--	--
ISE	Isparta Süleyman Demirel	--	--	--	--
IVL	Ivalo	--	--	--	--
JCU	Ceuta (Heliport)	--	--	--	--
JIK	Ikaria	--	--	--	--
JKG	Jönköping	--	--	--	--
JKH	Chios	--	--	--	--
JKL	Kalimnos	--	--	--	--
JNX	Naxos	--	--	--	--
JOE	Joensuu	--	--	--	--
JSH	Sitia	--	--	--	--
JSY	Syros	--	--	--	--
JTY	Astypalaia	--	--	--	--
JYV	Jyväskylä	--	--	--	--

		ABSOLUTE 2019	GROWTH 2019 VS 2018	GROWTH 2019 VS 2014	GROWTH 2019 VS 2009
Code	Airport	Hub	Hub	Hub	Hub
KAJ	Kajaani	--	--	--	--
KAO	Kuusamo	--	--	--	--
KCM	Kahramanmarağ	--	--	--	--
KCO	Kocaeli Cengiz Topel	--	--	--	--
KEM	Kemi-Tornio	--	--	--	--
KFS	Kastamonu	--	--	--	--
KGS	Kos	--	--	--	--
KID	Kristianstad	--	--	--	--
KIT	Kythira	--	--	--	--
KKN	Kirkenes	--	--	--	--
KLF	Kaluga	--	--	--	--
KLR	Kalmar	--	--	--	--
KLV	Karlovy Vary	--	--	--	--
KOK	Kokkola-Pietarsaari	--	--	--	--
KRF	Höga Kusten	--	--	--	--
KRN	Kiruna	--	--	--	--
KSC	Košice	--	--	--	--
KSD	Karlstad	--	--	--	--
KSJ	Kasos	--	--	--	--
KSO	Kastoria	--	--	--	--
KSU	Kristiansund	--	--	--	--
KSY	Kars	--	--	--	--
KTT	Kittilä	--	--	--	--

		ABSOLUTE 2019	GROWTH 2019 VS 2018	GROWTH 2019 VS 2014	GROWTH 2019 VS 2009
Code	Airport	Hub	Hub	Hub	Hub
KUO	Kuopio	--	--	--	--
KZI	Kozani	--	--	--	--
KZS	Kastelorizo	--	--	--	--
LDE	Tarbes	--	--	--	--
LEI	Almería	--	--	--	--
LEN	Léon	--	--	--	--
LIG	Limoges	--	--	--	--
LKL	Lakselv	--	--	--	--
LKN	Leknes	--	--	--	--
LLA	Luleå	--	--	--	--
LPI	Linköping	--	--	--	--
LRS	Leros	--	--	--	--
LUZ	Lublin	--	--	--	--
LXS	Limnos	--	--	--	--
LYC	Lycksele	--	--	--	--
LYR	Svalbard	--	--	--	--
MCM	Monaco (Heliport)	--	--	--	--
MEH	Mehamn	--	--	--	--
MJF	Mosjøen	--	--	--	--
MJT	Mitilini	--	--	--	--
MLN	Melilla	--	--	--	--
MLO	Milos	--	--	--	--
MLX	Malatya	--	--	--	--

		ABSOLUTE 2019	GROWTH 2019 VS 2018	GROWTH 2019 VS 2014	GROWTH 2019 VS 2009
Code	Airport	Hub	Hub	Hub	Hub
MOL	Molde	--	--	--	--
MQM	Mardin	--	--	--	--
MQN	Mo i Rana	--	--	--	--
MSR	Mus	--	--	--	--
MZH	Amasya Merzifon	--	--	--	--
NAV	Nevğehir Kapadokya	--	--	--	--
NKT	Sirnak	--	--	--	--
NOP	Sinop	--	--	--	--
NQY	Newquay	--	--	--	--
OER	Örnsköldsvik	--	--	--	--
OHD	Ohrid	--	--	--	--
OMO	Mostar	--	--	--	--
OMR	Oradea	--	--	--	--
OSI	Osijek	--	--	--	--
OSY	Namsos	--	--	--	--
OUL	Oulu	--	--	--	--
PAS	Paros	--	--	--	--
PDV	Plovdiv	--	--	--	--
PED	Pardubice	--	--	--	--
PIS	Poitiers-Biard	--	--	--	--
PJA	Pajala	--	--	--	--
PLQ	Palanga	--	--	--	--
PMF	Parma	--	--	--	--

		ABSOLUTE 2019	GROWTH 2019 VS 2018	GROWTH 2019 VS 2014	GROWTH 2019 VS 2009
Code	**Airport**	**Hub**	**Hub**	**Hub**	**Hub**
PNA	Pamplona	--	--	--	--
PUF	Pau-Pyrénées	--	--	--	--
PUY	Pula	--	--	--	--
PVK	Aktion	--	--	--	--
PXO	Porto Santo	--	--	--	--
RET	Røst	--	--	--	--
REU	Reus	--	--	--	--
RGS	Burgos	--	--	--	--
RJK	Rijeka	--	--	--	--
RJL	Logroño-Agoncillo	--	--	--	--
RMU	Murcia International Airport	--	--	--	--
RNB	Ronneby	--	--	--	--
RRS	Røros	--	--	--	--
RVK	Rørvik	--	--	--	--
RVN	Rovaniemi	--	--	--	--
SDL	Sundsvall-Timrå	--	--	--	--
SDN	Sandane	--	--	--	--
SDV	Tel Aviv Dov Hoz	--	--	--	--
SFT	Skellefteå	--	--	--	--
SKN	Stokmarknes	--	--	--	--
SKU	Skyros	--	--	--	--
SLM	Salamanca	--	--	--	--
SMI	Samos	--	--	--	--

		ABSOLUTE 2019	GROWTH 2019 VS 2018	GROWTH 2019 VS 2014	GROWTH 2019 VS 2009
Code	Airport	Hub	Hub	Hub	Hub
SNR	Saint-Nazaire	--	--	--	--
SOG	Sogndal	--	--	--	--
SOJ	Sørkjosen	--	--	--	--
SSJ	Sandnessjøen	--	--	--	--
SUJ	Satu Mare	--	--	--	--
SVJ	Svolvær	--	--	--	--
SVL	Savonlinna	--	--	--	--
SXZ	Siirt	--	--	--	--
TEQ	Tekirdag Çorlu	--	--	--	--
TGM	Vidrasau – Mures	--	--	--	--
THN	Trollhättan	--	--	--	--
TKU	Turku	--	--	--	--
TLN	Toulon-Hyères	--	--	--	--
TMP	Tampere-Pirkkala	--	--	--	--
TPS	Trapani Birgi	--	--	--	--
TRS	Trieste	--	--	--	--
TYF	Torsby	--	--	--	--
UIP	Quimper	--	--	--	--
VAA	Vaasa	--	--	--	--
VAN	Van Ferit Melen	--	--	--	--
VAS	Sivas Nuri Demirag	--	--	--	--
VAW	Vardø	--	--	--	--
VBS	Brescia	--	--	--	--

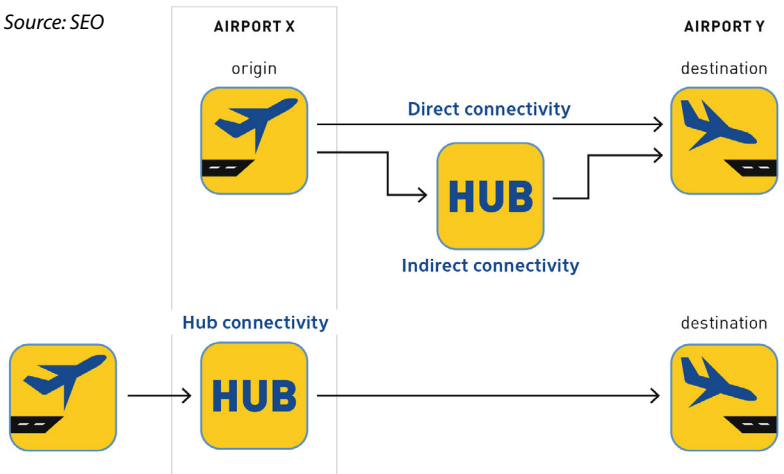
		ABSOLUTE 2019	GROWTH 2019 VS 2018	GROWTH 2019 VS 2014	GROWTH 2019 VS 2009
Code	**Airport**	**Hub**	**Hub**	**Hub**	**Hub**
VBY	Visby	--	--	--	--
VDE	El Hierro	--	--	--	--
VDS	Vadsø	--	--	--	--
VHM	Vilhelmina	--	--	--	--
VIT	Vitoria	--	--	--	--
VLL	Valladolid	--	--	--	--
VOL	Nea Anchialos	--	--	--	--
VST	Stockholm-Västerås	--	--	--	--
XRY	Jerez	--	--	--	--
YEI	Bursa Yenisehir	--	--	--	--
YKO	Hakkari Yüksekova	--	--	--	--
ZAZ	Zaragoza	--	--	--	--
ZTH	Zakynthos	--	--	--	--

APPENDIX 7: NETSCAN METHODOLOGY

The connectivity performance offered from an airport (airport connectivity) is made up of all connections offered from the airport either direct or indirect via an intermediate hub. Hub connectivity represents the connectivity offered via (with a transfer at) the airport.

FIGURE 1: **DIFFERENT TYPES OF CONNECTIVITY**

Source: SEO



Traditionally, connectivity is represented by the number of destinations or the number of direct flights offered from an airport. Although valuable in itself, this does not provide insight into the indirect and hub connectivity provided by the airports. The SEO NetScan connectivity model follows a more comprehensive approach and takes all three types of connectivity into account.

The NetScan model first identifies all direct and indirect (one-stop) connections available on an airport-pair. The model uses OAG passenger flight schedule data on direct flights as input. The flight schedules for the third week of June are used. Indirect connections are created within the model by connecting two direct flights taking into account minimum and maximum connecting times. Indirect connections are possible at any given airport between:

- flights of the same airline;
- flights of airlines working together in an alliance or through a codeshare agreement. The alliance and codeshare compositions are specified for the specific year of analysis.

As indirect connections are less attractive to the passenger than direct connections, due to the transfer and circuity time involved, each connection is weighted for its quality. The quality of a connection ranges between zero and one. A direct, non-stop flight operated by a jet aircraft is given the maximum quality of one. The quality of an indirect connection will always be lower than one since travel time is added due to transfer time and circuity time. The same holds true for a direct multi-stop connection or a direct connection operated by a turboprop: passengers face a lower network quality because of a longer travel time. Connections with a too long travel time relative to the theoretical direct flight time will be assigned a quality of 0. As such, these connections are considered to be unrealistic travel options for the passenger. Box 1 shows how the quality of individual connections is determined.

BOX 1: **DETERMINING THE QUALITY OF INDIVIDUAL CONNECTIONS**

The quality of each connection is calculated as follows:

1. First the maximum allowable perceived travel time is calculated. The maximum allowable perceived travel time $t_{x(h)y}^{perceived,\max}$ between airports X and Y depends upon the non-stop flight time between both airports $t_{xy}^{flight,non-stop}$ and a factor which decreases with distance. The non-stop flight time is determined by the geographical coordinates of origin and destination airport and the flight speed of an average jet aircraft taking into account the time needed for take-off and landing. Over longer distances passengers are willing to accept longer transfer and circuity times. Therefore the maximum allowable travel time also depends on a factor which decreases with distance: the further apart two airports are, the longer the maximum perceived travel time will be. For example, when the direct flight time between two airports is one hour, the maximum allowable perceived travel time will be about three hours, whereas this will be 24 hours for airports which are 12 hours apart by direct flight.

$$t_{xy}^{perceived,\max} = t_{xy}^{flight,non-stop} + 5 * \log(t_{xy}^{flight,non-stop} + 0.5) \quad (1)$$

2. Second the actual perceived travel time is determined. For direct connections, the actual perceived travel time between airports X and Y $t_{x(h)y}^{perceived,actual}$ equals the actual flight time $t_{xy}^{flight,actual}$. For indirect flights the perceived travel time equals the flight times on both flight legs and the transfer time at hub H $t_h^{transfer}$. As transfer time is considered more uncomfortable than flight time, the transfer time is penalized by a factor which decreases with distance p_{xy} :

$$t_{x(h)y}^{perceived,actual} = \begin{cases} t_{xy}^{flight,actual} & for\ direct\ flights \\ (t_{xh}^{flight,actual} + t_{hy}^{flight,actual}) + p_{xy} * t_h^{transfer} & for\ indirect\ flights \end{cases} \quad (2)$$

... /...

3. If the actual flight time is smaller than or equal to the average non-stop flight time, then the weight of the connection $q_{x(h)ya}$ equals one. In practice, this is only the case on direct flights operated by aircraft that are at least equally fast as the average jet aircraft on which the non-stop flight time is based. When the perceived travel time becomes larger than the maximum allowable perceived travel time, then the weight of the connection is zero and the connection will be considered unviable. In any other case, the perceived travel time lies between the non-stop flight time and the maximum allowable perceived flight time. In these cases, the weight of the connection depends on the relative difference between the perceived and maximum allowable travel time.

$$q_{x(h)y} = \begin{cases} 1 & if\ t_{x(h)y}^{perceived,\,actual} <= t_{xy}^{flight,\,non-stop} \\ 1 - \dfrac{t_{x(h)y}^{perceived,\,actual} - t_{xy}^{flight,\,non-stop}}{t_{xy}^{perceived,\,\max} - t_{xy}^{flight,\,non-stop}} & if\ t_{xy}^{flight,\,non-stop} < t_{x(h)y}^{perceived,\,actual} < t_{xy}^{perceived,\,\max} \\ 0 & if\ t_{x(h)y}^{perceived,\,actual} => t_{xy}^{perceived,\,\max} \end{cases}$$

(3)

When the perceived travel time is relatively small compared to the maximum allowable travel time, then the weight of the connection will be high and vice versa. The connectivity $CNU_{x(h)ya}$ of an individual direct or indirect connection equals its quality $q_{x(h)ya}$.

$$CNU_{x(h)ya} = q_{x(h)ya}$$

(4)

The CNU is calculated for each individual direct and indirect connection. This means that when a flight is offered with a daily frequency, the CNU's for each of these seven flights as well as for each possible connection have been calculated. The reason for distinguishing between individual flights is twofold. First, the flights might be carried out by different airplane types during the week leading to different flight times and therefore differing CNU's. Second, the same flight might connect to different flights on for example a Monday than on a Friday.

Summing the quality adjusted connectivity values offered by an airport on a certain airport-pair gives the total connectivity on the airport-pair. Summing direct and indirect connectivity offered from an airport yields the airport connectivity, which measures the connectivity available to passengers departing from the airport. Adding up hub connectivity by transfer (hub) airport yields the connectivity offered via the airport, which gives an indication of the performance of an airport as a transfer point.

Since 1997, NetScan has been applied in many consultancy studies for different stakeholders and has been widely published in the international peer-reviewed academic journals:

- Lieshout, R. & G. Burghouwt (2012). Airline competition in connecting markets. In: Niemeier et al. (eds), Liberalization in aviation. Aldershot: Ashgate.
- Burghouwt, G. and R. Redondi. Connectivity in air transport networks: an assessment of models and applications. Journal of Transport Economics and Policy 47(1), 35-53.
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- Burghouwt, G. and J. Veldhuis (2006). "The competitive position of hub airports in the Transatlantic market." Journal of Air Transportation, vol. 11, no. 1, pp. 106-130.
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For the 6th year running, ACI EUROPE releases its annual Airport Industry Connectivity Report – a comprehensive industry-wide snapshot of air connectivity. This Report lays out the evolution of direct, indirect and total airport connectivity as well as hub connectivity between 2009 and 2019, enriched by analysis based on SEO's NetScan connectivity methodology.

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