Traditionally dominated by traffic between Europe and North America, newer, longer-range airliners are increasing transatlantic traffic between the Middle East, Africa, and even the Indian sub-continent to the Americas, without the need to stop in Europe. This article analyses the development of the transatlantic market, and how this dynamic is changing.

The development of the transatlantic market

The transatlantic market is one of the world's largest long-haul passenger markets. Many of the world's economic and political hubs are found either side of the Atlantic Ocean. This makes for many financially lucrative routes for the world's airlines to connect the many passengers wishing to travel across the Atlantic.

With the ever-increasing use of technology to communicate, the 9/11 terrorist attacks in 2001, and many Western economies experiencing economic downturns since 2008, one might think the transatlantic market would have matured and/or stagnated in that period. This is not the case, however, with seat numbers increasing overall by 40.3% from 2002 to 2011 *(see table, page 11)*, and 210 new routes being added; an increase of 44%.

About 50 new routes were opened between the Middle East, Africa and the Indian sub-continent, and the Americas. Most, 160, were on the traditional Europe-Americas market; and 144 of these were between Europe and North America, while other new routes were opened between Europe and South America.

This article analyses how and where this growth has occurred as well as how aircraft types changed in 2002–2011.

Market development

Traditionally, the transatlantic market is thought of as flights operated between Europe, and North America and the Caribbean. While this is indeed the dominant sector of transatlantic flights, accounting for 78.2% of total seats flown in 2011, routes between other continents on the west and eastern side of the Atlantic also constitute transatlantic operations.

On the eastern side of the Atlantic flights originate from: Europe to South America; the Middle East to both North and South America; Africa to North and South America; and the Indian sub-continent (India and Pakistan) to the US and Canada.

Although flights from Europe, Africa and the Middle East take a clear route over the Atlantic Ocean, flights from the Indian sub-continent do not. They are included in this analysis because in 2002 many airlines from the Indian sub-continent made a refuelling stop in Europe on their way to North America, thereby adding to the transatlantic market.

With the advent and delivery of ultra-long-range airliners such as the 777-200LR, many of these routes from the Indian sub-continent to North America are now flown directly without technical stops in Europe, and so constitute transatlantic services. These routes are included to illustrate how this has changed the transatlantic market from 2002 to 2011.

The transatlantic market can be analysed as routes between four eastern continents, and North and South America on the western side. North America is sub-divided into Canada, the US, the Caribbean, and Mexico and Central America (which is included with Mexico since operations to and from Central America are limited).

North America is the dominant part of the Americas, accounting for 87% of all services and seat capacity. Of this, the US and Canada account for about 77% of services and 75% of seat capacity.

The importance of South America has grown, however, since 2002. The number of routes serving it has increased by 28 (43%), for example, and most of these are from Europe.

Operations from Europe

Europe, as an origin or destination, accounted for 90.5% of all transatlantic seats flown (53.374 million) to both the Americas in 2011 *(see table, page 11)*. This makes Europe the dominant eastern continent in the transatlantic market. This percentage, however, decreased from the 96.9% of all seats flown in the transatlantic market in 2002, due to the growth in services from the Middle East, the Indian sub-continent and Africa.

In 2011, operations from Europe were dominated by services to North America, which accounted for 87.3% of flights and 86.6% of the 53.37 million seats that originated from Europe. The other 13% were for South American services *(see table, page 11)*. This is higher than in 2002, and is explained by the 18 new routes opened between Europe and South America during the period.

Breaking down services from Europe to the four main regions of North America, services between Europe and the US, the largest sector, account for

TRANSATLANTIC TRAFFIC DEVELOPMENT BY CONTINENT 2002-2011

Region	2002 No. of routes	2002 Ops	2002 Seat capacity	2002 Av. aircraft size	2002 % Total seat capacity	2011 No. of routes	2011 Ops	2011 Seat capacity	2011 Av. aircraft size	2011 % Total seat capacity	2002-2011 % change seat capacity
FROM EUROPE TO:											
US	209	106,570	28,036,431	263	66.7%	263	130,679	33,603,263	257	57.0%	+19.9%
Canada	62	14,603	3,789,602	260	9.0%	97	21,938	5,837,195	266	9.9%	+54%
Mexico & C. Am.	15	3,487	1,021,821	293	2.4%	55	8,632	2,609,201	302	4.4%	+155.3%
Caribbean	100	11,318	3,753,139	332	8.9%	115	13,233	4,048,866	306	6.9%	7.9%
S. America	60	15,545	4,143,069	267	9.9%	78	25,698	7,275,772	283	12.3%	+75.6%
TOTAL	**446**	**151,523**	**40,744,062**	**269**	**96.9%**	**608**	**200,180**	**53,374,297**	**267**	**90.5%**	**+31%**
FROM MIDDLE EAST TO:											
US	7	1,614	516,759	320	1.2%	29	9,543	2,904,886	304	4.9%	+462.1%
Canada	1	458	109,203	238	0.3%	6	914	281,318	308	0.5%	+157.6%
Mexico & C. Am.	0	0	0	0	N/A	0	0	0	0	N/A	N/A
Caribbean	0	0	0	0	N/A	0	0	0	0	N/A	N/A
S. America	0	0	0	0	N/A	4	882	263,498	299	0.4%	N/A
TOTAL	**8**	**2,072**	**625,962**	**302**	**1.5%**	**39**	**11,339**	**3,449,702**	**304**	**5.8%**	**+451.1%**
FROM AFRICA TO:											
US	10	1,441	506,687	352	1.2%	16	3,274	844,390	258	1.4%	+66.6%
Canada	1	131	39,460	301	0.1%	2	518	148,165	286	0.3%	+275.5%
Mexico & C. Am.	0	0	0	0	N/A	0	0	0	0	N/A	N/A
Caribbean	0	0	0	0	N/A	2	44	12,422	282	0.0%	N/A
S. America	5	366	118,174	323	0.3%	11	1,293	354,580	274	0.6%	+200%
TOTAL	**16**	**1,938**	**664,321**	**343**	**1.6**	**31**	**5,129**	**1,359,557**	**265**	**2.3%**	**+104.7%**
FROM INDIAN SUB-CONTINENT TO:											
US	0	0	0	0	N/A	6	2,178	623,809	286	1.1%	N/A
Canada	0	0	0	0	N/A	5	521	166,654	320	0.3%	N/A
Mexico & C. Am.	0	0	0	0	N/A	0	0	0	0	N/A	N/A
Caribbean	0	0	0	0	N/A	0	0	0	0	N/A	N/A
S. America	0	0	0	0	N/A	0	0	0	0	N/A	N/A
TOTAL	**0**	**0**	**0**	**0**	**0.0%**	**11**	**2,699**	**790,463**	**293**	**1.4%**	**N/A**
SUMMARY:											
FROM:											
Europe	446	151,523	40,744,062	269	96.9%	608	200,180	53,374,297	267	90.5%	+31%
Africa	16	1,938	664,321	343	1.6%	31	5,129	1,359.557	265	2.3%	+104.7%
Middle East	8	2,072	625,962	302	1.5%	39	11,339	3,449,702	304	5.8%	+451.1%
Sub-continent	0	0	0	0	N/A	11	2,699	790,463	293	1.4%	N/A
TOTAL MARKET	**470**	**155,533**	**42,034,345**	**270**	**100%**	**689**	**219,347**	**58,974,019**	**269**	**100%**	**+40.3%**

33.6 million seats and 57% of all transatlantic seat capacity. The market saw a 20% increase in seats, equal to 5.6 million.

This sector is the main traditional transatlantic market, and is still growing. Over the period 54 new routes were opened , although some of these were transferred from London Gatwick (LGW) to London Heathrow (LHR).

The Canadian and Caribbean markets increased little, indicating they have reached maturity. They account for 9.9% and 6.9% of the transatlantic market.

The Mexican, Central American and South American markets grew at the highest rates, with 58 new routes being opened. The busiest are: Madrid (MAD) to Cancun (CUN) and to San Juan (SJU); and Amsterdam (AMS) to Lima (LIM). Other routes include Lisbon (LIS) to Brasilia (BSB); Munich (MUC) to Sao Paulo (GRU); Rome (FCO) to Caracas (CCS); MAD to Cali; Colombia (CLO) and LIS to Belo Horizonte.

While the Mexico and Central American market is the smallest from Europe, it grew at the highest rate from 2002 to 2011. Seat numbers more than doubled to 2.6 million and the number of routes more than tripled to 55.

South America is the second largest transatlantic market from Europe after the US, and grew in capacity by 3.14 million seats; a rise of 75.6% *(see table, this page)*. A total of 18 new routes were added on the Europe-South America market.

Overall, one-way seat capacity from Europe grew by 13 million seats over the period, a growth of 31%. More than 160 new routes were added, amounting to about 50,000 additional flights per year *(see table, this page)*.

Operations from Middle East

Direct services from the Middle East to the Americas have fast become the second largest sector of the transatlantic market. The number of routes has more than quadrupled to 39 in the period since 2002, while the number of operations and seats has increased by a factor of 5.5 to 11,339 flights and 3.45 million seats *(see table, this page)*. The sector therefore accounts for 5.2% of all services and 5.8% of seat capacity on the transatlantic market.

By 2011, the number of routes between the Middle East, and the US and Canada had risen from eight to 35; with 29 operating to the US.

A small number of new routes were also opened to South America, although in 2011 these were operating at relatively low frequencies.

These large increases in capacity from the Middle East are due to the rapid network expansion of the major Middle Eastern carriers over the period *(see The perpetual growth of Middle East airlines, Aircraft Commerce, October/November 2011, page 12)*. The likes of Emirates (EK), Etihad (EY) and Qatar Airways

(QR) have added a large number of long-range widebodies to their fleets, like the A340-500 and 777-200LR, which have made it possible for these ultra long-range routes to be operated as non-stop services.

EK operates services from Dubai (DXB) to New York JFK (JFK), IAH, LAX, San Francisco (SFO), YYZ and GRU.

EY operates from Abu Dhabi (AUH) to JFK, Chicago O'Hare (ORD) and YYZ. QR operates from Doha (DOH) to Washington Dulles (IAD), IAH, JFK, Montreal (YUL), and GRU.

Operations from Africa

The Africa-Americas market is the third largest sector in the transatlantic market, accounting for an annual total of 5,129 flights and 1.36 million seats for 31 routes *(see table, page 11)*. This is 2.3% of transatlantic services and seat capacity.

The Africa-Americas market has grown fast from 2002 to 2011, with nine routes added: six to the US, one to Canada and two to the Caribbean.

Annual seat capacity more than doubled, and frequencies grew at a faster rate, which had the effect of reducing average aircraft size.

Operations from India

Services from the Indian sub-continent only serve the US and Canada. The India-North America market is the smallest of the four main sectors, and accounted for 1.3% of services and capacity in 2011.

Direct flights from the Indian sub-continent (India, Bangladesh and Pakistan) and other parts of the Asia Pacific region to North America cannot be classed as transatlantic in a strictly geographic sense, because they are really trans-polar routes.

In 2002, however, airlines from the region, such as Air India (AI) and Pakistan International Airlines (PK), used European airports for refuelling stops and to pick up fifth freedom traffic en route to North America. The routes are therefore included as a sector of the transatlantic market. An example of this is AI, which in 2002 operated 747-400s from LHR to JFK and ORD, and from CDG to EWR.

By 2011, AI was operating direct flights from Mumbai (BOM) and Delhi (DEL) to EWR, JFK and YYZ, with 777-200LRs and 777-300ERs. AI no longer has technical stops anywhere in Europe.

These new direct services have added services and capacity to the transatlantic market. By 2011, there were 11 direct routes from the Indian sub-continent to North America: six to the US and five to Canada. The US flights accounted for most of the capacity, with 623,809 seats flown to the US out of 790,463 seats to North America *(see table, page 11)*.

Major hubs

In 2011, four of the top five hubs for transatlantic travel, based on available one-way seat capacity were European: LHR was top, JFK second, CDG third, FRA fourth and MAD fifth *(see table, page 14)*.

North American hubs dominate the latter half of the top 10, with EWR, ORD and IAD and YYZ ranking sixth, eighth, ninth, and tenth. AMS completes the top 10, ranking seventh. These top 10 airports account for 47.4% of total transatlantic capacity and operations.

LHR and JFK are the dominant hubs, offering more one-way seat capacity than the other airports in the top 10. They combine to offer almost 20 million transatlantic seats on about 74,000 flights *(see table, page 14)* from a total of 59 million seats and 220,000 flights.

Both LHR and JFK have added 9,000 new transatlantic flights each from 2002 to 2011 *(see table, page 14)*. JFK has added 700,000 seats more than LHR, so it has gained a little ground on LHR in terms of transatlantic seat capacity.

LHR

One-way annual transatlantic services from LHR grew by 8,700, and seat capacity by 1.99 million from 2002 to 2011, although about half of this expansion is a result of the transfer of flights from LGW. By 2011, transatlantic services and capacity from LHR had reached 40,307 flights and 10.6 million seats.

Most of LHR's transatlantic capacity, 82%, is to the US. LHR is also by far the largest hub for travel between Europe and the US, with LHR providing more than 8.7 million one-way seats between Europe and the US in 2011.

The transfer of routes from LGW to LHR was as a consequence of the UK and US Open Skies agreement in 2008. Prior to this, only British Airways (BA), Virgin Atlantic (VS), United Airlines (UA) and American Airlines (AA) could operate to the US from LHR. All other carriers had to operate from LGW when flying to the US.

Several airlines, including Delta Airlines (DL), Continental (CO) and Northwest (NW), transferred their transatlantic services from LGW to LHR; LHR's attractiveness being that it generates higher passenger yields.

From 2002 to 2011, the number of transatlantic flights and seat capacity operated from LGW declined by 4,500 and 1.125 million; a reduction of 34%. Seat capacity decreased by 33.6% *(see table, page 14)*, as capacity was transferred to new services from LHR.

LGW did, however, retain several transatlantic services, in particular many routes to the Caribbean, most of which are operated by VS and BA.

Many US destinations served from LGW are leisure-oriented markets, and are flown by VS and BA. There are also services to Atlanta (ATL) by Delta Airlines (DL), and Charlotte (CLT) by US Airways (US). LGW serves several Canadian destinations through Canadian leisure carrier Air Transat (TS).

The number of services and seats for LHR and LGW are combined to give an overall view of transatlantic operations serving London. This analysis shows that transatlantic seat capacity from London overall grew by 7.2% over the period to 2011. This is an annual one-way capacity increase of about 862,000 seats and 4,000 flights.

BA is the dominant carrier in the London market, and accounted for 57% of the one-way seat capacity in 2011 from LHR and LGW combined, which are now BA's only transatlantic hubs.

Combining both LHR and LGW, BA operated 18,899 transatlantic operations, which offered 5,082,029 seats in 2011. LHR operations accounted for 16,275 operations and 4,489,005 seats.

BA has increased its total transatlantic capacity by about 600,000 seats since 2002 *(see table, page 16)*.

BA offered the third largest amount of transatlantic seat capacity of all airlines in 2011 *(see table, page 16)*. This gave BA an 8.6% capacity share of the total transatlantic market. Despite BA's increase in transatlantic seat capacity, its capacity share reduced by 1.9% from the 10.5% share it had in 2002.

In 2011, however, BA operated 36 transatlantic routes - five fewer than in 2002. This was 27 from LHR (increase of four from 2002), and nine from LGW (a reduction of eight routes).

BA's transatlantic fleet mix has remained almost the same from 2002 to 2011, and comprises 767-300ERs, 777-200ERs, and 747-400s.

LHR is also the origin for the busiest transatlantic route: LHR-JFK. Capacity on this route is over double the capacity found for the second-placed route, LHR-LAX. Almost one million more seats were available on LHR-JFK, compared with

TOP 30 TRANSATLANTIC HUBS BY ONE-WAY PASSENGER CAPACITY 2002-2011

Hub	Hub region	2002 Ops	2002 Seat capacity	2002 Average aircraft size	2011 Ops	2011 Seat capacity	2011 Average aircraft size	2002-2011 % change Ops	2002-2011 % change seat capacity	2002-2011 change aircraft size
LHR	Europe	31,643	8,655,471	274	40,307	10,643,910	264	27.4%	23.0%	-9
JFK	US	24,140	6,440,751	267	33,603	9,158,543	273	39.2%	42.2%	6
CDG	Europe	19,796	5,502,930	278	23,335	6,547,255	281	17.9%	19.0%	3
FRA	Europe	17,876	4,983,752	279	20,062	6,045,199	301	12.2%	21.3%	23
MAD	Europe	10,992	3,141,192	286	18,837	5,321,561	283	71.4%	69.4%	-3
EWR	US	12,336	2,938,749	238	21,118	4,518,940	214	71.2%	53.8%	-24
AMS	Europe	13,541	3,722,617	275	16,201	4,315,326	266	19.6%	15.9%	-9
ORD	US	11,857	2,998,988	253	13,004	3,341,024	257	9.7%	11.4%	4
IAD	US	8,575	2,164,304	252	12,532	3,083,905	246	46.1%	42.5%	-6
YYZ	Canada	8,031	1,997,877	249	11,155	2,976,318	267	38.9%	49.0%	18
GRU	S. America	5,371	1,425,277	265	8,368	2,424,831	290	55.8%	70.1%	24
ATL	US	7,846	1,960,531	250	9,507	2,342,835	246	21.2%	19.5%	-3
LGW	Europe	12,195	3,346,832	274	7,416	2,220,847	299	-39.2%	-33.6%	25
LAX	US	5,281	1,698,489	322	7,227	2,205,839	305	36.8%	29.9%	-16
YUL	Canada	3,460	974,937	282	6,713	1,901,575	283	94.0%	95.0%	1
BOS	US	6,272	1,587,504	253	7,420	1,898,636	256	18.3%	19.6%	3
MIA	US	5,196	1,661,186	320	6,112	1,821,040	298	17.6%	9.6%	-22
FCO	Europe	3,391	837,876	247	7,040	1,783,327	253	107.6%	112.8%	6
MUC	Europe	2,779	639,559	230	5,799	1,596,121	275	108.7%	149.6%	45
PHL	US	4,377	1,108,745	253	6,581	1,564,946	238	50.4%	41.1%	-16
SFO	US	3,854	1,184,013	307	4,495	1,507,102	335	16.6%	27.3%	28
ORY	Europe	3,039	1,284,747	423	4,722	1,491,976	316	55.4%	16.1%	-107
IAH	US	2,788	731,960	263	5,348	1,411,724	264	91.8%	92.9%	1
DXB	Middle East	100	28,200	282	3,802	1,270,315	334	3,702.0%	4,404.7%	52
ZRH	Europe	4,917	1,180,019	240	5,739	1,208,802	211	16.7%	2.4%	-29
LIS	Europe	2,604	595,332	229	4,543	1,150,067	253	74.5%	93.2%	25
EZE	S. America	2,443	807,361	330	3,488	1,113,626	319	42.8%	37.9%	-11
MAN	Europe	3,201	849,117	265	4,237	1,097,011	259	32.4%	29.2%	-6
BRU	Europe	2,352	512,759	218	4,513	1,004,117	222	91.9%	95.8%	4
TLV	Middle East	1,699	519,237	306	3,250	983,104	302	91.3%	89.3%	-3

LHR-LAX in 2011 *(see table, page 15)*. This shows just how dominant the LHR-JFK route is.

In 2011, five airlines operated LHR-JFK: BA, AA, VS, DL, and Kuwait Airways (KU). BA accounts for 43.4% of the LHR-JFK seat capacity, and operated seven daily flights.

VS and AA offer a very similar amount of seat capacity on the route, accounting for 20.1% and 19.9% of seat capacity respectively. VS operated three daily services, while AA operated four.

DL operates 767-400ERs three times daily, and accounts for 14.3% of seat capacity.

LHR, as the largest transatlantic hub, accounts for eight of the top 10 busiest routes, and 10 of the top 20 *(see table, this page)*. Nine of the 10 in the top 20 are to destinations in the US, illustrating the dominance of LHR as a European hub serving the US market. The other route LHR has in the top 20 is to YYZ.

Of the 10 routes in the top 20 that include LHR, BA accounts for 38.6% of the seat capacity, and its capacity share on each route ranges from 25% to 45%. BA is the market leader in terms of capacity on five of these 10 routes, which are from LHR to JFK, LAX, BOS, MIA and SFO.

VS is the largest non-aligned airline in the transatlantic market and the second largest UK-based carrier. VS increased its capacity by more than 500,000 seats up to 2011; an increase of 25.6%.

VS transferred only its MIA service from LGW to LHR, and also opened a new service to ORD. It added about 160,000 one-way seats up to 2011.

Unlike BA, VS expanded its transatlantic operations from LGW. It added about 160,000 seats to its existing operations. It also added routes from LGW to HAV, KIN, MBJ and TAB.

Most of VS's capacity increase at LHR was due to additional frequencies on existing services, rather than new routes.

VS has also increased capacity at its small MAN hub by 173,242 seats. This is an increase of almost 200%. As well as adding frequencies to its MAN-MCO route, VS has started MAN-LAS and MAN-BGI since 2002.

Paris CDG

CDG showed a steady growth rate of 19% in one-way seat capacity from 2002 to 2011, making it the third busiest hub in the transatlantic market. One-way seat capacity increased by over a million seats to 6,547,255 in 2011 *(see table, this page)*.

Eight net routes have been added to CDG's services, including six US services. US opened a route to CLT, and DL opened two routes to Minneapolis St. Paul (MSP), and Salt Lake city (SLC).

Other new routes opened at CDG from 2002 to 2011 include Cancun (CUN), MCO, Seattle (SEA) and LIM.

AF is the dominant carrier at CDG, and accounts for 62.2% of all one-way transatlantic seat capacity from CDG. The carrier with the next highest share at CDG is DL with 8.5% capacity share. AA, Continental (CO), and Air Canada (AC) are the next three largest with shares of 6.5%, 4%, and 3.6%.

ORY is AF's other transatlantic hub. Between CDG and ORY, AF increased its transatlantic seat capacity by 19%, equal to 700,000 seats up to 2011 *(see table, this page)*.

Nevertheless, AF's total capacity share of the total transatlantic market decreased from 9.1% in 2002 to 7.7% in 2011. AF ranked fourth in terms of total transatlantic seat capacity offered.

AF increased its seat capacity from CDG by almost one million seats up to and 2011; an increase of 31.4%. AF added routes from CDG to DTW (also operated by DL), MCO and SEA in the US, as well as Fort de France (FDF) in the Caribbean, CUN in Mexico, and LIM in

TOP 30 BUSIEST TRANSATLANTIC ROUTES BY PASSENGER TRAFFIC 2002-2011

Route	Origin region	Dest. region	2002 Ops	2002 Seat capacity	2002 Average aircraft size	2011 Ops	2011 Seat capacity	2011 Average aircraft size	2002-2011 % change Ops	2002-2011 % change seat capacity	2002-2011 change aircraft size
LHR-JFK	Europe	US	6,461	1,849,940	286	6,304	1,841,138	292	-2.4%	-0.5%	6
LHR-LAX	Europe	US	2,541	817,743	322	2,775	862,757	311	9.2%	5.5%	-11
LHR-EWR	Europe	US	2,138	553,426	259	3,581	827,632	231	67.5%	49.5%	-28
CDG-JFK	Europe	US	2,783	720,659	259	2,663	795,722	299	-4.3%	10.4%	40
LHR-ORD	Europe	US	3,388	881,800	260	3,240	760,011	235	-4.4%	-13.8%	-26
LHR-BOS	Europe	US	2,420	660,304	273	2,806	686,586	245	16.0%	4.0%	-28
CDG-YUL	Europe	Canada	1,139	375,735	330	1,878	639,849	341	64.9%	70.3%	11
LHR-IAD	Europe	US	2,551	669,602	262	2,725	639,579	235	6.8%	-4.5%	-28
LHR-MIA	Europe	US	1,159	351,749	303	1,859	558,017	300	60.4%	58.6%	-3
LHR-SFO	Europe	US	1,815	573,944	316	1,665	551,904	331	-8.3%	-3.8%	15
LHR-YYZ	Europe	Canada	2,481	632,156	255	2,181	544,528	250	-12.1%	-13.9%	-5
ORY-PTP	Europe	Caribbean	1,229	559,054	455	1,445	535,027	370	17.6%	-4.3%	-85
MAD-EZE	Europe	S. America	973	354,858	365	1,441	504,680	350	48.1%	42.2%	-14
ORY-FDF	Europe	Caribbean	1,180	523,306	443	1,326	498,003	376	12.4%	-4.8%	-68
FRA-JFK	Europe	US	1,561	459,036	294	1,446	494,482	342	-7.4%	7.7%	48
MAD-JFK	Europe	US	772	217,066	281	1,665	444,342	267	115.7%	104.7%	-14
FRA-IAD	Europe	US	1,297	373,742	288	1,589	424,454	267	22.5%	13.6%	-21
FRA-ORD	Europe	US	1,666	455,958	274	1,282	416,824	325	-23.0%	-8.6%	51
LHR-IAH	Europe	US	0	0	0	1,430	396,798	277	N/A	N/A	N/A
TLV-JFK	Middle East	US	596	216,414	363	972	376,281	387	63.1%	73.9%	24
LGW-MCO	Europe	US	1,102	433,426	393	1,019	361,963	355	-7.5%	-16.5%	-38
AMS-DTW	Europe	US	1,362	422,475	310	1,310	358,388	274	-3.8%	-15.2%	-37
CDG-IAD	Europe	US	1,145	319,411	279	1,226	352,837	288	7.1%	10.5%	9
FRA-SFO	Europe	US	731	232,381	318	936	352,524	377	28.0%	51.7%	59
CDG-LAX	Europe	US	838	292,372	349	1,160	351,823	303	38.4%	20.3%	-46
LHR-DFW	Europe	US	0	0	0	1,267	340,339	269	N/A	N/A	N/A
FRA-YYZ	Europe	Canada	916	280,374	306	1,187	330,158	278	29.6%	17.8%	-28
CDG-ATL	Europe	US	1,351	379,517	281	1,252	330,057	264	-7.3%	-13.0%	-17
CDG-GRU	Europe	S. America	817	201,978	247	1,278	326,329	255	56.4%	61.6%	8
MAD-LIM	Europe	S. America	373	94,742	254	1,116	319,679	286	199.2%	237.4%	32

South America.

Despite operating the same number of services from ORY in 2011, AF reduced capacity by 244,330 seats. This is due to a downgauge in aircraft from 747s to 777-200ERs and A340s.

FRA

Frankfurt is the fourth largest hub for transatlantic operations, and the third largest European hub. FRA is dominated by Lufthansa (LH).

Capacity from FRA increased by 21.3% to just over 6 million seats up to 2011. The number of transatlantic routes operated from FRA reduced by a net of three to 50 over the same period.

Dropped routes included CVG, PHX, Pittsburgh (PIT), and TPA. New routes include MCO, SEA and Ottawa (YOW).

Of a total transatlantic one-way capacity of 6 million seats in 2011, routes to the US accounted for about four million seats; 66.6% of capacity. Other markets include: Canada, with 850,000 seats; South America with 700,000; Mexico and Central America with 260,000; and the Caribbean market with 210,000.

LH provided 3.25 million of the 6 million transatlantic seats, accounting for 53.7% of capacity. The other major airlines at FRA include: UA, with 10.7% capacity share; AC with 8.1%; DE with 8%; and US with 4.4%.

LH is the fifth largest transatlantic carrier, and in 2011 had a 7.6% seat capacity share of the total transatlantic market. It provided 4.48 million one-way seats; an increase of 56.6%. This increase included about 400,000 additional seats between FRA and the US, and 200,000 seats between FRA and South America.

LH offered 40 transatlantic routes in 2011: 25 from FRA; 11 from its secondary hub at MUC; and four from a small, third hub at Dusseldorf (DUS). LH added 13 new transatlantic routes up to 2011.

LH's secondary transatlantic operation from MUC has seen the fastest rate of route network development of all European and North American hubs. This is explained by LH's development of MUC into a secondary long-haul hub after FRA.

The number of transatlantic routes served by MUC has increased by just three to 19, but the number of operations increased by a factor of about 2.1, and annual seat capacity increased by a factor of 2.5.

LH accounts for 62.6% of transatlantic operations from MUC, and has increased its transatlantic seat capacity from 261,726 seats to 998,484 seats. It has also increased the number of transatlantic routes by seven to 11. LH added routes to CLT, EWR, IAD, LAX, Miami (MIA), YUL and GRU.

Other airlines operating transatlantic routes from MUC are: UA (11.5% capacity share); US (5.9%); AC (5.7%) DL (5.4%); and CO (4.6%).

In total, LH increased its transatlantic seat capacity by 56.6%, adding about 4,500 flights and 1.6 million seats. The combined operations at FRA and MUC account for most of this growth. This increased LH's share of total transatlantic capacity from 6.8% in 2002 to 7.6% in 2011. Most of this can be attributed to its expansion of MUC as a long-haul base, with seat numbers increasing by a factor of 2.5. This includes four routes added to the US, two to Canada and one to South America.

MAD

MAD, home to Iberia (IB), was the fastest growing transatlantic hub in the top 10 up to 2011. Seat capacity increased by 69.4%, and flights by 71.4% *(see table, page 14)*. This resulted in an extra 2 million seats by 2011, due to an expansion of existing routes and the addition of new 12 new ones: five to the

TOP 20 AIRLINES BY ONE-WAY PASSENGER CAPACITY 2002-2011

Airline	Airline origin region	Airline alliance	2002 Ops	2002 Seat capacity	2002 % Capacity share	2011 Ops	2011 Seat capacity	2011 % Capacity share	2002-2011 % change ops	2002-2011 % change seat capacity
DL+NW	USA	SkyTeam	17,202	4,361,788	10.4%	24,511	5,814,199	9.9%	42.5%	33.3%
CO+UA	USA	Star Alliance	17,343	3,987,595	9.5%	26,244	5,732,567	9.7%	51.3%	43.8%
BA	Europe	Oneworld	16,696	4,432,593	10.5%	18,899	5,082,029	8.6%	13.2%	14.7%
AF	Europe	SkyTeam	11,977	3,833,047	9.1%	14,300	4,561,892	7.7%	19.4%	19.0%
LH	Europe	Star Alliance	9,897	2,861,141	6.8%	14,204	4,479,431	7.6%	43.5%	56.6%
AA	USA	Oneworld	11,739	2,774,377	6.6%	13,157	2,953,787	5.0%	12.1%	6.5%
IB	Europe	Oneworld	5,595	1,784,403	4.2%	8,674	2,576,940	4.4%	55.0%	44.4%
VS	Europe	Independent	5,002	2,000,749	4.8%	6,770	2,513,221	4.3%	35.3%	25.6%
AC	Canada	Star Alliance	7,733	1,835,070	4.4%	8,711	2,186,482	3.7%	12.6%	19.1%
KL	Europe	SkyTeam	5,965	1,660,058	3.9%	7,456	2,116,255	3.6%	25.0%	27.5%
US	USA	Star Alliance	4,476	1,150,912	2.7%	6,879	1,708,115	2.9%	53.7%	48.4%
TS	Canada	Independent	947	290,276	0.7%	3,959	1,145,561	1.9%	318.1%	294.6%
TP	Europe	Star Alliance	2,021	464,874	1.1%	4,229	1,118,769	1.9%	109.3%	140.7%
EK	Middle East	Independent	0	0	N/A	3,076	1,075,707	1.8%	N/A	N/A
AZ	Europe	SkyTeam	3,815	912,199	2.2%	3,883	986,229	1.7%	1.8%	8.1%
UX	Europe	SkyTeam	1,020	276,420	0.7%	2,893	859,115	1.5%	183.6%	210.8%
LX	Europe	Star Alliance	2,733	701,137	1.7%	3,932	845,554	1.4%	43.9%	20.6%
JJ	South America	Star Alliance	150	33,450	0.1%	2,860	751,106	1.3%	1806.7%	2,145.5%
EI	Europe	Independent	1,852	560,044	1.3%	1,930	597,610	1.0%	4.2%	6.7%
TK	Europe	Star Alliance	511	137,970	0.3%	1,788	549,961	0.9%	249.9%	298.6%

US, four to Mexico and Central America, and three to South America.

In 2011, the total number of seats on transatlantic operations was 5.3 million, split between: about 2.55 million seats to South America; 1.38 million seats to the US; 900,000 seats to Mexico and Central America; 450,000 seats to the Caribbean; and just 33,000 seats to Canada.

Not surprisingly, MAD is the dominant hub between Europe and South America, Mexico and Central America.

IB is the dominant transatlantic carrier from MAD, accounting for almost 50% of capacity. Iberia operates A340-300s and A340-600s on these routes, with the routes to EZE, JFK and LIM being the busiest. Air Europa (UX), UA, AA and Avianca (AV) are the other top five airlines at MAD. UX has a capacity share of 16.1%; while the other three have 5% or less.

In 2011, IB operated 26 transatlantic routes: 23 from MAD and three from Barcelona (BCN). Up to 2011, IB added six services from MAD. These included BOS, LAX, GUA, PTY, and San Jose (SJO), Cordoba (COR), Fortaleza (FOR), and Montevideo (MVD).

IB's transatlantic seat capacity in 2011 was 2,576,540, and virtually all of this was from MAD. IB increased its available seat capacity by 44% up to 2011, giving it an overall capacity share of 4.4% in 2011. This ranked IB seventh *(see table, this page)*.

IB's average aircraft size decreased by 22 seats to 297 in 2011. This is due to a decision to change from 747s to A340-600s.

AMS

AMS is the seventh largest transatlantic hub, and fifth largest European hub. Operations and capacity changed by only 16% up to 2011; a low rate of development.

KL and DL are the dominant transatlantic carriers at AMS, and account for 80% of the 4.3 million seat capacity.

KL accounts for 50% of this, while DL, which has absorbed KL's partner NW since 2002, accounts for the other 30%. DL uses a mixture of 767s and A330s; while KL uses MD-11s, A330s, 747s and 777s. The capacity DL offers at AMS almost exactly matches what it took over from NW in their merger.

KL offered 2,116,255 one-way transatlantic seats in 2011; a 27.5% increase from 2002. This gave KL a capacity share of 3.6% of the overall transatlantic market.

KL handed routes serving DTW, EWR and Memphis (MEM) to DL, but KL now operates the DTW and MEM routes. KL also added routes to ATL, DFW and IAD. KL increased its overall seat capacity to the US by 200,000 seats, and now operates to nine US cities. KL also added 150,000 seats, and a new route to YYC.

KL added new routes to EZE, GIG, LIM and Quito (UIO), while dropping CCS.

US hubs

Unlike European hubs, US hubs are home to several major US operators. In order of the amount of annual seat capacity provided, the largest US hubs are JFK, EWR, ORD, IAD, ATL, LAX, BOS, MIA, PHL, SFO and IAH.

JFK is the second largest transatlantic hub, and provided 9.2 million one-way seats in 2011 *(see table, page 14)*. JFK supports hub operations by DL, and AA.

DL is the most dominant carrier at JFK, and in 2011 accounted for 21.4% of one-way seat capacity (1.96 million) at JFK. AA provided 11.5% (1.06 million seats).

The three next highest were European flag carriers: BA with 8.9% of the seats; AF with 6.3%; and LH with 4.3%.

JFK is the most mature US hub, and has seen high capacity growth since 2002. The number of services and seats grew by 39.2% and 42.2% to 2011, as a result of increasing frequency on services and adding new routes. The number of routes increased by 12 to 57, including: AUH; Stockholm Arlanda (ARN); Copenhagen (CPH); DEL; DME; DOH; DUS; DXB; Lahore (LHE); London City (LCY); Madinah, Saudi Arabia (MED); Naples (NAP); Palermo (PMO); Pisa (PSA); Riyadh (RUH); Rzeszow (RZE); Berlin (TXL); Valencia (VLC); and Riga (RIX).

These new routes accounted for about 1.1 million seats, or 12% of JFK's capacity in 2011. About 1.8 million seats, 28.6%, were added to existing routes.

EWR has had the highest rate of growth of US hubs. The number of flights and seats increased by 71% and 54% up to 2011. This is because the dominant operator at EWR, CO, now United, uses narrowbody 757-200s on a large number

of transatlantic services, thus lowering average aircraft size.

CO used 757-200s in 2011 from EWR to a variety of western European destinations, including AMS, ARN, BCN, Belfast (BFS), Birmingham (BHX), CDG, CPH, Dublin (DUB), Edinburgh (EDI), GLA, Hamburg (HAM), and LHR.

CO is the only dominant carrier at EWR, accounting for 56.6% of seats. Most of the other capacity is provided by the European flag carriers. CO is also responsible for the vast majority of growth at EWR, and increased its seat capacity by about 1.3 million seats; most of the 1.6 million seats operated from EWR. Not including CO's switch from LGW to LHR, new routes accounted for 900,000 extra seats, while the remaining 400,000 seats of growth are due to increased frequencies on existing routes.

ORD only experienced a capacity increase of just over 1,000 flights from 2002 to 2011, so one-way seat capacity only grew by 11.4%.

AA and UA are the dominant airlines at ORD. AA is the largest at ORD, and provided about 750,000 seats; a capacity share of 22.3%. AA dropped routes and added others to 2011.

UA is close behind with 725,000 seats and 21.7% capacity share. UA has increased seat capacity by over 160,000 seats; half of which are due to increased frequencies on existing routes and a new route to MUC.

Other major airlines at ORD with transatlantic operations are the European flag carriers. SLH is the largest, and flies about 400,000 seats; 11.9% of transatlantic capacity at ORD.

IAD experienced a higher rate of growth, with about 4,000 transatlantic flights being added. This resulted in a 42.5% increase in one-way seat capacity. United Airlines (UA) is the dominant transatlantic carrier at IAD, and operates 747s, 767s and 777s to Europe.

US Airlines

Delta

DL provided the largest amount of transatlantic capacity of all airlines, operating about 24,500 flights and providing just under 6 million seats *(see table, page 16)*. This gave it a capacity share of 9.9%.

This is a 105.6% increase in seat capacity offered by Delta from 2002 , and a 3.2% increase in capacity share from 2002. This can be explained by its merger with NW in 2008-2009.

If DL's and NW's operations are combined for 2002, there has still been an overall growth of 33.3% in seat capacity and 42.5% in flights operated.

Most of DL's growth has been due to route expansion. JFK and ATL are its two main hubs for the transatlantic, accounting for 33.6% and 32.4% of its seats.

DL added 43 new transatlantic routes, mostly from JFK and ATL, to its network up to 2011, but also dropped another 11 routes in the same period.

Continental & United

CO and UA are merging, with full completion due in 2012. Combining CO and UA's operations in 2011, makes the new United the second largest transatlantic carrier in terms of seat capacity. It has just 100,000 seats fewer than DL.

CO and UA operated almost 9,000 more transatlantic flights in 2011 than in 2002; an increase of 51.3%. Seat capacity increased from four million to over 5.7 million in 2011; a 43.8% rise. This gave CO and UA a 9.7% transatlantic share.

Up to 2011, CO and UA increased their transatlantic routes from 39 to 58.

EWR is CO's and UA's largest transatlantic route, and grew by 1.3 million seats to provide more than 2.6 million seats. EWR accounted for 45.7% of CO's and UA's transatlantic seat capacity. The 14 new routes opened from EWR included: ARN, BCN, BFS, CPH, EDI, GLA, and HAM.

About 500,000 extra seats were added to CO's and UA's second largest transatlantic hub at IAD. IAD accounted for 26% of its transatlantic seats. New routes were opened to Accra (ACC), DME, DXB, FCO, Geneva (GVA), Kuwait (KWI), MAD, and Zurich (ZRH).

ORD was CO's and UA's third largest transatlantic hub, where 160,000 seats were added, and accounted for 12.6% of their transatlantic seat capacity. They have smaller transatlantic hubs at IAH, SFO and LAX.

American Airlines

AA is the third largest US airline. It only increased its seat capacity by 6.5%; a rise to 2.95 million seats. This gave it a 5% capacity share.

AA began using 757-200s on several transatlantic routes, including BOS-CDG, BOS-LHR, JFK-BRU, JFK-MAD and JFK-MAN.

JFK is its largest transatlantic hub, followed by ORD, DFW and BOS. By 2011 it was operating 29 transatlantic routes.

AA offers 1 million seats at JFK; 35.8% of its transatlantic capacity. AA only operated three transatlantic routes from JFK in 2002, but increased to 10 by 2011, by opening routes to: BCN, BRU, Budapest (BUD), FCO, MAD, MAN and Milan (MXP).

AA operated 0.75 million seats from ORD; 25.2% of its transatlantic capacity.

DFW was AA's third largest transatlantic hub, with about 450,000 seats or 15.5% of its capacity.

MIA was fourth with 10.8% of its capacity, followed by BOS, LAX and Raleigh/Durham (RDU).

TRANSATLANTIC CAPACITY BY AIRCRAFT MODEL 2002-2011

Aircraft	2002 Ops	2002 Seat capacity	2002 % Capacity share	2011 Ops	2011 Seat capacity	2011 % Capacity share	2002-2011 % change ops	2002-2011 % change seat capacity
767-300ER	35,702	7,944,294	18.9%	39,844	8,920,099	15.1%	11.6%	12.3%
747-400	19,822	7,631,461	18.2%	21,972	8,561,731	14.5%	10.8%	12.2%
777-200ER	31,366	8,106,368	19.3%	31,357	8,289,244	14.1%	0.0%	2.3%
A330-200	7,238	1,811,830	4.3%	23,213	6,074,208	10.3%	220.7%	235.3%
A330-300	5,643	1,648,407	3.9%	19,316	5,490,530	9.3%	242.3%	233.1%
777-300ER	0	0	N/A	11,737	3,940,726	6.7%	N/A	N/A
A340-300	17,101	4,366,496	10.4%	15,333	3,885,915	6.6%	-10.3%	-11.0%
A340-600	410	126,280	0.3%	10,668	3,491,364	5.9%	2502.0%	2664.8%
757-200	2,596	472,221	1.1%	19,127	3,408,555	5.8%	636.8%	621.8%
767-400ER	1,569	368,715	0.9%	6,946	1,662,640	2.8%	342.7%	350.9%
A380-800	0	0	N/A	1,847	975,437	1.7%	N/A	N/A
777-200LR	0	0	N/A	3,480	920,371	1.6%	N/A	N/A
747-400 Combi	4,378	1,231,934	2.9%	2,526	703,766	1.2%	-42.3%	-42.9%
767-200ER	5,762	1,084,380	2.6%	3,193	610,875	1.0%	-44.6%	-43.7%
A310-300	2,538	527,878	1.3%	2,389	582,248	1.0%	-5.9%	10.3%
MD-11	8,648	2,419,038	5.8%	1,917	563,598	1.0%	-77.8%	-76.7%
A340-200	195	50,228	0.1%	1,484	376,389	0.6%	661.0%	649.4%
A340-500	0	0	N/A	804	199,698	0.3%	N/A	N/A
Ilyushin 96	63	17,646	0.0%	230	60,260	0.1%	265.1%	241.5%
Other types	12,502	4,227,169	10.1%	1,964	256,365	0.4%	-84.3%	-93.9%

USAirways

US is the fourth largest US transatlantic carrier. It had a capacity share of just 2.9%, flying over 1.7 million seats. US has added about 550,000 seats and 2,400 operations up to 2011.

In 2002, US operated 14 transatlantic routes from three hubs: nine from PHL; three from PIT; and two from CLT. US has since closed its PIT hub.

76.4% of US's transatlantic seat capacity is flown from PHL. Since 2002 several new routes have been added, to: ATH, BCN, BRU, DUB, GLA, LHR, LIS, TLV, VC, and ZRH.

CLT accounted for the rest of US's transatlantic capacity. New routes were opened to CDG, DUB, FCO, and MAD.

YYZ

YYZ is Canada's busiest airport for transatlantic travel, and ranks tenth in terms of all airports for transatlantic operations. Over 3,000 flights and about 1 million seats were added to operations serving YYZ from 2002 to 2011; rises of 38.9% and 48.9% *(see table, page 14)*. Average aircraft size rose by 18 seats.

Air Canada (AC) provided the most capacity at YYZ, with 4,148 flights and 1,055,533 seats equating to 35.5% of the transatlantic capacity from YYZ.

Other airlines at YYZ are: TS with 15.8% of capacity, and BA with 5.8%.

Growth at YYZ is due to increasing frequencies on existing routes, and the addition of new routes. Since 2002, 23 new routes were added at YYZ, and another 11 dropped. The new routes accounted for about half of growth, and included: Athens (ATH), AUH, Mumbai (BOM), DEL, DXB and Islamabad (ISB). Airlines from the Indian sub-continent, such as AI and PK, also added capacity by flying direct from their hubs with ultra-long-range 777s.

GRU

The biggest hub in South America for transatlantic operations is GRU, ranked eleventh in the overall rankings, with just under 2.5 million one-way seats on transatlantic operations in 2011. This is a 70.1% increase in seat capacity from 2002 *(see table, page 14)*.

The dominant airline at GRU in 2011 was TAM. It took over many routes and operations from Brazilian flag carrier VARIG, which ceased operations in 2006.

TAM provided almost equal transatlantic seat capacity from GRU as VARIG in 2002. These 560,000 seats gave TAM a 23.2% share of the 2.4 million seats at GRU. There are no other dominant transatlantic carriers from GRU.

By 2011 the number of transatlantic routes to GRU had grown from 10 to 18. New routes were opened to BCN, DOH, DXB, IST, IAD, MUC, OPO, and TLV, and accounted for about 550,000 seats at GRU. Expansion to the existing routes added another 450,000 seats.

DXB

DXB had the highest rate of capacity growth of all hubs up to 2011.

The number of annual operations increased from almost nil in 2002 to 3,802 in 2011, while about 1.27 million seats were offered on these services.

EK is the dominant carrier at DXB, accounting for 84.7% of all transatlantic seat capacity at DXB. EK is ranked fifteenth in terms of transatlantic seat capacity *(see table, page 16)*. EK provided over 1 million seats in the transatlantic market in this time, giving it a 1.8% capacity share.

EK opened routes from DXB to IAH, JFK, LAX, SFO, YYZ and GRU. The busiest route among these is from JFK where EK operates twice daily with an A380-800 and a 777-300ER.

If EK continues to expand its transatlantic operations at the same rate, it will increase its ranking.

There are two other transatlantic operations from DXB: a service to ATL by DL, and a service to IAD by UA.

Aircraft types

Most aircraft types serving the transatlantic are medium- and large-sized widebodies. The 767-300ER accounts for the largest number of operations *(see table, this page)*. Its use across the Atlantic actually increased by 12% up to 2011. The 767-300ER is used by all US majors, as well as most European flag carriers.

While many 747-400 operators phased out or reduced their fleets, the number of operations with the type increased by 11% over the period. This suggests that airlines' need to rationalise seat capacities and service frequencies by using smaller types in previous decades has been met. With continued traffic growth on some routes over the past decade, the 747-400 has been used to

Prior to the merger between US majors, BA was the dominant carrier on the transatlantic. BA is the dominant airline at London, and accounts for 57% of capacity. This amounted to more than 5 million seats each way across the Atlantic in 2011.

meet demand.

The 747-400 ranked second of all aircraft models in terms of seat capacity, and fourth in number of operations in 2011. However, its ranking is expected to change as many major airlines continue to phase out their 747-400 fleets, and replace them with types like the 777-300ER and A380.

The 777-200ER is the most utilised 777 variant, and the -200ER is ranked third in terms of capacity provided, and second in terms of number of flights. Its use has changed little since 2002, however. It is operated in large numbers by most European and all US majors, as well as other airlines.

The A330-200, A330-300, 777-300ER, A340-600 and 757-200 saw an increase in utilisation and capacity over the period. Between them, they accounted for 84,000 operations and 22.4 million seats on a one-way basis in 2011.

These aircraft have partially replaced types like the 747 Classics, older A340 models, and trijets such as the MD-11, DC-10 and L-1011. This is because four of the five newer types have better fuel efficiency and operating performance, and lower maintenance costs, than the twinjets.

The A330-200/-300 are operated by many airlines, with the A330-200 ranking third in number of operations. The 777-300ER has grown in popularity in recent years, and its use is set to increase as deliveries to airlines continue.

The A340-600 is less popular, and is only operated in large numbers by IB, LH and VS. IB and LH have used it to expand their long-haul route networks.

The use of the 757-200 has increased since 2002 as some US majors have tried to rationalise capacity and increase service frequencies.

Other types that have increased in use since 2002, but still only have a limited presence are the 777-200LR and A380.

The A380 provided almost one million transatlantic seats on 1,800 flights in 2011; ranking it eleventh in terms of overall capacity *(see table, page 20)*. This is only likely to increase as deliveries continue, so it will rise in these rankings accordingly. The A380 is already operated by AF, LH and EK. These airlines will receive more, while VS and BA are due to take their first deliveries.

The 777-200LR is a newcomer to the transatlantic market since 2002, with about 900,000 seats on 3,500 flights *(see table, page 20)*. It is mainly operated by EK, AI, DL, QR, and Saudi Arabian.

The A340-500 also entered service on the transatlantic in 2002-2011, although in small numbers with EY and Arik Air.

Aircraft types that accounted for significant capacity in 2002 were the A340-300, 767-200ER, MD-11 and 747 Classics. By 2011, however, capacity provided by the A340-300 had fallen by 0.5 million seats. Use of the MD-11 declined faster, however, with seat numbers dropping by more than 75% and 1.9 million. Operation of 747 Classics had virtually ceased.

All of these types have aged and been phased out in large numbers by their operators.

The fleet used on the transatlantic has therefore become dominated by the A330-200/-300, 777-200ER/-300ER and 747-400, which provide 70% of the seat capacity. This percentage is likely to increase as more A330s and 777s are delivered, although the 747-400 will decline in use.

The A340-300/-600, 757-200, 767-400ER, 777-200LR and A380 account for another 24%. Capacity provided by the 777-200LR and A380 will increase, while that provided by the other three types will remain steady and then later decline.

In the future, the 787 and A350 will account for increasing portions of transatlantic operations and seat capacity. These types are first likely to displace remaining A340-200/-300s, 767-200ERs, A310s and A300-600s. They will later replace the older A330s and 767-300ERs.

Summary

Despite being the most mature long-haul market, the transatlantic clearly has scope for further development. Even the established Europe-North America market saw 144 new routes opened between 2002 and 2011.

There is clearly potential for more routes to be opened from both the Middle East and Europe to South America. The major Middle East airlines have only opened routes to a small number of the major North American cities in recent years, and more new routes are likely to be started.

The biggest change of all, however, in the transatlantic market is that despite the large number of new routes that continue to be developed, average aircraft size has stopped declining. This is in contrast to previous decades where airlines dropped the 747 and trijets in favour of the 767 and other medium-widebody twinjets.

A move to larger types is a reflection of airline capacity and fleet strategies, and sustained traffic growth on existing routes. Optimum service frequencies had already been reached, and many services have needed a move to larger types such as the A330-300 and 777 family members.

Routes that have been opened over the past decade have served at least one major hub, and have required larger types. This compares to the 1990s and early 2000s where new routes were more often opened to serve secondary airports, and so required smaller types. AC