

There have been four airline mergers in the US since 2008, and another is due to take place in early 2017. Fleet and schedule data from 2006 and 2016 are compared to assess the impact of these mergers on US airline capacity and financial performance.

The effect of mergers on US airline performance

The US domestic market suffered from over-capacity following 9/11. The over-supply of seats had the effect of diluting passenger fares and yields, and made it hard for most carriers to return to profitability. Four high-profile mergers have taken place between airlines in the US since 2006. These include three mergers between the big six legacy carriers: Delta Air Lines and Northwest Airlines; United Airlines and Continental Airlines; and American Airlines and US Airways. Low-cost carriers (LCCs) Southwest Airlines and AirTran Airways have also merged.

These mergers have resulted in a rationalisation and consolidation of capacity of the US domestic market. The results of this in terms of passenger load factor (LF), net yields, and unit revenue in terms of revenue per available seat-mile (RASM) are examined here. International services are also addressed.

US airline schedule and capacity data have been examined in detail to identify how the newly merged airlines have developed their networks and made capacity cuts and additions. Fleet developments are also considered.

US market

The US market includes a mix of large hub-and-spoke networks operated by legacy full-service airlines, and point-to-point networks provided by LCCs.

In a hub-and-spoke network, traffic from smaller regional airports is fed into major hubs where travellers can connect to other domestic or international services. Flights are often scheduled in waves or banks, with feeder services timed to permit efficient connections. Some feeder flights are operated by turboprops or regional jets (RJs). In many cases, these aircraft are not part of the legacy mainline fleet and are operated by regional partner carriers under the major

airline's branding.

Some US regional operators are wholly-owned subsidiaries of major legacy airlines, while others are independent. Some independent regional airlines are part of holding companies that own multiple operators. One example is SkyWest Inc, which owns SkyWest Airlines and ExpressJet Airlines. Most of the capacity provided by independent regional carriers is operated under the branding of major airlines.

Scope clause provisions can restrict the size, type and number of aircraft that regional affiliates are permitted to operate on behalf of the major US airlines. They are designed to provide job security to mainline pilots. In the past, many scope clauses capped the maximum capacity of outsourced regional flights at 50 seats. More recently there has been a relaxation of scope clause restrictions to permit the use of larger aircraft with up to 76 seats.

US capacity

Aircraft Commerce has compared Innovata schedule data for 2006 and 2016 to assess the impact of airline mergers on US networks and US capacity before the first merger was completed. Capacity data account for all non-stop system-wide operations of all scheduled US airline services. Overseas US territories, such as Guam, are considered as domestic destinations.

The data from 2006 offer the opportunity to focus on how the US market as a whole has been affected, rather than only the impact on each individual carrier.

In addition to post-merger rationalisation, other external factors, such as the 2008/2009 economic downturn, have influenced US capacity developments over the past decade.

There will be more than 1.16 billion seats available across 9.80 million flights on system-wide services by US airlines in

2016. This represents an overall 4% increase in capacity and a 12% reduction in the number of flights compared to 2006. This resulted in an increase in the average aircraft size from 100 to 118 seats. The general trend is, therefore, towards slightly more capacity, with fewer flights operated by larger aircraft.

Domestic capacity dominates US airline schedules, but has declined since 2006, while international traffic has increased. Excess domestic capacity continued to be a main problem for US airlines after 9/11. The domestic market will account for 77% of all capacity and 84% of all flights operated by US airlines in 2016. The number of seats available on US domestic services has decreased by 2% from 910 million to 891 million since 2006. The overall 2% reduction in domestic capacity disguises the large reductions by the large legacy airlines, and increases by the LCCs.

During the same period, capacity available on international services to and from the US increased by 32% to more than 268 million seats. US airlines have been interested in increasing international networks because of their potential for high passenger yields. In 2016 the largest destination markets for international flights from the US will be Canada, Mexico and the United Kingdom (UK).

The average aircraft size increased by 16 seats on US domestic services and by 19 on international flights from 2006 to 2016. An increase in average aircraft size will contribute to reducing CASM.

Narrowbodies will operate about half of all flights to, from and within the US, while providing two-thirds of total capacity.

There has also been an increase in capacity provided by narrowbodies, RJs and widebodies since 2006, while the number of seats operated on turboprop services has nearly halved.

The growth in widebody capacity has been focused on international routes.

BI-DIRECTIONAL SYSTEM CAPACITY BY AIRCRAFT CATEGORY

Market & Aircraft type	Seats	2016		Change 2006-2014		
		Flights	Avg Seats	Seats	Flights	Avg Seats
Delta Air Lines						
Narrowbody	147,716,408	981,733	150	7%	4%	4
Regional Jet	53,963,350	840,142	64	-7%	-25%	12
Widebody	20,704,985	83,181	249	-23%	-20%	-10
Turboprop	-	-	-	-100%	-100%	-
Total	222,384,743	1,905,056	117	-3%	-19%	19
United Airlines						
Narrowbody	96,572,346	637,105	152	-22%	-27%	11
Regional Jet	53,227,530	913,310	58	-3%	-13%	5
Widebody	20,530,482	78,631	261	-12%	-14%	5
Turboprop	1,697,833	40,846	42	-83%	-88%	14
Total	172,028,191	1,669,892	103	-19%	-30%	14
American Airlines						
Narrowbody	151,583,465	1,006,798	151	-16%	-18%	5
Regional Jet	75,545,211	1,186,254	64	24%	4%	11
Widebody	19,157,445	76,654	250	-25%	-31%	19
Turboprop	3,742,814	89,981	42	-77%	-79%	5
Total	250,028,935	2,359,687	106	-12%	-19%	9
Southwest Airlines						
Narrowbody	194,738,355	1,322,705	147	9%	-1%	14
Total	194,738,355	1,322,705	147	9%	-1%	14

Notes:

For 2006, Delta inc Northwest, United inc Continental, American inc US Airways, Southwest inc AirTran

Widebody capacity on domestic services has nearly halved since 2006.

American Airlines will provide the most system-wide capacity of all US carriers in 2016. The next largest airlines will be Delta, Southwest and United, collectively accounting for 72% of available capacity.

Delta Air Lines

The first of the four major mergers took place between Delta and Northwest Airlines in 2008. The newly consolidated carrier retained the Delta brand and is a member of the SkyTeam Alliance.

This analysis will refer to the post-merger airline by DL, Delta's two-letter International Air Transport Association (IATA) code.

Delta's 2006 capacity data include services operated by its LCC Song, which is no longer operating.

In 2006 Delta and Northwest were the third- and seventh-largest airlines, based on marketed capacity, to, from and within the US. In 2016 DL will be the second-largest operator in the US with more than 222 million seats available across 1.90 million domestic and international flights (*see table, this page*). This represents a 3% reduction in system-wide capacity and a 19% system-wide reduction in flights compared to Delta and Northwest's combined, pre-merger

operations in 2006.

Nearly one-quarter of DL's marketed capacity will be operated by regional airlines under the Delta Connection brand in 2016. Delta Connection services will be provided by third-party carriers including SkyWest, Compass Airlines, ExpressJet, Shuttle America and GoJet. DL's wholly-owned regional subsidiary Endeavor Air also flies under the Delta Connection banner.

Delta network developments

Before the 2008 merger Delta's main base was Atlanta (ATL); other hubs were Boston (BOS), Cincinnati (CVG), Los Angeles (LAX), New York-La Guardia (LGA), New York-JFK (JFK) and Salt Lake City (SLC). Northwest's main hubs were at Detroit (DTW) and Minneapolis St Paul (MSP), but it also operated a smaller hub at Memphis (MEM).

DL will offer more international capacity, but fewer domestic seats in 2016 compared to combined Delta and Northwest operations in 2006, when Delta served 219 domestic US points, while Northwest served 197. Some of the points served by Delta and Northwest were clearly the same, including those between their respective hubs. In 2016 DL serves 229 domestic airports.

DL's domestic operations will account for 86% of its total capacity and 90% of

its systemwide flights in 2016. There has been a 7% decline in available domestic seats and a 22% reduction in the number of flights compared to combined Delta and Northwest pre-merger levels in 2006. In 2016 DL will provide nearly 191 million domestic seats.

Post-merger rationalisation has seen cuts to a number of services.

Delta and Northwest duplicated domestic services between their respective hubs in 2006. Capacity on some of these duplicated services has since been reduced. As an example, Delta and Northwest provided a combined capacity of 150,000 one-way seats on JFK-DTW in 2006, provided by an average of five daily flights. In 2016, DL will provide 110,00 seats across three or four daily flights on this service. This represents a 27% cut in capacity.

Not all of the duplicated domestic services have seen cuts in capacity, with some experiencing growth since 2006.

In 2016, DL will offer fewer domestic routes from seven of the 10 pre-merger hubs operated by Delta and Northwest in 2006. It will also provide less domestic capacity from six of these hubs (*see table, page 16*).

The reduction in domestic capacity has coincided with an increase in average domestic load factor (LF), yield and revenue per available seat-mile (RASM). DL's average LF on domestic services in 2015, was 87.30% compared to average LFs of 79.30% and 82.70% for Delta and Northwest in 2006 (*see table, page 14*). This is an improvement of 6.30% based on a simple average of Delta and Northwest's pre-merger performance. DL's average domestic yield and RASM were 16.21 and 17.83 cents in 2015. This is an improvement of 3.17 and 5.06 cents compared to an average of Delta and Northwest's performance in 2006.

There was no duplication of international services between Delta and Northwest in 2006. Delta's main international markets were Mexico and Canada in North America; Germany, the UK, France and Italy in Europe; and a number of destinations in the Caribbean. Its largest international focus airports were Paris Charles de Gaulle (CDG), London Gatwick (LGW), Frankfurt (FRA) and Toronto (YYZ).

Northwest had strong links with the Asia Pacific region via trans-Pacific services to Japan. Tokyo Narita (NRT) was a key operating base for the airline. Northwest's other main international markets included transatlantic services to Amsterdam (AMS) and transcontinental services to Canada.

In 2016 DL will provide 25% more capacity and 18% more flights on international services, compared to Delta and Northwest's combined operations in 2006.

US AIRLINE DOMESTIC PERFORMANCE 2006 - 2015

	2006	2015	DIFFERENCE
Delta/Northwest			
Load factor	79.30%/82.70%	87.30%	6.30%
Yield (cents)	12.23/13.85	16.21	3.17
RASM (cents)	11.89/13.64	17.83	5.06
CASM (cents)	11.41/12.22	13.83	2.01
United/Continental			
Load factor	81.70%/83.70%	86.40%	3.70%
Yield (cents)	12.19/12.45	13.84	1.52
RASM (cents)	11.13/10.60	14.95	4.08
CASM (cents)	10.86/11.55	12.36	1.15
American/US Airways			
Load factor	81.70%/79.30%	86.00%	5.50%
Yield (cents)	12.52/13.16	14.93	2.09
RASM (cents)	11.23/11.82	15.02	3.49
CASM (cents)	11.13/11.37	11.95	0.70
Southwest			
Load factor	73.10%	83.70%	10.60%
Yield (cents)	12.63	15.74	3.11
RASM (cents)	9.79	14.21	4.42
CASM (cents)	8.78	11.25	2.47

Source: Airline Monitor

All of Delta and Northwest's pre-existing hubs were initially retained following the merger. Some have since seen an increase in capacity, while others have suffered from cuts in services (see table, page 16). A new hub has been added to the network and one removed.

Four of the seven hubs operated by Delta prior to the merger have seen an increase in capacity by DL. It offers more domestic and international capacity from ATL, JFK, LGA and LAX in 2016 in comparison to Delta and Northwest operations in 2006 (see table, page 16).

Operations at ATL account for the most domestic and international capacity on DL's network, despite a reduction in number of routes served.

LAX and JFK have seen the strongest growth in capacity by DL at any of its pre-merger hubs. It has increased the number of routes at JFK by 21 and at LAX by 29. DL has overtaken jetBlue and American Airlines to become the largest operator from JFK.

DL's other three pre-merger hubs at SLC, BOS and CVG will see less capacity provided by the consolidated carrier. There has been a 7% reduction in capacity at SLC and a 24% reduction at BOS. This is a combination of cuts to domestic services and moderate increases in international services at both airports.

DL has considerably scaled back its services at CVG following the merger. It has cut capacity at CVG by 79%, and the number of routes from 138 to 35.

DL has also reduced capacity at

Northwest's former hubs at MSP, DTW and MEM. DL has reduced domestic flights at MSP and DTW airports by 20%; and capacity by 16% at MSP and 18% at DTW.

Reduction in services at MEM has been more significant. In 2006 Delta and Northwest served 86 domestic and five international destinations, but in 2016, DL will only serve seven domestic routes from MEM with fewer than 20 daily flights. Its capacity from MEM has reduced by 88%, and MEM is no longer a DL hub.

DL has introduced one new hub to its network since the merger: SEA in 2014. Delta and Northwest both previously connected SEA with other domestic hubs. In 2016 DL serves 37 domestic and 15 international routes from SEA, and provides more than 5.50 million seats across 124 daily departures.

Delta fleet development

In July 2016 DL's mainline fleet comprised 829 passenger aircraft, including 671 narrowbodies and 158 widebodies. This represents a small increase of 26 mainline aircraft compared to the pre-merger fleets in 2006. Average aircraft size has increased by 19 seats (see, table page 12).

Mainline fleet trend

Narrowbody aircraft will provide two-thirds of all capacity on DL's

network in 2016.

In 2016 DL's narrowbody fleet of 671 aircraft includes two McDonnell Douglas, five Boeing, and three Airbus types: the MD-88, MD-90, 757-300, 757-200, 737-900ER, 737-800, 737-700, A321, A320, and A319.

Smaller, ageing 737-200s and DC-9s have been phased out. The number of large narrowbodies has increased, with growth of the MD-90 fleet and the introduction of 737-900ERs and A321s. This has resulted in an increase in average narrowbody size from 146 to 150 seats. DL has more 737-900ERs and A321s on order.

In 2013 DL introduced 717-200s to replace 50-seat RJs on certain routes, and on a capacity-neutral basis. DL has also ordered 75 CS100s, which could be used to replace smaller RJs or ageing narrowbodies.

Capacity provided by widebodies on DL's network has decreased by 23% compared to combined pre-merger levels in 2006 (see table, page 12). This is mainly due to a 20% fall in the number of flights operated by widebodies. Some widebodies have been replaced with narrowbodies on certain services.

DL's widebody fleet is 158 aircraft, including six Boeing and two Airbus types: the 747-400, 767-300, 767-300ER, 767-400ER, 777-200ER, 777-200LR, A300-200, and A330-300. Its widebody order book includes the A330-900neo, A350-900 and the 787-8.

Since 2006, DC-10s and 747-200s have been phased out and the 747-400 fleet has been reduced by nearly 50%. There has been a slight contraction of the 767 fleet, but the number of A330s has increased and the 777-200LR has been introduced.

Regional trends

DL does not operate any regional aircraft, and all regional services are provided by partner airlines. DL's only wholly-owned regional affiliate is Endeavor Air, which operates CRJ200LRs (43), CRJ900ERs (41) and CRJ900LRs (40).

There has been a 17% reduction in capacity operated by regional aircraft on DL services since 2006.

Turboprops, including EMB-120 Brasilias, ATR 72s and Saab 340s have been completely withdrawn from DL-marketed services.

There has also been a 7% reduction in RJ capacity (see table, page 12). DL has replaced 50-seat aircraft with 717s on some routes. DL has also replaced 50-seat aircraft with larger RJs configured with 76 seats, including the CRJ900 and E-175. This has led to an increase in the average aircraft size on DL's RJ services from 52 to 64 seats since 2006.

DELTA HUBS - DEPARTING ONE-WAY SEATS

HUB	2016				Change since 2006			
	SEATS	FLIGHTS	AVG SEATS	ROUTES	SEATS	FLIGHTS	AVG SEATS	ROUTES
ATL Dom	41,773,256	313,323	133	161	16%	-2%	21	-19
ATL Intl	5,347,693	32,538	164	73	12%	13%	-2	-1
ATL total	47,120,949	345,861	136	234	15%	-1%	19	-20
MSP Dom	14,107,118	128,986	109	122	-16%	-20%	5	-16
MSP Intl	1,365,354	10,310	132	27	2%	1%	2	4
MSP Total	15,472,472	139,296	111	149	-14%	-19%	6	-12
DTW Dom	13,504,035	137,289	98	108	-18%	-20%	3	-18
DTW Intl	1,694,108	9,637	176	26	-13%	-24%	21	0
DTW Total	15,198,143	146,926	103	134	-17%	-21%	4	-18
JFK Dom	6,302,567	54,232	116	50	68%	45%	16	4
JFK Intl	3,281,654	18,053	182	51	114%	123%	-7	17
JFK Total	9,584,221	72,285	133	101	82%	59%	17	21
SLC Dom	8,779,304	82,084	107	81	-8%	-28%	24	-21
SLC Intl	409,186	3,243	126	11	24%	-26%	51	0
SLC Total	9,188,490	85,327	108	92	-7%	-28%	25	-21
LAX Dom	6,869,132	51,159	134	43	77%	145%	-52	20
LAX Intl	924,570	5,596	165	18	310%	529%	-89	9
LAX Total	7,793,702	56,755	137	61	90%	161%	-51	29
LGA Dom	7,571,956	83,297	91	61	43%	81%	-24	22
LGA Intl	106,565	1,534	69	2	16%	17%	-1	0
LGA Total	7,678,521	84,831	91	63	42%	79%	-23	22
SEA Dom	4,560,154	38,209	119	37	131%	255%	-64	27
SEA Intl	1,020,622	7,135	143	15	444%	844%	-105	13
SEA Total	5,580,776	45,344	123	52	158%	293%	-64	40
BOS Dom	2,870,696	24,622	117	18	-29%	-33%	7	-14
BOS Intl	372,310	1,722	216	7	58%	-20%	107	0
BOS Total	3,243,006	26,344	123	25	-24%	-33%	13	-14
CVG Dom	2,057,806	23,577	87	32	-78%	-83%	19	-94
CVG Intl	94,218	715	132	3	-83%	-86%	22	-9
CVG Total	2,152,024	24,292	89	35	-79%	-83%	20	-103
MEM Dom	773,551	6,739	115	7	-88%	-92%	40	-79
MEM Intl	-	-	-	-	-100%	-100%	-	-5
MEM Total	773,551	6,739	115	7	-88%	-92%	38	-84

Notes:

2006 data includes combined capacity for Delta & Northwest

United Airlines

A second major merger took place between United and Continental in 2010. The consolidated carrier is part of the Star Alliance and retained the United name, but some of the brand identity of Continental, including its logo.

This analysis refers to the post-merger carrier by United's (IATA) code UA.

In 2006 United and Continental were the fourth- and sixth-largest operators, based on marketed capacity to, from and within the US. In 2016 UA is the fourth-largest operator in terms of systemwide capacity. It will provide more than 172 million seats over 1.67 million flights (*see table, page 17*). This is a 19% reduction in capacity and a 30% reduction in the number of flights since 2006.

Nearly one-third of UA's capacity will be operated by regional affiliates in 2016. UA does not own any regional carriers. SkyWest Airlines, ExpressJet Airlines, Mesa Airlines, Republic Airlines, Trans States Airlines, GoJet Airlines, Shuttle America, Commut Air and Cape Air will all provide capacity under the United Express brand.

United network developments

United and Continental operated a total of nine domestic hubs before the 2010 merger. United's hubs were spread between the US East and West Coasts. Its main base was at Chicago O'Hare (ORD) and its other hubs were Denver (DEN), San Francisco (SFO), Washington-Dulles (IAD) and LAX. Continental's main base

was Houston (IAH). It also had a large operation at New York-Newark (EWR) and smaller hubs at Cleveland (CLE) and Guam (GUM).

United and Continental's domestic networks included 165 and 162 destinations respectively, with some overlap between the two. In 2016 UA will operate to 214 domestic destinations.

Domestic flights will account for 79% of UA's systemwide capacity in 2016. UA has 23% fewer seats and 32% fewer flights on domestic services compared to the pre-merger levels of United and Continental in 2006. One main factor has been the post-merger domestic network rationalisation. In 2016 UA will provide 135 million domestic seats. It will offer less domestic capacity across eight of the nine pre-merger hubs, compared to United and Continental's combined 2006 services (*see table, page 17*).

The reduction in domestic capacity has coincided with an increase in average domestic (LF), yield and RASM. UA's average LF on domestic services in 2015, was 86.40% compared to average LFs of 81.70% and 83.70% for United and Continental in 2006 (*see table, page 14*). This is an improvement of 3.70% based on a simple average of the pre-merger performance of United and Continental. UA's average domestic yield and RASM were 13.84 and 14.95 cents in 2015. This is an improvement of 1.52 and 4.08 cents compared to the average performance of United and Continental in 2006.

In contrast to a reduction in domestic services, UA's international capacity has increased by 6% since 2006, despite a 14% fall in the number of international flights.

There was no duplication of international routes between United and Continental in 2006.

Continental's largest international markets were Mexico, Canada, the UK and Japan. Its largest individual destinations were NRT, LGW and Mexico City (MEX). One of its strategies involved using 757s on thinner-demand transatlantic routes, such as CLE-LGW, and EWR to Bristol (BRS), Edinburgh (EDI), Glasgow (GLA) and Manchester (MAN). In 2006, United's largest international markets were the UK, Canada and Japan. Its largest individual destinations were LHR and NRT.

Since 2006, capacity has shifted across the combined United and Continental hubs, partly due to post-merger rationalisation. Eight of the nine hubs have seen a reduction in capacity, while only SFO has had an increase in available seats (*see table, page 17*). In 2016 UA will provide 13.29 million departing seats from SFO, an increase of 19% compared to 2006. It is the only one of the nine pre-merger hubs to have grown domestic capacity since 2006. SFO

has also seen the strongest growth in international traffic.

No hubs have been added to the network since the merger, but CLE has lost its hub status. US Airways has cut capacity by 70%.

UA's largest hubs in 2016 are ORD and IAH from, where it will provide 19.40 million and 18.88 million departing seats (see table, this page). UA will offer 18% less capacity at ORD, IAH, DEN and IAD, compared to pre-merger traffic levels in 2006.

UA will also offer 2% less capacity from EWR and 28% less from LAX.

While all of these hubs saw a reduction in domestic services, they all benefited from an increase in international capacity and traffic. The exception to this was ORD, which saw a reduction in international operations.

Continental's former hub at GUM was retained after the 2010 merger. It is the smallest hub in the airline's network. In 2006 most of Continental's services from GUM were operated by subsidiary Continental Micronesia. In 2016 they are operated by mainline UA aircraft. Capacity has been reduced by 9% and the number of flights has fallen by 12% compared to pre-merger levels in 2006.

United fleet developments

UA's mainline fleet comprised 720 in-service aircraft in July 2016, including 544 narrowbodies and 176 widebodies. This is 100 fewer mainline aircraft than United and Continental operated in July 2006.

The average aircraft size on UA services has increased by 14 seats compared to United and Continental operations in 2006 (see, table page 12).

United mainline trends

Narrowbody aircraft will provide more than half the capacity on UA's systemwide services.

The number of narrowbody seats has, however, fallen by 22% since 2006, due mainly to post-merger domestic network rationalisation. UA's average narrowbody size has risen from 141 to 152 seats since 2006.

In 2016, UA's narrowbody fleet was 544 aircraft of six Boeing and two Airbus types: the 757-300, 757-200, 737-900ER, 737-900, 737-800, 737-700, A320 and A319. It has 40 737-700s and 99 737 MAX 9s on order.

737-300s and 737-500s have been retired, while 737-800 and 737-900ER fleets have grown.

The capacity provided by widebodies on UA's systemwide services has decreased by 12% since 2006.

UA's 2016 UA's widebody fleet comprises 176 aircraft: 777-200ERs,

UNITED HUBS - DEPARTING ONE-WAY SEATS

HUB	2016				Change since 2006			
	SEATS	FLIGHTS	AVG SEATS	ROUTES	SEATS	FLIGHTS	AVG SEATS	ROUTES
ORD Dom	16,960,131	180,728	94	142	-20%	-18%	-2	21
ORD Intl	2,436,167	17,128	142	42	-5%	4%	-14	13
ORD total	19,396,298	197,856	98	184	-18%	-16%	-2	34
IAH Dom	14,241,544	146,169	97	114	-25%	-34%	11	-8
IAH Intl	4,638,736	35,503	131	62	18%	-8%	29	-2
IAH Total	18,880,280	181,672	104	176	-18%	-30%	15	-10
EWR Dom	11,601,763	118,148	98	91	-5%	-6%	1	1
EWR Intl	4,652,124	27,507	169	71	8%	-4%	19	1
EWR Total	16,253,887	145,655	112	162	-2%	-6%	5	2
DEN Dom	13,002,992	132,403	98	123	-19%	-15%	-5	25
DEN Intl	577,685	5,550	104	13	13%	5%	7	3
DEN Total	13,580,677	137,953	98	136	-18%	-14%	-5	28
SFO Dom	10,893,204	91,696	119	69	16%	2%	15	18
SFO Intl	2,397,384	10,410	230	26	34%	27%	11	8
SFO Total	13,290,588	102,106	130	95	19%	4%	16	26
IAD Dom	6,111,753	68,540	89	67	-24%	-33%	10	-10
IAD Intl	1,885,911	10,876	173	32	13%	13%	-1	9
IAD Total	7,997,664	79,416	101	99	-18%	-29%	14	-1
LAX Dom	5,909,760	47,057	126	42	-33%	-50%	32	-10
LAX Intl	873,004	4,174	209	11	31%	17%	22	-3
LAX Total	6,782,764	51,231	132	53	-28%	-47%	35	-13
CLE Dom	1,492,971	16,669	90	18	-70%	-79%	28	-60
CLE Intl	12,088	72	168	1	-91%	-97%	114	-4
CLE Total	1,505,059	16,741	90	19	-70%	-80%	28	-64
GUM DOM	183,732	2,196	84	3	-22%	-32%	11	0
GUM Intl	744,039	4,650	160	12	-5%	1%	-11	-6
GUM Total	927,771	6,846	136	15	-9%	-12%	5	-6

Notes:

2006 data includes combined capacity of United & Continental

767-300ERs, 747-400s, 777-200s, 787-9s, 767-400ERs and 787-8s.

UA's 747 fleet has been reduced by nine aircraft since 2006. The 787s were introduced after the merger. UA's order book includes 787-9s, A350-1000s 787-10s and 777-300ERs.

United regional trends

UA does not operate regional aircraft as part of its mainline fleet. United Express services are performed by various regional partners.

Regional aircraft will provide 32% of all seats in 2016 on UA's network, but 15% less capacity on UA services in 2016 than they did on combined United and Continental operations in 2006 (see table, page 12).

Capacity provided by turboprops on United Express services has fallen by 83% compared to 2006, due to an 88% cut in turboprop flights. In some cases routes that had been operated exclusively by turboprops have been dropped, while turboprop capacity has been replaced by

RJs on other routes.

The average size of turboprops used for UA Express services has grown from 28 to 42 seats since 2006. Smaller types such as the EMB-120 Brasilia and Saab 340 have been replaced by larger ones, including the ATR 42, Q300 and Q400.

In 2016 RJs will operate 13% fewer flights on UA-marketed services compared to 2006. The capacity provided by RJs has only fallen by 3%, however, thanks to the use of new, larger aircraft. These include the CRJ700, E-170 and E-175 configured with 66, 70 and 76 seats.

American Airlines

The third and final legacy merger took place between American Airlines and US Airways in 2013. The consolidated carrier maintained the American Airlines brand, and is part of the OneWorld alliance. The post-merger airline will be referred to by American's IATA code AA.

US Airways had merged with America West in late 2005. America West



operations are included in the 2006 US Airways capacity and fleet figures.

American provided the most marketed systemwide capacity in 2006. US Airways became the fifth-largest operator after merging with America West.

AA is currently the largest US operator in terms of systemwide capacity. In 2016 it will provide 250 million seats across 2.36 million two-way flights (see table, page 12). This is a 12% reduction in capacity and a 19% decrease in flights compared to the pre-merged carriers in 2006.

Regional affiliates will provide 30% of AA's systemwide capacity. AA has three wholly-owned regional carriers: Envoy Air, Piedmont Airlines and PSA Airlines. It also has agreements with other carriers including Air Wisconsin Compass Airlines, ExpressJet, Mesa Airlines, Republic Airlines, SkyWest and Trans States Airlines. All regional services operate under the American Eagle brand.

AA network developments

American operated five main hubs before the 2013 merger, spread across the US from North to South and East to West. The largest base was at Dallas-Fort Worth (DFW). It also had hubs at ORD, Miami (MIA), LAX and JFK.

US Airways' largest pre-merger hubs were mainly concentrated in the Eastern US. Its largest base was at Charlotte (CLT) and other hubs included Philadelphia (PHL), Washington-National (DCA), LGA and Phoenix (PHX).

All 10 hubs operated by American Airlines and US Airways before the merger have been retained by AA. The AA website also lists EWR as a hub. It is not clear if EWR was considered as a hub

for American Airlines before the merger.

In 2006, the domestic networks of American and US Airways served 170 and 202 destinations respectively, with some overlap between the two. In 2016, AA will serve 228 domestic airports.

Domestic services account for 84% of AA's systemwide capacity in 2016. There has been a 12% decline in domestic capacity available since 2006. The number of domestic flights has decreased by 20% over the same period. In 2016 AA will provide about 210.7 million domestic seats.

These reductions are partly due to a post-merger consolidation of the carrier's domestic network, including cuts to some duplicated services.

The reduction in domestic capacity has coincided with an increase in average domestic LF, yields and RASM. AA's average LF on domestic services in 2015, was 86.00% compared to average LFs of 81.70% and 79.30% for American and US Airways in 2006 (see table, page 14). This is an improvement of 5.50% based on a simple average of the pre-merger performance of American and US Airways. AA's average domestic yield and RASM were 14.93 and 15.02 cents in 2015. This is an improvement of 2.09 and 3.49 cents compared to the average performance of American and US Airways in 2006.

There was significantly less network duplication between American and US Airways on international services. In 2006 American's main international markets were Mexico, the UK, the Dominican Republic and Canada. US Airways' main international markets were Canada and Mexico. In 2006 only one international route was served by both carriers.

American Airlines and US Airways was the last of the major airline mergers to be finalised in 2013. The result has been a success, with the difference between unit revenue and unit cost standing at about 3.0 cents. Both carriers were struggling to generate an operating profit 10 years ago.

There was, therefore, less need for any post-merger rationalisation of the international network. This may explain why international capacity provided by AA has only decreased by 7% compared to the combined operations of 2006.

DFW is AA's largest hub, and CLT is now AA's second largest hub. DFW and CLT are also the largest origin points for domestic services on the AA network, followed by ORD, PHX and PHL.

MIA and DFW are the largest origin points for AA's international network. MIA serves as a hub for traffic between the US and Latin America and the Caribbean. AA does not operate any international services from EWR, and has limited international operations from LGA and DCA.

AA will offer more capacity from its CLT, MIA and LAX hubs in 2016 compared to the combined operations of American and US Airways in 2006.

AA's other eight hubs have all declined since 2006 (see table, page 20). With the exception of JFK, they have all seen a decline in domestic capacity compared to pre-merged airlines in 2006.

LGA has seen the biggest cut in capacity of any AA hub, losing one-third since 2006. American and US Airways had to sell a number of slots at LGA to gain merger approval.

AA fleet development

AA's in-service fleet comprises 951 aircraft in July 2016, including 783 narrowbodies, 148 widebodies and 20 RJs. This is 83 fewer aircraft than AA and UA had in July 2006.

The average aircraft size on AA services has increased by nine seats compared to the combined operations of American and US Airways in 2006 (see table, page 12).

AA mainline trends

Narrowbodies will provide more than 60% of AA's systemwide capacity in 2016. Capacity provided by narrowbodies has decreased by 16% since 2006. This is due to an 18% reduction in narrowbody flights, partly as a result of domestic network rationalisation.

The 737-800 is now most common type in AA's narrowbody fleet with 275 in-service. It operates another 508 A321s, A319s, MD-80s, 757-200s, and A320s.

AMERICAN AIRLINES HUBS - DEPARTING ONE-WAY SEATS

HUB	2016			Change since 2006				
	SEATS	FLIGHTS	AVG ROUTES SEATS	SEATS	FLIGHTS	AVG ROUTES SEATS		
DFW Dom	28,081,579	253,226	111	150	-5%	-6%	2	15
DFW Intl	3,783,882	25,968	146	52	26%	27%	0	17
DFW total	31,865,461	279,194	114	202	-2%	-4%	3	32
CLT Dom	23,523,635	224,588	105	119	38%	18%	15	19
CLT Intl	1,749,635	10,776	162	31	35%	28%	8	7
CLT Total	25,273,270	235,364	107	150	37%	19%	14	26
MIA Dom	9,893,530	71,421	139	55	18%	28%	-11	10
MIA Intl	6,900,578	44,707	154	73	11%	22%	-16	20
MIA Total	16,794,108	116,128	145	128	15%	25%	-13	30
ORD Dom	15,278,841	159,334	96	110	-11%	-11%	0	1
ORD Intl	1,169,606	8,123	144	19	-38%	-31%	-16	-3
ORD Total	16,448,447	167,457	98	129	-14%	-12%	-2	-2
PHL Dom	11,540,184	133,689	86	90	-12%	-14%	1	3
PHL Intl	1,932,449	13,389	144	35	2%	-2%	6	0
PHL Total	13,472,633	147,078	92	125	-11%	-13%	3	3
PHX Dom	11,924,997	93,482	128	70	-8%	-18%	13	-11
PHX Intl	715,482	5,557	129	13	-16%	-22%	9	-3
PHX Total	12,640,479	99,039	128	83	-9%	-18%	13	-14
LAX Dom	7,708,502	66,157	117	55	5%	4%	2	22
LAX Intl	1,113,042	5,664	197	16	137%	126%	10	8
LAX Total	8,821,544	71,821	123	71	13%	8%	5	30
DCA Dom	7,390,063	85,721	86	68	-3%	0%	-4	14
DCA Intl	48,382	839	58	3	-55%	-38%	-21	0
DCA Total	7,438,445	86,560	86	71	-4%	0%	-4	14
LGA Dom	5,291,037	53,721	98	37	-34%	-50%	24	-24
LGA Intl	181,310	3,156	57	2	-11%	4%	-10	-3
LGA Total	5,472,347	56,877	96	39	-33%	-49%	22	-27
JFK Dom	3,138,593	26,022	121	27	1%	14%	-15	9
JFK Intl	1,832,711	9,808	187	25	-31%	-30%	-3	-1
JFK Total	4,971,304	35,830	139	52	-14%	-3%	-17	8
EWR Dom	1,543,507	12,761	121	6	-24%	-33%	14	-7
EWR Intl	-	-	-	-	-	-	-	-
EWR Total	1,543,507	12,761	121	6	-24%	-33%	14	-7

Notes:

2006 data includes combined capacity for American & US Airways

A number of ageing aircraft have been retired since 2006, including 737-300s and 737-400s operated by US Airways and a large part of American's MD-80 fleet. These have been replaced by larger aircraft in some cases, including more 737-800s and the introduction of the A321. The focus on larger narrowbodies looks set to continue. AA has a further 29 737-800s and 33 A321s on order, as well as 100 737 MAX 8s and 100 A321neos.

The capacity provided by widebodies on AA's systemwide operations in 2016 is 25% less than in 2006. The number of flights operated by widebodies has decreased by 31%. During the same period the average size of widebodies on AA services has increased by 19 seats to 250 seats.

In 2016, the AA widebody fleet consists of 148 777-200ERs, 767-300ERs, 777-300ERs, 787-8s, A330-200s, and A330-300s. AA also has three 787-8s, 22 787-9s and 22 A350-900s on order. The introduction of the larger 777-300ER is a contributing factor to the increase in average capacity on AA widebody services.

AA regional trends

AA is the only post-merger legacy carrier with regional aircraft in its mainline fleet. AA's mainline fleet includes 20 E-190s. AA also has three wholly-owned regional subsidiaries, operating as American Eagle. Envoy Air's fleet includes 30 ERJ-140s, 82 ERJ-145s, 35 CRJ700s

and 17 E-175s. PSA Airlines operates CRJ200s (35), CRJ700s (26) and CRJ900s (52). Piedmont Airlines operates Dash 8-100s (27), Dash 8-300s (11) and ERJ-145s (7). Additional regional capacity is provided by other third-party operators.

Regional aircraft will provide more than 79 million seats on AA-marketed systemwide services in 2016. This is a 3% increase compared to 2006. The capacity provided by regional aircraft has also increased from 27% in 2006 to 32% in 2016.

RJs are the only category of aircraft to have witnessed a growth in capacity on AA-marketed services compared to 2006. Most of the capacity provided by regional aircraft will be from RJs, which will provide more than 75 million of the 79 million seats on AA-marketed systemwide services. This is an increase of 24% compared to 2006. The average size of RJs has increased from 53 to 64 seats since 2006.

The share of AA's RJ capacity provided by aircraft smaller than 50 seats has dropped from nearly three-quarters to 36%. They are being gradually replaced by new, larger types including the E-170, E-175, E-190 and CRJ900, configured with an average capacity of 69, 76, 98 and 84 seats. The introduction of larger RJs will be partly due to more relaxed scope clauses. On some routes AA is using RJs to operate capacity in 2016 that was provided by narrowbodies or turboprops in 2006.

Capacity provided by turboprops on AA marketed services has decreased by 77% since 2006. The phasing out of smaller types, such as the Beech 1900, Jetstream 31 (J31) and J41 and use of Dash 8s has contributed to an increase in the average size of turboprops from 37 to 42 seats.

Southwest Airlines

Southwest Airlines was already the largest LCC in the US when it announced the acquisition of smaller rival AirTran in May 2011. The post-merger carrier is referred to by Southwest's IATA code WN.

Southwest was the second-largest system-wide US operator in 2006. AirTran was the ninth-largest carrier.

In 2016 WN will be the third-largest US operator on systemwide services. It will provide more than 194 million seats across 1.32 million flights (see table, page 12). This represents a 9% increase in capacity, but a 1% reduction in the number of flights compared to combined Southwest and AirTran operations in 2006.

WN is the only one of the four major US carriers to have increased capacity. It started the increase immediately after 9/11.

Following its merger with Continental in 2010, United has cut its domestic seat capacity by 23%. Continental was making an operating loss in 2006, while United was struggling. The merged and consolidated airline now has a difference between unit revenue and cost of 2.60 cents.

WN network developments

Southwest built its network around secondary airports, a typical LCC strategy. In 2006 Chicago Midway (MDW), Oakland (OAK), Houston-William P. Hobby (HOU) and Dallas-Love Field (DAL) were the second-, fifth-, sixth- and eighth-largest operating bases in Southwest's network. These are secondary alternatives to primary airports at ORD, SFO, IAH and DFW.

AirTran also operated from secondary airports, but some of its main bases in 2006 were primary gateways. ATL was by far the largest and accounted for a third of AirTran's departing capacity. BOS and PHL were also significant origin points for AirTran flights. In 2011, Southwest showed how the acquisition would allow it to add new markets to its network, emphasising AirTran's presence at the primary airports of ATL and DCA.

Domestic flights account for 98% of WN's capacity in 2016. It will provide 191 million seats across 1.30 million domestic flights in 2016. This is a 7% increase in domestic capacity, but a 3% reduction in flights compared to combined Southwest and AirTran operations in 2006. WN will be the second-largest provider of US domestic traffic in 2016.

WN's average domestic LF, yield and RASM have improved since 2006. In 2016 WN's average domestic LF is 83.70%. This is 10.60% higher than in 2006. Its domestic yield and RASM have increased by 3.11 and 4.42 cents compared to 2006 (see table, page 14).

WN is still in the early stages of developing an international network. In 2006 Southwest did not serve any international destinations and AirTran only offered two international routes to the Bahamas. In 2016 WN will operate 39 international routes providing 3.53 million seats across 24,500 flights.

WN fleet developments

In 2006, Southwest and AirTran had a fleet of 580 active narrowbodies with an average size of 133 seats.

In 2016, WN has an active fleet of 702 737s with an average aircraft size of 147 seats. The fleet has, therefore, grown by 122 aircraft since 2006, and average aircraft size has increased by 14 seats.



Before Southwest acquired AirTran, both carriers operated the 737-700. Southwest also operated the 737-300 and 737-500, while AirTran had the largest global fleet of 717-200s. Since the merger, WN has integrated the AirTran 737-700s into its fleet, and withdrawn the 717-200s. It has also been gradually phasing out 737-500s.

The increase in average aircraft size is due to introduction of the 737-800, and withdrawal and phasing out of smaller 717-200s and 737-500s. The increase in average aircraft size will continue, since most of WN's outstanding orders are for 737-800s and 737 MAX 8s.

Other carriers

Apart from the four main post-merger carriers, the largest operators on services to, from and within the US in 2016 are jetBlue Airways, Alaska Airlines, Spirit Airlines and Frontier Airlines. All four have experienced growth since 2006. JetBlue has almost doubled systemwide capacity while Spirit has tripled available seats. A significant amount of this additional capacity is domestic.

In April 2016, Alaska Air Group announced its intention to acquire Virgin America, with the merger is expected to take place in early 2017. Based on combined 2016 capacity, the newly merged entity would become the fifth-largest operator in the US.

Summary

Since 2006, overall systemwide capacity provided by US carriers has increased by 4%, while there has been an overall 2% contraction in the domestic

market.

DL, UA and AA have made reductions of 7%, 23% and 12% in their domestic capacity over the past 10 years, mainly due to post-merger network rationalisation and capacity consolidation. All three carriers have seen subsequent improvements in domestic LFs, yields and RASM. Their domestic CASM has also increased, but at a lower rate than RASM. This clearly indicates that the mergers and domestic capacity cuts have had a positive impact on performance. The difference between unit revenue, RASM; and unit cost, CASM has increased to 2.80-3.05 cents. This is in contrast to the traditional expectation of 1.0 cents difference.

WN has increased its domestic capacity but also managed to improve its domestic LFs, yields and RASM.

International services to and from the US have grown by 32% since 2006. All four merged carriers have seen significant increases in international services.

DL and UA have both closed one hub since their mergers. It is uncertain if AA will follow suit. DL is the only carrier to introduce a new post-merger hub.

There has been an increase in services operated by RJs, narrowbodies and widebodies in the US market since 2006, but turboprop capacity has nearly halved.

There has been a general trend towards the use of larger RJs due to more relaxed scope clauses. Large narrowbodies, including the 737-800 and A321, are replacing ageing smaller types such as the MD-80 and 737-300. [AC](#)

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