



CIRIUM

# THE ON-TIME PERFORMANCE REVIEW

Airlines and Airports





# 2021 WINNER

## THE PLATINUM AWARD

### OPERATIONAL EXCELLENCE

We present the Platinum Award to the world's best airline, which has demonstrated operational excellence for the year.

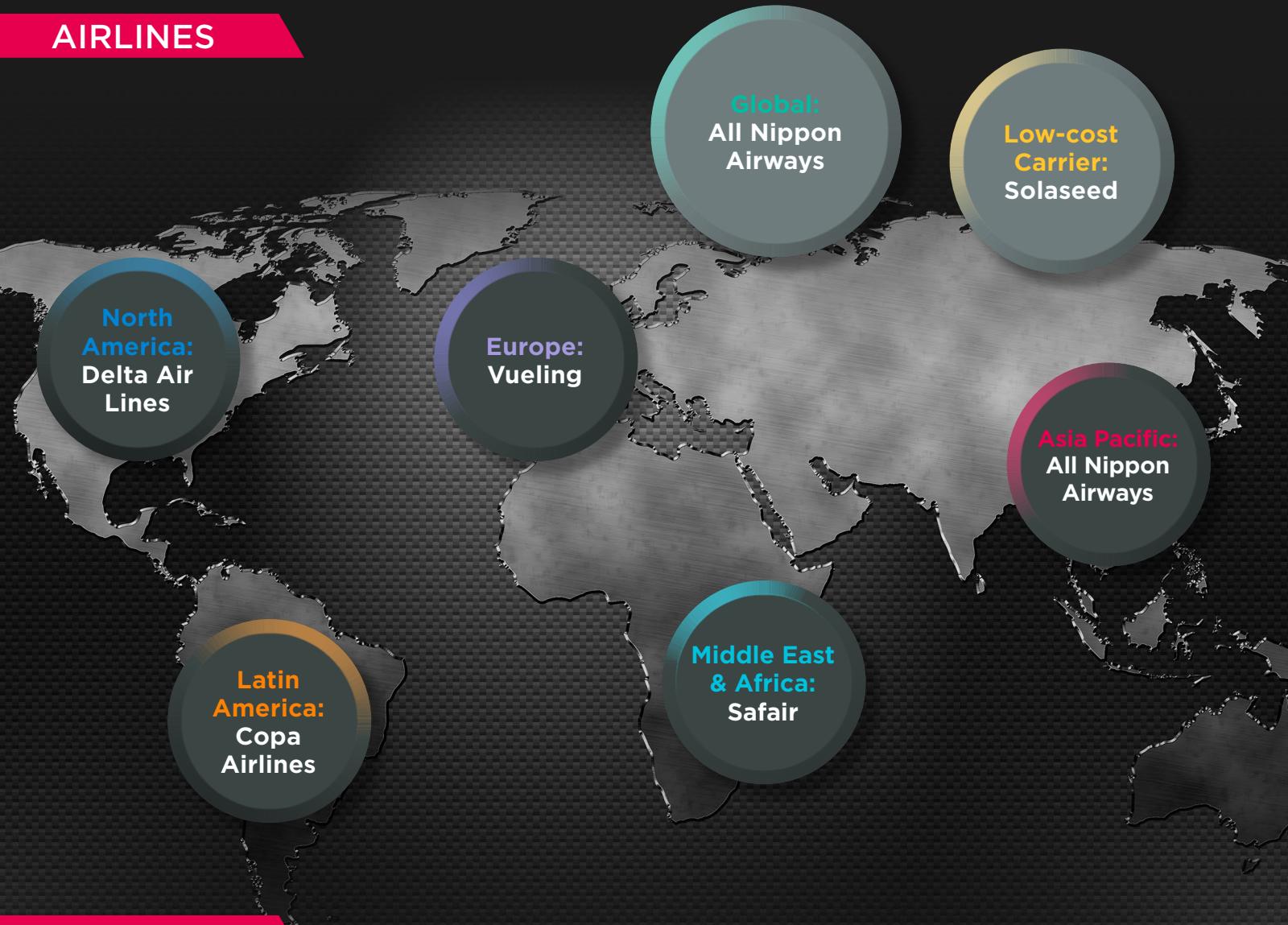
Delta Air Lines is this year's winner of the Platinum Award. It is the world's best performing airline when considering on-time performance, operational complexity and its ability to limit the impact of flight disruption to its passengers.



# THE WINNERS 2021



## AIRLINES



## AIRPORTS

Global	➤	Haneda Airport (HND)
Large	➤	Itami Airport (ITM)
Medium	➤	Kansai International Airport (KIX)
Small	➤	Matsuyama Airport (MYJ)

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## INTRODUCTION



**Jeremy Bowen**  
Chief Executive Officer - Cirium

It was another challenging year for the global airline industry. 2021 was an improvement over 2020 and marked the start of a recovery but regional differences are still prominent. In 2021, many airlines greatly improved their operational performance, as Cirium carefully documents in this just-published On-Time Performance Review 2021.

I'd like to congratulate this year's leaders, none more so than Delta Air Lines the recipient of Cirium's 2021 Platinum Award. We're introducing this new award to recognize operational excellence and commitment to continued improvements. In 2021, Delta Air Lines stood out by being the world's best performing airline.

We recognize Delta Air Lines because of their on-time performance metrics, the size and complexity of their operation, and ability to deliver tangible benefits to passengers, airports, and commitments to the environment.

Cirium's on-time performance reporting for airlines and airports is the longest-standing of such analysis in the industry, going back more than 13 years. We paused our updates during the depths of the COVID-19 pandemic in 2020 as global flights and operations nearly came to a halt. Cirium resumed reporting in June 2021, with regular monthly updates that help gauge the industry's performance in getting passengers from point A to point B, on time.

The latest annual report highlights developments in 2021 – a year in which airlines around the world operated nearly 25 million flights, a 10% increase from 2020 but still 36% below 2019. Cirium looks forward to monitoring on-time performance in 2022, as the industry continues its recovery.

Ultimately, our aim is to provide airline industry stakeholders with a neutral, third-party perspective on on-time performance data. We ensure that our analyses consistently adhere to defined metrics, based on the widest and deepest pool of data collected and curated from more than 600 sources of real-time flight information. These sources include the airlines themselves, airports, global distribution systems, positional data, Civil Aviation Authorities/Air Navigation Service Providers, proprietary data partnerships and the Web.

Importantly, our on-time performance data is backed by a completely independent board of advisors, comprised of industry experts with an unbiased view of the industry. The board of advisors' oversight ensures accuracy and proper representation of all the information we present.

In addition to the report, Cirium provides On-Time Performance Workbooks which grant airlines access to Cirium's data and analysis on a real-time basis, which allows for benchmarking and creating carrier comparison reports. Our trusted broad portfolio of on-time performance products is a must for identifying and monitoring trends in airline and airport operational performance, analyzing the competitive landscape, evaluating partner performance and tracking aircraft utilization aligned to sustainability targets.

Congratulations again to Delta Air Lines the winner of this year's Cirium Platinum Award and to the winners in the airline and airport categories.

Which airlines and airports will perform best in 2022? Be sure to stay informed with Cirium's industry-leading data.

# The growing importance of measuring on-time performance



By **Mike Malik**  
Chief Marketing Officer  
at Cirium

Slowly but surely, the global airline industry is getting back on its feet. But amid staffing, scheduling and other challenges, the recovery isn't always going so smoothly.

Now more than ever, airline operational performance is front and center, not least because of headline-making delays and cancellations in the US this fall. Passengers, airports, governments, corporate travel departments and other stakeholders want to know: Are flights departing and arriving on time?

In June, Cirium relaunched its closely watched on-time performance (OTP) reports, following a temporary suspension at the onset of the pandemic when there was little flight activity. We've otherwise produced the reports for more than a decade now, applying our highest standards of data accuracy and quality control. The information covers OTP for both airlines and airports. To be clear, we don't just publish and analyze the data monthly. The On-Time Performance Review looks at the annual OTP for airlines and airports, with rankings to identify the industry's champions. In addition, access to Cirium OTP data and analysis — on a real-time basis — is available through our Workbooks. This allows for benchmarking and creating carrier comparison performance analyses. More broadly, our OTP portfolio of products is a must for identifying and monitoring trends in airline and airport operational performance.

### Where does our OTP data come from?

It's collected and curated from more than 600 sources of real-time flight information, including airlines themselves but also

airports, global distribution systems, positional data, Civil Aviation Authorities/ANSPs, proprietary data partnerships and the Web. Importantly, our OTP data is backed by a completely independent board of advisors, comprised of industry experts with an unbiased view of the industry. The board is there to ensure accuracy and proper representation of all the information we present.

Our report for October revealed rough skies for several major airlines in the US, where demand has returned rather vigorously. The high cancelation rate and poor on-time performance of American Airlines and Southwest Airlines, most notably, reflect their difficulties in suddenly ramping schedules back up after more than a year of deeply depressed demand. Others performed better on metrics like flight completion factor and punctuality, in some cases because they planned more conservatively with respect to how much capacity they scheduled. You can see the trade-off: Go aggressive on capacity to grab as much of the reviving revenue pie as possible? Or take a more restrained approach to minimize operational disruptions.

One thing clearly evident from the latest OTP report is the current difficulty of operating at leisure-heavy airports, where traffic is in some cases now above pre-pandemic highs. That's certainly the case in Florida, where domestic flight departures this October were 2% greater than they were in October 2019, according to data from Diio by Cirium. Spirit Airlines' stumbles this fall, no doubt, are linked to its Florida-heavy network.

## THE POWER OF OTP

Globally, many of the top-ranking airports for punctuality are in places that invested heavily in new airport capacity. Sure enough, global airports featuring at the top of the rankings for on-time departures were in cities that recently opened a major new airport, for example Chengdu which ranked as third. A fourth city in the top five, Moscow, opened new runways and terminals. There you have it: Airport infrastructure expansion indeed pays dividends in the form of precious time saved from delays and cancelations.

### But does punctuality drive passenger loyalty?

It surely does for some time-sensitive fliers. Consider a corporate traveler that needs to connect through an East Asian hub. Knowing that Tokyo's Haneda airport currently ranks number one in the world among global airports for on-time departures is certainly relevant. A passenger flying to Hawaii, meanwhile, might very well make a multi-thousand dollar purchasing decision knowing that Hawaiian Airlines consistently ranks near or at the top of our OTP rankings. Customer loyalty, of course, drives enormous value in the airline industry, not least through its potential to generate revenues through credit cards and other partnerships.

There are other reasons why on-time performance data is increasingly studied and analyzed. As environmental sustainability takes on ever-greater importance to airlines and airports, it's helpful to know which areas of a flight network are prone to costly delays — think of a flight circling overhead burning fuel while it waits for an open gate. The increasingly environmental-conscious public might want to know that as well. Schedule and crew managers, of course, want to know which airports are problematic, so they can plan accordingly. On-time data is relevant for optimizing aircraft utilization. It's relevant for cost control. One can see how it might be even relevant for airport retail and inflight sales. Airlines and airports will both find it useful, furthermore, for competitive analysis, benchmarking their own performance against rivals.

What's more, achieving a strong record of on-time arrivals and departures promises to grow in importance as weather worldwide becomes more challenging. Which airlines and airports will do it best? Be sure to stay informed with Cirium's best-in-the industry data.



# Our on-time performance is backed by an independent board of advisors

The Cirium On-Time Performance (OTP) Advisory Board is a structured and collaborative team of external advisors that supports Cirium's OTP program.

Cirium is the first and only company that has an OTP Advisory Board, which includes Luis Felipe de Oliveira, Director General at ACI world, Henry H. Harteveldt, President – Travel Industry Analyst at Atmosphere Group, Dr. Mario Hardy, Chief Executive Officer at Pacific Asia Travel Association (PATA), and Cirium's Chief Executive Officer, Jeremy Bowen and Chief Marketing Officer, Mike Malik.

Most businesses in the industry rely on Cirium's OTP results to gauge their performance and this independent oversight provides confidence and trust.

The purpose of this Board is to advise, assist and support on the OTP results both on a monthly and an annual basis.

The members of the board augment the knowledge of our internal team and bring

fresh thinking to the company. Their expert knowledge and experience of airline and airport flight operations ensures an accurate and balanced view of the Cirium OTP results.

The Advisory Board acts as a sounding board for the OPT operations team, reviewing the results before they are published and provides ideas for improving method.

Indeed, the Board also helps the organization gain new insights and advice to solve business problems and explore new opportunities by stimulating robust, high-quality conversations.

However, Cirium cannot describe the purpose of a board better than Bill Emmott, former editor of The Economist and a prominent advisory board member, who said: "They are there to give focus to or sometimes challenge research and intelligence work being done in the company, thus avoiding groupthink and giving direction on big-picture issues."

# The industry standard for on-time performance



By Isaac Pato  
Senior Data Analyst  
at Cirium

As the world's industry standard for on-time performance (OTP), Cirium is releasing a 2021 report which analyzes and recognizes the airlines and airports who have had to cope with fluctuating environments caused by the pandemic.

Our OTP criteria remains the same and identifies the airlines and airports who met their published scheduled arrival times.

### Airlines

To qualify for the Cirium OTP Review, there is an **80% actual gate departure data requirement for all airport categories**.

These categories include **Global, Major (by region) and low-cost carriers**. For Global and Major airlines, a ranking is given for both **Mainline** (operated by a major airline) and **Network** operations (operated by a major airline and includes flights marketed by the airline but operated by an airline partner).

For the Global airlines category, we consider the Top 10% of all passenger airlines by capacity and volume criteria — by Available Seat Kilometres (ASKs), flights and seats—the airline must also serve at least three regions.

For Major airlines by region, the threshold for ASKs, flights and seats, varies by region to accurately reflect the size of operations in that region. The thresholds are:

- o Asia Pacific – Top 30%
- o Europe – Top 30%
- o Latin America – Top 30%
- o Middle East and Africa – Top 30%
- o North America – Top 20%

The low-cost carrier (LCC) category reviews airlines that are industry recognized and/or self-identified low-cost carriers. For this category, we consider the Top 90% of LCC airlines. LCC airlines must fall in the Top 90% for flights, seats and destinations to be considered.

### Airports

There is an **80% actual gate departure data requirement for all airport categories**.

Each month Cirium reviews the total number of flights in a given month (approximately 3 million) for every airport globally in an ordered list, then looks at where the percentile demarcations fall. For the annual OTP review, we take the total number of flights in a given year for every airport.

The Global airports category is based on the following:

- Top 10% by total flights served in a month
- Actual gate departure coverage 80% or better
- Must serve at least three regions (inclusive of its own)

For further details on the other airport categories, please see the report calculations in the appendix.

### About the On-Time Performance Review

First, the definition of OTP is when a passenger flight/aircraft arrives at the gate within 15 minutes of the scheduled arrival time.

We provide the global view of airline and airport OTP which represents an accurate and independent benchmark of customer service quality and operational excellence. The results enable airlines and airports to identify global travel trends, geographies, routes and airports which may require operational focus. The details also provide an understanding of relative performance against competitors, whether partners and codeshare flights are supporting or hindering performance and more.

Individually these are important insights. Together, they are an invaluable asset when it comes to fine-tuning schedules to maximize efficiency and boost the bottom line.



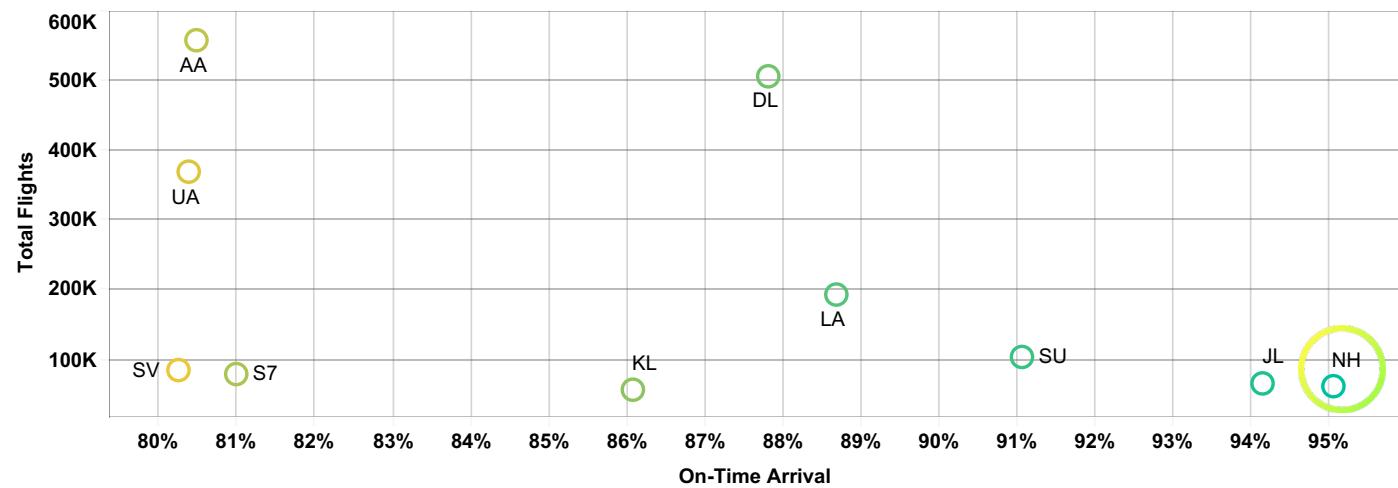
AIRLINES

# The most on-time Global Airlines - Mainline

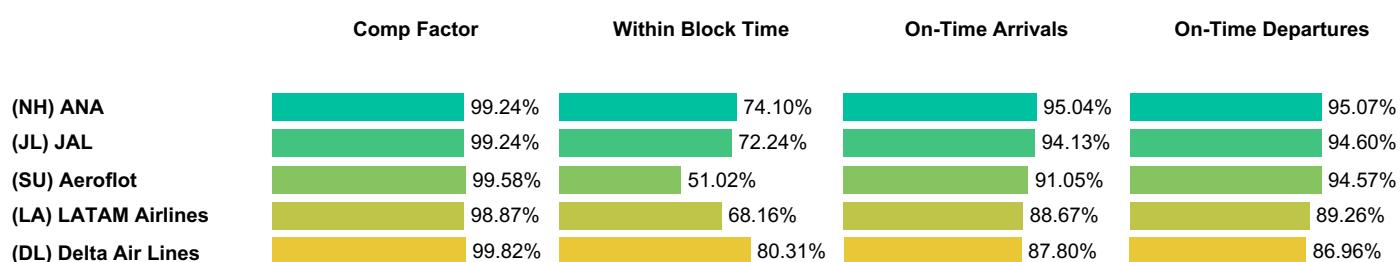


	On-Time Ranking	On-Time Arrival	Total Flights	Comp Factor	Tracked Flights	Summary of Top Performers
(NH) ANA	1	95.04%	62,146	99.24%	99.98%	Total Flights <b>2,086,412</b>
(JL) JAL	2	94.13%	66,155	99.24%	99.89%	Total Tracked Flights <b>99.03%</b>
(SU) Aeroflot	3	91.05%	104,182	99.58%	98.99%	
(LA) LATAM Airlines	4	88.67%	193,928	98.87%	98.91%	
(DL) Delta Air Lines	5	87.80%	507,751	99.82%	99.98%	
(KL) KLM	6	86.07%	57,099	99.61%	96.45%	
(S7) S7 Airlines	7	80.99%	79,579	99.74%	99.32%	
(AA) American Airlines	8	80.47%	559,639	97.50%	99.98%	
(UA) United Airlines	9	80.38%	370,628	99.08%	99.92%	
(SV) Saudia	10	80.24%	85,305	98.80%	96.90%	

Relative Performance



Operational Highlights

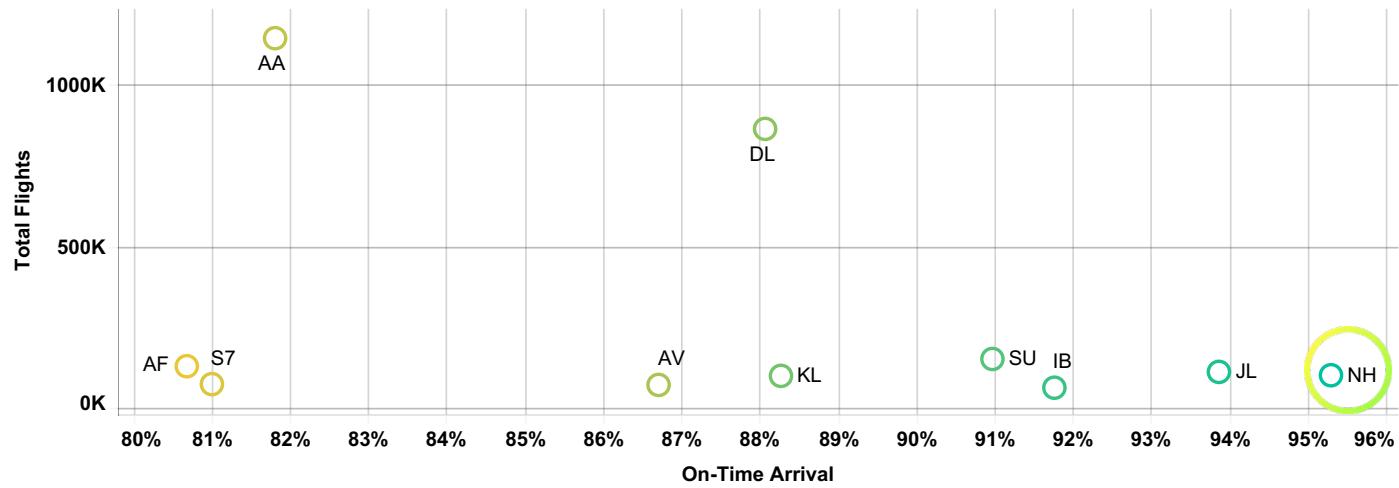


# The most on-time Global Airlines - Network



	On-Time Ranking	On-Time Arrival	Total Flights	Comp Factor	Tracked Flights	Summary of Top Performers
(NH) ANA	1	95.28%	106,987	99.07%	98.20%	Total Flights <b>2,864,515</b>
(JL) JAL	2	93.85%	117,346	98.60%	99.90%	Total Tracked Flights <b>98.18%</b>
(IB) Iberia	3	91.74%	68,460	99.49%	99.71%	
(SU) Aeroflot	4	90.95%	157,347	99.44%	90.87%	
(KL) KLM	5	88.25%	105,084	99.14%	97.15%	
(DL) Delta Air Lines	6	88.05%	868,701	99.67%	99.96%	
(AV) SA AVIANCA	7	86.69%	77,080	99.63%	96.82%	
(AA) American Airlines	8	81.79%	1,149,080	98.03%	99.97%	
(S7) S7 Airlines	9	80.99%	79,579	99.74%	99.32%	
(AF) Air France	10	80.66%	134,851	99.35%	99.85%	

Relative Performance



Operational Highlights

	Comp Factor	Within Block Time	On-Time Arrivals	On-Time Departures
(NH) ANA	99.07%	68.79%	95.28%	95.71%
(JL) JAL	98.60%	70.97%	93.85%	94.49%
(IB) Iberia	99.49%	81.47%	91.74%	88.46%
(SU) Aeroflot	99.44%	48.94%	90.95%	94.15%
(KL) KLM	99.14%	59.25%	88.25%	78.76%

Tokyo Tower, Minato-ku, Tokyo



## Japanese airlines top the global list and set the standard

International traffic in Asia has been slow to recover, however All Nippon Airways (ANA) and Japan Airlines (JAL) leveraged the opportunity to restart and delivered an impressive on-time performance.

Japanese commercial aviation continues to set the standard for consistently high on-time performance, as shown again here with ANA and JAL at the top of the list of both the mainline and network categories of the Global award. ANA took the top spot by a small margin over its principal rival JAL, with 95.04% of its flights on time compared to JAL's at 94.13% in the mainline category.

Russian carrier Aeroflot (91.05%) performed very well and aggressively reopened international routes to Europe, the Middle East and Asia.

LATAM Airlines achieved fourth position (with 88.67% of flights on time) after not making the Top 10 Global mainline category in 2019. The carrier is among the short list of airlines that began a serious effort of digital transformation well before the onset of the COVID-19 pandemic. That positioned them well to make data-driven decisions during the recovery and to outperform others in on-time performance in 2021.

Iberia's network operations — including flights operated by Iberia Regional and Iberia Express — demonstrated how to operate a smooth recovery by achieving a level of on-time performance exceeded only by the Japanese network carriers. The carrier achieved 91.74% of their flights on time.

Aeroflot and its affiliates, Pobeda and Rossiya, rode a strong Russian domestic recovery and operated 90.95% of their flights on time. Achieving consistently smooth connections between flights operated by network partners is a complicated operational challenge — one that has been mastered by the large US network operators in this year's results — Delta and American.

These US hub-and-spoke giants showed measurable improvement in overall network on-time performance over their 2019 numbers despite having to deal with an entirely redrawn landscape. The carriers in the Global Network category improved their on-time performance as a whole by nearly 12 percentage points over 2019.

For Cirium's review of the past year and the industry outlook for 2022, please visit the [\*\*2021 Cirium Airline Insights Review\*\*](#).

# The most on-time Asia Pacific Airlines - Mainline



	On-Time Ranking	On-Time Arrival	total_flights	Comp Factor	Tracked Flights	Summary of Top Performers
(NH) ANA	1	95.04%	62,146	99.24%	99.98%	Total Flights <b>2,875,265</b>
(JL) JAL	2	94.13%	66,155	99.24%	99.89%	Total Tracked Flights <b>97.11%</b>
(VA) Virgin Australia	3	88.07%	32,819	88.73%	97.66%	
(QF) Qantas	4	87.85%	26,012	93.09%	96.26%	
(NZ) Air New Zealand	5	87.79%	64,078	90.61%	97.57%	
(6E) IndiGo	6	87.30%	232,226	98.39%	96.73%	
(KE) Korean Air	7	86.21%	28,231	99.93%	97.84%	
(UK) Vistara	8	85.79%	33,075	99.27%	99.48%	
(EU) Chengdu Airlines	9	83.44%	49,598	87.49%	92.85%	
(KY) Kunming Airlines	10	82.67%	22,517	78.74%	97.70%	

Relative Performance



Operational Highlights

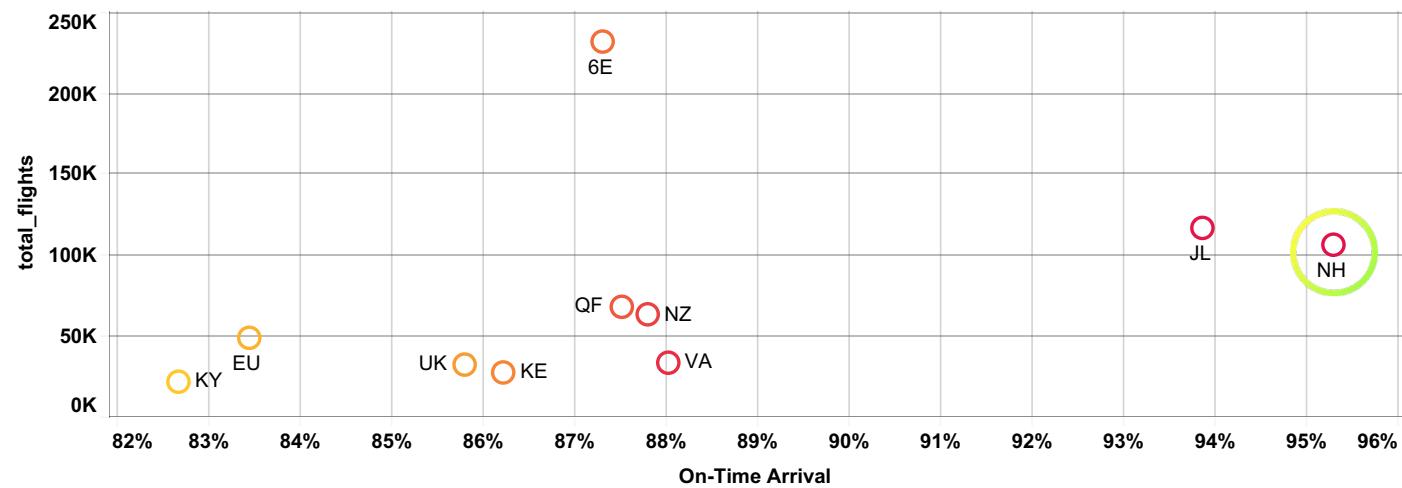
	Comp Factor	Within Block Time	On-Time Arrivals	On-Time Departures
(NH) ANA	99.24%	74.10%	95.04%	95.07%
(JL) JAL	99.24%	72.24%	94.13%	94.60%
(VA) Virgin Australia	88.73%	67.18%	88.07%	86.15%
(QF) Qantas	93.09%	59.83%	87.85%	89.89%
(NZ) Air New Zealand	90.61%	67.56%	87.79%	87.08%

# The most on-time Asia Pacific Airlines - Network

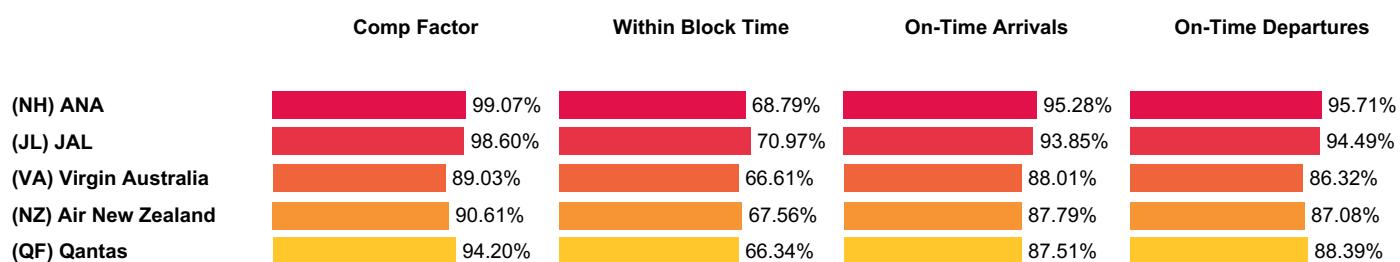


	On-Time Ranking	On-Time Arrival	total_flights	Comp Factor	Tracked Flights	Summary of Top Performers
(NH) ANA	1	95.28%	106,987	99.07%	98.20%	Total Flights <b>3,037,432</b>
(JL) JAL	2	93.85%	117,346	98.60%	99.90%	Total Tracked Flights <b>97.08%</b>
(VA) Virgin Australia	3	88.01%	34,247	89.03%	97.68%	
(NZ) Air New Zealand	4	87.79%	64,078	90.61%	97.57%	
(QF) Qantas	5	87.51%	68,701	94.20%	97.25%	
(6E) IndiGo	6	87.30%	232,226	98.39%	96.73%	
(KE) Korean Air	7	86.21%	28,231	99.93%	97.84%	
(UK) Vistara	8	85.79%	33,075	99.27%	99.48%	
(EU) Chengdu Airlines	9	83.44%	49,598	87.49%	92.85%	
(KY) Kunming Airlines	10	82.67%	22,517	78.74%	97.70%	

Relative Performance



Operational Highlights



## A fragmented recovery in the Asia Pacific

Asia has proven to be a particularly difficult region in which to operate due to travel restrictions imposed by government agencies to control the spread of COVID-19.

Airlines that operate a schedule consisting mainly of international flights were, and remain to be, in a state of near hibernation.

Those with a sizeable domestic market have fared better. This year's Top 10 is dominated by carriers with significant domestic operations.

Passengers willing to fly benefited from much-improved on-time arrival performance. If you compare this year's report to that of 2019, the Top six all performed at an on-time performance (OTP) percentage that exceeded the 2019 winner — All Nippon Airways (ANA) at 86.2%.

With traffic down more than 60% for the Top 10 compared to 2019, on-time operations were easier to achieve given the relative lack of congestion.

ANA repeats as the winner in the category with an OTP of over 95% — a feat that will be hard to match when traffic returns to normal.

IndiGo makes an impressive appearance in this category coming in sixth with nearly 89% of its flights arriving on-time, having found the means to navigate through a very complex regulatory environment where each individual Indian state could impose its own restrictions.

Only minor differences can be seen between the Asian network and Asian mainline flight statistics since flights operated by the marketing carrier tend to dominate in Asia Pacific (over 80%).

For an in-depth look into the Asia Pacific's fragmented recovery visit [\*\*2021 Cirium Airline Insights Review\*\*](#).

Jiaxiu Pavillion, Nanming River, Guiyang City

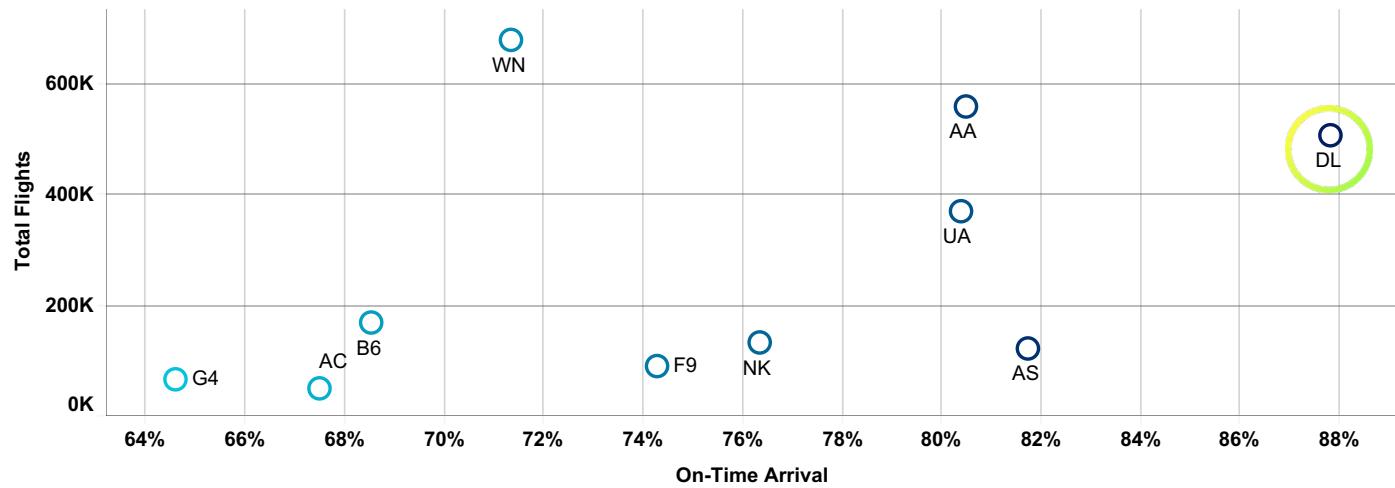


The most on-time  
**North America Airlines - Mainline**



	On-Time Ranking	On-Time Arrival	Total Flights	Comp Factor	Tracked Flights	Summary of Top Performers
(DL) Delta Air Lines	1	87.80%	507,751	99.82%	99.98%	Total Flights <b>2,753,625</b>
(AS) Alaska Airlines	2	81.72%	122,924	99.06%	99.93%	Total Tracked Flights <b>99.64%</b>
(AA) American Airlines	3	80.47%	559,639	97.50%	99.98%	
(UA) United Airlines	4	80.38%	370,628	99.08%	99.92%	
(NK) Spirit Airlines	5	76.33%	133,758	96.48%	99.50%	
(F9) Frontier Airlines	6	74.27%	91,158	98.77%	99.76%	
(WN) Southwest Airlines	7	71.33%	679,847	97.65%	99.81%	
(B6) JetBlue Airways	8	68.52%	169,744	98.76%	98.18%	
(AC) Air Canada	9	67.48%	50,925	99.19%	99.43%	
(G4) Allegiant Air	10	64.59%	67,251	96.57%	99.91%	

Relative Performance



Operational Highlights

	Comp Factor	Within Block Time	On-Time Arrivals	On-Time Departures
(DL) Delta Air Lines	99.82%	80.31%	87.80%	86.96%
(AS) Alaska Airlines	99.06%	62.52%	81.72%	84.15%
(AA) American Airlines	97.50%	77.35%	80.47%	79.51%
(UA) United Airlines	99.08%	73.61%	80.38%	80.67%
(NK) Spirit Airlines	96.48%	71.90%	76.33%	75.97%

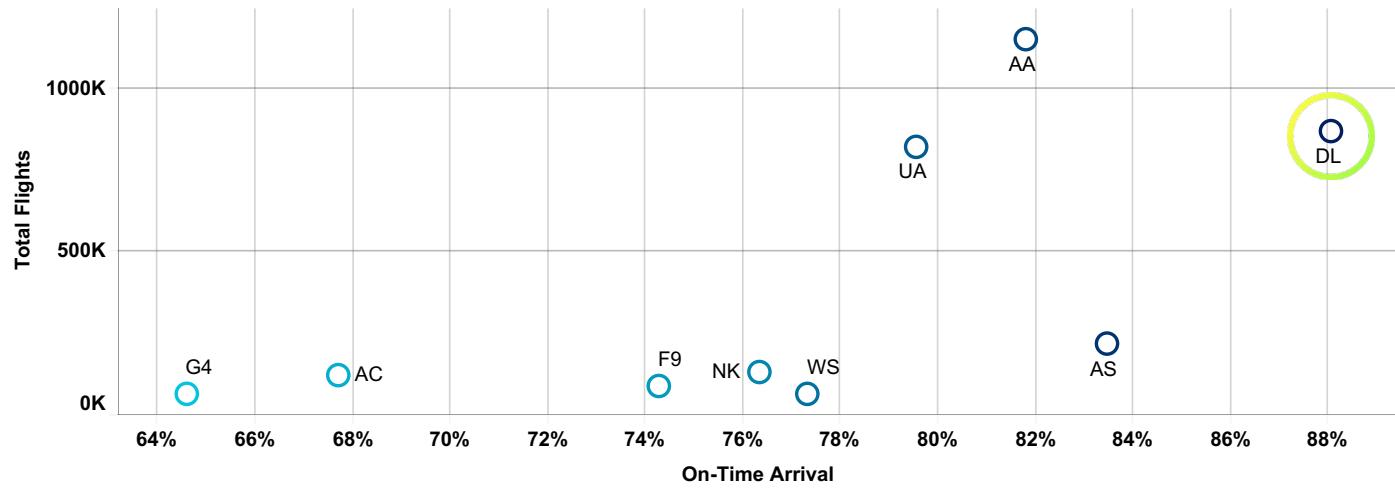
The most on-time

# North America Airlines - Network



	On-Time Ranking	On-Time Arrival	Total Flights	Comp Factor	Tracked Flights	Summary of Top Performers
(DL) Delta Air Lines	1	88.05%	868,701	99.67%	99.96%	Total Flights <b>3,542,417</b>
(AS) Alaska Airlines	2	83.46%	220,501	99.01%	99.94%	Total Tracked Flights <b>99.83%</b>
(AA) American Airlines	3	81.79%	1,149,080	98.03%	99.97%	
(UA) United Airlines	4	79.54%	820,661	98.16%	99.91%	
(WS) WestJet	5	77.31%	67,042	98.18%	99.90%	
(NK) Spirit Airlines	6	76.33%	133,758	96.48%	99.50%	
(F9) Frontier Airlines	7	74.27%	91,158	98.77%	99.76%	
(AC) Air Canada	8	67.69%	124,265	98.20%	99.59%	
(G4) Allegiant Air	9	64.59%	67,251	96.57%	99.91%	Total On-Time Arrivals <b>77.00%</b>

## Relative Performance



## Operational Highlights

	Comp Factor	Within Block Time	On-Time Arrivals	On-Time Departures
(DL) Delta Air Lines	99.67%	79.68%	88.05%	87.73%
(AS) Alaska Airlines	99.01%	64.84%	83.46%	85.44%
(AA) American Airlines	98.03%	74.59%	81.79%	82.04%
(UA) United Airlines	98.16%	70.01%	79.54%	81.20%
(WS) WestJet	98.18%	65.06%	77.31%	78.71%

## Delta Air Lines takes top spot in North America again

Delta Air Lines demonstrated its ability to consistently outpace its major North American competitors with another outstanding operational performance, with 87.80% of its flights on time. Over two points more than the carrier achieved in 2019 (85.69%).

In addition to beating its nearest competitor by more than five percentage points, Delta's completed flight ratio was nearly perfect at over 99.8% — a reflection of the carrier's commitment to avoid cancellations whenever possible.

Alaska Airlines (81.72%), another consistently high performer, was the second most on-time in the region and maintained its number of completed flights compared to 2019.

American Airlines (80.47%) moved up from fifth in 2019 to third this year with a slight improvement in on-time performance (OTP) percentage.

Carriers in North America have a much more significant reliance on network partners primarily to connect secondary airports to the mainline hubs.

The recovery has been equally distributed in this region across the major mainline carriers and their partners.

Mainline carriers operated approximately 62% of the flights they marketed in both 2019 and the OTP measurement period in 2021 (June-December).

United Airlines (80.38%) moved up the rankings from seventh in 2019 to finish fourth in 2021 with measurable improvements in both OTP and completed flight percentages.

Cirium experts explore the North American market in more detail in the [\*\*2021 Cirium Airline Insights Review\*\*](#).

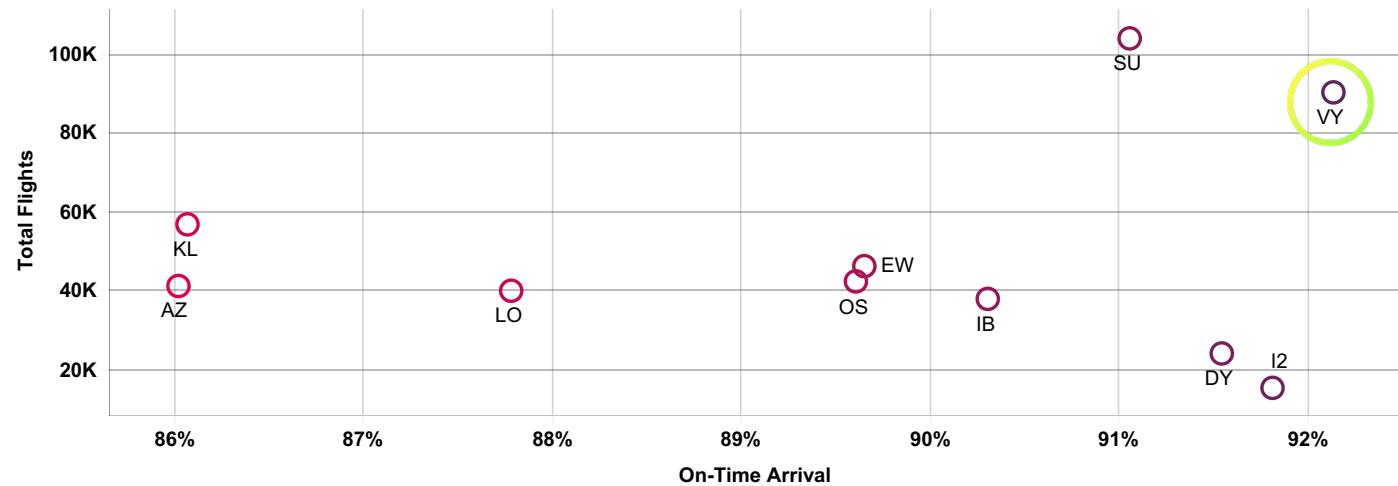
Mesa Arch, Canyonlands National Park, Utah

# The most on-time Europe Airlines - Mainline

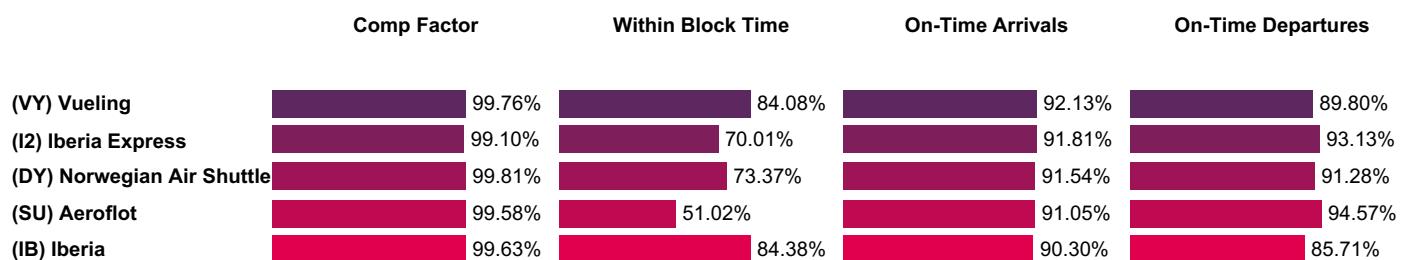


	On-Time Ranking	On-Time Arrival	Total Flights	Comp Factor	Tracked Flights	Summary of Top Performers
(VY) Vueling	1	92.13%	90,514	99.76%	99.88%	Total Flights <b>501,101</b>
(I2) Iberia Express	2	91.81%	15,703	99.10%	99.41%	Total Tracked Flights <b>98.82%</b>
(DY) Norwegian Air Shuttle	3	91.54%	24,416	99.81%	99.69%	
(SU) Aeroflot	4	91.05%	104,182	99.58%	98.99%	
(IB) Iberia	5	90.30%	38,234	99.63%	99.77%	
(EW) Eurowings	6	89.65%	46,515	99.08%	99.83%	
(OS) Austrian	7	89.60%	42,660	99.46%	100.00%	
(LO) LOT - Polish Airlines	8	87.78%	40,286	99.72%	98.71%	
(KL) KLM	9	86.07%	57,099	99.61%	96.45%	
(AZ) ITA S.p.A.	10	86.02%	41,492	96.97%	95.44%	Total On-Time Arrivals <b>89.59%</b>

Relative Performance



Operational Highlights

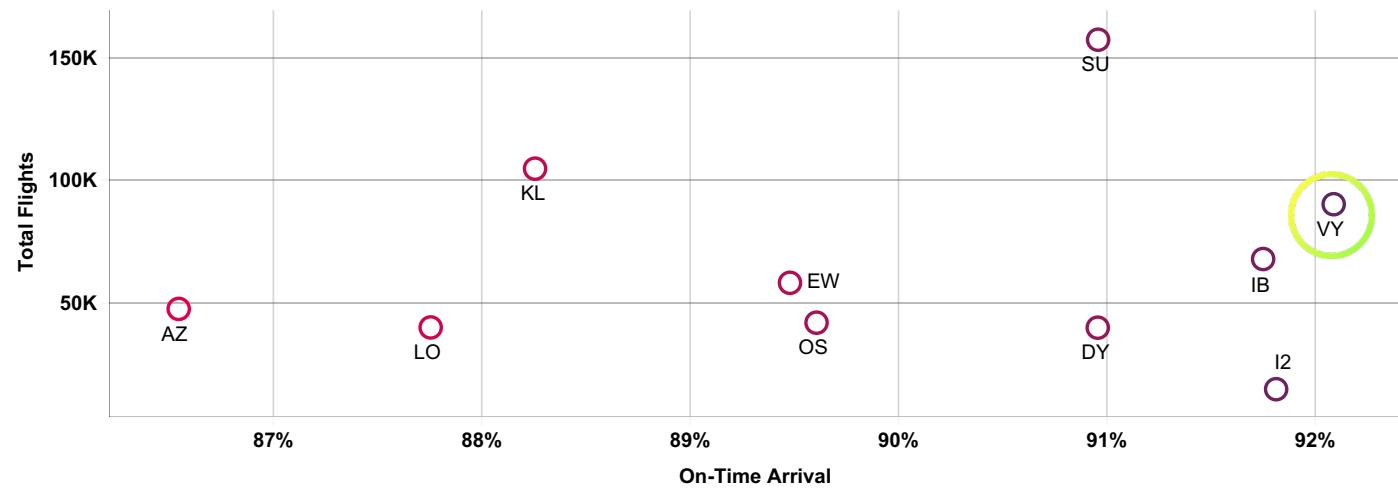


# The most on-time Europe Airlines - Network



	On-Time Ranking	On-Time Arrival	Total Flights	Comp Factor	Tracked Flights	Summary of Top Performers
(VY) Vueling	1	92.08%	90,674	99.76%	99.88%	Total Flights <b>668,377</b>
(I2) Iberia Express	2	91.81%	15,703	99.10%	99.41%	Total Tracked Flights <b>97.91%</b>
(IB) Iberia	3	91.74%	68,460	99.49%	99.71%	
(SU) Aeroflot	4	90.95%	157,347	99.44%	90.87%	
(DY) Norwegian Air Shuttle	5	90.95%	40,639	99.83%	97.80%	
(OS) Austrian	6	89.60%	42,660	99.46%	100.00%	
(EW) Eurowings	7	89.48%	58,826	99.12%	99.78%	
(KL) KLM	8	88.25%	105,084	99.14%	97.15%	
(LO) LOT - Polish Airlines	9	87.75%	40,736	99.72%	98.48%	
(AZ) ITA S.p.A.	10	86.54%	48,248	96.88%	96.00%	

Relative Performance



Operational Highlights

	Comp Factor	Within Block Time	On-Time Arrivals	On-Time Departures
(VY) Vueling	99.76%	84.07%	92.08%	89.75%
(I2) Iberia Express	99.10%	70.01%	91.81%	93.13%
(IB) Iberia	99.49%	81.47%	91.74%	88.46%
(SU) Aeroflot	99.44%	48.94%	90.95%	94.15%
(DY) Norwegian Air Shuttle	99.83%	66.91%	90.95%	90.45%

## Heavily impacted by travel restrictions, yet nimble carriers outperform

Spanish IAG carriers — Vueling (92.13%), Iberia Express (91.81%) and Iberia (90.30%) — took three of the top five slots this year in the European mainline category. Vueling notably rose to the top as it expanded internationally — 65% of its third quarter capacity this year was dedicated to international flights.

The carrier took advantage of slots given up by airlines such as Air France at Paris Orly Airport and opened new routes serving Northern Europe.

Norwegian Air Shuttle (91.54%) and Aeroflot (91.09%) rounded out the top five — each of which excelled with greater than 90% of their flights arriving on-time.

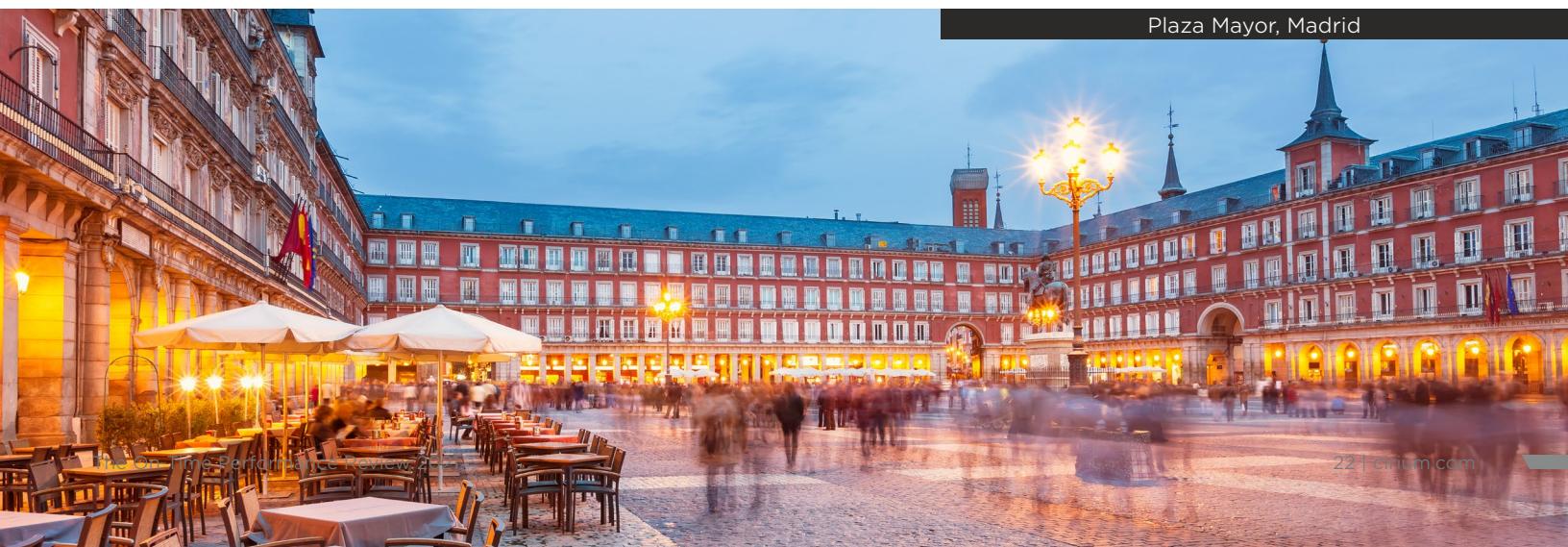
The top performers in Europe also appear to have adapted well to the uncertainties in demand and in the regulatory environment. Very few of their flights were canceled, as evidenced by completion factors only slightly below 100%.

There are only minor differences between the European mainline and network flight statistics in 2021 due to a significant reduction in flights operated by network partners in the region.

Network flight activity has been slower to recover in Europe — 95% of flights tracked in Europe during the 2021 on-time performance review were operated by the marketing carrier compared to 79% in 2019. This is likely due to the higher margins on mainline flights and a surplus of crew and aircraft in the mainline carrier's fleet, which minimizes the need for support from wet lease aircraft and crew providers.

The **2021 Cirium Airline Insights Review** has more insights on how the pandemic has impacted airlines this year.

Plaza Mayor, Madrid

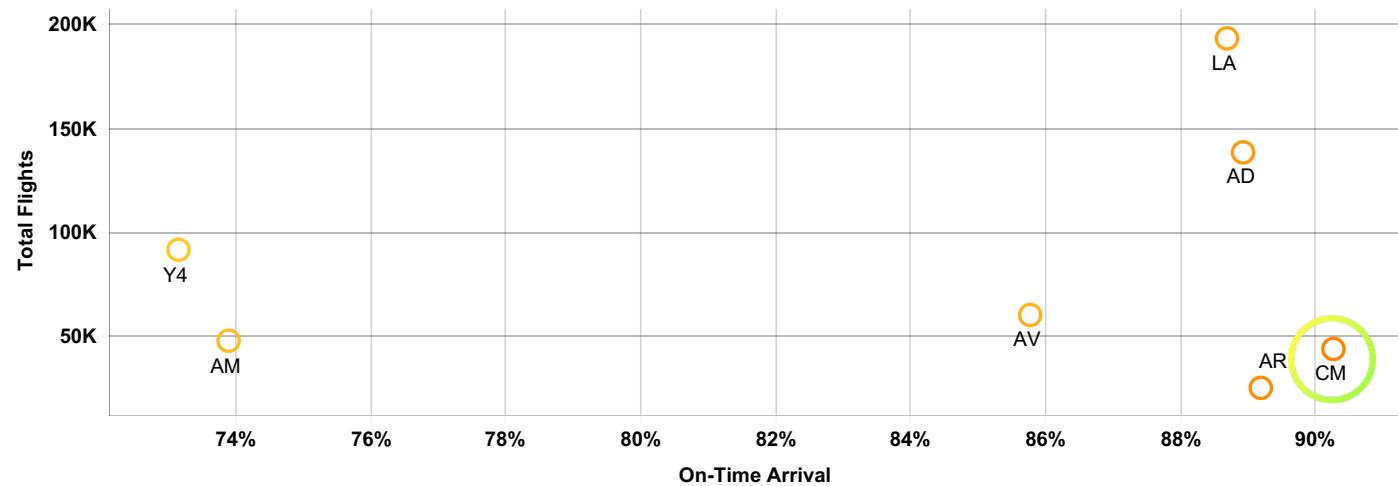


# The most on-time Latin America Airlines - Mainline



	On-Time Ranking	On-Time Arrival	Total Flights	Comp Factor	Tracked Flights	Summary of Top Performers
(CM) Copa Airlines	1	90.25%	44,126	99.78%	99.34%	Total Flights <b>602,948</b>
(AR) Aerolineas Argentinas	2	89.17%	25,357	98.93%	98.84%	Total Tracked Flights <b>99.24%</b>
(AD) Azul	3	88.91%	138,958	98.86%	99.28%	
(LA) LATAM Airlines	4	88.67%	193,928	98.87%	98.91%	
(AV) SA AVIANCA	5	85.76%	60,517	99.62%	99.67%	
(AM) Aeromexico	6	73.88%	48,101	99.47%	99.92%	
(Y4) Volaris	7	73.14%	91,961	98.62%	98.74%	Total On-Time Arrivals <b>84.25%</b>

Relative Performance



Operational Highlights

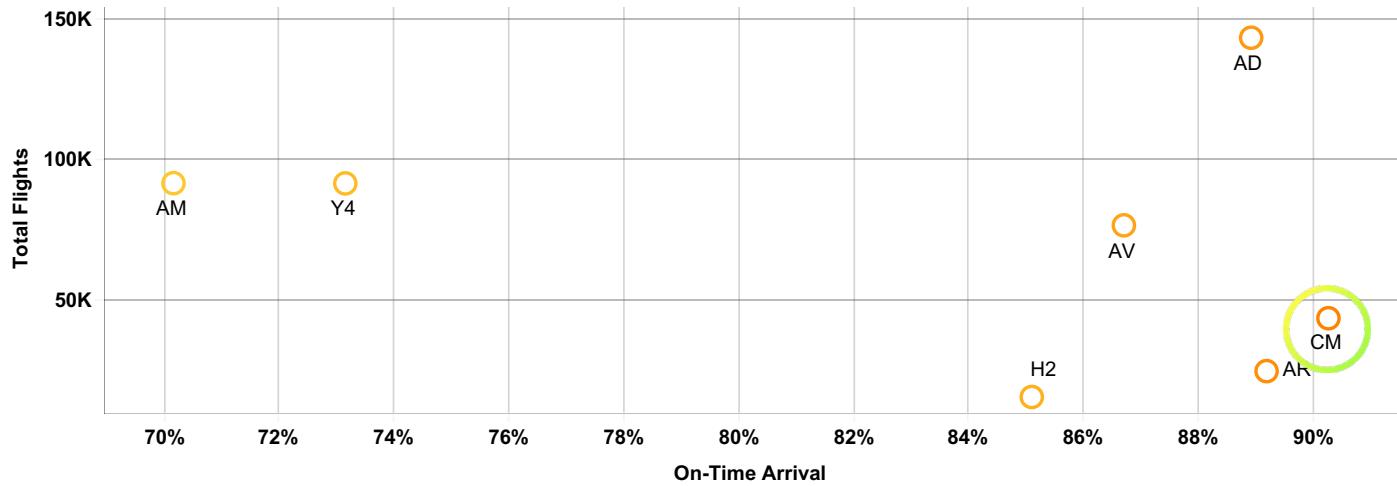
	Comp Factor	Within Block Time	On-Time Arrivals	On-Time Departures
(CM) Copa Airlines	99.78%	66.90%	90.25%	92.46%
(AR) Aerolineas Argentinas	98.93%	58.08%	89.17%	90.87%
(AD) Azul	98.86%	66.10%	88.91%	89.97%
(LA) LATAM Airlines	98.87%	68.16%	88.67%	89.26%
(AV) SA AVIANCA	99.62%	78.61%	85.76%	84.79%

# The most on-time Latin America Airlines - Network



	On-Time Ranking	On-Time Arrival	Total Flights	Comp Factor	Tracked Flights	Summary of Top Performers
(CM) Copa Airlines	1	90.25%	44,126	99.78%	99.34%	Total Flights <b>490,380</b>
(AR) Aerolineas Argentinas	2	89.17%	25,357	98.93%	98.84%	Total Tracked Flights <b>98.34%</b>
(AD) Azul	3	88.91%	143,633	98.67%	98.06%	
(AV) SA AVIANCA	4	86.69%	77,080	99.63%	96.82%	
(H2) Sky Airline	5	85.09%	16,183	99.13%	96.63%	
(Y4) Volaris	6	73.14%	91,961	98.62%	98.74%	
(AM) Aeromexico	7	70.15%	92,040	99.50%	99.93%	Total On-Time Arrivals <b>83.34%</b>

Relative Performance



Operational Highlights

	Comp Factor	Within Block Time	On-Time Arrivals	On-Time Departures
(CM) Copa Airlines	99.78%	66.90%	90.25%	92.46%
(AR) Aerolineas Argentinas	98.93%	58.08%	89.17%	90.87%
(AD) Azul	98.67%	64.90%	88.91%	89.98%
(AV) SA AVIANCA	99.63%	75.41%	86.69%	85.86%
(H2) Sky Airline	99.13%	52.68%	85.09%	87.43%

## Copa Airlines shines in Latin America despite hit from COVID-19

Copa Airlines — an airline that was close to a complete shutdown at the start of the pandemic — is making a strong recovery and operating its expanding schedules at a very high level of on-time performance, with 90.25% of its flights on time.

The airline reportedly recovered to 70% of its 2019 traffic in the third quarter of 2021 and is expecting to have exceeded 80% in the fourth quarter. Full recovery is expected in 2022.

Copa also won both the mainline and network categories in 2019 with a superior on-time arrival. In the mainline category it achieved five percentage points higher than its nearest competitor.

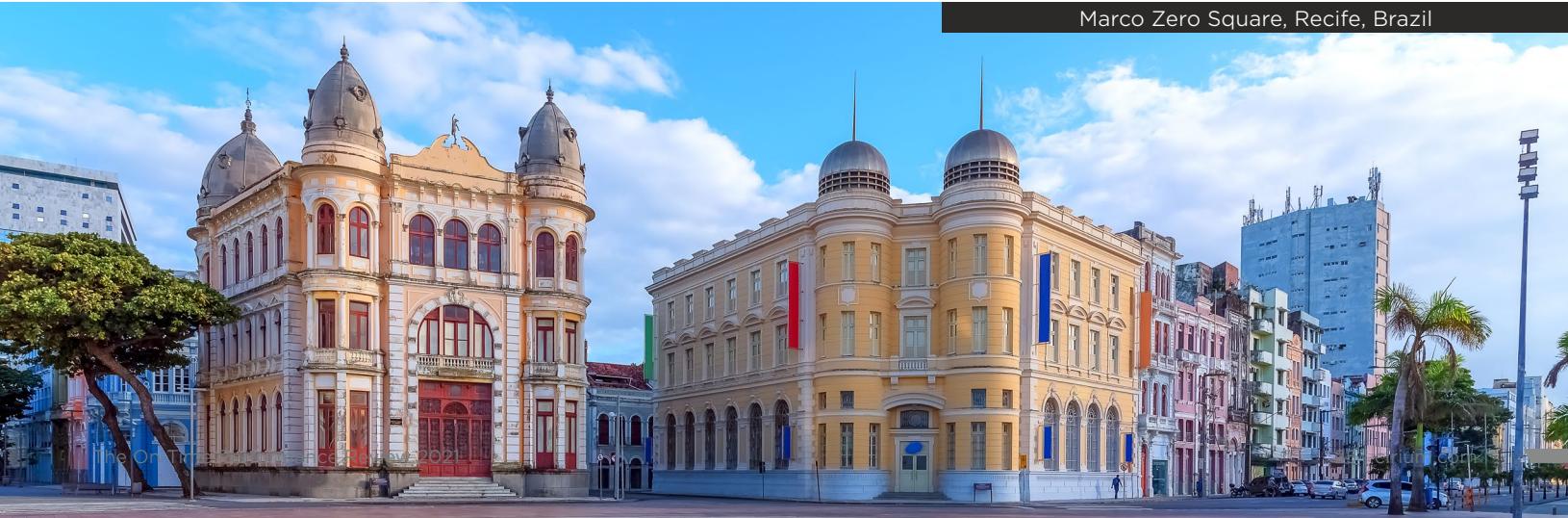
This year's results show Aerolineas Argentinas (89.17%) and Azul (88.91%) closing that gap to just over one percentage point between the airlines. Azul's domestic dominance in Brazil is reflected in the number of flights it operated between June and December.

LATAM (88.67%) recorded over 190,000 flights — more than double the number of the other carriers in the top seven, apart from Azul that flew around 140,000 flights.

The results in Latin America provide optimism for the region's recovery. The airlines are performing well after being particularly hard hit by COVID-related restrictions.

For more Cirium insights on the airline market, visit the [\*\*2021 Cirium Airline Insights Review \(AIR\)\*\*](#).

Marco Zero Square, Recife, Brazil

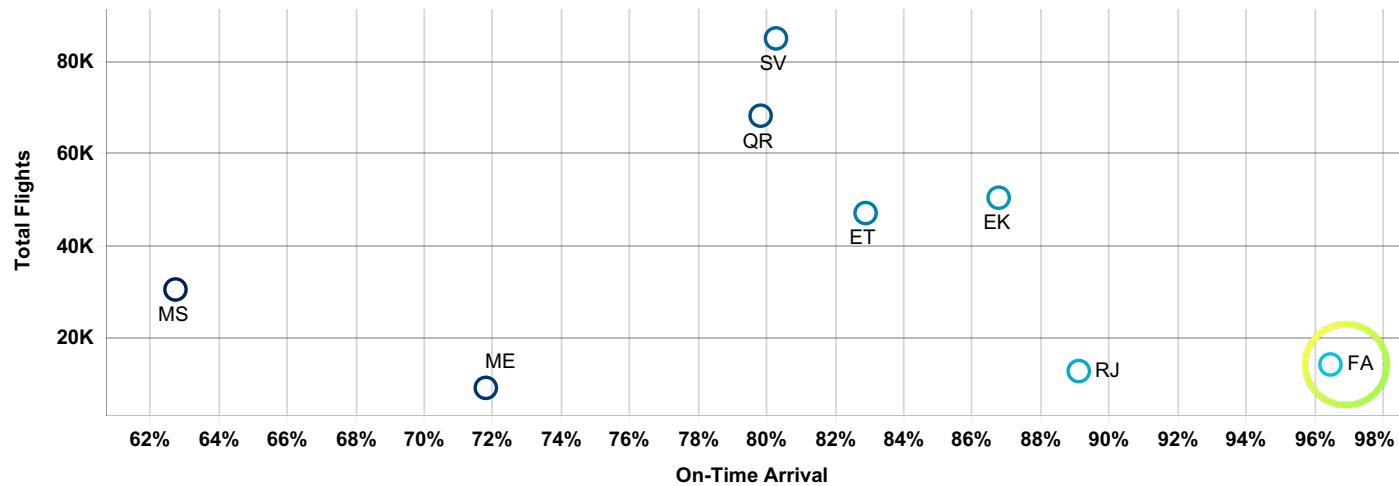


# The most on-time Middle East & Africa Airlines - Mainline

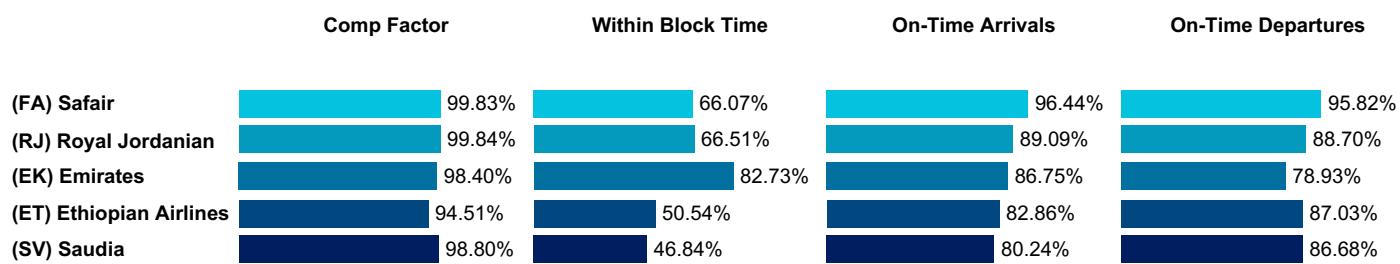


	On-Time Ranking	On-Time Arrival	Total Flights	Comp Factor	Tracked Flights	Summary of Top Performers
(FA) Safair	1	96.44%	14,344	99.83%	85.30%	Total Flights <b>318,910</b>
(RJ) Royal Jordanian	2	89.09%	12,912	99.84%	92.47%	Total Tracked Flights <b>90.64%</b>
(EK) Emirates	3	86.75%	50,641	98.40%	98.30%	
(ET) Ethiopian Airlines	4	82.86%	47,297	94.51%	92.72%	
(SV) Saudia	5	80.24%	85,305	98.80%	96.90%	
(QR) Qatar Airways	6	79.80%	68,486	99.20%	82.06%	
(ME) Middle East Airlines	7	71.77%	9,257	99.70%	82.50%	
(MS) EgyptAir	8	62.71%	30,668	98.72%	94.87%	Total On-Time Arrivals <b>81.21%</b>

Relative Performance



Operational Highlights

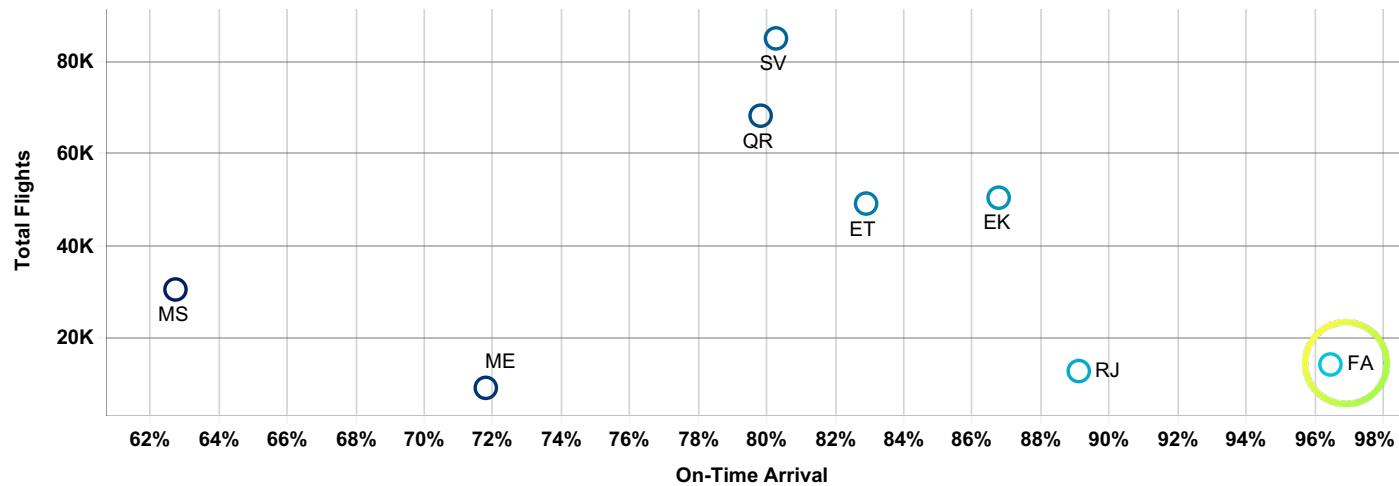


# The most on-time Middle East & Africa Airlines - Network



	On-Time Ranking	On-Time Arrival	Total Flights	Comp Factor	Tracked Flights	Summary of Top Performers
(FA) Safair	1	96.44%	14,344	99.83%	85.30%	Total Flights <b>320,974</b>
(RJ) Royal Jordanian	2	89.09%	12,912	99.84%	92.47%	Total Tracked Flights <b>90.21%</b>
(EK) Emirates	3	86.75%	50,641	98.40%	98.30%	
(ET) Ethiopian Airlines	4	82.88%	49,361	94.46%	89.29%	
(SV) Saudia	5	80.24%	85,305	98.80%	96.90%	
(QR) Qatar Airways	6	79.80%	68,486	99.20%	82.06%	
(ME) Middle East Airlines	7	71.77%	9,257	99.70%	82.50%	
(MS) EgyptAir	8	62.71%	30,668	98.72%	94.87%	

Relative Performance



Operational Highlights

	Comp Factor	Within Block Time	On-Time Arrivals	On-Time Departures
(FA) Safair	99.83%	66.07%	96.44%	95.82%
(RJ) Royal Jordanian	99.84%	66.51%	89.09%	88.70%
(EK) Emirates	98.40%	82.73%	86.75%	78.93%
(ET) Ethiopian Airlines	94.46%	48.43%	82.88%	87.03%
(SV) Saudia	98.80%	46.84%	80.24%	86.68%

Burj Khalifa, Dubai



## Low-Cost Carrier Safair expands internationally and does it on time

Airlines serving the Middle East and Africa markets do not benefit from large domestic market opportunities. Despite this, they are gathering strength. The traffic in the region is expected to return to 2019 levels in 2022.

Safair is an exception when compared to other airlines. The South African low-cost carrier did not make the On-Time Performance Review Top 10 in 2019 and had been providing only domestic services until recently. The carrier has since launched its first international service to Mauritius — a holiday destination for South Africans — with focused operations. Safair operated its flights 96.44% on time in 2021.

Some of the airlines in this year's ranking also featured in the 2019 review, although the order of their rankings changed. Royal Jordanian (89.09%) moved up several positions from seventh place in 2019 to second this year. Emirates secured a spot in the top three still, with a better on-time arrival of 86.75%.

Qatar Airways, the 2019 winner has dropped to sixth, with 79.80% of its flights arriving on time.

Saudia (80.24%) and EgyptAir (62.71%) join the top performers this year after not making the Top 10 in 2019. Saudia operated the most flights out of the carriers in the ranking this year, with over 85,300 flights from June to December. The carrier just resumed its international routes to Los Angeles and Manchester.

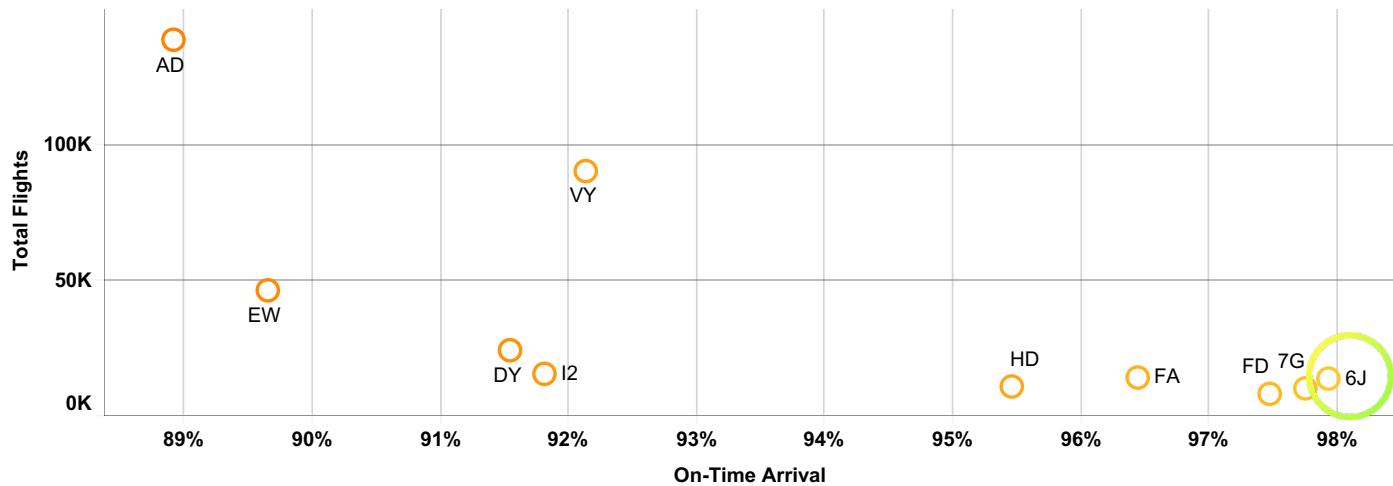
For a thorough analysis of the state of the commercial aviation industry and its prospects for recovery, download the [\*\*2021 Cirium Airline Insights Review \(AIR\)\*\*](#).

# The most on-time Low-Cost Carriers



	On-Time Ranking	On-Time Arrival	Total Flights	Comp Factor	Tracked Flights	Summary of Top Performers
(6J) Solaseed Air	1	97.93%	13,955	99.01%	99.91%	Total Flights <b>374,099</b>
(7G) StarFlyer	2	97.75%	10,342	98.22%	95.33%	Total Tracked Flights <b>97.53%</b>
(FD) Thai AirAsia	3	97.47%	8,321	99.69%	96.66%	
(FA) Safair	4	96.44%	14,344	99.83%	85.30%	
(HD) Air Do	5	95.45%	11,031	99.28%	99.97%	
(VY) Vueling	6	92.13%	90,514	99.76%	99.88%	
(I2) Iberia Express	7	91.81%	15,703	99.10%	99.41%	
(DY) Norwegian Air Shuttle	8	91.54%	24,416	99.81%	99.69%	
(EW) Eurowings	9	89.65%	46,515	99.08%	99.83%	
(AD) Azul	10	88.91%	138,958	98.86%	99.28%	Total On-Time Arrivals <b>93.91%</b>

Relative Performance



Operational Highlights

	Comp Factor	Within Block Time	On-Time Arrivals	On-Time Departures
(6J) Solaseed Air	99.01%	78.16%	97.93%	98.04%
(7G) StarFlyer	98.22%	77.06%	97.75%	97.95%
(FD) Thai AirAsia	99.69%	85.60%	97.47%	96.53%
(FA) Safair	99.83%	66.07%	96.44%	95.82%
(HD) Air Do	99.28%	71.25%	95.45%	95.88%

## Low-Cost Carriers have the adaptability and short-haul markets to weather the storm

Solaseed Air, a Japanese domestic operator, and an All Nippon Airways (ANA) affiliate, tops the low-cost carrier (LCC) category in on-time performance for the 2021 period.

The airline flies a network of 14 routes, including those connecting major cities in Kyushu with Haneda Airport and Naha Airport and has very nimble operations.

StarFlyer, another Japanese domestic carrier and ANA affiliate, performed second only to Solaseed. The carrier is listed by IATA and ICAO as an LCC; however, the airline considers itself a hybrid airline — a full-service airline with a lower cost structure.

Cirium is watching the hybrid airline space to see if operational models trend in this direction. Until then, there aren't enough airlines globally that describe themselves as hybrids to justify a new category in Cirium's On-Time Performance Review — yet.

LCCs have this year shown their adaptability to the changing environment because of COVID-19. The carriers have benefited from being focused on short-haul flights which have proven to be more attractive to consumers.

Vueling notably didn't feature in the LCC category in 2019, however with a focus on digital transformation, ranks as sixth this year in the Top 10. The airline also operated the second highest number of flights (over 90,500) after Azul at tenth who operated 139,00 flights from June to December.

Cirium has curated a number of insights around the market in 2021 and the outlook for 2022 in the [\*\*2021 Cirium Airline Insights Review \(AIR\).\*\*](#)



Shinjuku, Tokyo

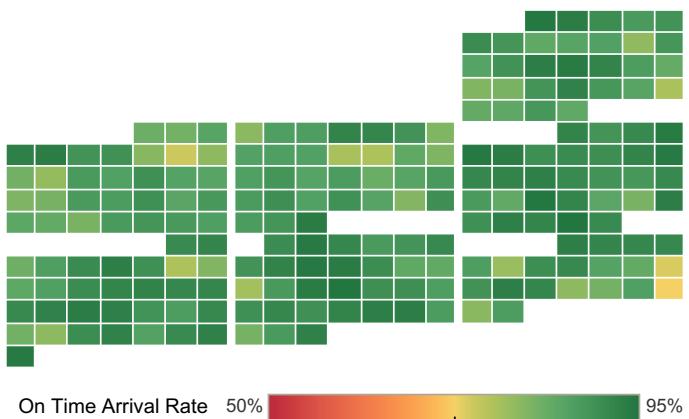


# AIRLINE WINNER: 2021 PROFILE

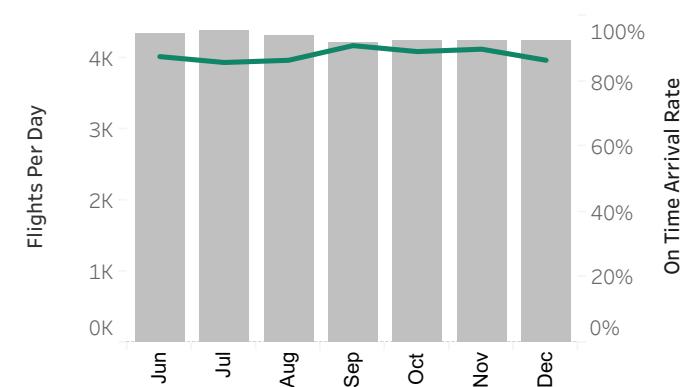
## Delta Air Lines — Platinum Award, North America Mainline and Network

On-Time Arrival Rate <b>88.03%</b>	Active Tails <b>771</b>	Total Flights Scheduled <b>868,992</b>	Avg Daily Utilization (per Tail) <b>8.97 hr</b>	Total Distance Flown <b>1,085.53M km</b>
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Daily On-Time Performance Calendar



Monthly Trends  
FLIGHT VOLUME | PERFORMANCE



Mainline Fleet Composition



Airport Hub Grouping



Most Flown Routes

	Flights	Seats	On Time Arrival %	Operator Country:
ATL - MCO	2,586	528K	81.11%	<b>United States</b>
MCO - ATL	2,584	528K	86.14%	840,128 Arriving Flights
ATL - LGA	2,211	417K	89.64%	
LGA - ATL	2,210	417K	91.06%	840,139 Departing Flights
ATL - BOS	2,190	418K	88.10%	

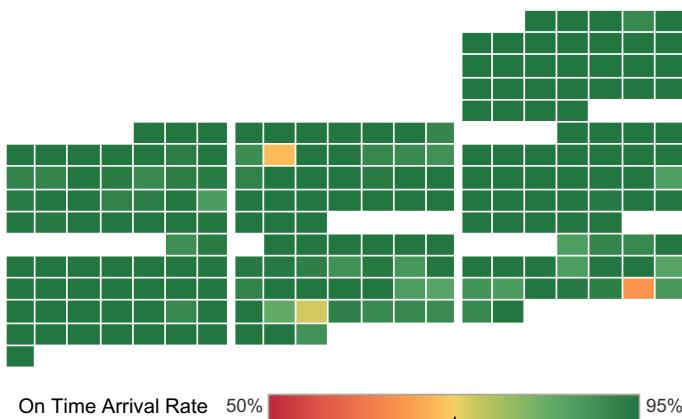


# AIRLINE WINNER: 2021 PROFILE

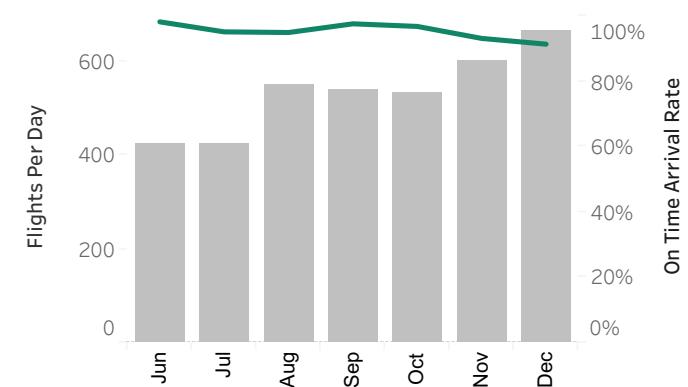
## ANA — Global, Asia Mainline and Network

On-Time Arrival Rate <b>95.28%</b>	Active Tails <b>185</b>	Total Flights Scheduled <b>106,995</b>	Avg Daily Utilization (per Tail) <b>5.02 hr</b>	Total Distance Flown <b>120.69M km</b>
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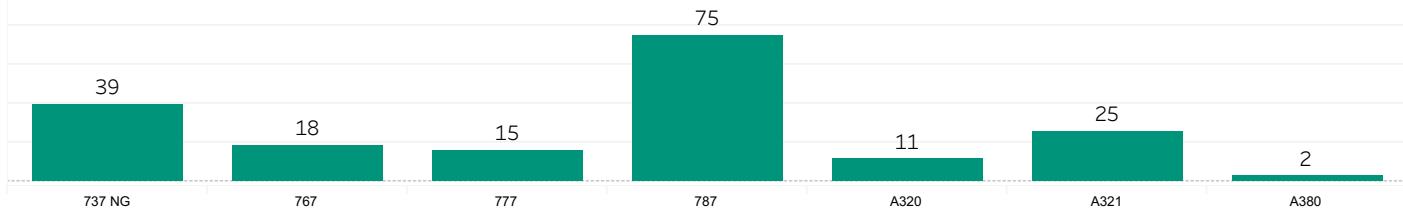
Daily On-Time Performance Calendar



Monthly Trends  
FLIGHT VOLUME | PERFORMANCE



Mainline Fleet Composition



Airport Hub Grouping



Most Flown Routes

	Flights	Seats	On Time Arrival %	Operator Country:
<b>HND - FUK</b>	2,922	760K	96.70%	<b>Japan</b>
<b>FUK - HND</b>	2,838	736K	96.57%	Arriving Flights
<b>CTS - HND</b>	2,722	721K	96.28%	
<b>HND - CTS</b>	2,721	721K	96.14%	
<b>ITM - HND</b>	2,707	650K	96.70%	Departing Flights

**103,486**  
Arriving Flights

**102,988**  
Departing Flights



# AIRLINE WINNER: 2021 PROFILE

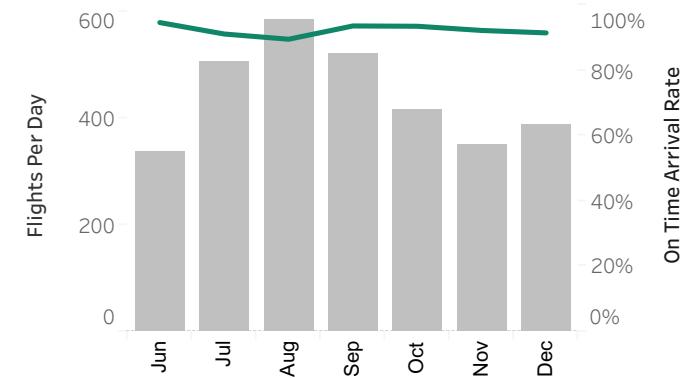
## Vueling Airlines — Europe Mainline and Network

On-Time Arrival Rate <b>92.08%</b>	Active Tails <b>114</b>	Total Flights Scheduled <b>90,675</b>	Avg Daily Utilization (per Tail) <b>6.60 hr</b>	Total Distance Flown <b>78.02M km</b>
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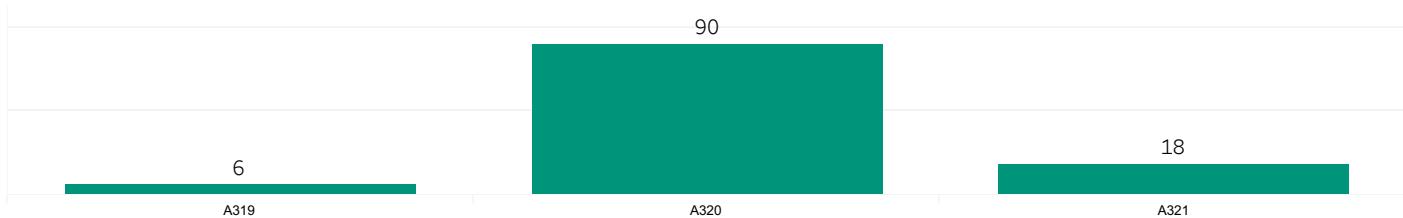
Daily On-Time Performance Calendar



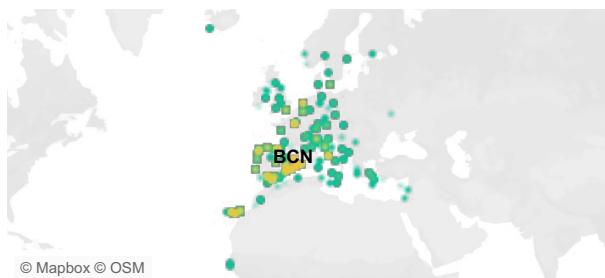
Monthly Trends  
FLIGHT VOLUME | PERFORMANCE



Mainline Fleet Composition



Airport Hub Grouping



Most Flown Routes

	Flights	Seats	On Time Arrival %	Operator Country:
<b>BCN - PMI</b>	1,961	377K	95.32%	<b>Spain</b>
<b>PMI - BCN</b>	1,960	376K	93.87%	<b>67,012</b>
<b>BCN - IBZ</b>	1,847	359K	94.54%	Arriving Flights
<b>IBZ - BCN</b>	1,847	359K	93.62%	
<b>BCN - MAH</b>	1,716	336K	95.23%	<b>67,018</b>
<b>MAH - BCN</b>	1,716	336K	95.98%	Departing Flights

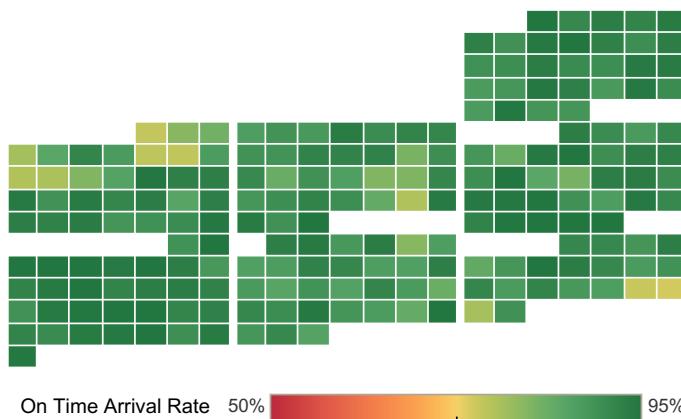


# AIRLINE WINNER: 2021 PROFILE

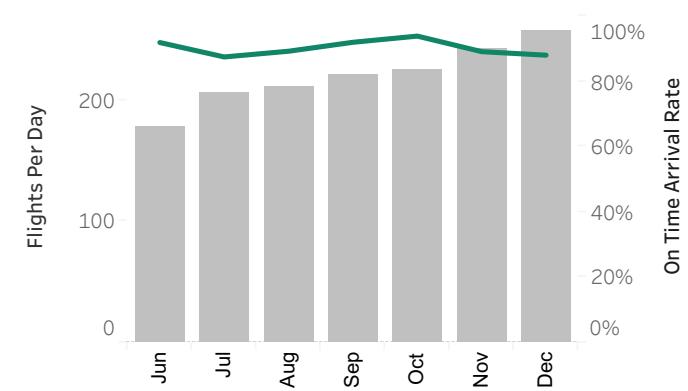
## Copa Airlines — Latin America Mainline and Network

On-Time Arrival Rate <b>90.23%</b>	Active Tails <b>72</b>	Total Flights Scheduled <b>44,148</b>	Avg Daily Utilization (per Tail) <b>10.08 hr</b>	Total Distance Flown <b>92.48M km</b>
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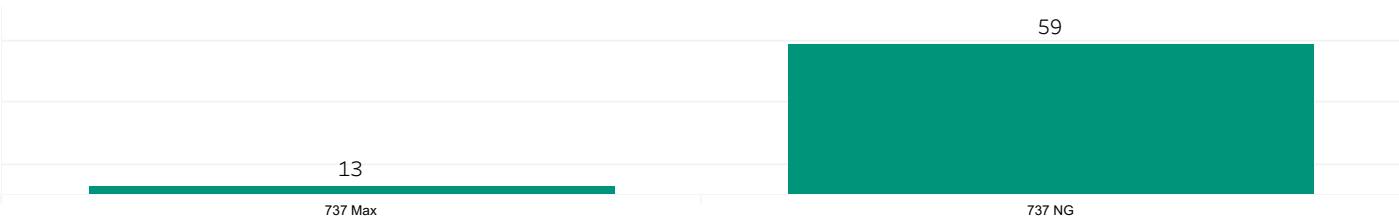
Daily On-Time Performance Calendar



Monthly Trends  
FLIGHT VOLUME | PERFORMANCE



Mainline Fleet Composition



Airport Hub Grouping



Most Flown Routes

	Flights	Seats	On Time Arrival %	Operator Country: Panama
<b>PTY - CUN</b>	1,669	262K	90.70%	<b>22,098</b> Arriving Flights
<b>CUN - PTY</b>	1,668	262K	89.28%	
<b>MIA - PTY</b>	1,406	221K	91.01%	
<b>PTY - MIA</b>	1,402	221K	90.44%	
<b>BOG - PTY</b>	1,081	167K	95.82%	<b>22,119</b> Departing Flights
<b>PTY - BOG</b>	1,081	167K	89.01%	

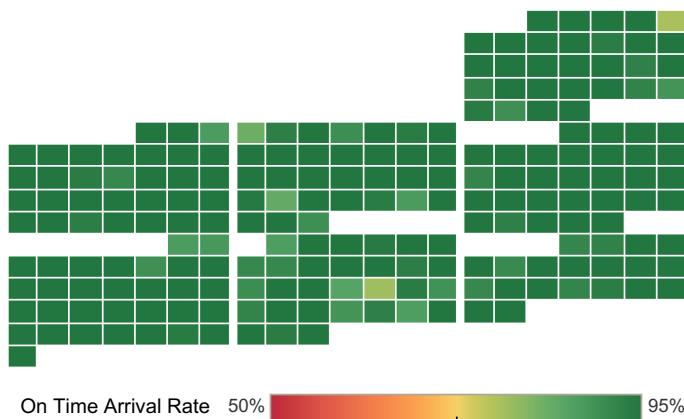


# AIRLINE WINNER: 2021 PROFILE

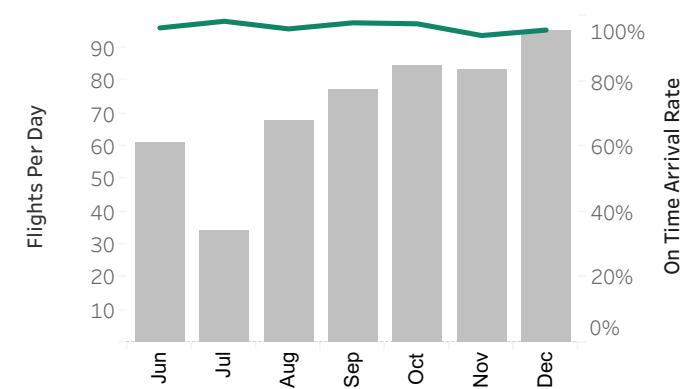
## Safair — Middle East and Africa Mainline and Network

On-Time Arrival Rate <b>96.40%</b>	Active Tails <b>21</b>	Total Flights Scheduled <b>14,344</b>	Avg Daily Utilization (per Tail) <b>5.44 hr</b>	Total Distance Flown <b>11.73M km</b>
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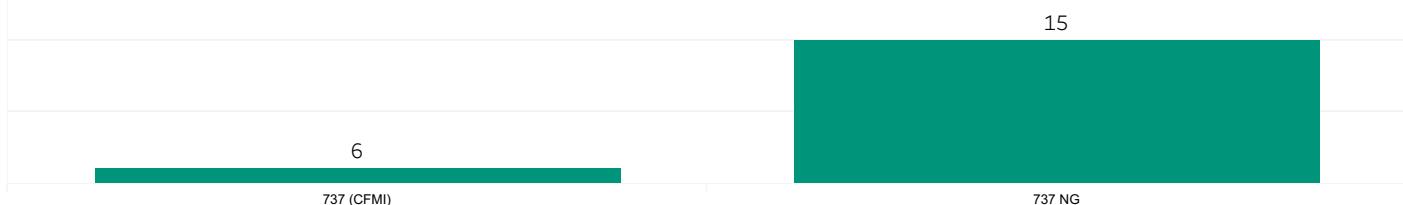
Daily On-Time Performance Calendar



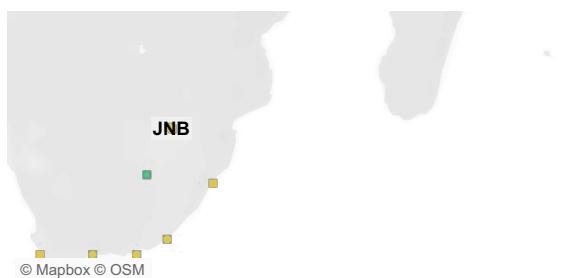
Monthly Trends  
FLIGHT VOLUME | PERFORMANCE



Mainline Fleet Composition



Airport Hub Grouping



Most Flown Routes

	Flights	Seats	On Time Arrival %	Operator Country:
JNB - CPT	1,929	348K	95.59%	<b>South Africa</b>
CPT - JNB	1,927	349K	97.61%	Arriving Flights
DUR - JNB	1,671	293K	95.43%	
JNB - DUR	1,671	294K	96.37%	
CPT - DUR	578	103K	97.21%	<b>14,343</b>
DUR - CPT	578	103K	96.34%	Departing Flights

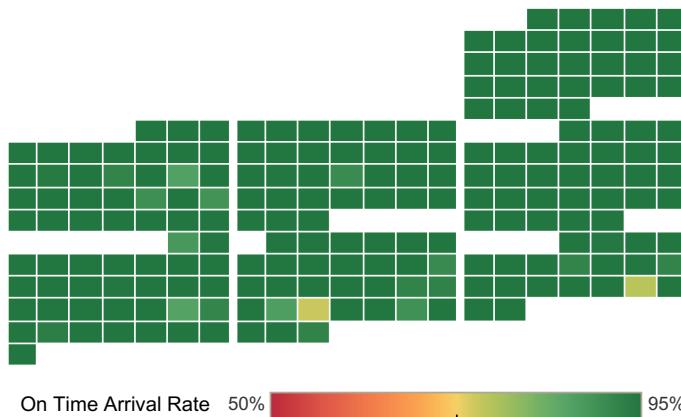


# AIRLINE WINNER: 2021 PROFILE

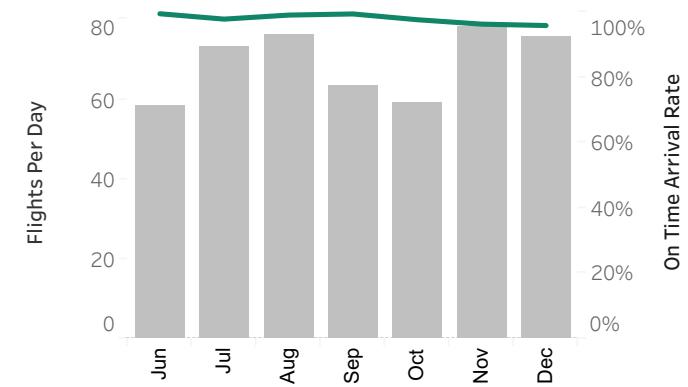
## Solaseed Air — LCC

On-Time Arrival Rate <b>97.91%</b>	Active Tails <b>14</b>	Total Flights Scheduled <b>13,955</b>	Avg Daily Utilization (per Tail) <b>5.23 hr</b>	Total Distance Flown <b>7.66M km</b>
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Daily On-Time Performance Calendar



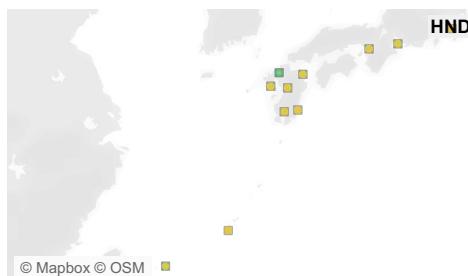
Monthly Trends  
FLIGHT VOLUME | PERFORMANCE



Mainline Fleet Composition



Airport Hub Grouping



Most Flown Routes

	Flights	Seats	On Time Arrival %	Operator Country:
<b>HND - KMI</b>	1,091	115K	97.97%	<b>Japan</b>
<b>KMI - HND</b>	1,091	127K	97.60%	Arriving Flights
<b>HND - KMJ</b>	932	102K	98.60%	
<b>KMJ - HND</b>	932	109K	98.39%	
<b>KOJ - HND</b>	757	79K	96.68%	<b>13,955</b> Departing Flights



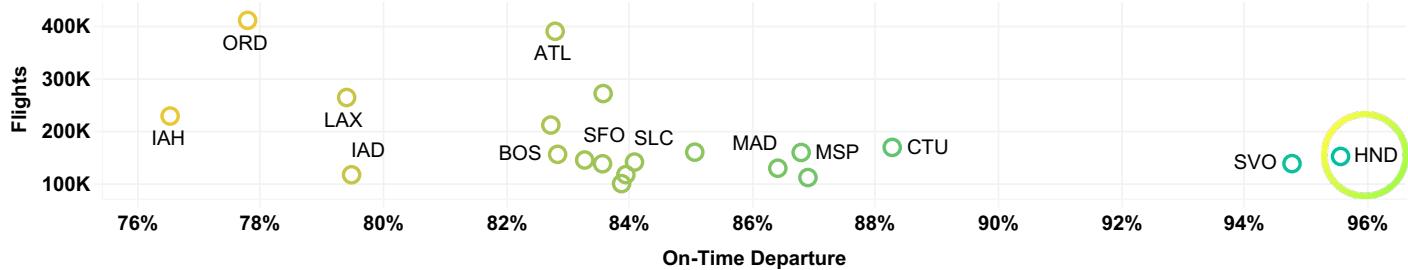
**AIRPORTS**

# The most on-time Global Airports



	On-Time Ranking	On-Time Departure	Total Flights	Tracked Flights	Routes Served	Summary of Global Airports
(HND) Haneda Airport	1	95.55%	154,158	93.17%	84	Total Flights <b>3,760,740</b>
(SVO) Sheremetyevo International Airport	2	94.76%	140,476	83.80%	207	Total Seats <b>523.59M</b>
(CTU) Chengdu Shuangliu International Airport	3	88.26%	171,446	83.17%	167	Total Routes <b>3,250</b>
(BCN) Barcelona-El Prat Airport	4	86.89%	113,801	94.22%	189	On-Time Departures <b>79.36%</b>
(MSP) Minneapolis-St. Paul International Airport	5	86.78%	161,734	92.48%	147	Tracked Flights <b>94.11%</b>
(MAD) Adolfo Suarez Madrid-Barajas Airport	6	86.40%	131,626	89.82%	192	
(DTW) Detroit Metropolitan Wayne County Airp..	7	85.05%	162,323	99.16%	128	
(SLC) Salt Lake City International Airport	8	84.07%	143,399	99.31%	99	
(BOG) El Dorado International Airport	9	83.93%	119,361	81.03%	86	
(MUC) Franz Josef Strauss Airport	10	83.86%	102,184	91.79%	191	
(CLT) Charlotte Douglas International Airport	11	83.56%	274,501	98.38%	183	
(PHL) Philadelphia International Airport	12	83.55%	140,189	98.44%	124	
(SFO) San Francisco International Airport	13	83.26%	147,363	98.88%	147	
(BOS) Boston Logan International Airport	14	82.82%	158,173	95.95%	130	
(ATL) Hartsfield-Jackson Atlanta International ..	15	82.78%	393,629	99.09%	218	
(SEA) Seattle-Tacoma International Airport	16	82.71%	214,249	98.92%	119	
(IAD) Washington Dulles International Airport	17	79.47%	119,126	93.61%	165	
(LAX) Los Angeles International Airport	18	79.39%	266,968	96.32%	196	
(ORD) O'Hare International Airport	19	77.78%	414,577	96.82%	272	
(IAH) George Bush Intercontinental Airport	20	76.52%	231,457	97.90%	206	

## Relative Performance



## Operational Highlights

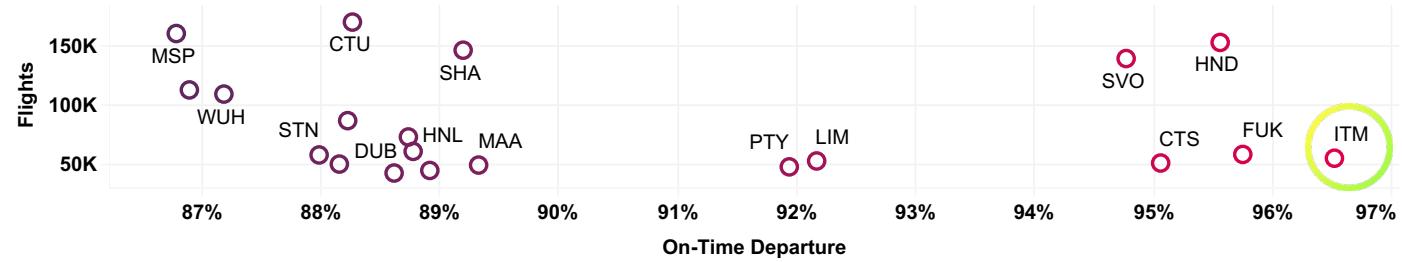
	On-Time Departure	On-Time Arrival	Total Routes Served	Total Airlines Served
(HND) Haneda Airport	95.55%	95.10%	84	23
(SVO) Sheremetyevo International Airport	94.76%	88.71%	207	33
(CTU) Chengdu Shuangliu International Airp..	88.26%	83.13%	167	50
(BCN) Barcelona-El Prat Airport	86.89%	86.92%	189	70
(MSP) Minneapolis-St. Paul International Air..	86.78%	86.57%	147	16

# The most on-time Large Airports



	On-Time Ranking	On-Time Departure	Total Flights	Tracked Flights	Routes Served	Summary of Large Airports
(ITM) Itami Airport	1	96.51%	55,752	98.58%	34	Total Flights <b>1,738,450</b>
(FUK) Fukuoka Airport	2	95.74%	58,975	92.45%	35	Total Seats <b>280.74M</b>
(HND) Haneda Airport	3	95.55%	154,158	93.17%	84	Total Routes <b>2,176</b>
(CTS) New Chitose Airport	4	95.05%	51,667	95.39%	31	On-Time Departures <b>80.08%</b>
(SVO) Sheremetyevo International Airport	5	94.76%	140,476	83.80%	207	Tracked Flights <b>89.97%</b>
(LIM) Jorge Chavez International Airport	6	92.16%	53,409	91.51%	59	
(PTY) Tocumen International Airport	7	91.93%	48,408	97.31%	75	
(MAA) Chennai Airport	8	89.32%	49,923	81.90%	70	
(SHA) Shanghai Hongqiao International Airport	9	89.19%	147,570	83.52%	65	
(LGW) London Gatwick Airport	10	88.91%	45,344	95.38%	177	
(DUB) Dublin Airport	11	88.77%	61,562	98.89%	166	
(HNL) Daniel K. Inouye International Airport	12	88.73%	73,819	84.24%	59	
(ADD) Addis Ababa Bole International Airport	13	88.61%	43,167	88.41%	104	
(CTU) Chengdu Shuangliu International Airport	14	88.26%	171,446	83.17%	167	
(LED) Pulkovo Airport	15	88.22%	87,685	80.40%	160	
(SCL) Arturo Merino Benitez Airport	16	88.15%	50,767	92.91%	53	
(STN) Stansted Airport	17	87.98%	58,526	91.30%	180	
(WUH) Wuhan Tianhe International Airport	18	87.18%	110,261	80.29%	114	
(BCN) Barcelona-El Prat Airport	19	86.89%	113,801	94.22%	189	
(MSP) Minneapolis-St. Paul International Airport	20	86.78%	161,734	92.48%	147	

## Relative Performance



## Operational Highlights

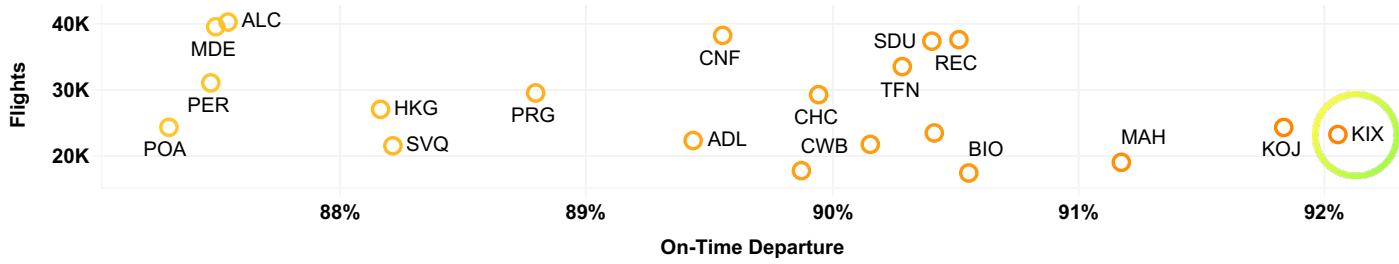
	On-Time Departure	On-Time Arrival	Total Routes Served	Total Airlines Served
(ITM) Itami Airport	96.51%	94.28%	34	4
(FUK) Fukuoka Airport	95.74%	96.05%	35	24
(HND) Haneda Airport	95.55%	95.10%	84	23
(CTS) New Chitose Airport	95.05%	94.60%	31	11
(SVO) Sheremetyevo International Airport	94.76%	88.71%	207	33

# The most on-time Medium Airports



	On-Time Ranking	On-Time Departure	Total Flights	Tracked Flights	Routes Served	Summary of Med. Airports
(KIX) Kansai International Airport	1	92.05%	23,400	93.91%	48	
(KOJ) Kagoshima Airport	2	91.83%	24,473	83.95%	17	Total Flights <b>562,223</b>
(MAH) Menorca Airport	3	91.17%	19,179	83.35%	74	
(BIO) Bilbao Airport	4	90.55%	17,550	90.43%	45	
(REC) Guararapes-Gilberto Freyre International ..	5	90.51%	37,819	88.62%	41	
(AEP) Jorge Newbery Airport	6	90.41%	23,640	83.32%	47	Total Seats <b>83.63M</b>
(SDU) Santos Dumont Airport	7	90.40%	37,583	82.27%	20	
(TFN) Tenerife North Airport	8	90.28%	33,719	86.17%	32	
(KOA) Kona International Airport at Keahole	9	90.15%	21,904	84.85%	19	
(CHC) Christchurch International Airport	10	89.94%	29,459	84.88%	22	Total Routes <b>984</b>
(CWB) Afonso Pena International Airport	11	89.87%	17,909	82.09%	19	
(CNF) Tancredo Neves International Airport	12	89.55%	38,462	90.14%	46	
(ADL) Adelaide Airport	13	89.43%	22,487	85.63%	31	
(PRG) Vaclav Havel Airport Prague	14	88.79%	29,718	90.18%	127	
(SVQ) Seville Airport	15	88.21%	21,691	96.68%	79	
(HKG) Hong Kong International Airport	16	88.16%	27,225	89.92%	73	
(ALC) Alicante-Elche Airport	17	87.54%	40,484	89.71%	129	
(MDE) Jose Maria Cordova International Airport	18	87.49%	39,778	84.02%	24	
(PER) Perth Airport	19	87.47%	31,250	81.61%	51	
(POA) Salgado Filho International Airport	20	87.30%	24,493	81.53%	40	Tracked Flights <b>86.66%</b>

## Relative Performance



## Operational Highlights

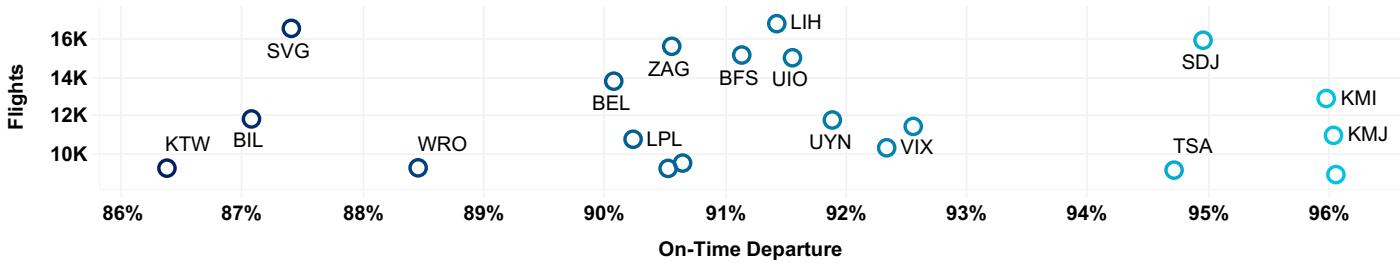
	On-Time Departure	On-Time Arrival	Total Routes Served	Total Airlines Served
(KIX) Kansai International Airport	92.05%	88.84%	48	35
(KOJ) Kagoshima Airport	91.83%	90.04%	17	8
(MAH) Menorca Airport	91.17%	93.01%	74	27
(BIO) Bilbao Airport	90.55%	91.44%	45	17
(REC) Guararapes-Gilberto Freyre Internatio..	90.51%	90.04%	41	6

# The most on-time Small Airports

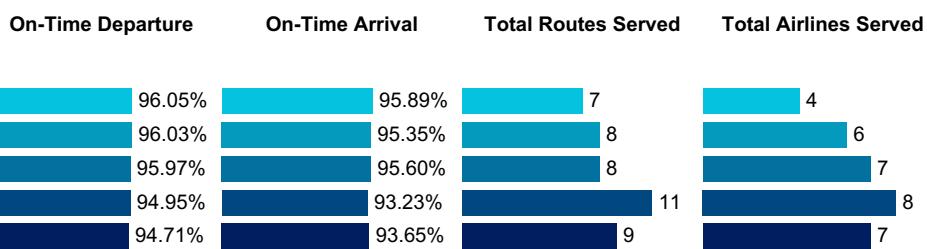


	On-Time Ranking	On-Time Departure	Total Flights	Tracked Flights	Routes Served	Summary of Small Airports
(MYJ) Matsuyama Airport	1	96.05%	8,961	92.77%	7	Total Flights <b>245,099</b>
(KMJ) Kumamoto Airport	2	96.03%	11,009	84.27%	8	Total Seats <b>32.68M</b>
(KMI) Miyazaki Airport	3	95.97%	12,938	93.35%	8	Total Routes <b>603</b>
(SDJ) Sendai Airport	4	94.95%	15,982	83.37%	11	On-Time Departures <b>81.34%</b>
(TSA) Taipei Songshan Airport	5	94.71%	9,195	95.82%	9	Tracked Flights <b>89.79%</b>
(CGB) Marechal Rondon International Airport	6	92.55%	11,478	88.67%	33	
(VIX) Eurico de Aguiar Salles Airport	7	92.33%	10,361	83.83%	8	
(UYN) Yulin Yuyang Airport	8	91.88%	11,814	82.08%	26	
(UIO) Mariscal Sucre International Airport	9	91.55%	15,066	94.84%	20	
(LIH) Lihue Airport	10	91.42%	16,847	99.32%	15	
(BFS) Belfast International Airport	11	91.13%	15,209	91.91%	50	
(BHD) George Best Belfast City Airport	12	90.64%	9,562	96.97%	26	
(ZAG) Franjo Tudman Airport	13	90.55%	15,664	81.31%	59	
(MSQ) Minsk National Airport	14	90.52%	9,284	89.20%	53	
(LPL) Liverpool John Lennon Airport	15	90.23%	10,807	90.93%	64	
(BEL) Val De Cans International Airport	16	90.07%	13,841	82.07%	26	
(WRO) Wroclaw Airport	17	88.45%	9,315	91.24%	70	
(SVG) Stavanger Airport Sola	18	87.40%	16,600	96.66%	23	
(BIL) Billings Logan International Airport	19	87.07%	11,869	96.65%	17	
(KTW) Katowice International Airport	20	86.37%	9,297	80.62%	70	

## Relative Performance



## Operational Highlights



## The world's most on-time airports of 2021 are Japanese

The 2021 airport landscape has changed significantly since 2019. COVID-19 related travel restrictions, passenger flight reductions resulting from low demand, staffing shortages and increased importance of cargo, has meant that airports ranking in the On-Time Performance Review 2021 have shuffled.

As the US recovered stronger than most markets this year with a large domestic market, it's no surprise that 13 of the Top 20 Global airports are in the US.

The world's leading airport in on-time performance however is Tokyo International Airport - Haneda (HND). In 2021, 95.6% of the airport's flights departed on time.

Notably, all the winners in each airport category — Global, Large, Medium, Small — are Japanese airports. Itami Airport (ITM) tops the Large airports list, with 96.51% of flights departing on time. Kansai International Airport (KIX) takes top spot in the Medium airports category as 92.05% of its flights departed on time and Matsuyama Airport (MYJ) leads the Small airports list, achieving 96.05% of its flights departing on time.

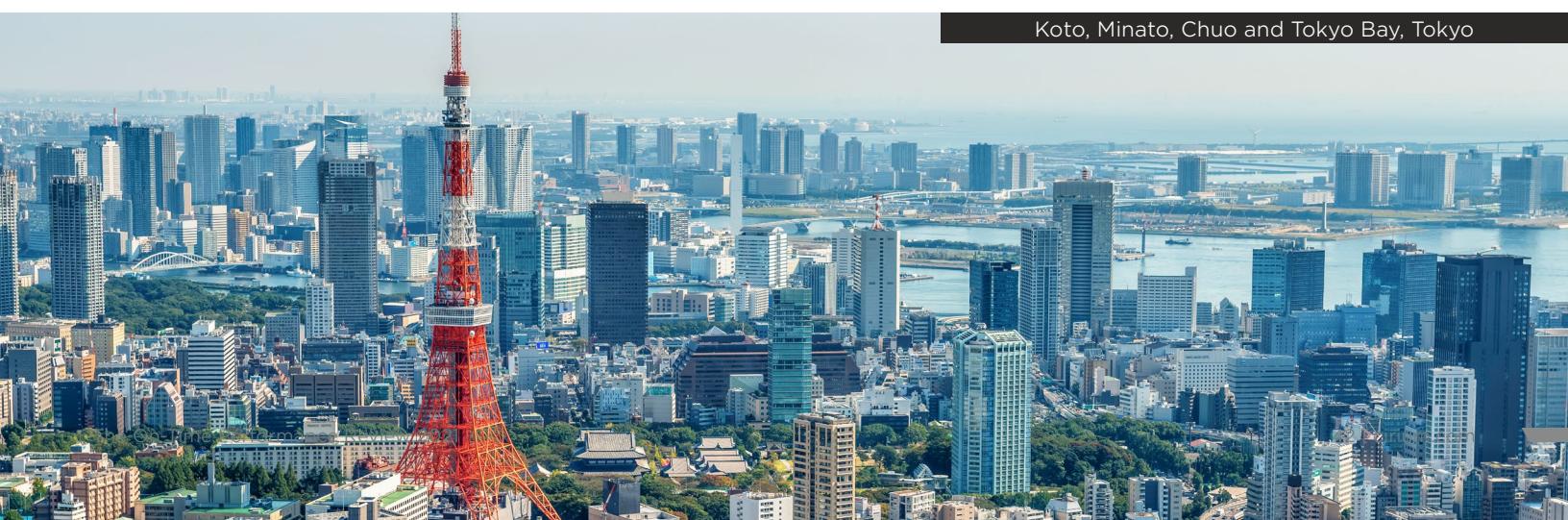
The airport categories in the On-Time Performance Review are based on the current level of flight activity. With flight volumes fluctuating in a lot of regions, the airport rankings are also fluctuating. Large airports like Hong Kong (HKG) which was once considered a Global airport in the Cirium Review, with 107,800 annual flights in 2019, is now considered in the Medium category. The airport's annual flights have reduced to approximately 27,000 in 2021 — a 75% reduction.

Conversely some airports saw significant growth, especially in the US. The flights departing Charlotte Douglas International Airport (CLT) increased from 174,480 annual flights in 2019 to approximately 269,000 annual flights in 2021 — a 54% increase.

Airports, in this new world, are employing new approaches to survive and thrive. At the heart of these efforts are the airports that are embracing digital transformation strategies, where data is front and center. Airports are focusing on improving passenger service and flow through the airport, deploying comprehensive pandemic protocols, optimizing the reconciliation and collection of fees and services, maximizing staffing, and driving passenger confidence and winning new cargo business.

Congratulations to the top airports in each of the airport categories for their exceptional on-time departure performance in challenging times.

Koto, Minato, Chuo and Tokyo Bay, Tokyo





# APPENDIX

# Usage and attribution

We ask you to cite Cirium if you extract and use the data and information in this report in your own content and marketing. Where possible please also link to [www.cirium.com](http://www.cirium.com).

The data presented in this report derives from The Cirium Core, which holds information from over 2,000 sources. Cirium verifies and quality checks all the data as we process it. Cirium is solely responsible for all insights and analyses provided in this report.

As a neutral partner in the industry, we rank airlines and airports from an independent position. It is our mission to accelerate the industry's digital transformation.

## Examples of how to cite us:

“Aviation analytics company Cirium said 88% of Delta’s flights nationwide arrived on-time in September.”

“88% of Delta’s flights nationwide arrived on time in September, according to Cirium’s on-time performance data.”

“According to the aviation analytics company Cirium, 88% of Delta’s flights nationwide arrived on-time in September.”

“Cirium’s airline on-time performance analysis shows 88% of Delta’s flights nationwide arrive on-time in September.”



For questions about citing Cirium’s on-time performance analysis, please contact Rachel Humphries at [Rachel.Humphries@Cirium.com](mailto:Rachel.Humphries@Cirium.com).

# The On-Time Performance Board



**Luis Felipe de Oliveira**  
Director General - ACI World

Luis Felipe de Oliveira joined ACI World as Director General in June 2020, bringing with him vast experience in commercial and technical aviation.

He successfully led the Latin American and Caribbean Air Transport Association (ALTA) between October 2017 and May 2020, promoting positive change in the organisation. Prior to joining ALTA, Luis served as World Fuel Services' Vice President Supply Development for Latin America and

Caribbean where he was responsible for improving World Fuel's aviation fuel business in the region.

For 10 years, Luis served IATA, leading fuel and airport campaigns with governments, oil companies, fuel service providers and airports for the Americas, Africa and the Middle East regions, based in Switzerland. He also served 12 years at Shell with a focus on Latin America and the Caribbean and Africa and Europe, based in the Netherlands.



**Henry H. Harteveldt**  
President - Travel Industry Analyst, Atmosphere Research Group

Henry H. Harteveldt is one of the travel industry's most respected analysts. He started the Atmosphere Research Group – a San Francisco-based independent, objective travel industry market research and strategic advisory firm – in 2011, following a nearly-11-year career as Forrester Research's global

head of travel research. Before becoming an analyst, Henry spent more than 15 years in marketing, product, planning, PR, and distribution roles at a variety of leading travel firms, including Continental Airlines, Fairmont Hotel Management Company and GetThere.



**Dr. Mario Hardy**  
Managing Director - Private Family Office MAP2 | Ventures

Dr. Hardy is the Managing Director of Private Family Office MAP2 | Ventures, a board member of the Global Chamber of Business Leaders, the vice-chairman of the World Rural Tourism Conference and also holds several advisory board positions with privately-owned technology companies. He is also the former CEO of the Pacific Asia Travel Association and has over 35 years of experience in corporate development and technology investment,

coupled with several leadership roles with non-profit organisations. He received an Honorary Doctorate of Letters from Capilano University in 2016 and in 2017, Dr. Hardy graduated from the Executive Program of Singularity University in Exponential Technologies and was honoured as a "Global Ambassador of Peace Through Tourism" by the International Institute for Peace Through Tourism.

## APPENDIX



**Jeremy Bowen**  
Chief Executive Office - Cirium

Jeremy Bowen is the CEO of Cirium, the aviation analytics company that is helping to shape an intelligent future for air travel.

Cirium is part of the global information-based analytics company RELX. Jeremy originally joined its FlightGlobal brand, the aviation arm of RELX, in 2018. He became CEO in 2019 during the same period as the company rebranded to Cirium, after significantly growing its data portfolio with the acquisitions of Diio, FlightStats, Ascend and Innovata. At the same time, Jeremy led the divestment of its legacy publishing business, FlightGlobal.

During this leadership position, Jeremy has

additionally set a new vision and strategy for Cirium, aligned company operations, driven a new collaborative culture and completed the two acquisitions of Snowflake Software and Migacore, to further expand Cirium's data portfolio and technology offering.

Jeremy has been in the data and analytics world all his career, previously with RELX's Accuity business for eight years—a company focused on the financial services sector. Previous to this role, spending 15 years with data insights company Dun & Bradstreet in leadership positions in the UK, Australia and New Zealand.



**Mike Malik**  
Chief Marketing Officer - Cirium

Mike Malik is the Chief Marketing Officer at Cirium and joined the company in 2018. He rebranded the company from FlightGlobal and brought together other brands the company had acquired in the last decade under one umbrella brand.

Mike has been in the airline and aviation industry throughout his career and has held several executive level positions. Mike was Chief Commercial Officer for UBM Aviation, President of Aloha Air Cargo & Aloha Tech Ops, and Chief Information Officer for Aloha Airlines. He was also one of the founding team members of Maxjet Airways, where he was Chief Marketing and Information Officer. Prior to this, he was President and CEO of Shepherd Systems, an airline sales force automation and business intelligence company. He spent nine years at Sabre and

assumed roles in London and Hong Kong where he was Vice President, Asia Pacific. While in Hong Kong, he was a special consultant to the executive management team of Cathay Pacific Airways.

As an executive consultant to several airlines, Mike assisted them in deploying new technology into their operations. This included Lufthansa for day-of-operations control, Swissair for pricing and Cathay Pacific Airways for revenue management, crew management and maintenance operations.

Mike is currently an advisory board member to Aerobrand, an airline branding and design company that rebranded Lufthansa Airlines in 2018.

## Glossary of terms

<b>AIRLINE CODE</b>	The IATA code for the airline. This is the code of the Marketing Airline.
<b>ON-TIME RANKING</b>	For each list of airlines and airports, on-time performance is ranked where a rank of 1 equates to the best performance.
<b>COVERAGE</b>	The percentage of published flights for which we have an actual arrival gate time for airlines and an actual departure time for airports against which we can measure a flight's performance versus its schedule.
<b>TOTAL FLIGHTS</b>	The total number of scheduled single segment flights (consisting of one origin and one destination) during the June to December 2021 timeframe.
<b>SEATS (MILLIONS)</b>	The estimated seat capacity of all scheduled flights.
<b>AVAILABLE SEAT KILOMETERS (ASK)</b>	The number of seats available multiplied by the number of kilometers between origin and destination.
<b>TRACKED FLIGHTS</b>	The percentage of published flights for which Cirium tracked an actual gate arrival time, cancelation or diversion.
<b>BLOCK TIME</b>	Referred to as BO. The percentage of flights that were completed within their scheduled time.
<b>COMP. FACTOR</b>	Completion factor which is the percentage of tracked flights that were completed (e.g., not canceled)
<b>ON-TIME DEPARTURE</b>	The percentage of completed flights that departed the gate on time. On time is defined as within 15 minutes of the scheduled gate departure time. The on-time departure ranking is used to determine the top performing airports.
<b>ON-TIME ARRIVAL</b>	The percentage of completed flights that arrived at the gate on time. On time is defined as within 15 minutes of the scheduled gate arrival time. The on-time arrival ranking is used to determine the top performing airlines.
<b>AVG. DEP. DELAY</b>	The average departure delay, in minutes, for all delayed flights. The delay minutes for on-time flights are not included in this calculation.
<b>AVG. ARRIVAL DELAY</b>	The average arrival delay, in minutes, for all flights with delays 15 minutes or greater. The delay minutes for on-time flights are not included in this calculation.
<b>AVG. DELAY WHEN LATE</b>	The total number of minutes a flight was delayed past the scheduled time on average.
<b>MAINLINE</b>	A system of flights that are operated by a major airline and does not include airline partners.
<b>NETWORK</b>	A system of flights that are flown by a major airline and include the flights that are marketed by the airline but are operated by a separate airline partner (excluding codeshares).

# The 2021 Platinum Award for Operational Excellence

## **What is the Platinum Award?**

The Platinum Award is presented to the world's top airline that demonstrated exceptional *operational performance* for the year.

## **Why are we introducing this category?**

Every airline faces challenges based on their own unique operational environment and geography. While on-time performance is a great indicator of an airline's quality of service, there are other factors that we felt we needed to take into consideration to gauge the performance of an airline's overall operations. We introduced this category to celebrate an airline for excellence in their overall operational performance.

In our evaluation, we considered the complexity of the airline's operation, volume of flights, diversity of its network, and other key operational factors.

We developed a proprietary algorithm that considers an array of parameters, which provides an output that compares airlines on a one-to-one basis as far as possible to ensure fairness, accuracy, and integrity in the selection process.

## **How would an airline qualify for this award?**

First, the airline must qualify in the Global Mainline category. Which means it must meet actual gate arrival and departure thresholds. It must also meet an Available Seat Kilometer (ASK) threshold and must serve at least three geographic regions in its network.

## **What parameters does the algorithm use?**

The Platinum Award uses a proprietary mathematical algorithm that considers the following factors:

- Long-haul versus short-haul flights.
- Delay impact to passengers using scheduled departure time as a threshold. Cancelations incurred (although early notifications of cancelations are excluded from the calculation).
- Airline network complexity by considering the number of passengers and sector distance.
- Number of total flights operated.

# Report calculation

## Airline calculations

We examine our flight status and arrival data curated from over 600 global sources, including published schedules, government agencies, civil aviation authorities, airlines, airports, and major airline reservation systems.

Our data processing team has logic, processes and protections in place to corroborate the information we gather for flights worldwide. Our categories for this report are grouped into three areas: Global, Major (by region), and low-cost carriers. A ranking is given for network and mainline operations in the Global and Major (by region) categories. There is an 80% Actual Gate Arrival Time coverage requirement for all categories.

### Key evaluation criteria

**Available Seat Kilometers (ASK)** — the number of seats available multiplied by the number of kilometers flown — captures an airline's total production in terms of their total passenger carrying capacity and distance flown.

**Flights** — the total number of flights flown — captures the airline's total volume of passenger flights flown.

**Seats** — the total number of seats flown — captures the airline's total volume of seats flown.

**Regions Served** — the total number of regions served by an airline — captures the airline's global prominence across report regions. An airline is considered to serve a region if it operates one (1) or more flights per day to or within that region. An airline's home region counts as one of its regions served.

**Actual Gate Arrival Time (AGA) Coverage** — the percentage of flights in Cirium's database for which the AGA field is present — ensures a minimum data quality standard required to evaluate the airline's performance. Airlines can boost their coverage by becoming a Cirium Data Supplier. Find out more at <https://www.cirium.com/about/data-supply/>



**600**  
global sources

## APPENDIX

### Regional Thresholds

For the Global Airlines category, we consider the top 10% of all passenger airlines by capacity and volume criteria — Available Seat Kilometres (ASK), flights and seats — the airline must also serve at least three (3) regions.

For Major Airlines by Region, the threshold of ASKs, flights and seats varies by region to accurately reflect the size of operations in that region. The thresholds for each region are listed in the table below.

REGION	FLIGHTS, SEATS, ASK, THRESHOLD
ASIA PACIFIC	Top 30%
EUROPE	Top 30%
LATIN AMERICA	Top 30%
MIDDLE EAST & AFRICA	Top 30%
NORTH AMERICA	Top 20%

The low-cost carrier (LCC) category reviews airlines that are industry recognized and/or self-identified LCCs. For this category, we consider the top 90% of LCC airlines. LCC airlines must fall in the top 90% for flights, seats, and destinations to be considered.



### Airport calculations

Each month Cirium reviews the total number of flights in a given month (approximately 3 million) for every airport globally in an ordered list, then looks at where the percentile demarcations fall. For the annual OTP review, we take the total number of flights in a given year for every airport.

Airports are selected based on a combination of factors, including:

#### Global Airport

- Top 10% by total flights served in a month
- Actual gate departure coverage 80% or better
- Must serve at least three (3) regions (inclusive of its own)

#### Large Airport

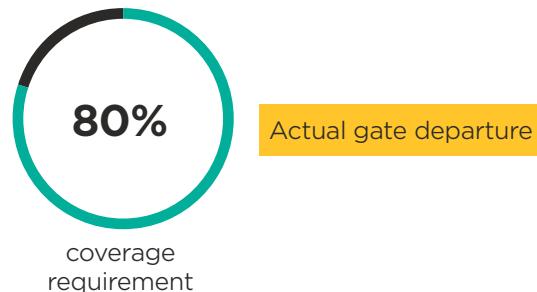
- Top 25% by total flights served in a month
- Actual gate departure coverage 80% or better
- Note: this category can include airports in the global airport category

#### Medium Airport

- Between 50th and 75th percentile by total flights served in a month
- Actual gate departure coverage 80% or better

#### Small Airport

- Between 25th and 50th percentile by total flights served in a month
- Actual gate departure coverage 80% or better



# Why the world trusts our rankings

Cirium applies the highest level of quality assurance to the data that supports the On-Time Performance Review. We ensure the highest level of accuracy, timeliness, and coverage of the data, which is why the data and analyses are trusted by airlines and airports globally.

The experienced and dedicated Cirium data team collect, verify, and clean the data and then apply logic, algorithms and security to it.

This comprehensive structure is in place to achieve the ‘quality balance’ of the data that we use to rank airlines and airports.

Sophisticated tools and statistics validate the information and remove outliers and multisource verification fills in the gaps in single data sources. In cases of conflict, advanced algorithms identify the most reasonable data points, crosscheck the information, and determine consistency of information. Our expert team apply their in-depth knowledge in data and aviation to add extra validity to the data.

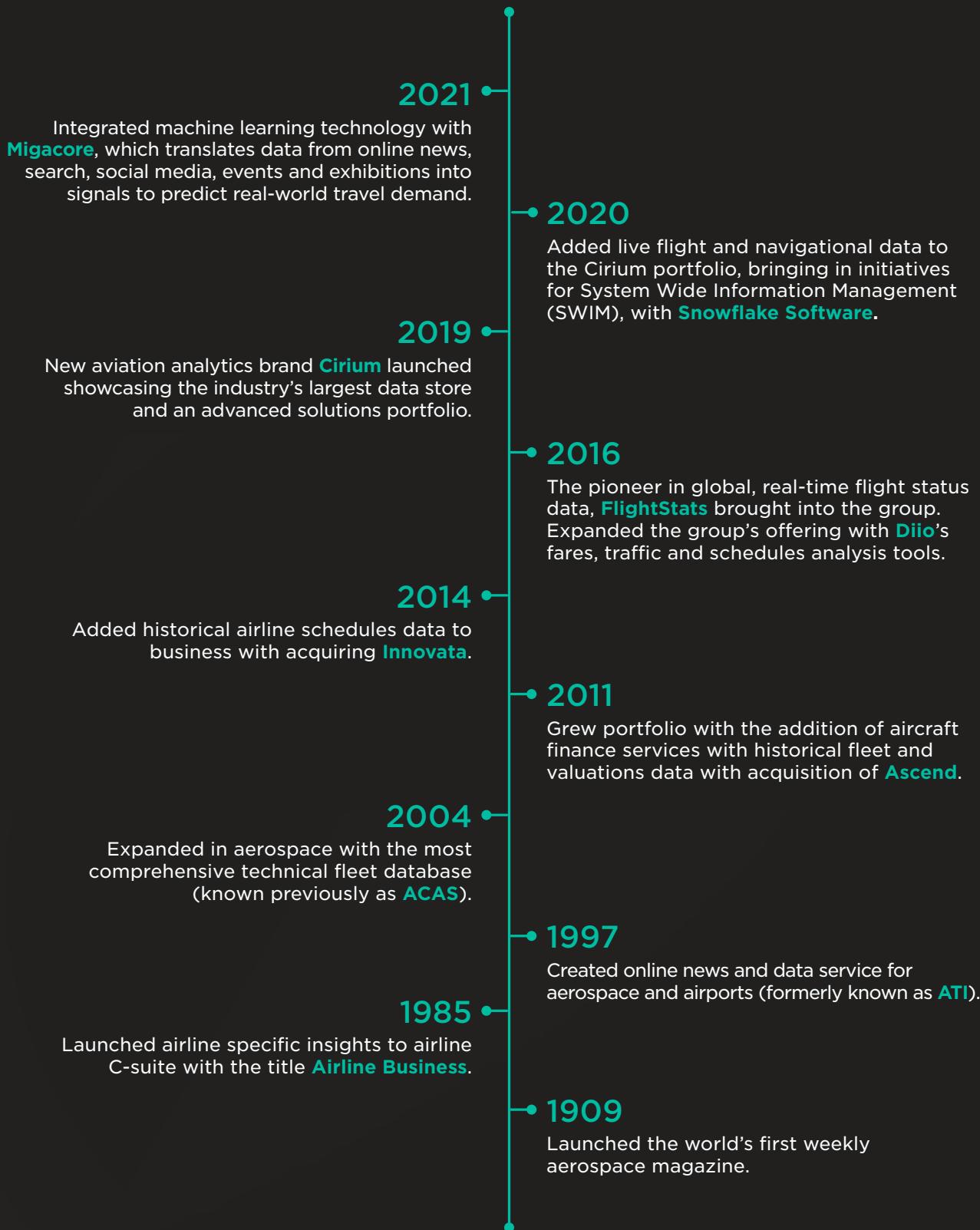
Cirium has a strict definition for what we consider as flight coverage for an airline or airport. For an airline to qualify for Cirium’s On-Time Performance rankings, a carrier must meet the coverage standards, and we must have data fields which include estimated departures, actual departures, departure dates and arrival gates.

Cirium’s approach to on-time performance data and the process involved means we immediately notice when changes or deviations occur.



CIRIUM

Cirium brings together powerful data and analytics to keep the world moving. Delivering insight, built from decades of experience in the sector, enabling travel companies, aircraft manufacturers, airports, airlines and financial institutions, among others, to make logical and informed decisions which shape the future of travel, grow revenues and enhance customer experiences. Cirium is part of RELX PLC, a global provider of information-based analytics and decision tools for professional and business customers.



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