

atmosfair Airline Index 2025



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Overall Ranking

(Low-Cost Carriers see page 5)

*EP: efficiency points (maximum=100), **EC: efficiency class (A – G)

| Overall ranking | | | | | | Distance Rating | | | | | |
|-----------------|---------------------------|------------|----------------------|------|------|-----------------------|-----|------------------------------|----|-----------------------|-----|
| # | Airline | Type | Country | EP* | EC** | Short haul <800 km | | Medium haul 800 - 3800 km | | Long haul >3800 km | |
| | | | | | | EP | # | EP | # | EP | # |
| 1 | Sky Airline | NetCarrier | Chile | 81 | C | 83,3 | 4 | 80,8 | 3 | 78,1 | 10 |
| 2 | Qingdao Airline | NetCarrier | China | 79,5 | D | 83,8 | 2 | 79,1 | 7 | -- | -- |
| 3 | Shandong Airlines | NetCarrier | China | 79,4 | D | 81,6 | 6 | 79,5 | 5 | 77,5 | 13 |
| 3 | Southwind | NetCarrier | Türkiye | 79,4 | D | 86 | 1 | 79,8 | 4 | 75,1 | 22 |
| 5 | TUIfly Netherlands | Charter | Netherlands | 78,6 | D | 62,3 | 69 | 74,2 | 30 | 79,2 | 5 |
| 6 | El Al Israel Airlines | NetCarrier | Israel | 78,3 | D | 74,8 | 17 | 84,6 | 1 | 77,3 | 14 |
| 7 | Starlux | NetCarrier | Taiwan | 78,2 | D | 83 | 5 | 76,3 | 13 | 84 | 2 |
| 8 | Xiamen Airlines | NetCarrier | China | 78,1 | D | 83,6 | 3 | 81,7 | 2 | 72,9 | 37 |
| 9 | Biman Bangladesh Airlines | NetCarrier | Bangladesh | 77,5 | D | 58,1 | 87 | 73,7 | 34 | 78,1 | 10 |
| 10 | LATAM Airlines | NetCarrier | Chile | 77,4 | D | 73,8 | 22 | 75,5 | 21 | 81,8 | 4 |
| 10 | Air Corsica | NetCarrier | France | 77,4 | D | 75,3 | 13 | 79,4 | 6 | -- | -- |
| 12 | SmartWings | NetCarrier | Czech Republic | 77,1 | D | 72,4 | 29 | 76,3 | 13 | 83,1 | 3 |
| 13 | TUI Airlines | Charter | United Kingdom | 76,8 | D | 77 | 11 | 75,6 | 18 | 79,2 | 5 |
| 14 | China Airlines | NetCarrier | Taiwan | 76,3 | D | 75,1 | 15 | 78,2 | 8 | 74,7 | 24 |
| 15 | Hainan Airlines | NetCarrier | China | 76,2 | D | 66,4 | 56 | 72,9 | 42 | 79,2 | 5 |
| 16 | TUIfly | Charter | Germany | 76,1 | D | 73,6 | 23 | 76,2 | 16 | 74,9 | 23 |
| 17 | Air Europa | NetCarrier | Spain | 75,9 | D | 72 | 31 | 74,7 | 26 | 77,1 | 15 |
| 18 | Japan Airlines | NetCarrier | Japan | 75,8 | D | 69 | 46 | 77,1 | 10 | 76,3 | 17 |
| 19 | Iberia | NetCarrier | Spain | 75,7 | D | 71,1 | 38 | 76,8 | 12 | 75,3 | 21 |
| 20 | Aegean Airlines | NetCarrier | Greece | 74,9 | D | 66,3 | 57 | 76,3 | 13 | -- | -- |
| 21 | Etihad Airways | NetCarrier | United Arab Emirates | 74,7 | D | 57,9 | 89 | 71,3 | 54 | 75,5 | 20 |
| 21 | Batik Air Malaysia | NetCarrier | Malaysia | 74,7 | D | 71 | 39 | 75,2 | 25 | 73,7 | 32 |
| 23 | Jet2.com | Charter | United Kingdom | 74,4 | D | 69,2 | 45 | 74,4 | 28 | 70,1 | 49 |
| 24 | Aeromexico | NetCarrier | Mexico | 74,3 | D | 74,8 | 17 | 73,2 | 39 | 75,7 | 19 |
| 24 | Air Mauritius | NetCarrier | Mauritius | 74,3 | D | 78,3 | 8 | 75,3 | 24 | 73,9 | 30 |
| 26 | Porter Airlines | Regional | Canada | 74,1 | D | 78,1 | 10 | 74,1 | 32 | 67,1 | 59 |
| 27 | Transavia France | Charter | France | 74 | D | 75,2 | 14 | 74 | 33 | 73,8 | 31 |
| 27 | Copa Airlines | NetCarrier | Panama | 74 | D | 79,9 | 7 | 75,6 | 18 | 73,5 | 33 |
| 29 | Juneyao Airlines | NetCarrier | China | 73,7 | D | 71,6 | 33 | 73,3 | 37 | 77,7 | 12 |
| 30 | SunExpress | Charter | Turkey | 73 | D | 59,9 | 79 | 73,3 | 37 | -- | -- |
| 30 | Avianca | NetCarrier | Colombia | 73 | D | 65,9 | 61 | 72 | 50 | 78,2 | 9 |
| 30 | Air Baltic Corporation | NetCarrier | Latvia | 73 | D | 70,7 | 40 | 73,4 | 36 | 71,3 | 43 |
| 30 | Ural Airlines | NetCarrier | Russian Federation | 73 | D | 67,7 | 52 | 72,6 | 43 | 76,3 | 17 |
| 34 | KLM-Royal Dutch Airlines | NetCarrier | Netherlands | 72,9 | D | 71,6 | 33 | 73,5 | 35 | 72,8 | 38 |
| 34 | Zhejiang Loong Airlines | NetCarrier | China | 72,9 | D | 57,4 | 92 | 75,5 | 21 | 48,8 | 101 |
| 36 | Air New Zealand | NetCarrier | New Zealand | 72,8 | D | 72,6 | 26 | 77,5 | 9 | 67,7 | 58 |
| 36 | AJet | Unknown | Türkei | 72,8 | D | 73,5 | 24 | 72,6 | 43 | -- | -- |
| 38 | China Southern Airlines | NetCarrier | China | 72,7 | D | 72,2 | 30 | 71,7 | 53 | 84,4 | 1 |
| 39 | Fiji Airways | NetCarrier | Fiji | 72,6 | D | 50,3 | 112 | 74,2 | 30 | 71,6 | 42 |
| 40 | Shanghai Airlines | NetCarrier | China | 72,4 | D | 68,1 | 50 | 72,3 | 45 | 72,5 | 40 |
| 41 | Nordwind Airlines | Charter | Russian Federation | 72,3 | D | 66,7 | 55 | 72 | 50 | 74,7 | 24 |
| 42 | Sunclass Airlines | Charter | Denmark | 71,6 | D | 53,9 | 103 | 73 | 41 | 69,7 | 50 |
| 42 | Air Canada | NetCarrier | Canada | 71,6 | D | 71,7 | 32 | 70 | 61 | 72,6 | 39 |

| # | Airline | Type | Country | EP* | EC** | Short haul <800 km | | Medium haul 800 - 3800 km | | Long haul >3800 km | |
|----|--------------------------------|------------|--------------------|------|------|-----------------------|-----|------------------------------|-----|-----------------------|-----|
| | | | | | | EP | # | EP | # | EP | # |
| 44 | Thai Airways International | NetCarrier | Thailand | 71,5 | D | 72,6 | 26 | 68,9 | 67 | 73,1 | 36 |
| 45 | AZUR air | Charter | Russia | 71,2 | D | 69,8 | 44 | 70,7 | 57 | 71,9 | 41 |
| 46 | Condor Flugdienst | Charter | Germany | 70,7 | D | 52 | 109 | 75,4 | 23 | 65,9 | 64 |
| 46 | Qatar Airways | NetCarrier | Qatar | 70,7 | D | 64,9 | 65 | 68,2 | 75 | 71,2 | 45 |
| 48 | Air India | NetCarrier | India | 70,6 | D | 78,2 | 9 | 75,9 | 17 | 64,7 | 62 |
| 49 | Air Transat A.T. | Charter | Canada | 70,5 | D | 68,2 | 49 | 70,8 | 56 | 70,4 | 48 |
| 49 | Aeroflot Russian Airlines | NetCarrier | Russian Federation | 70,5 | D | 68,3 | 48 | 70,2 | 60 | 71,3 | 43 |
| 51 | Vietnam Airlines | NetCarrier | Viet Nam | 70,4 | D | 70,7 | 40 | 68,6 | 71 | 74,2 | 27 |
| 51 | Uzbekistan Airways | NetCarrier | Uzbekistan | 70,4 | D | 71,3 | 35 | 72,2 | 46 | 64,2 | 64 |
| 53 | Philippine Airlines | NetCarrier | Philippines | 69,9 | D | 75,1 | 15 | 74,7 | 26 | 61,2 | 74 |
| 53 | Air Cairo | NetCarrier | Egypt | 69,9 | D | 59,9 | 79 | 69,9 | 62 | 73,2 | 35 |
| 55 | TUI fly Belgium | Charter | Belgium | 69,7 | D | 58,7 | 84 | 67,6 | 80 | 76,6 | 16 |
| 55 | SAS Scandinavian Airlines | NetCarrier | Sweden | 69,7 | D | 74,6 | 21 | 76,9 | 11 | 58,6 | 85 |
| 57 | Alaska Airlines | NetCarrier | USA | 69,5 | D | 55,5 | 95 | 68,7 | 70 | 70,9 | 46 |
| 58 | Air France | NetCarrier | France | 69,4 | D | 73,4 | 25 | 74,4 | 28 | 68,2 | 55 |
| 58 | Brussels Airlines | NetCarrier | Belgium | 69,4 | D | 71,2 | 36 | 75,6 | 18 | 60,7 | 77 |
| 60 | Shenzhen Airlines | NetCarrier | China | 69,3 | D | 69,9 | 43 | 69,3 | 65 | -- | -- |
| 60 | ITA Airways | NetCarrier | Italy | 69,3 | D | 68,1 | 50 | 69,4 | 63 | 69,7 | 50 |
| 62 | Guangxi Beibu Gulf Airlines | Regional | China | 69,1 | D | 65,7 | 63 | 69,2 | 66 | -- | -- |
| 63 | Icelandair | NetCarrier | Iceland | 68,9 | D | 46,1 | 116 | 72,1 | 49 | 67,1 | 59 |
| 63 | Neos Air | NetCarrier | Italy | 68,9 | D | 61,2 | 76 | 68,9 | 67 | -- | -- |
| 65 | Air China | NetCarrier | China | 68,8 | D | 67,2 | 53 | 66,7 | 84 | 79,2 | 5 |
| 66 | Asiana Airlines | NetCarrier | Korea | 68,6 | D | 54,1 | 100 | 65,2 | 92 | 74,1 | 28 |
| 67 | Virgin Australia International | NetCarrier | Australia | 68,5 | D | 64,4 | 66 | 68,5 | 73 | 70,6 | 47 |
| 68 | Sichuan Airlines | NetCarrier | China | 68,3 | D | 62,3 | 69 | 68,2 | 75 | 74,4 | 26 |
| 69 | Finnair | NetCarrier | Finland | 68,1 | D | 61,8 | 73 | 66,2 | 86 | 69,6 | 53 |
| 70 | Cathay Pacific Airways | NetCarrier | China | 67,8 | D | 58,8 | 82 | 64,8 | 94 | 69,7 | 50 |
| 71 | Cathay Dragon | NetCarrier | China | 67,5 | D | 52,1 | 108 | 68,6 | 71 | -- | -- |
| 72 | China Eastern Airlines | NetCarrier | China | 67 | D | 67,1 | 54 | 67,6 | 80 | 64,3 | 63 |
| 73 | Pakistan Internat. Airlines | NetCarrier | Pakistan | 66,9 | D | 66 | 59 | 67,7 | 78 | 48,3 | 102 |
| 74 | TAP Portugal | NetCarrier | Portugal | 66,7 | D | 53,1 | 107 | 72,2 | 46 | 64,2 | 64 |
| 75 | United Airlines | NetCarrier | USA | 66,4 | D | 60,2 | 78 | 69,4 | 63 | 64,2 | 64 |
| 76 | Gulf Air | NetCarrier | Bahrain | 66,2 | D | 42,7 | 117 | 60 | 106 | 74 | 29 |
| 77 | UTair Aviation | NetCarrier | Russian Federation | 66 | D | 72,6 | 26 | 65,3 | 90 | 68,1 | 56 |
| 78 | Malaysia Airlines | NetCarrier | Malaysia | 65,8 | D | 74,8 | 17 | 70,7 | 57 | 62,6 | 71 |
| 78 | Egyptair | NetCarrier | Egypt | 65,8 | D | 70,3 | 42 | 64,2 | 97 | 67,8 | 57 |
| 78 | Aer Lingus | NetCarrier | Ireland | 65,8 | D | 74,8 | 17 | 70,5 | 59 | 60,8 | 76 |
| 78 | Breeze Airways | Regional | USA | 65,8 | D | 58,6 | 85 | 66 | 88 | 69,5 | 54 |
| 82 | TianJin Airlines | Regional | China | 65,7 | D | 58 | 88 | 67,3 | 82 | 63,5 | 68 |
| 83 | Beijing Capital Airlines | NetCarrier | China | 65,2 | D | 63,5 | 68 | 66,1 | 87 | 56,1 | 93 |
| 84 | Hong Kong Airlines | NetCarrier | China | 65,1 | D | 57,7 | 91 | 65,3 | 90 | 50,8 | 98 |
| 85 | Discover Airlines | NetCarrier | Germany | 64,6 | D | 25,4 | 122 | 72,2 | 46 | 56 | 94 |
| 86 | Oman Air | NetCarrier | Oman | 64,3 | D | 53,6 | 105 | 67,3 | 82 | 60,7 | 77 |
| 87 | American Airlines | NetCarrier | USA | 64,2 | D | 55 | 97 | 68 | 77 | 59,4 | 81 |
| 88 | Air Astana | NetCarrier | Kazakhstan | 63,8 | D | 62 | 72 | 64,4 | 96 | 62,8 | 70 |
| 89 | British Airways | NetCarrier | United Kingdom | 63,5 | D | 66,1 | 58 | 71,9 | 52 | 60,7 | 77 |
| 90 | Austrian Airlines | NetCarrier | Austria | 63 | D | 54,5 | 99 | 68,3 | 74 | 60,3 | 80 |
| 91 | Turkish Airlines | NetCarrier | Turkey | 62,7 | D | 68,4 | 47 | 63,7 | 98 | 61,4 | 73 |
| 91 | Korean Air | NetCarrier | Korea | 62,7 | D | 71,2 | 36 | 67,7 | 78 | 59,3 | 83 |
| 93 | Virgin Atlantic Airways | NetCarrier | United Kingdom | 62,1 | D | 10,6 | 123 | 35,3 | 121 | 62,3 | 72 |

| # | Airline | Type | Country | EP* | EC** | Short haul <800 km | | Medium haul 800 - 3800 km | | Long haul >3800 km | |
|-----|---------------------------|------------|----------------------|------|------|-----------------------|-----|------------------------------|-----|-----------------------|-----|
| | | | | | | EP | # | EP | # | EP | # |
| 94 | Tibet Airlines | Regional | China | 61,7 | D | 64,4 | 66 | 61,4 | 100 | -- | -- |
| 95 | EVA Airways | NetCarrier | Taiwan | 61,4 | D | 66 | 59 | 65,1 | 93 | 59,4 | 8 |
| 96 | Batik Air | NetCarrier | Indonesia | 61,1 | D | 60,6 | 77 | 61,3 | 101 | 26,3 | 108 |
| 96 | Edelweiss Air | NetCarrier | Switzerland | 61,1 | D | 50,9 | 111 | 66,5 | 85 | 49,5 | 100 |
| 98 | Royal Air Maroc | NetCarrier | Morocco | 60,7 | D | 54,8 | 98 | 60,8 | 102 | 61,1 | 75 |
| 99 | Bulgaria Air | NetCarrier | Bulgaria | 60,4 | D | 61,4 | 75 | 60,3 | 103 | -- | -- |
| 100 | Lufthansa German Airlines | NetCarrier | Germany | 60,1 | D | 65,1 | 64 | 73,2 | 39 | 55,6 | 95 |
| 101 | Azerbaijan Airlines | NetCarrier | Azerbaijan | 59,8 | E | 54,1 | 100 | 61,7 | 99 | 56,3 | 92 |
| 102 | Delta Air Lines | NetCarrier | USA | 59,7 | E | 58,3 | 86 | 64,5 | 95 | 57 | 90 |
| 102 | Emirates | NetCarrier | United Arab Emirates | 59,7 | E | 75,4 | 12 | 68,9 | 67 | 57,8 | 88 |
| 104 | LOT - Polish Airlines | NetCarrier | Poland | 59,6 | E | 32,2 | 121 | 56,9 | 110 | 73,5 | 33 |
| 105 | Air Serbia | NetCarrier | Serbia | 59,3 | E | 61,7 | 74 | 59,9 | 107 | 53,3 | 97 |
| 106 | Air Macau | NetCarrier | China | 59,2 | E | 58,8 | 82 | 59,2 | 108 | -- | -- |
| 107 | Qantas Airways | NetCarrier | Australia | 58,4 | E | 62,2 | 71 | 58,4 | 109 | 58,3 | 86 |
| 108 | All Nippon Airways | NetCarrier | Japan | 58,3 | E | 53,5 | 106 | 60,2 | 104 | 57,9 | 87 |
| 109 | Royal Jordanian | NetCarrier | Jordan | 58,1 | E | 53,9 | 103 | 54,7 | 112 | 63,3 | 69 |
| 110 | Avianca El Salvador | NetCarrier | El Salvador | 57,8 | E | 57,8 | 90 | -- | -- | -- | -- |
| 111 | SAUDIA | NetCarrier | Saudi Arabia | 57,4 | E | 55,5 | 95 | 56,7 | 111 | 59,1 | 84 |
| 112 | China Express Airlines | Regional | China | 57,2 | E | 51,9 | 110 | 60,1 | 105 | -- | -- |
| 113 | Srilankan Airlines | NetCarrier | Sri Lanka | 56,4 | E | 57,4 | 92 | 54,7 | 112 | 57,1 | 89 |
| 114 | Kenya Airways | NetCarrier | Kenya | 56,3 | E | 39,3 | 120 | 48,4 | 117 | 64,1 | 67 |
| 115 | Hawaiian Airlines | NetCarrier | USA | 55,8 | E | 50 | 113 | -- | -- | 56,8 | 91 |
| 116 | Swiss | NetCarrier | Switzerland | 53,9 | E | 65,8 | 62 | 71,3 | 54 | 47,5 | 103 |
| 117 | Ethiopian Airlines | NetCarrier | Ethiopia | 53,6 | E | 47 | 115 | 52 | 114 | 54,5 | 96 |
| 118 | Garuda Indonesia | NetCarrier | Indonesia | 48,3 | E | 47,5 | 114 | 40,9 | 119 | 50,2 | 99 |
| 119 | Singapore Airlines | NetCarrier | Singapore | 47,5 | E | 54,1 | 100 | 65,6 | 89 | 42,6 | 104 |
| 120 | Air Algerie | NetCarrier | Algeria | 47,4 | E | 55,9 | 94 | 49,1 | 116 | 33,9 | 106 |
| 121 | Kuwait Airways | NetCarrier | Kuwait | 43,8 | E | 59,7 | 81 | 49,5 | 115 | 41,2 | 105 |
| 122 | Aerolineas Argentinas | NetCarrier | Argentina | 43,2 | E | 42,4 | 118 | 43,5 | 118 | -- | -- |
| 123 | Iran Air | NetCarrier | Iran | 36,9 | F | 40,4 | 119 | 37,7 | 120 | 32,5 | 107 |

Ranking Low-Cost Carriers

| Airlines | EC** |
|---|------|
| -- | A |
| -- | B |
| Akasa Air, Flair Airlines, Flynas - National Air Services, IndiGo Air, Jeju Airlines, Lion Air, Scoot, Smartavia, SpiceJet, Volaris, Wizz Air, Wizz Air Malta, Wizz Air UK | C |
| Air Arabia, Air Arabia Maroc, Air Busan, Air India Express, AirAsia, Airasia X, AirDo, Allegiant Air LLC, Avelo Airlines, Azul Airlines, Cebu Pacific Air, Citilink Indonesia, Easyjet, Eurowings, Fly One, Flybondi, Flydubai, Frontier Airlines, GOL Linhas Aereas, Indonesia AirAsia, Jazeera Airways, JetBlue Airways Corporation, Jetstar Airways, Jetstar Japan, Jin Air, Lucky Air, Norse Atlantic Airways, Norwegian Air Shuttle, Norwegian Air Sweden, Philippines AirAsia, Ryanair, Ryanair UK, SalamAir, Southwest Airlines, Spirit Airlines, Spring Airlines, Sun Country Airlines, Super Air Jet, Thai Air Asia X, Thai AirAsia, Transavia, T'way Air, VietJet Air, Viva, Volaris Costa Rica, Volotea, Vueling Airlines, Westjet, ZIPAIR Tokyo | D |
| Air Arabia Egypt | E |
| -- | F |
| -- | G |

Methodology and Background

atmosfair Airline Index 2025 Data

- 32 million flights analyzed
- Over 200 of the largest airlines worldwide evaluated
- 49,074 city pairs covered globally
- 92% of global aviation included
- 163 aircraft types (97% market coverage)
- 479 engines (96% market coverage)
- Renowned, independent data sources: CH-Aviation, ICAO, IATA, OAG, FlightGlobal, and others
- Data year: 2024

Methodology of the Atmosfair Airline Index (AAI)

The fundamental unit of measurement is the CO₂ efficiency of flights (CO₂ emissions per passenger-kilometer). Since CO₂ efficiency naturally varies across short, medium, and long-haul flights due to physical constraints (discussed in the next section), it is converted into efficiency points for accurate airline comparison.

Steps in calculating an airline's efficiency points:

1. The CO₂ emissions per payload kilometer are calculated for each individual flight, factoring in: aircraft type, engine type, passenger and cargo capacity and load factors (seat and cargo utilization).
2. The CO₂ emissions per payload kilometer for each flight are compared to the best possible flight scenario as defined by ICAO standards.
3. Efficiency points for each city pair are assigned, with the best-case scenario receiving 100 points and other flights rated relative to this benchmark.
4. For each airline, all city pair points are aggregated into a global average efficiency score.
5. Airlines are ranked based on their global efficiency points.

The AAI calculation uses the ICAO CO₂ calculation method, ensuring high accuracy with a confidence level of ± 1.5 efficiency points (95%).

Detailed documentation of the CO₂ calculation method is available at:

https://www.atmosfair.de/en/air_travel_and_climate/atmosfair_airline_index/

Efficiency Comparison of Routes with Different Lengths

The CO₂ efficiency of flight routes is strongly influenced by the distance traveled. For short-haul flights, the high emissions generated during ascent to cruising altitude are distributed across fewer payload kilometers compared to medium-haul flights, resulting in higher average CO₂ emissions per payload kilometer. Conversely, on long-haul routes, carbon efficiency is lower than on medium-haul routes because aircraft must carry extra fuel, which remains unused until

the latter stages of the flight. This variation makes it challenging to compare airlines operating flights of different lengths.

The AAI addresses this issue with an innovative method that accounts for these distance-related effects. In the AAI, airlines' performances are compared exclusively on identical routes (e.g., Paris–London), ensuring a constant flight distance for evaluation. In a subsequent step, these efficiency results are aggregated to calculate a global efficiency score for the airline (see previous section). This approach ensures that the resulting efficiency score reflects only the technical and operational CO₂ efficiency of the airlines, making them directly comparable from a climate perspective. The AAI's efficiency points (EP) measure how closely an airline approaches the optimal performance (e.g., best aircraft, most efficient engine, highest possible load factor, etc.). A perfect score of 100 efficiency points represents the best achievable outcome with current technology and operational practices.

Low-Cost Carriers

Low-cost carriers (LCCs) are included in the Airline Index using a different approach. They are assessed separately due to specific methodological features in calculating and evaluating their CO₂ emissions, which prevent a direct comparison with other airlines in terms of climate efficiency as measured by the AAI. However, at least the direct CO₂ emissions of LCCs can still be evaluated. To ensure passengers have access to this information, LCCs are represented in a simplified format within the AAI.

The key methodological differences are as follows:

1. Subsidies:

Many LCCs receive subsidies that enable them to operate flights at significantly lower prices than would otherwise be possible. These subsidies often result in the creation of additional flights, and thus additional CO₂ emissions, which ideally should be included in the climate balance of the subsidized airline. However, these emissions cannot be accounted for in the AAI. While other airlines may also benefit from subsidies in various forms, they typically do not use them to lower prices in a way that directly leads to increased CO₂ emissions.

2. Detours:

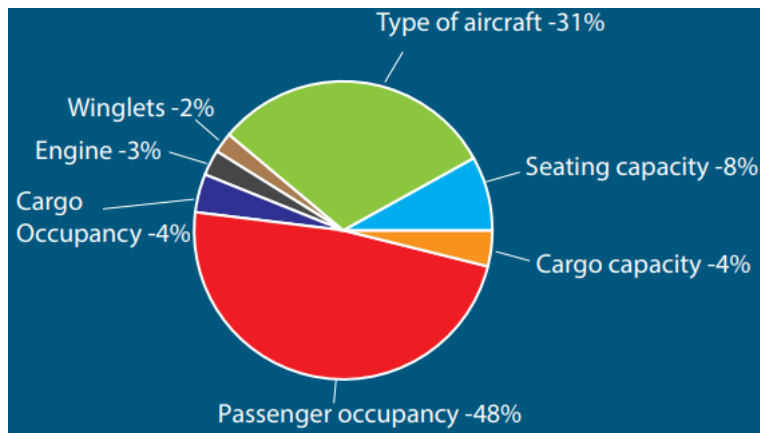
LCCs frequently operate from regional airports, which often require longer journeys for passengers traveling to and from these locations compared to flights departing from and arriving at central city airports. These extended journeys lead to additional CO₂ emissions that should be considered in the rankings from a passenger-centric perspective.

It is important to note that not all LCCs are the same. atmosfair follows the definition and classification of LCCs provided by ATI, a service provider to the International Civil Aviation Organization (ICAO). The full definition and details can be found in the complete methodology documentation, available for download on the atmosfair website.

Where Do Individual Airlines Gain and Lose Efficiency Points?

Airlines achieve the best efficiency results when they operate modern aircraft optimized for the route distance and passenger load, configure the planes with a high number of seats, and utilize both the seating capacity and cargo space effectively. In essence, airlines that maximize seat availability and maintain high occupancy rates are the most efficient in transporting passengers.

However, airlines prioritize different factors when tailoring their offerings to customers. While atmosfair does not assess or critique these priorities, it evaluates the resulting CO₂ emissions that are influenced by them.



Airlines can optimize various factors to improve their carbon efficiency. The chart illustrates which factors have the most significant impact on reducing carbon emissions when adjusted by one standard deviation.

How to Use the Airline Index

1. Avoid

- Even efficient flights can exceed an individual's annual climate-friendly CO₂ budget (2,300 kg per year for the two-degree target). Consider whether reasonable alternatives are available, such as traveling by train.
- Did you select a direct flight? (Rule of thumb: a direct flight in efficiency class E is generally better for the climate than a transfer flight in class C.)

2. Optimize

- The Airline Index provides information on an airline's efficiency, categorized by short, medium, and long-haul flights. Start by determining the distance of your flight, then identify the most efficient airline within the corresponding distance category.
- Typically, the airline with the highest efficiency points will be the most climate-friendly for your trip from A to B. However, since exceptions may occur, atmosfair offers detailed airline comparisons for companies, focusing on routes critical to their operations.

3. Offset

- You can offset the CO₂ emissions generated by your flight through atmosfair, which supports the development and expansion of renewable energy in developing countries. Make your contribution to climate protection online with the multiple award-winning service at: www.atmosfair.de