Flix 2025

Avoided Emissions Methodology

Contents

Introduction

Flix is a global travel-tech company committed to providing sustainable and affordable travel options to millions of travellers worldwide. Flix is offering its services via its proprietary and innovative technology platform, with an established presence in regions such as Europe, North America and Türkiye, and ongoing expansion in Latin America, India and Australia. When customers use Flix services to travel, they are foregoing a specific transportation solution. Our services enable emissions avoidance when the carbon footprint of travel with Flix is lower than the alternative travel mode the passenger would have selected.

At Flix, we have been estimating the Avoided Emissions since 2021 and working on improving the methodology year over year. These figures are reported annually on our ESG reports.

This document presents the results of our 2025 avoided emissions estimation, and explains our methodology in calculating the figures, including key assumptions, data sources, and scope of the approach. Our motivation behind this disclosure is to demonstrate a more complete picture of climate impact of Flix services, in comparison to other modes of transport.

Flix-specific terms and definitions

Term	Abbreviation / Definition
Alternative Drives	Any solution, including technologies and fuels, that allow to power coaches with sources of energy which are either zero-emission (e.g. electric), or anyway less polluting than diesel (e.g. HVO, biofuel)
Bus line	Label for a set of trips regularly operated by our buses and trains, usually all following the same route or having little deviations between each other.
Checked Pax	Passengers who paid for a ticket and whose ticket was checked in by the drivers on the Flix bus/train, i.e. assuming those who actually took the ride, and excluding customers who paid but did not travel.
Cooperation Model	Defined as “marketplace” in previous methodological documents, it refers to Flix’s service to connect other intercity carriers to its platform, so that customers have the option of booking tickets from third-party providers directly via Flix.
Driven km	Distance traveled by our buses and trains.
Flix brands	Flix provides its services through various brands such as FlixBus, FlixTrain, Greyhound (bus) and Kamil Koc (bus).
Order item (Passenger level)	Number of rides taken by a customer. Example: If a customer booked a trip with interconnections from A to B and B to C, A-B and B-C are individual order items.
Pax	Passenger.
Pax km	A passenger-kilometer , abbreviated as pkm, is the unit of measurement representing the transport of one passenger by a defined mode of transport (road, rail, air, sea, inland waterways etc.) over one kilometer. It is possible to distinguish it from Checked Pax km, in line with the definition above.
Bus line	Label for a set of trips regularly operated by our buses and trains, usually all following the same route or having little deviations between each other.

2025 organizational boundaries at Flix

The 2025 avoided emissions calculation includes our global operations[1] that were part of Flix Group from 1st January 2025 to 31st December 2025. For Flix's internal purposes, the global markets in scope of this calculation are divided into 21 business regions across 39 geographical countries. The table below compares the analysis' scope in 2025 and 2024.[2]

Business Regions	Included in 2024 calculation	Included in 2025 calculation
Adriatic Bus[3]	Yes	Yes
Australia Bus	No	Yes
BeNeLux Bus	Yes	Yes
Black Sea Bus	Yes	Yes
Brazil Bus	Yes	Yes
Chile Bus	Yes	Yes
Czech Republic Bus	Yes	Yes
DACH Bus	Yes	Yes
DACH Train	Yes	Yes
Denmark Bus	Yes	Yes
France Bus	Yes	Yes
Greyhound Bus	Yes	Yes
Iberia Bus	Yes	Yes
Italy Bus	Yes	Yes
Mexico Bus	No	Yes
Poland Bus	Yes	Yes
Sweden Bus	Yes	Yes
Türkiye Bus	Yes	Yes
Ukraine Bus	Yes	Yes
United Kingdom Bus	Yes	Yes
USA Bus	Yes	Yes

Data sources

The data for this avoided emission calculation comes from three sources: (a) post ride survey data results owned by Flix' Marketing department and (b) business operational data (bus km, passenger km, etc) owned by Flix' Network Planning department, and emission factors of Flix services and alternative modes of transport, sourced from internationally recognized references.

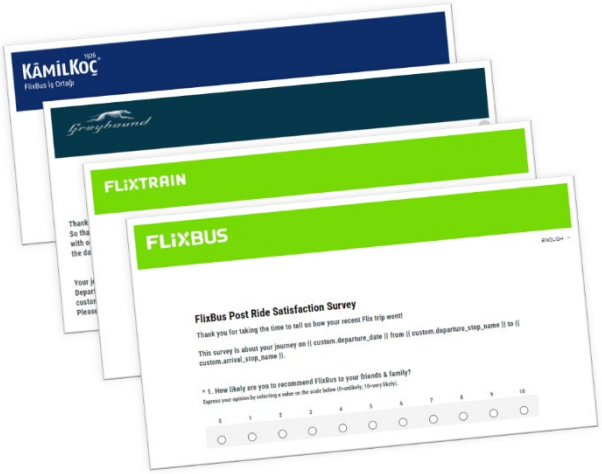
[1] For the purpose of this Methodological Document, global operations exclude cooperation model services throughout. Furthermore, India has been excluded due data unavailability.

[2] Flix uses "business regions" for internal reporting purposes of its operations. These business regions consist of a larger amount of operating bus or train lines that cross multiple geographic countries. Lines are usually assigned to business regions by their most significant country market by driven revenues. As such, the countries included in the scope of this analysis are: Australia, Austria, Belgium, Bosnia-Herzegovina, Brazil, Bulgaria, Canada, Chile, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Great Britain, Greece, Hungary, Italy, Latvia, Liechtenstein, Lithuania, Luxemburg, Mexico, Moldova, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye, Ukraine, USA.
Albania, Andorra, Ireland, Macedonia and Montenegro were excluded since Flix operates only via cooperation model services in these countries.

[3] Identified as "Croatia Bus" in the previous year analysis.

(a) Post Ride Survey data

(b) After booking a ride, Flix customers receive a Post Ride Survey (PRS) which is primarily designed to capture their customer satisfaction score. However, the survey also includes several other key sections that aim to capture the customer demographic, personal preferences, and their suggestions for future improvements.

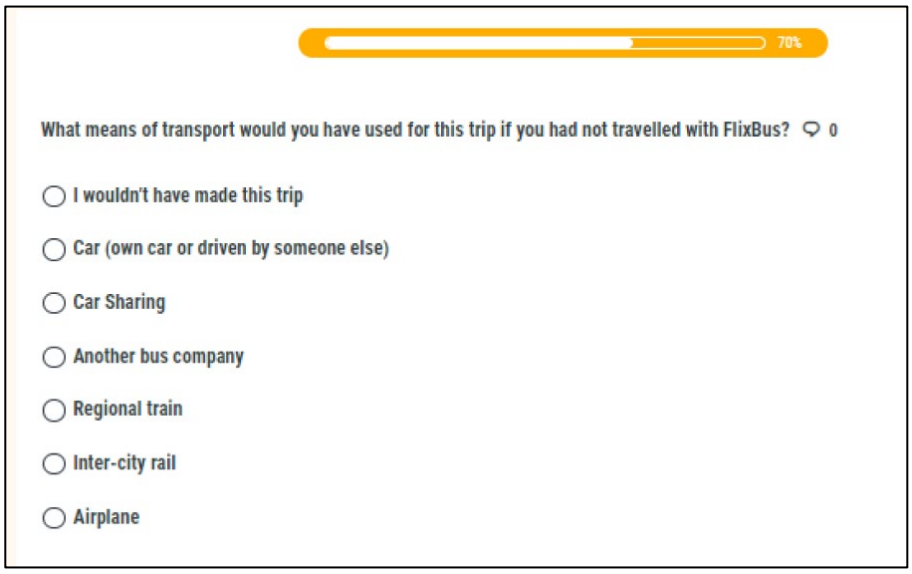


Additional information regarding the survey:

- Survey design: The survey is implemented on Survey Monkey.
- Survey scope: The survey is sent out to customers who have booked a ticket with FlixBus or FlixTrain and have specifically consented to receiving marketing communications.
- Survey channel: The primary channel of survey was via email, sent out to all customers in Flix SE and Flix North America. For Kamil Koç customers in Türkiye, the primary channel of survey was via SMS.
- Survey language: The survey is sent in up to 18 languages depending on the Flix product (bus or train) and the region.

From a question bank of general and market-specific questions that are selectively chosen to be sent out based on purpose and region, the primary question that forms the basis of the avoided emissions calculation is the following:

What means of transport would you have used for this trip if you had not travelled with Flix?



Survey limitations:

- The survey is sent only to those customers who consent to marketing communications, and up to 50% of the customer opt out or are in offline heavy markets.
- While a ride booking can be made for multiple customers across multiple order items or interconnections, the survey can only be sent to one person making the booking, and only for the first leg of the entire itinerary.
- Since this survey is considered under marketing activity by law, a 48-hour frequency cap applies for the survey to be sent to the same customer, which may prevent the survey from being sent for multiple bookings made within a weekend or holiday period.
- The survey is sent to the customer even if the customer did not board the bus/train or take the ride. That said, the avoided emissions are accounted only for the checked pax, meaning the ones paying and effectively boarding the bus/train.

Survey response rate: In 2025, we received over 1.1 million valid surveys, resulting in an average of 1.34% survey response rate (as valid surveys / checked pax).[4]

(c) Business operation data

The business operation data relates to the actual driven km, pax-km, bus lines, business regions, etc, from Flix's global operations in 2025.

(d) Emission factor data

Emission factors for Flix were obtained from:

[4] Valid surveys and checked pax in this ration refer to surveys where customers responded to the question on alternative modes of transport relevant for this study, regardless whether the number of valid surveys for the line was higher than 10.

Bus Regions	Emission Factor Source (2025)
FlixBus regions	Manually calculated, in particular: - Parameters assumptions such as WtT and TtW per mass, lower heating value and density were obtained from ISO 14083, Diesel values (EU and US); - Average fuel consumptions were obtained from FlixBus partners and applied to the respective operational region. Further business data, obtained from bus partners or fuel suppliers, were used for the correct accounting of the emissions arising from the Alternative Drives.
DACH (Germany) FlixTrain	Manually calculated using business operational data and German Environmental Agency (UBA) for the grid electricity mix.

The manually calculated emission factors were computed using the following formula:

$$\text{WtW emission factor (Country A) in } gCO_2e \text{ per pkm} =$$

$$\left(\frac{\text{WtT emissions (Country A) in } tCO_2}{\text{Total pkm (Country A)}} \times 10^6\right) + \left(\frac{\text{TtW emissions (Country A) in } tCO_2}{\text{Total pkm (Country A)}} \times 10^6\right)$$

As a result, the following emission factors have been used for Flix:

Bus Regions	Flix Emission Factor Used (g CO_2 e / passenger km)
Australia Bus	33.6
BeNeLux Bus	24.0
Black Sea Bus	33.4
Brazil Bus	47.4
Chile Bus	34.6
Adriatic Bus	30.6
Czech Republic Bus	29.3
DACH Bus	26.1
DACH Train[5]	13.6
Denmark Bus	20.5
France Bus	25.5
Greyhound Bus	45.5
Iberia Bus	27.2
Italy Bus	27.0
Mexico Bus	42.2
Poland Bus	31.3
Sweden Bus	29.1
Türkiye Bus	48.2
USA Bus	44.6
Ukraine Bus	36.8
United Kingdom Bus	34.1

[5] Calculated using the location-based approach for comparability purposes, applying the German energy mix from UBA. FlixTrain procures 100% of its traction electricity from renewable sources, while electricity used for stationary purposes, which accounts for a significantly smaller share of total consumption, is sourced from the standard energy grid. For reference, the emission intensity under the market-based approach is approximately 0.1 gCO2e/passenger km.

Emission factors for alternative modes of transport were obtained from:

Bus Regions	Emission Factor Source	Year of Data Source
All European and Türkiye bus regions	German Environmental Agency (UBA). As an exception, the Emission Factor sources of the US and other regions (below), were used for Bus in Türkiye, since the average fuel consumption and load factor were more consistent, according to our analysis.	2024
Australia, Flix USA, Greyhound, Brazil, Chile, Mexico bus regions	US Environmental Protection Agency Emission Factor Hub for the Tank-to-Wheel part and UK Government GHG Conversion Factors for the Well-to-Tank part. As an exception, UBA (above) was used for flights due to the lack of a consistent source.	2025
United Kingdom bus region	UK Government GHG Conversion Factors. Regional train factor was applied also to Inter-City for a better representation of Flix alternative modes of transport in the region.	2025

For the alternate mode emission factors, we have assumed an average passenger occupancy of 1.4 person for a private car (based on 2024 UBA source) and an average passenger occupancy of 2.5 person for car-sharing.

Where needed, emission factors for alternative modes of transport were converted to gCO_2/pax km.

Since the US EPA emission factors are accounting for combustion emissions only (Tank-to-Wheel), the upstream emissions (Well-to-Tank) were added based on the UK DEFRA source, as prescribed by the US EPA's Scope 3 Inventory Guidance.

As a result, the following emission factors have been used for alternative modes of transport (g CO_2e / passenger km):

Bus Regions	Regional train	Inter-City train	Car sharing	Private car	Bus competitor	Domestic Flight
All European bus regions	44.0	26.0	91.8	164.0	30.0	290.0
Türkiye	44.0	26.0	91.8	164.0	48.2	290.0
Australia, Flix USA, Greyhound, Brazil, Chile, Mexico bus regions	92.2	61.4	90.9	162.3	48.2	290.0
United Kingdom bus region	35.5	35.5	96.9	173.0	27.8	229.3

Calculation methodology

The responses from Post Ride Survey questions are used by our Network Planning team to calculate the emissions avoided by Flix customers. To reduce manual effort and improve data reliability and scalability, all calculations and estimations on Flix business data were done directly on our internal data system (Snowflake); this is possible because data about lines and Pax km is also available there.

Following is the 2025 data workflow used by the Network Planning team to calculate the emissions avoided:

1. Definition of analysis boundaries: Flix franchise (no cooperation model) rides departed between 1st Jan and 31st Dec 2025 in the business regions in our organizational boundaries;
2. Extraction and cleaning of business data, providing for each line the corresponding business region, the total checked pax-km and pax count, and the ride count.
3. Extraction and cleaning of survey data from our database, providing for each line the count of responses with a valid answer to the alternative mode question, as well as the count and percentage for each alternative option over such number. Combination of the previous two sources, resulting in a table where each record is a combination between a Flix line and a possible alternative mode of transportation. Pax and Pax-km are distributed to the alternative modes according to the share they have for that line.
4. Export to excel and combination with emission factors per pax-km in that business region for that alternative mode and for mode Flix provides the total CO2 (virtually) emitted, and the difference is the absolute CO2 saved thanks to that Flix line. In case of alternative mode "I would have not traveled if Flix was not there", we consider it instead as induced CO2.
5. Aggregation and sum provide ultimately the total figures of saved and induced CO2 per business region and Flix, and when divided by the total checked pax, pax-km or bus-km provide the relative figures.[6]

Key assumptions:

- **Minimum responses threshold and valid surveys:** The Post Ride Survey starts with the NPS question and then proceeds to other questions when the customer expands the survey link. We assume that a minimum of 10 surveys with answers to the alternative modes of transportation question are considered representative of all passengers on that line and will be counted as valid surveys.
- All the survey responses with less than 10 questions answered by the customer have been excluded from the avoided emissions calculation. This threshold was used for the first time within the 2023 calculation and applied again in 2024 and 2025.
- **Induced emissions:** For customers who selected “I would not have travelled” indicating that they would not have taken the trip should the FlixBus or FlixTrain option not be available, the resultant emissions saved are negative. These ‘induced emissions’ are already accounted for within the calculation and are deducted from the emissions saved.

[6] Please note that unlike the totals, these denominators (such as pax-km) take into account all lines, including those with less than the minimum count of valid surveys.

- **Extrapolated data:** The responses from the Post Ride Survey are used as a sample to extrapolate the responses of all eligible passengers, covering the total passenger km.
- **Cooperation model bookings:** Bookings for those rides that are operated by external third parties who use Flix tech platform to sell tickets for their rides, are excluded from the avoided emission calculations.
- **Data cut-off**: As part of the avoided emissions calculations, we account for survey responses for those rides that departed in 2025, even if the actual survey responses were submitted in 2026.

Our 2025 results

In 2025, Flix helped customers avoid **1.5 million tonnes** of CO_2 emissions. For 2025, this means an average of 52.5 grams of CO2 saved per passenger km and 1.4 kg of CO2 saved per driven bus-km.

Main changes versus 2024

The methodology was overall consistent with last year. Key updates included:

- The adoption of ISO 14083 for Flix diesel emission factors;
- The use of specific fuel consumption intensity per bus by Flix business region, as communicated by bus partners, ensuring a more precise estimation that accounts for the specific fleet characteristics of each region, identified in collaboration with our bus partners;
- The inclusion of two new business regions: Australia and Mexico;
- The use of US emission factors for the "Bus Competitor" alternative transport mode in Türkiye, as more consistent with internal Flix data in terms of fuel consumption and load factor.

The resulting overall GHG emissions savings generated by our customers increased slightly compared to last year (2%), mainly driven by:

- The higher number of passenger-kilometers travelled on the Flix fleet during 2025, reflecting the addition of new business regions;
- The increased adoption of alternative drives, as highlighted in the ESG Report 2025, available at https://www.corporate.flix.com/governance-esg-data-policies/.

These factors, combined with minor methodological updates, contributed to higher savings despite a marginal decline in overall load factor (approximately 1% lower year-over-year).

Reporting criteria

While no universal global standards currently exist for reporting avoided emissions, this document draws on the principles outlined in the **Guidance on Avoided Emissions v2.0**, issued by *World Business Council for Sustainable Development* (WBCSD).

The guidance notes that solutions directly related to fossil fuels may fall outside the scope of the framework, including solutions used where no technologically or economically feasible low-carbon alternatives are available in the specific context.

Long-distance coach transport currently relies predominantly on diesel-powered vehicles and does not yet fully meet the eligibility criteria described under Gate 2 of the guidance. The avoided emissions presented in this methodology should therefore not be interpreted as evidence that the current technology mix constitutes a climate solution fully aligned with the ultimate solutions aligned with the latest climate science.

Instead, the metric is disclosed to illustrate the comparative emissions performance of collective coach transport relative to alternative passenger transport modes, such as private cars or short-haul aviation. Within the current transport system, long-distance coach services can enable passengers to choose travel options that have lower CO2 emissions, on a per passenger km basis, thereby contributing to emissions savings at the system level.

At the same time, Flix is pursuing a fleet transformation strategy aimed at progressively reducing the carbon intensity of operations through the deployment of alternative technologies and lower-carbon fuels, in line with the company's science-based climate targets established in line with the SBTi framework. Please refer to the Annex for further information on the validation claim eligibility requirements.

For further queries on the topic, please reach out to responsibility@flix.com.

Annex: Checklist for validation claim eligibility

As part of Flix's commitment to transparent and credible reporting, we have prepared the following table to validate the eligibility of our Avoided Emissions methodology against the three eligibility gates defined by the WBCSD Guidance on Avoided Emissions v2.0. These gates, covering Climate Action Credibility (Gate 1), Latest Climate Science Alignment (Gate 2), and Contribution Legitimacy (Gate 3), represent the criteria that companies shall satisfy to claim for Avoided Emissions.

For each gate, the requirements are listed alongside a dedicated space for supporting notes. Although our methodology has not yet been externally audited, this checklist is intended to support future auditability assessments.

Requirement	Methodological explanation / evidence
Gate 1 – Climate Action Credibility	
G1-1: The company maintains a comprehensive GHG inventory covering Scope 1, Scope 2 and relevant Scope 3 emissions.	Flix annually reports its corporate GHG inventory, including Scope 1, Scope 2 and Scope 3 emissions (where relevant) based on the operational control approach and covering the entire consolidated perimeter. The GHG inventory is included in the annual ESG Report of the company. The FY25 GHG Inventory has been externally assured for the first time.
G1-2: The company has established public GHG reduction targets aligned, or in the process of alignment, with a 1.5°C pathway.	Flix has aligned with the Paris Agreement and committed to near-term, company-wide emission reduction targets validated by the Science Based Targets initiative (SBTi) in April 2024: - Scope 1&2 Targets: Reduce absolute emissions by 54.6% by 2032 (base year: 2019). - Scope 3 Targets: Reduce emissions intensity (Category 11 - Use of Sold Products) per passenger kilometer by 40.9% by 2032 (base year: 2019).
G1-3. Progress against climate targets is regularly monitored and publicly reported.	Progress on climate targets and decarbonization measures is disclosed through Flix's voluntary ESG report, inspired by the ESRS standards.
Gate 2 – Alignment with Climate pathways	
G2-1: The climate solution demonstrates mitigation potential consistent with the latest climate science.	As specified in the Reporting Criteria paragraph, the company acknowledges that long-distance coach transport, currently relying predominantly on diesel-powered vehicles, is not aligned with the latest climate science. Nevertheless, within the current transport system, collective coach transport enables lower emissions per passenger-kilometer compared to alternative transport modes such as private passenger cars or short-haul aviation. The avoided emissions metric is therefore disclosed to illustrate the comparative emissions performance of collective transport and the system-level emissions savings associated with modal shift.
G2-2: The solution is aligned with recognized decarbonization pathways or scientific frameworks (e.g., IPCC scenarios or equivalent)	The company aligns its climate strategy with science-based frameworks such as SBTi (Science-Based Targets initiative)

and does not create structural barriers to the net-zero transition	and integrates decarbonization levers including fleet transformation and renewable energy sourcing.
Gate 3 – Contribution Legitimacy	
G3-1: The solution delivers significant GHG emission reductions compared to an appropriate reference scenario	For several years now, Flix has been calculating the emissions avoided by customers choosing FlixBus or FlixTrain over alternative modes of transport. During FY25, Flix estimates that choosing collective travel with its services enabled travelers to avoid more than 1.5 million tonnes of CO_2e compared with alternative transport modes.
G3-2: A clear causal link exists between the solution and the emissions reductions achieved.	Flix operates a digital platform that organizes and markets long-distance coach services operated by local bus partners. Through route planning, ticketing, pricing, and customer interface, the company enables passengers to access an extensive network of collective transport services, directly facilitating the modal shift that drives emissions reductions.
G3-3: The emissions reduction impact can be quantified using transparent and credible methodologies.	Our calculation methodology is fully described in this report, including sources, assumptions, and limitations.
G3-4: Supporting evidence is available (e.g., scientific literature, LCA studies, primary operational data).	Calculations rely on multiple data sources including internal calculations and external standards datasets such as ISO 14083, UBA, DEFRA, US EPA emission factors.
Additional Check – Fossil-Solution Screening (applicable where relevant)	
FS-1: If the solution involves fossil-based technologies or fuels, its mitigation potential must be clearly demonstrated.	For travel solutions involving combustion technologies, emission reductions are demonstrated through comparative emissions intensity per passenger-kilometer.
FS-2: The solution does not create long-term fossil-fuel lock-in or delay the transition to low-carbon alternatives.	Flix's strategy includes fleet transformation and adoption of alternative drive technologies (e.g., electric, bio-fuels) which are aimed at achieving the climate targets and avoid fossil-fuel lock-in.
FS-3: No technically or economically viable lower-carbon alternative exists that would provide equivalent functionality.	Flix's fleet transformation program involves piloting a range of technologies and alternative drive solutions in collaboration with partners worldwide. Flix believes that a flexible, technology-agnostic approach is essential during this transitional phase, balancing the advantages and limitations of each technology — particularly given that no single scalable and cost-competitive low-carbon solution has yet emerged as dominant in the long-distance coach segment.
FS-4 Additional transparency and monitoring are ensured for fossil-related solutions.	GHG Inventory, performance and decarbonization progress are disclosed through our annual ESG Report.