ZERO EMPTY SEATS

BlaBlaCar

A study into BlaBlaCar's environmental contribution

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"Bringing Freedom, Fairness and Fraternity to the world of travel.

Our obsession

BlaBlaCar was created with one dream in mind: fill the millions of empty seats on the road to create an efficient, affordable and friendly way to travel.

76% of long-distance travel in Europe is done by car, but with an average occupancy rate of only 1.9 people, most cars have at least three seats left empty. That's an unacceptable waste.

With the same amount of cars on the road, carpooling could more than double the number of people traveling. In a world of growing populations and travel aspirations, increasing the efficiency of road travel can have a significant positive impact on both mobility and the environment.

So how much CO_2 does carpooling save each year?

To answer this question, we worked with leading research consultancy Le BIPE, which analyzed BlaBlaCar's real usage data over 12 months, and surveyed 6,884 BlaBlaCar members across eight countries.

The results of the study show that BlaBlaCar is operating a carbon-saving transport network thanks to the relative efficiency of filled cars versus alternative modes of transport. As we increase the number of people traveling, we save **1.6 million tonnes of CO_2** per year.

But looking at today's data is not enough - we can and will do much more. In this report, you'll see the impact that BlaBlaCar's continued growth and expansion into new activity can have on further reducing the carbon footprint of road travel.

From sharing cars to optimizing the efficiency of buses, we have one objective in mind: zero empty seats on the road.
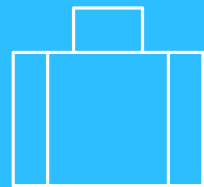
Our
key numbers

The world's largest trusted carpooling community
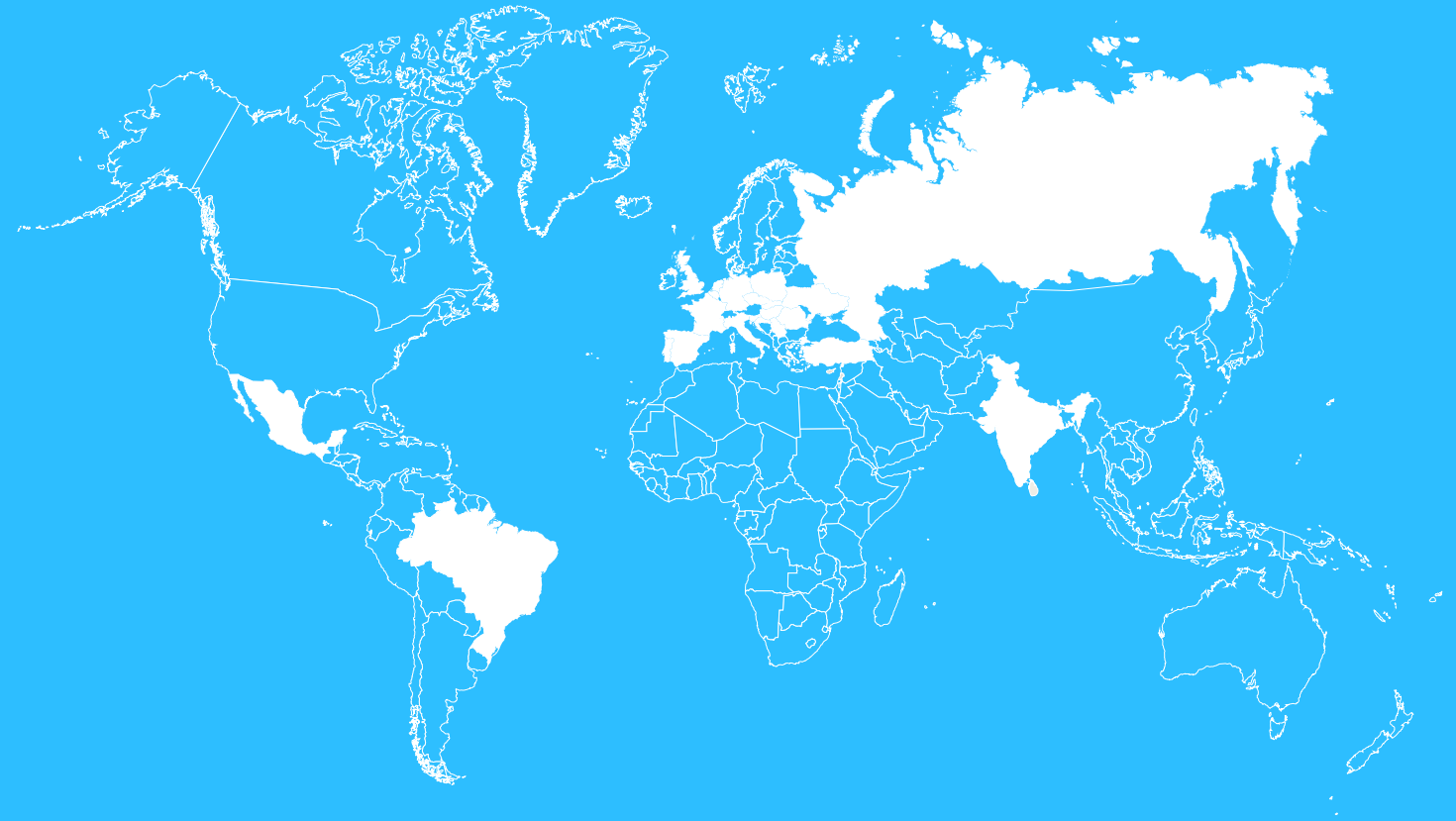
70 million members
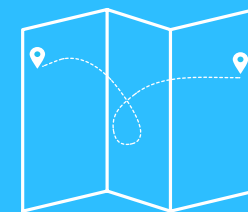
25 million travelers
per quarter

22 countries

More than €1.4 billion
saved by members since BlaBlaCar's creation

263 kilometers
is the average distance of a BlaBlaCar trip

30 billion kilometers
shared by the community since BlaBlaCar's creation

Methodology

The study was conducted by research consultancy Le BIPE[1] in 2018.

The analysis is based on three sources of information:

• Real usage data over a year (1st January - 31st December 2018) for the 22 countries BlaBlaCar operates in, provided by BlaBlaCar;

• External reference data for each country, including energy mix, energy sources, and levels of CO_2 emissions (sources are given each time, and are listed at the end of the report);

• A survey of 6,884 BlaBlaCar members in 8 countries, namely Brazil, France, Germany, Italy, Poland, Russia, Spain, and Ukraine.

Brazil (558)

France (1,064)

Germany (1,204)

Italy (1,162)

Poland (679)

Russia (674)

Spain (829)

Ukraine (714)

[1] Le BIPE is a strategy consulting firm founded in France in 1958 and member of the BDO Group. Le BIPE specialises in forecasting, data science, socio-economic outlooks and future trends analysis.

Direct CO_2 savings:

CO_2 generated by alternative modes of transport in a world without BlaBlaCar, including first and last mile (in the case of reaching airports, train or bus stations)

−

CO_2 generated by BlaBlaCar mobility, including first and last mile (to reach carpooling meeting points), additional mobility (drivers and passengers who would not have traveled if carpooling were not an option) and CO_2 savings resulting from safer driving habits while carpooling

+

Indirect CO_2 savings:

Gains resulting from informal carpooling inspired by BlaBlaCar but not organized on the BlaBlaCar platform

=

Total CO_2 savings generated by BlaBlaCar

DIRECT CO$_2$ SAVINGS

To calculate BlaBlaCar's CO$_2$ savings, we looked at the CO$_2$ emissions generated by BlaBlaCar mobility, and compared them with the CO$_2$ emissions that would have been generated without BlaBlaCar. The comparison takes into account first & last miles, detours and behavioral changes.
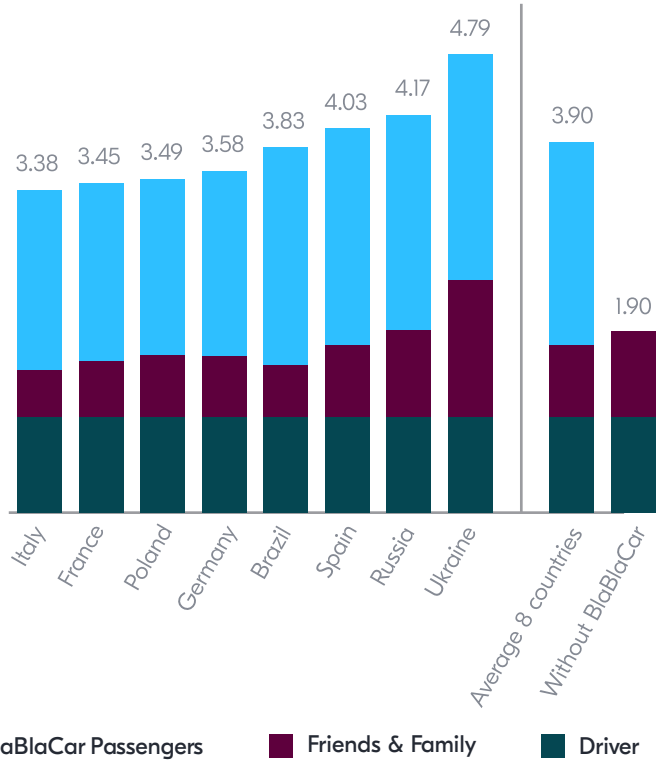
Filling empty seats...

Doubling the number of people travelling!

By allowing drivers and passengers to share their journeys, BlaBlaCar raises the average car occupancy rate in the 8 countries analyzed by 105%, from 1.9[2] people to 3.9[3] people. That means doubling the number of people traveling whilst using the same number of cars, and whilst emitting less CO_2.

1.9 people per car	**3.1 people per car**	**3.9 people per car**
without BlaBlaCar, counting **1 driver** and **0.9 friends & family** who share the trip	**with BlaBlaCar,** if we only count **2.1 passengers** who booked on BlaBlaCar	**with BlaBlaCar,** if we include **0.8 friends & family** who also share the trip

Chart values by country:
- Italy: 3.38
- France: 3.45
- Poland: 3.49
- Germany: 3.58
- Brazil: 3.83
- Spain: 4.03
- Russia: 4.17
- Ukraine: 4.79
- Average 8 countries: 3.90
- Without BlaBlaCar: 1.90

Legend: ■ BlaBlaCar Passengers ■ Friends & Family ■ Driver

[2] Average car occupancy rate in the 8 countries covered by the analysis, calculated by Le BIPE, based on data from the International Energy Agency, OECD, and national administrations.
[3] Sources: BlaBlaCar data; BlaBlaCar survey 2018; Le BIPE; ITF/OECD; IEA.

The world with BlaBlaCar

3.9 people per car

In 2018, BlaBlaCar members organized 95.3 million journeys through the platform. With BlaBlaCar, those trips resulted in **2.17 million tonnes of CO$_2$** emissions. Without BlaBlaCar, the same trips would have generated **3.06 million tonnes of CO$_2$** emissions. The direct carbon saved from BlaBlaCar carpooling is therefore **894,000 tonnes of CO$_2$** in a single year. That's the equivalent of 3 months' traffic in a major city like Berlin.

Looking at the average trip efficiency of journeys on BlaBlaCar versus the alternatives that would otherwise have been chosen by members, carpooling on BlaBlaCar is on average **29% more efficient**.

Additional CO$_2$ savings thanks to safer driving habits:

In addition to the relative efficiency of carpooling, the study also reveals that drivers tend to drive more safely when carpooling:

35% of drivers check their tire pressure more often

22% of drivers reduce their speed when they carpool

Both of these behaviors have a significant impact on the safety and the eco-efficiency of driving. In total, they saved **15,200 tonnes of CO$_2$** in 2018.
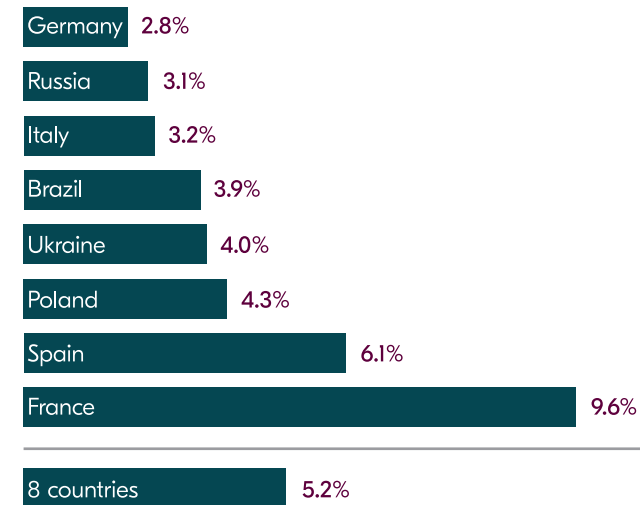
This contribution represents **1.7%** of the direct CO$_2$ savings of BlaBlaCar.

The world without BlaBlaCar

1.9 people per car

90.3 million journeys would have been conducted in 2018 on alternative modes of travel if members had not carpooled with BlaBlaCar, which would have generated **3.06 million tonnes of CO$_2$**.

Share of members who would not have traveled if BlaBlaCar were not an option

Country	Percentage
Germany	2.8%
Russia	3.1%
Italy	3.2%
Brazil	3.9%
Ukraine	4.0%
Poland	4.3%
Spain	6.1%
France	9.6%
8 countries	5.2%

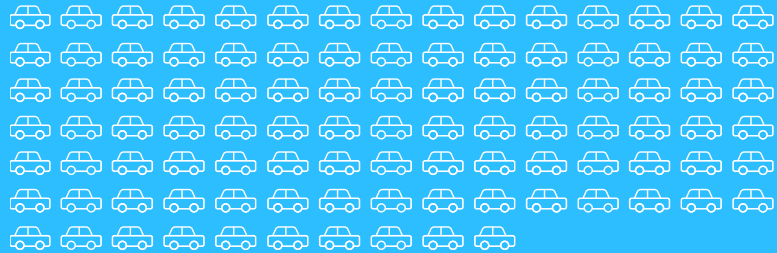## 5 million journeys would not have happened:

Had BlaBlaCar not existed, 5 million journeys would not have happened (5.2% of 95.3 million journeys).

The world with BlaBlaCar

On base 100, assuming 1 driver and 2.1 BlaBlaCar passengers per car:

100 drivers + 210 BlaBlaCar passengers

2.17 million tonnes of CO$_2$
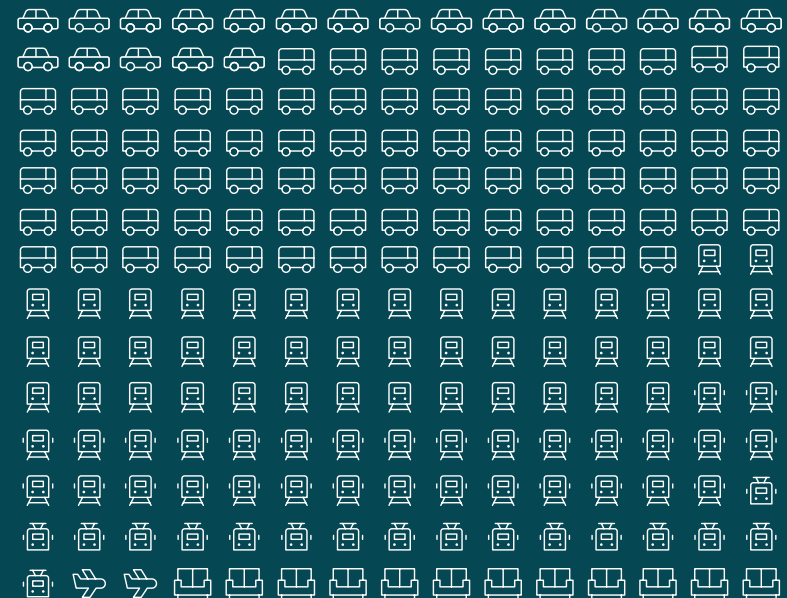
For 95.3 million journeys in 2018

The world without BlaBlaCar

We asked BlaBlaCar's drivers and passengers what their alternative mode of transport would have been.

How the 100 drivers would have traveled

How the 210 passengers would have traveled

3.06 million tonnes of CO$_2$

For 90.3 million journeys in 2018

Reducing the first & last mile...

BlaBlaCar cuts passengers' first & last mile from 24km to 18km. This is explained by the fact that there are carpooling meeting points potentially everywhere there is a road (at every crossroad, supermarket, restaurant...) whereas traditional transportation modes require travelers to reach a central infrastructure like a station or an airport.

In Germany, for example, there are 5,000 train stations but over 75,000 monthly BlaBlaCar meeting points.
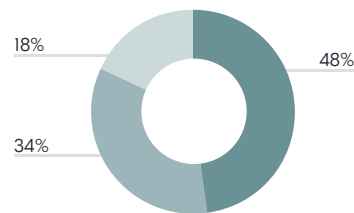
5,000
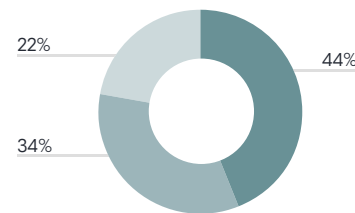train stations

75,000
monthly BlaBlaCar meeting points

First mile*	Alternative journey*	Last mile*

18%
48%
34%

22%
44%
34%

Passenger first mile
alternative journey:
13km

Passenger last mile
alternative journey:
11km

■ Public transport / Train ■ Car ■ Active mobility (feet, bike)

*Distance (km) x mode

...and enabling door-to-door travel

PUBLIC TRANSPORT

For a quarter of trips, public transport is the favored first & last mile option. This underpins the strong complementarity between carpooling and public transport that could be further reinforced by building a fully-integrated intermodal experience.

CAR

For another quarter of trips, the car remains the preferred solution in areas less covered by public transport infrastructure. This share is lower than for alternative journeys because meeting points are less concentrated in big city centers. Overall, this reduces traffic congestion and local pollution in and around cities.
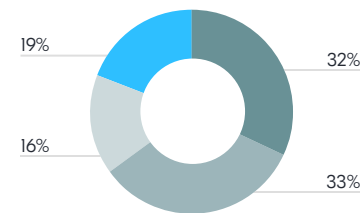
DOOR-TO-DOOR

19% of trips require no first mile solution,and 26% no last mile solution, because drivers pick up and drop off passengers at their departure/arrival points. This is where the power of a highly distributed car network can add unique value.

First mile*	BlaBlaCar journey*	Last mile*

19%
32%
16%
33%

26%
26%
20%
28%

Passenger first mile
to reach their BlaBlaCar:
10km
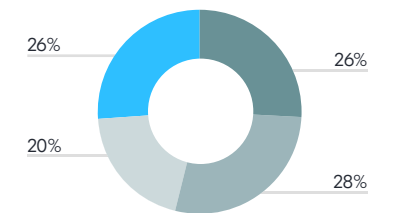
Passenger last mile
after their BlaBlaCar:
8km

■ Public transport / Train ■ Car ■ Active mobility (feet, bike) ■ Door-to-door

MORE PEOPLE TRAVEL, WITH LESS IMPACT

Direct CO_2 savings

3.06 million tonnes of CO_2
for 90.3 million journeys without BlaBlaCar

-

2.17 million tonnes of CO_2
for 95.3 million journeys with BlaBlaCar

=

894,000 tonnes of CO_2
saved in 2018

With only **1.6%** more cars on the road, carpooling enables the transport of **2.1** times more people in cars for **29%** less CO_2 emissions.

This represents

• 3 months' traffic in a city like Berlin
• The CO_2 absorbed in a year by a forest the size of 420,000 football fields (3,000km²)

INDIRECT CO$_2$ SAVINGS

In addition to its direct CO$_2$ savings, BlaBlaCar also inspires people to start carpooling informally (i.e. outside the platform) after trying the activity on BlaBlaCar. This is what we call BlaBlaCar's indirect CO$_2$ savings, illustrating the large-scale behavioral change induced beyond usage on our platform.

Carpooling beyond BlaBlaCar

According to the study, an additional **593,000 tonnes of CO$_2$** are avoided every year thanks to 115.9 million car journeys made by groups of carpoolers who met on BlaBlaCar and continued to share rides informally.

Another **80,000 tonnes** are avoided by carpoolers inspired by BlaBlaCar (but who did not actually meet on the platform).

Among BlaBlaCar's members:

3.4% belong to a commuter carpooling group with colleagues (sharing a trip at least once a month)

2.8% belong to a short-distance carpooling group (sharing a trip at least once a month)

7.8% belong to a long-distance carpooling group (sharing a trip at least 6 times a year)

10.8% carpool informally from time to time on short & long distances

Among BlaBlaCar's members who carpool informally:

Influence of BlaBlaCar on the adoption of informal carpooling outside of the platform

22% — Formed on BlaBlaCar
21% — Inspired by BlaBlaCar
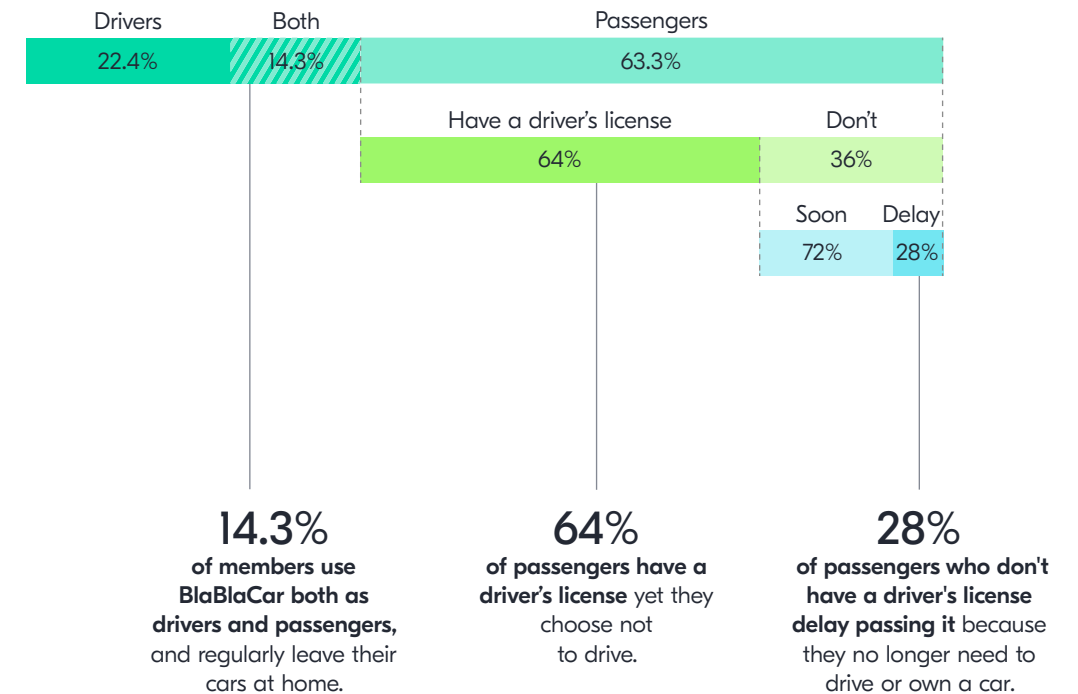57% — Not related
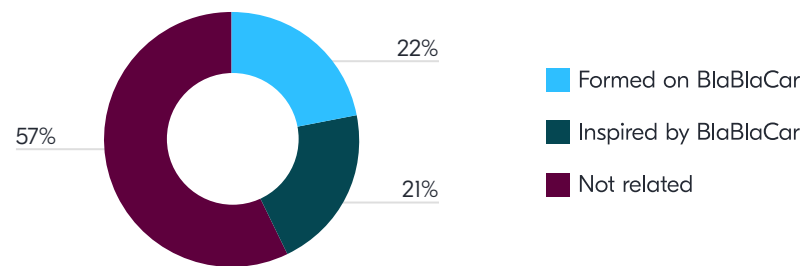
Changing behaviors

First and foremost, growing carpooling usage requires behaviors to evolve. As we've grown the BlaBlaCar community to over 70 million members in 22 markets, we have observed that behavioral change can occur quickly when users are provided with solutions that meet their needs and address their pain points.

Millions of drivers have turned their back on the idea of driving alone and have chosen instead to share rides on BlaBlaCar.

What are some of the other behavioral changes observed in the BlaBlaCar community?

Drivers	Both	Passengers
22.4%	14.3%	63.3%

Have a driver's license	Don't
64%	36%

Soon	Delay
72%	28%

14.3% of members use BlaBlaCar both as **drivers and passengers,** and regularly leave their cars at home.

64% of passengers have a **driver's license** yet they choose not to drive.

28% of passengers who don't **have a driver's license delay passing it** because they no longer need to drive or own a car.

Indirect CO$_2$ savings

673,000 tonnes of CO$_2$

emissions were avoided in 2018 through BlaBlaCar's indirect environmental benefit

This represents

- The CO$_2$ generated by 14,000 Moscow - Paris flights.

- The CO$_2$ absorbed in a year by a forest the size of 310,000 football fields (2,200km^2)

Total CO_2 savings

Direct carbon savings
894,000 tonnes of CO_2

+

Indirect carbon savings
673,000 tonnes of CO_2

=

1.6 million tonnes of CO_2

saved by BlaBlaCar's community in 2018

It is as if

Paris was free of road traffic during a year.

DRIVING FURTHER CHANGE

When assessing the environmental benefits of carpooling, it's important to go beyond today's picture and understand the levers that will help generate significantly greater CO_2 savings in the future.

Lever #1: Growth of BlaBlaCar
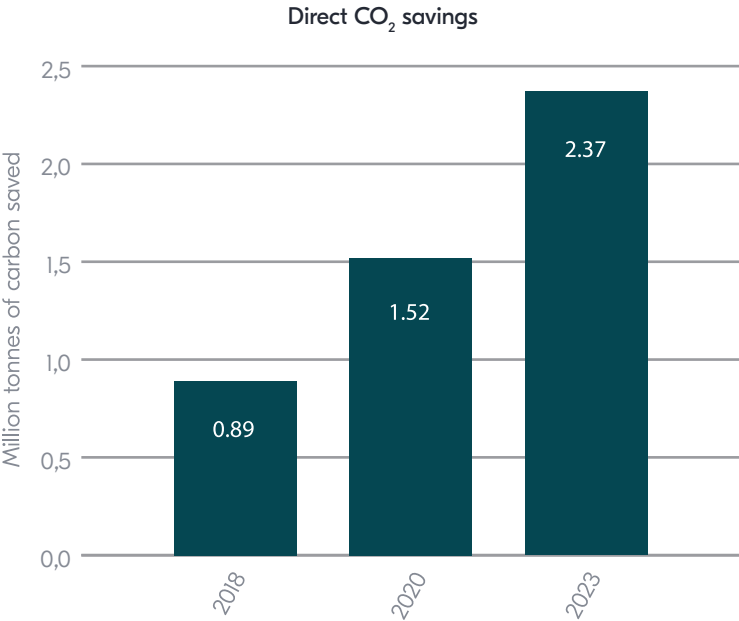
Current pace of growth

If the increase in the size of the active carpooling community and frequency of rides shared follow historical growth patterns[4], we will save **2.34 million tonnes of CO$_2$** in 2023, in other words, 2.5 times today's direct savings.

BlaBlaCar's community growth since 2006
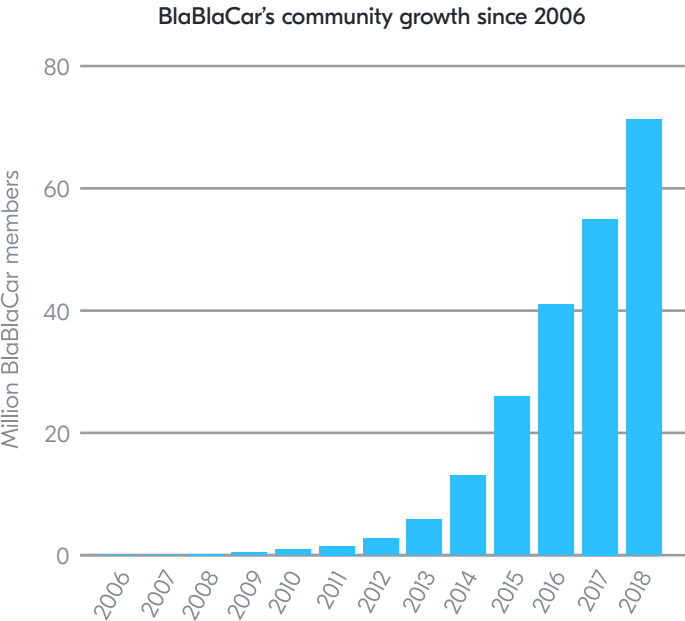
Room for growth

Though the BlaBlaCar community counts over 70 million members, carpooling still only represents 0.5%[5] of long-distance travel today. We are only scratching the surface of carpooling's massive potential.

Continuing to foster behavioral change at scale, so that more travelers share their long-distance journeys, will be key to unlocking the full potential of carpooling.

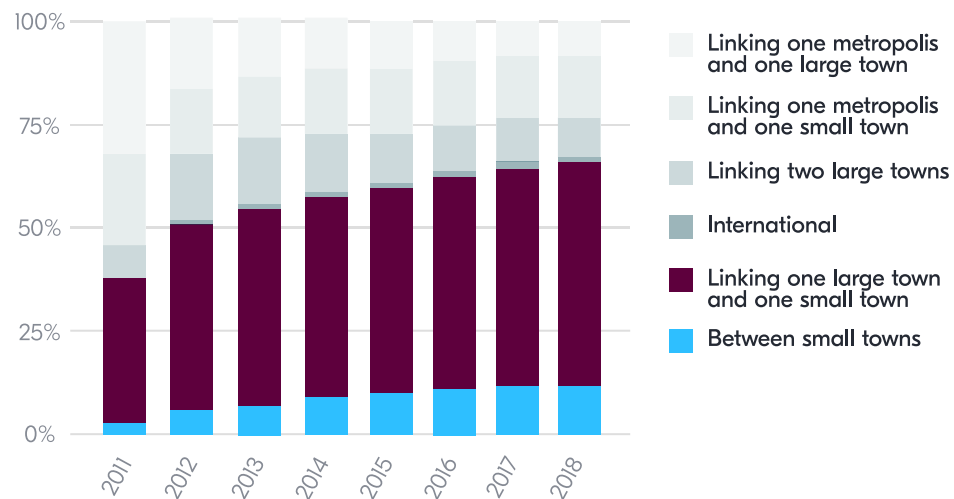### Direct CO$_2$ savings

"What it will take:

For carpooling adoption to grow faster and reach a significant share of long distance travel, it will take continued technological innovations to further ease the experience. It will also take communication and support from governments and cities, car manufacturers, highway operators, and other mobility players. Together, we can make shared mobility mainstream. As an emergent activity, carpooling is yet to be defined within the law of some countries. We are actively collaborating with public authorities to advise on how legislation can adapt in line with innovation.

[4] Increase in the size of the active community based on 2012-2018 rates; frequency of trips based on 2014-2017 rates.
[5] In countries where BlaBlaCar is active, 25 billion passengers kilometers are shared on BlaBlaCar among a total of 5,200 billion kilometers in 2018. Source: Le BIPE.

Lever #2: Unlocking door-to-door travel

When BlaBlaCar launches its long-distance carpooling service in a new market, members typically carpool between large cities. But as the size of the community grows, so does geographical coverage.

Suburban areas, smaller cities, and rural areas then start to attract more trips. These places, typically poorly covered by public transport infrastructure, have a high level of people driving alone in their cars; the wasted capacity and need for a mobility solution are therefore much higher.

The evolution of BlaBlaCar's geographical coverage in France and in Russia

Legend:
- Linking one metropolis and one large town
- Linking one metropolis and one small town
- Linking two large towns
- International
- Linking one large town and one small town
- Between small towns

## Transforming roads into carpooling lines

In 2018, BlaBlaCar rolled out a new algorithm that connects drivers with passengers at any point on their route, from their departure to their arrival point, unlocking subtrips and millions of possible local meeting points. This innovation has the potential to meet the needs of travelers wherever there is a road, increasing car occupancy rates where they are lowest, and developing a real door-to-door travel solution.

In 2018, our proximity matching algorithm saved **12,300 tonnes of CO$_2$** emissions in France where it was beta-tested (corresponding to 11% of the total CO$_2$ saved directly by BlaBlaCar in France).

## New proximity matching algorithm

BEFORE
A driver publishing a journey from Brussels to Frankfurt would have to find two passengers searching for Brussels-Frankfurt trips.
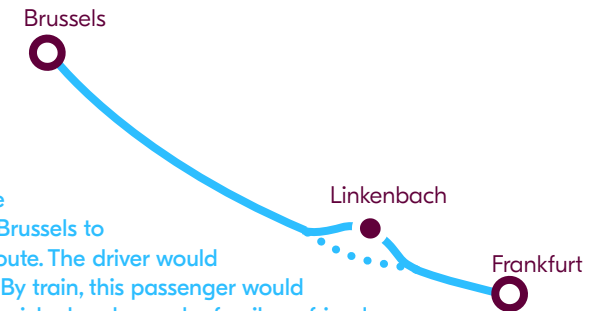
NOW
The driver might still have two passengers from Brussels to Frankfurt, but might also receive a request from a passenger looking to go from Brussels to Linkenbach, a small German village along the route. The driver would simply drop him off at the desired highway exit. By train, this passenger would have had to travel all the way to Frankfurt to be picked up by car by family or friends.
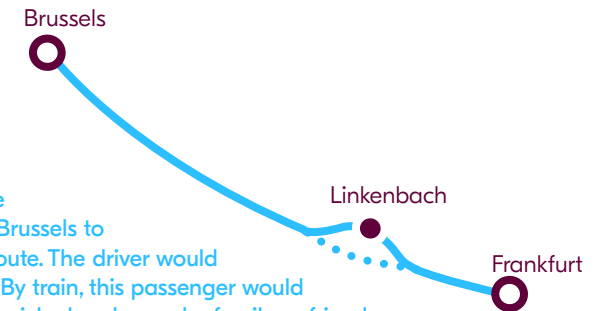
This scenario assumes that the development of this new algorithm will have the following effects:

• The growth rate of trip frequency in less dense areas will be twice the average rate of other trip types, as has been observed in France over the past 4 years.

• The average occupancy rate between less dense areas (serving rural or suburban areas) will reach the levels currently observed between more dense areas.

• There will be fewer first mile and last mile rides for pick-ups and drop-offs in cars that might not otherwise have traveled.

Based on these hypotheses, BlaBlaCar's new search algorithm could help save an additional **375,000 tonnes of CO$_2$** in 2023, which represents a 25% increase on today's direct annual savings.

"What it will take:

If we want drivers to change behaviors at scale and adopt the reflex of picking up passengers along their way, we'll need to make it even easier for them to do so. It will take more technological innovations that further improve the intelligence of matching algorithms, but also dedicated infrastructure. For example, designated parking lots at each highway entrance/exit would ease the experience, and thereby foster adoption.

Lever #3: Growth of BlaBlaLines

The car occupancy rate on daily commutes is only 1.08[6] people (versus 1.9 on long-distance trips). The room for progress is significant.

In 2018, BlaBlaCar launched a new service to tackle the daily commute. It is currently rolled out in France only.

Why a specific app for that?

Encouraging short-distance, daily carpooling is a different challenge than growing long-distance carpooling. On commuting distances, the financial incentive for the driver is not as strong, since the cost of the journey is lower. The mindset of a driver going to work is also different from that of one leaving on holiday or for the weekend, with less time on his or her hands.

To encourage behavioral change amongst everyday commuters, BlaBlaCar developed a dedicated product to address the specific needs and pain points of short-distance travel.

If in five years BlaBlaCar were to reach the same level 0.5%[7] modal share on short distances across all its markets as it has on long distances, these commuter journeys alone could save **1.88 million tonnes of CO_2**, more than the CO_2 savings achieved by long-distance carpooling today.

[6]Source: A study by the French Ministry of Ecology revealed in June 2014 that the occupancy rate of daily commuter vehicles is between 1.04 people per vehicle in the Paris region and 1.08 between rural and non-rural areas.
[7]In countries where BlaBlaCar is active, 25 billion passenger kilometers are shared on BlaBlaCar among a total of 5,200 billion kilometers. Source: Le BIPE.

"What it will take:

Beyond what BlaBlaCar can do, external support will be key. To become a mainstream means of transport, short-distance carpooling will need cities and companies to raise awareness, create practical conditions - such as safe meeting points along the road - and provide financial incentives both to passengers and drivers, to encourage sustainable behavior change amongst commuters.

Lever #4: Bus integration

In 2018, for the first time, BlaBlaCar ventured beyond carpooling to offer long-distance bus journeys in some of its markets.

But how efficient are buses?

The efficiency of buses, just like cars, depends on their occupancy rates and any subsequent journeys needed to reach their passengers' final destination. Looking at the case of France for example, with a 60% average occupancy rate, a bus emits even less CO_2 per passenger kilometer than carpooling.

Compared efficiency of a car, a BlaBlaCar carpool, and a long-distance bus
(calculated for a 240km trip in France)

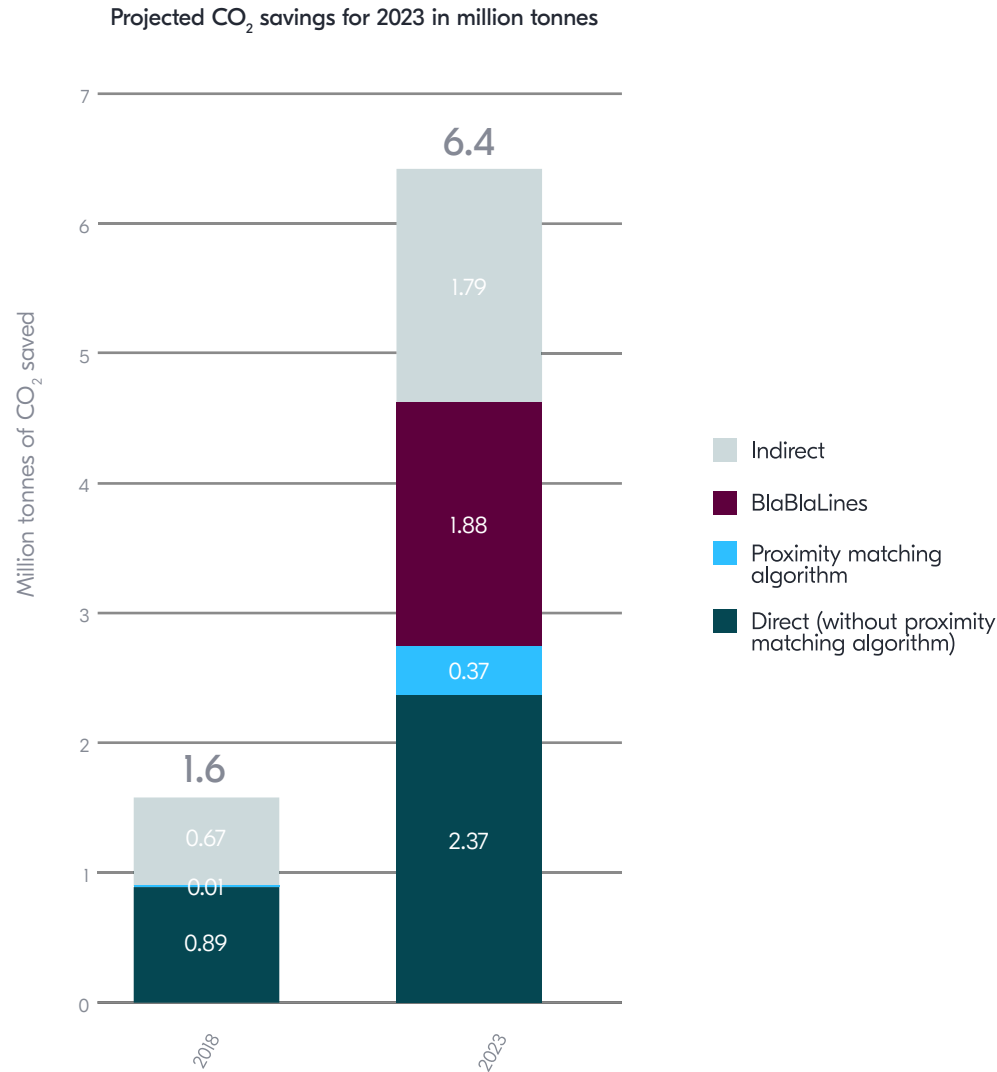|	Vehicle efficiency (gCO$_2$ per vkm[8])	Average occupancy	First & last mile km	Efficiency (gCO$_2$ per pkm[9])
	180	1.9 people	-	95g/pkm
	180	3.4 people	15km (passengers) 8km (drivers)	58g/pkm
	800	30 people (60% occupancy rate)	31km (passengers)	36g/pkm

BlaBlaCar will offer a mix of buses and carpooling on popular axes that serve a high volume of travelers, while less-frequented, more granular axes will continue to be best served by carpooling alone.

"By offering two complementary solutions, BlaBlaCar will strive to fill every empty seat in cars and buses alike, and run a fully optimized road travel network.

[8]Vehicle-kilometer or vkm measures the traffic flow. gCO$_2$ per vkm represents the CO_2 emissions for one vehicle and one kilometer.
[9]Passenger-kilometer or pkm is a unit of passenger transportation quantity. gCO$_2$ per pkm represents the CO_2 emissions for one passenger and one kilometer.

Projected CO$_2$ savings

Projected CO$_2$ savings for 2023 in million tonnes

Million tonnes of CO$_2$ saved

Legend:
- Indirect
- BlaBlaLines
- Proximity matching algorithm
- Direct (without proximity matching algorithm)

LONG-DISTANCE USAGE GROWTH

2.37

million tonnes in 2023

The expected growth in BlaBlaCar usage could increase annual CO$_2$ savings by 160%.

SHORT-DISTANCE USAGE GROWTH

1.88

million tonnes in 2023

Given the current prevalence of solo driving, short-distance carpooling promises a positive impact on emissions.

GROWTH FROM PROXIMITY MATCHING

375,000

tonnes of CO$_2$ in 2023

New, intelligent route matching translates into a 3,000% increase in CO$_2$ savings, mostly from the new carpooling trips now possible in non-central areas.

INFORMAL CARPOOLING GROWTH

1.79

million tonnes of CO$_2$

BlaBlaCar's members could save more CO$_2$ by sharing multiple rides outside the platform with colleagues, friends or other members with whom they have kept in touch.

6.4 million tonnes of CO$_2$

could be saved in 2023

11 YEARS TO LIMIT GLOBAL WARMING

According to the 2018 IPCC report, stabilizing global warming at 1.5°C requires reducing CO_2 emissions by 45% no later than 2030.

Time is running out.

Humanity has just 11 years to make massive and unprecedented changes across all sectors, including transportation.

Driving alone belongs in the past.

Since 2004, BlaBlaCar has strived to reduce wasted car capacity.

Countries, cities, NGOs and employers: join us in reducing the number of empty seats on the road.

By working together, we have the potential to drastically reduce global CO_2 emissions. Let's make carpooling the new norm.

#ZeroEmptySeats

SOURCES

Total surface transport mileage:
- International Transport Forum
- IRF (International Road Federation)

CO_2 efficiency of different modes of transport; average car occupancy & CO_2 emission from surface transport:
- IEA (International Energy Agency)
- UIC
- **Le** BIPE

Carpooling mode share; short-distance mobility patterns:
- JRC European Commission
- ADEME
- Commissariat général au développement durable

OUR PREVIOUS STUDIES

Entering the Trust Age:

https://blog.blablacar.com/trust

Bringing People Closer:

https://blog.blablacar.com/newsroom/news-list/study-social-impacts-carpooling