1. Projects



What role can daily carpooling play in the ecological transition?

Finished research Begin: May 2022 End: September 2023

Cars are responsible for around 16% of CO2 emissions in France. In this context, seeking to increase their occupancy rate (which is currently around 1 person per car for home-work trips!) to reduce the number of cars on the road seems an obvious lever for decarbonising mobility. The government is counting on a boom in daily carpooling, similar to the recent boom in long-distance carpooling. By teaming up once again with La Fabrique Écologique, the Mobile Lives Forum sought to question the relevance of local and national policies, seemingly born of common sense, for the development of carpooling: how can such policies be assessed? which trips and territories should be targeted? what subsidies should be offered?

Research participants

- Mobile Lives Forum
- La Fabrique Écologique

This study $\frac{1}{2}$ was based on a series of interviews with public and private stakeholders involved in the development of carpooling, then compared with public reports and data. Conducted between 2022 and 2023, the study analysed local policies $\frac{2}{2}$ pursued in the wake of the 2019 Mobility Orientation Law and the foundations of the 2023 - 2027 Carpooling Plan.

The Carpooling Plan launched by the government aims to rapidly increase the number of carpooled trips from 900,000 per day in 2023 to 3 million in 2027. This ambitious target

seems all the more achievable given that the starting point is very low: carpools represent just 0.5% of daily trips (all modes of transport combined) $\frac{3}{2}$ and, importantly for CO2 emissions, account for around 1.2% of distances travelled $\frac{4}{2}$.

The Mobile Lives Forum and La Fabrique Écologique have joined forces to question the relevance of and the public support for the seemingly common sense policy of the development of carpooling: which journeys and territories should be targeted? which operating methods should be favoured? what subsidies should be offered?

The key points:

- 1. There were 900,000 carpooled trips per day in 2019. The government's aim is to reach 3 million by 2027. Today, this target seems unattainable.
- 2. The territories where carpooling would make the most sense economically, ecologically and socially are precisely those where growth is least likely: rural and sparsely populated areas.
- 3. In the first half of 2023, only 3% of carpooling trips $\frac{5}{2}$ were facilitated through a digital platform. Using this data to assess current carpooling policies is therefore not practical.
- 4. While the number of carpooling trips via digital platforms doubled between 2022 and 2023, overall numbers remain low: in the first half of 2023, 0.04% of travelled kilometres ⁶ for short-distance trips were carpooled via a platform.
- 5. As daily carpooling alone cannot structure a low-carbon mobility system for the future, three other levers also need to be activated without delay: massively increasing public transport services across all regions, reducing vehicle weights and reducing daily distances travelled.

1. Increasing the number of people who carpool for daily short-distance trips is an obvious and consensual objective

Although informal carpooling (such as between neighbours and colleagues) has been used ever since cars have been on the road, for the last twenty years or so public and private actors have been trying to develop the practice by experimenting with all kinds of schemes to connect carpoolers and passengers. The reasons for this are economic (low initial investment costs $\frac{1}{2}$, lower travel expenses thanks to cost-sharing, lack of economic benefits to using other alternatives), social (enabling non-motorised individuals to access services and activities that are not served by public transport, strengthening social links, promoting territorial equity), technical (decongesting roads in dense areas) and of course environmental (reducing air pollution and cutting down on carbon emissions).

These are just some of the reasons why companies and associations from a wide range of sectors (social, transport, digital, etc.), and local authorities of all political persuasions, from elected environmentalists to degrowth advocates to car manufacturers, have come out in favour of carpooling.

At the national level, the environmental argument is stressed. And for good reason: the drop in car occupancy rates since the 1960s is one of the main reasons why travel-related

CO2 emissions are not falling (while distances travelled and vehicle weights have gone up) $\frac{8}{2}$, despite significant vehicle improvements (lower fuel consumption per kilometre and lower CO2 emissions per litre of fuel consumed). Although a car can carry 4 to 5 people, solo-driving (driving alone with no passengers) has gradually become the norm for daily trips, with an average of 1.43 people per vehicle, falling to 1.08 for commutes between home and work $\frac{9}{2}$. For want of a better alternative, putting more people in each car seems an obvious way to improve their carbon footprint. This is the reasoning behind the plan presented in June 2023 by the General Secretariat for Ecological Planning (Secrétariat général à la planification écologique, SGPE), which claims that the development of carpooling will save between 3 and 4.5 Mt of CO2 each year, i.e. around 12% of the cuts targeted by 2030 in terms of land-based mobilities of people $\frac{10}{2}$.

2. However, the routes that can actually be carpooled remain largely unknown

The Carpooling Plan estimates that there are "50 million" empty seats in circulation every day that could be filled. As the forecasting scenarios by ADEME $\frac{11}{10}$ or NégaWatt $\frac{12}{12}$ argue, all it would take to save a trip by a second vehicle would be to hop into a vehicle that is already on the road. With this reserve of "50 million empty seats," the potential carpooling availability would thus be the equivalent of a public transport network that is naturally adapted to the demand. But the reality is a little more complicated. How many journeys actually share the same origin and destination, and use the same timeframe?

While we are well aware of the qualitative obstacles that limit the practice of carpooling, we know little about its quantitative potential, i.e. the number of trips that really can be shared. Indeed, in addition to the psychological barriers 13 and the coordination costs for the driver and passenger (waiting times, possible delays, etc.), both of which are often used as reasons for the relatively low levels of short-distance carpooling, as they are proportionately more important than for long-distance trips, there are many other constraints that prevent the carpooling supply and demand from meeting. They relate to how society is organised, such as working hours, and more structurally to how the French territory and geography are organised. The dispersal of activities throughout the territory (work, leisure, shopping, etc.), closely linked to the absorption by metropolitan areas of rural/semi-rural areas where the population grows but employment declines 14, reduces the potential for carpooling. We need to know the number of trips that people make alone in their cars that can actually be shared with others, but no solid data exists.

Facilitating carpooling by limiting detours?

To reduce the number of detours and to make it easier for people to meet up, Ecov has developed carpooling routes that operate like bus routes, with specific stops. These lines remove potential detours for the driver. Yet their results show limited success: for example on the Plaine de l'Ain industrial zone where 8,200 employees work and where an average of only 46 trips per day were recorded in the first quarter of 2023! The system had to be supplemented by an on-demand transport service financed by the Region. France's road network is one of the densest in Europe, allowing people to use a multitude of routes and avoiding the concentration of traffic on a single road, which is at the heart of Ecov's model.

3. Not all carpooling trips are ecologically beneficial

Almost two-thirds of daily car trips are under 10 kilometres $\frac{15}{15}$ and many people can make them with an electrically-assisted bicycle $\frac{16}{16}$, or even with a normal bike or on foot for the shortest journeys. The ecological relevance zone for carpooling should only concern trips of more than 10 kilometres where a suitable public transport service does not already exist. Fortunately, on a national scale, the average range of carpooling trips is more in the order of 20 to 25 kilometres $\frac{17}{15}$, but in a city like Rouen almost a third of carpooling trips are under 10 kilometres and take place in dense areas, such as between Rouen and St Etienne du Rouvray, a route that competes with the campus public transport service. Faced with this risk, Rouen and other local authorities have stopped subsidising journeys that run parallel to public transport lines, especially as carpooling does not have the merits of a public service: journeys are only partially guaranteed and the user can be selected by the driver (and therefore discriminated against).

Carpooling does help to reduce CO2 emissions if the carpooling passenger has given up their car and if the possibility of carpooling does not in itself result in an additional journey. Moreover, in this case, carpooling can have an additional social benefit and be ecologically neutral, by serving isolated people in sparsely populated areas, for example.

Carpooling is often presented as a solution for providing mobility at a lower cost to the community in sparsely populated areas or outside normal working hours (e.g. shift work) when there is no public transport available. Yet according to the survey by France Stratégie, carpooling is much more common in metropolitan areas than it is in less densely populated areas: between August 2021 and July 2022, 222 carpooling journeys were made via digital platforms per 1,000 inhabitants in the inner suburbs of Paris, compared with 5 per 1,000 in rural areas $\frac{18}{2}$.

Targeting trips that can be shared is not always easy

In Grenoble, the SMMAG public-private transport union is rolling out a number of carpooling services run by associations and private companies, to match local needs with local solutions. The average cost is ≤ 16.3 , including the development of roads and operating costs. Despite the precise targeting of home-to-work trips between poorly served industrial areas and outlying intercommunal areas, in February 2023, only 0.71% of kilometres travelled had been carpooled via digital platforms. Ultimately therefore, the national market for daily carpooling services intermediated by companies such as Karos, or Blablacar Daily and Klaxit (recently merged), has been structured around commuting distances of around twenty kilometres, in dense urban areas, during rush hour and close to major cities $\frac{19}{2}$.

4. Short-distance carpooling via platforms boosted by public subsidies

Daily or short-distance carpooling, which receives infrastructural support (parking spaces, dedicated lanes), organisational support (public digital platform) and, since 2019 through the Mobility Orientation Law (LOM), financial support (beyond reimbursing expenses) to make it more competitive with solo-driving, has been met with mixed success.

The fact that the Mobility Orientation Law has given local authorities the ability to subsidise carpooling trips has had two repercussions:

- 1. carpooling has been brought into the commercial sphere by making it possible to subsidise journeys beyond the simple reimbursement or sharing of costs, which was the initial definition of carpooling.
- 2. digital platforms have been given the role of necessary intermediaries between local authorities and carpoolers for distributing subsidies and keeping track of changes in demand and flows. Only they can easily trace and report the identity of carpoolers and trips to local authorities and to the National Proof of Carpooling Register (Registre National de Preuve de Covoiturage, or RPC), which monitors their efficacy, whether the trips are actually performed or whether the driver's registration is sufficient.

Public subsidies per journey vary greatly from one territory to another, sometimes doubling in the same area depending on the intermediary used ($\in 0.5$ to $\in 1$ to provide passenger seats and $\in 1$ to $\in 2$ per passenger in the Grenoble area). To boost local policies, the National Carpooling Plan offers a further " $\in 1$ for $\in 1$ " scheme (for every $\in 1$ paid by a local authority to a carpooler, the State contributes a further $\in 1$). And, unsurprisingly, the towns where the most people carpool via digital platforms are those where the budget dedicated to subsidising carpoolers is the highest (Rouen and Montpellier, for example), a financial incentive on which the platforms are becoming structurally dependent. At one point, this subsidy even increased to $\in 5$ per passenger in the Pays de la Loire region and $\notin 6$ in the French Genevan region, at which point the local authorities had to quickly reduce the amount paid.

Finally, the National Carpooling Plan further strengthens the position of the platforms, by granting them a €120 bonus for each new carpooler who makes at least 10 journeys in the first three months, with the carpooler in turn receiving a welcome bonus of €100. This system, which finances the platforms more than the drivers $\frac{20}{20}$ while also forgetting about the passengers, has led some disillusioned transport operators to claim, off the record: "Daily carpooling? It's a lot of drivers, no passengers!" $\frac{21}{21}$

5. Despite support, the development of daily carpooling via digital platforms remains disappointing

Unlike the boom in long-distance carpooling a few years ago, short-distance daily carpooling is not taking off. Of course, the policies are relatively new and deployment was hampered by the Covid-19 lockdowns. But, according to economist Yves Crozet, it can also easily be explained by the weak financial benefits of carpooling compared to the loss of time it entails (detours and organisation) for relatively short journeys.

In 2022, society largely returned to normal after two years of mobility restrictions due to Covid-19, but despite local policies, the practice of carpooling remained marginal: 14,000 trips recorded per day on average, representing 0.013% of daily car trips $\frac{22}{2}$. In the first half of 2023, carpooling enjoyed a period of growth due to the implementation of the Carpooling Plan, and public transport strikes. The number of carpooling trips doubled to 27,000 per day, reaching record numbers in March $\frac{23}{2}$. That said, the overall importance of carpooling remained extremely low, especially when compared to the overall volume of journeys.

For example, in the urban area of Rouen, the "carpooling champion" according to digital platforms, even with fifteen times more carpooling trips than the national average in the first quarter of 2023, only 0.38% of local car trips were made using a digital platform $\frac{24}{2}$.

The ecological impact also remains low. In the first half of 2023, carpooling via digital platforms accounted for around 0.05% of the distances travelled by car for everyday trips and 0.18% for "home-work" commute $\frac{25}{25}$. It is hard to envisage structuring a low-carbon mobility system around carpooling alone.

6. Too few carpooling trips are being counted

As carpooling is one of the government's major priorities, the figures recorded in the Carpooling Proof Register $\frac{26}{26}$ are presented to the Prime Minister on a monthly basis, so that the evolution of carpooling practices via digital platforms can be monitored in real time and on a regional basis. Yet the value of these figures is limited. In the first half of 2023, trips that were carpooled via digital platforms represented just under 3% of all carpooled trips $\frac{27}{2}$! Self-organised carpooling is much more developed, but continues to pass under the radar.

Furthermore, there is no guarantee that carpoolers registered on digital platforms are new carpoolers. They could very well be people who previously carpooled without using the platforms but are now using them in order to benefit from the bonuses being offered. In addition, investigative journalists have uncovered instances of fraud and embezzlement, notably in Rouen $\frac{28}{100}$. It therefore seems inappropriate to consider trips made via digital platforms as a sufficient indicator to assess short-distance carpooling.

By 2027, the SGPE wants the total number of carpooling trips - including informal practices - to reach a total of 3 million every day, including 123,000 via platforms! The latter would still only represent one in twenty-five trips.

7. Informal carpooling, poorly supported by public policies

The SGPE is aiming for almost 2 million more informal carpools every day by 2027 $\frac{29}{29}$ (i.e. excluding platforms). To achieve this, three tools are being used

Notes

30 developing carpool parking areas, creating dedicated lanes, and allowing people to have their carpooling costs reimbursed (even for informal carpooling) through the Sustainable Mobility Package paid for by employers. However, given the current lack of regular surveys, it is impossible to assess the evolution of informal carpooling and therefore how such policies might influence practices. But what is certain is that each of these policies could be improved.

The development of carpool parking areas or dedicated carpool lanes needs improvement. Unfortunately, all too often the carpool parking areas can only be accessed

by car, which makes it hard to combine carpooling with alternative modes (cycling, walking, public transport) and thereby limits its contribution to the emergence of an alternative system to the private car. Dedicated carpool lanes aim to save carpoolers time and thus offset the extra costs they incur in having to coordinate the trip, either with a driver or with passengers. In practice, however, carpool lanes are not well respected

31 only 40% of vehicles using a reserved lane in Grenoble have more than one passenger $\frac{32}{32}$. Similar results were observed in Lyon.

Finally, although three years have passed since the Sustainable Mobility Package was introduced, only two out of five private employers offer it to their employees $\frac{33}{3}$, which greatly limits the scheme's potential impact on informal carpooling.

In total, the National Carpooling Plan, via the green fund, devotes less than a third of its budget to developing informal carpooling by helping local authorities to invest in infrastructure. Considering only this plan, and taking the SGPE's goals seriously, the State invests over 35 times more for a trip that is carpooled via a platform than for a trip that is carpooled in a self-organised way $\frac{34}{2}$.

To sum up, no data or public policy that we are aware of suggests that the SGPE's target for 2027 is realistic, even if we consider that the increase in carpooling via platforms brings in a large number of informal carpoolers, as drivers and passengers first meet through platforms before going on to self-organise their subsequent carpools.

8. An environmental policy with little socio-economic impact

Although the carpooling support policy implemented in 2019 is relatively inexpensive (no mass investment in new infrastructure; financial savings from fewer public transport lines), does it mean that it is ecologically efficient?

Without even taking into account the national "carpooling bonus," the cost per tonne of CO2 avoided thanks to carpooling is estimated at between €512 and €700 in Rouen, $\frac{35}{12}$ reaching €3,000 on the Plaine de l'Ain industrial zone and in the Grenoble metropolitan area - which is a long way from the €87 targeted by the Quinet report $\frac{36}{10}$ in 2020 (€250 in 2030)! By way of comparison, in a forecasting exercise, researcher Jean-Pierre Orfeuil estimates that the public cost per tonne of CO2 avoided for a complete national system of express coaches running daily at regular times, with feeder services to major cities (i.e. 800 lines, half from small towns, the other half from suburban areas) would amount to €445 $\frac{37}{10}$. Meanwhile, economist Yves Crozet estimates that the cost of transitioning the entire automobile fleet in France to electric motors would be around €425 $\frac{38}{100}$.

At current prices, public subsidies for carpooling are only justified if they remain marginal: if all new carpooling trips aimed at in the carpooling plan were subsidised as they are in Rouen, the annual cost would be ≤ 2 billion $\frac{39}{2}$. A sum that would certainly require tradeoffs to the detriment of other mobility solutions (public transport, cycling systems or a genuine walking policy).

Conclusion: What role will carpooling play in the mobility system of the future?

Public actors readily admit that the carpooling policy is still an ongoing process of invention: some say that "we're still experimenting," while others admit "it hasn't stabilised"... And while we believe that it is a rational and inexpensive way of improving the efficiency of the current car system, we can already see that the boom in daily carpooling that was hoped for thanks to incentives and digital platforms is not happening. As carpooling cannot provide the structure for a low-carbon mobility system in the future, we need to focus on three levers that need to be activated without delay: massively increasing public transport services across all regions, reducing vehicle weights and reducing daily distances travelled, helped in particular by a new land planning policy.

Recommendations for the daily short-distance carpooling policy:

At the national level, make carpooling practices visible and promote them, particularly off-platform:

- 1. Carry out an annual national survey of all carpooling practices in France, which is essential for assessing the policies that have been implemented.
- 2. Conduct a survey of trips that can actually be carpooled in order to assess the real potential for daily carpooling by type of territory. This would also be a useful exercise in the context of a national resilience strategy in preparation for an energy crisis.
- 3. Make the sustainable mobility package, which already covers informal carpooling, compulsory for all companies.

To create a mobility that is independent of private cars, plan for carpooling to be integrated into local mobility systems:

- 4. Make attractive rates for carpoolers compulsory in car parks, with controlled access during events and at major locations that generate traffic (shopping centres, cultural or leisure venues, etc.).
- 5. Make carpooling parking areas accessible on foot, by bicycle or public transport, and prioritise existing, well-served parking areas, such as supermarket car parks.
- 6. Provide financial and technical support to companies, associations and public authorities in their efforts to promote carpooling.
- 7. Offer subsidies to carpoolers only for trips that have been identified as being carpoolable and ecologically and socially beneficial, i.e. trips of at least 5 kilometres where there is no alternative public transport service.

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1 Mobile Lives Forum, La Fabrique Écologique, 2023

2 With 7 regional case studies: the metropolitan areas of Grenoble and Toulouse, the industrial park of Plaine de l'Ain, the metropolitan clusters of Geneva and Rouen, and the regions of Pays de la Loire and Brittany.

3 According to the 2019 Personal Mobility Survey (Enquête Mobilité des Personnes), every day on average 168 million local trips are made. According to the National Carpooling Plan, 900,000 journeys are carpooled every day. Carpooling therefore represents 0.5% of local trips.

4 According to the 2019 Personal Mobility Survey, 1,508 million kilometres are travelled every day for local trips. According to

ADEME(https://librairie.ademe.fr/cadic/2720/etude_nationale_covoiturage_courte_distanceleviers_action_et_benchmark.pdf), daily carpooling trips outside the family are on average 20km long. According to the National Carpooling Plan, 900,000 journeys are carpooled every day. 18 million km are therefore travelled every day in carpools. This represents 1.2% of all km travelled.

5 In the first half of 2023, according to the National Carpooling Observatory, there were 27,000 carpooling trips were made via platforms. According to the National Carpooling Plan, 900,000 journeys are carpooled every day. Journeys made via platforms therefore represent 3% of carpooling trips.

6 On average, in the first half of 2023, daily trips made via platforms were 24.6 km long. 27,265 trips are made every day over the same period. The number of kilometres driven was therefore 671,782km per day. According to the 2019 Personal Mobility Survey, 1,508 million km were travelled on a daily basis for daily short-term trips, all modes combined. The km travelled via a carpooling platform therefore represent only 0.04% of the total km travelled each day.

7 The €150 million allocated for the 2023 carpooling plan is not much when compared to the various investment plans that were announced at the beginning of the year for rail (€100 billion between now and 2040) or cycling (€400 million per year until 2027).

8 Aurélien Bigo. "Transport facing the challenge of the energy transition. Explorations between past and future, technology and sobriety, speeding up and slowing down." Economies et finances. Institut Polytechnique de Paris, 2020. https://www.theses.fr/2020IPPAX068

9 ADEME, National survey on short-distance carpooling; https://librairie.ademe.fr/mobilite-et-transport/2712-etude-nationale-sur-le-covoituragede-courte-distance.html

10 https://www.contexte.com/medias/pdf/medias-documents/2023/5/scan-10d31a763e3416412185d1c102d2492d75.pdf

11 ADEME (2021). "Transition(s) 2050. Choisir maintenant. Agir pour le climat" [Transition(s) 2050. Choose now. Acting for the climate]; https://librairie.ademe.fr/cadic/6531/transitions2050-rapport-compresse2.pdf

12 NegaWatt 2022 scenario, NegaWatt association, part 4: The scenario in detail. [online], URL: https://www.negawatt.org/IMG/pdf/scenario-negawatt-2022-rapportcomplet-partie4.pdf 13 The need for a break between family and work, the car as an extension of the home, the fear of others...

14 https://www.insee.fr/fr/statistiques/7622203

15 <u>Personal Mobility Survey</u>, 2019, Ministry of Ecological Transition

16 Journey times under 30 minutes at a travel speed of 20km/h.

17 Ademe and the National Daily Carpooling Observatory (beta.gouv.fr)

18 https://www.strategie.gouv.fr/publications/mobilites-espaces-peripheriques-denses-un-territoire-plus-accessible

19 Yet, these digital platforms are accessible in all regions.

20 With the exception of France Covoiturage, a platform set up by Ecov with the particular aim of challenging how some platforms appropriate financial aid.

21 <u>Carpooling - solo-driving - public transport: What are your preferences? In what context?</u> - YouTube

22 According to the 2019 Personal Mobility Survey, on average 106 million daily trips are made by car. In 2022, according to the National Carpooling Observatory, an average of 14,093 daily trips were made using carpooling platforms. They therefore represent 0.013% of daily trips made by car in 2022.

23 The number of trips fell to 26,000.

24 In the first quarter of 2023, an average of 3,643 trips made via digital platforms were recorded every day within the Rouen metropolitan area. According to the 2017 Household Travel Survey of the Rouen Metropolitan Area / CA Seine et Eure, residents of the metropolitan area make 941,000 car trips every day. 0.38% of the trips made by car each day are therefore carpooled via digital platforms.

25 According to the 2019 Personal Mobility Survey, an average of 1,256 million km are travelled every day by car for short-distance trips. 364 million km were travelled by car on a weekly basis for commutes between home and work. On average, according to the National Carpooling Observatory, in the first half of 2023, 27,265 daily trips were carpooled via platforms, with an average distance of 24.6 km, and an average of 0.67 million km were travelled each day using carpooling platforms. This represents 0.05% of all km travelled by car for local trips and is equivalent to 0.18 % of home-work commutes.

26 The Proof of Carpooling Register (Régistre de preuve de covoiturage, RPC) is a public service designed to make it easier and safer for mobility organising authorities and employers to implement measures encouraging short-distance carpooling. The Proof of Carpooling Register centralises carpooling trips reported by carpooling operators who have volunteered to work with the register.

27 In the first half of 2023, 27,000 carpooling trips were made via platforms, according to the National Carpooling Observatory. According to the National Carpooling Plan, 900,000 carpools are performed every day. Trips made via platforms therefore represent 3% of carpooling trips.

28 <u>Rouen. Fraud on the Klaxit carpooling app: isolated cases or a "massive"</u> <u>phenomenon?</u> | 76actu

29 The SGPE indicates that 900,000 trips were carpooled every day before the carpooling plan, and it aims for 3 million carpooled trips in 2027, which means an increase of 2.1 million, including 123,000 via platforms. This amounts to almost 2 million new daily carpools that will have to be informally organised.

30 To which we can add the referencing of carpool parking areas and territorial subsidies, as well as the development of dedicated communication.

31 No doubt due to the low number of offences recorded and fined.

- 32 Mobile Lives Forum, La Fabrique Écologique, 2023
- 33 Sustainable Mobility Package Barometer, Ademe, 2022

34 €100 million will be allocated in 2023 for intermediated carpooling, with a target of 110,000 additional trips per day in 2027 compared with 2022. €50 million will be allocated to informal carpooling in 2023, with a target of 2 million additional trips per day in 2027. If the 2023 scheme were reproduced until 2027 (500 million for intermediated carpooling and 250 million for informal carpooling), that would mean that €4,545 was invested for an additional intermediated trip per day and €125 for an additional self-organised trip per day. For each expected additional trip, the amount devoted to carpooling via a platform is 35 times greater than that devoted to non-intermediated carpooling.

35 Several hypotheses have been tested: each subsidised km costs the local authority €0.1 according to the local authority and €0.12 according to La Fabrique Écologique (taking operating costs into account). According to ADEME, in 2016, one kilometre driven by car was equivalent to 195g of CO2. According to Yves Crozet, today the figure is actually closer to 172.5g of CO2 per vehicle. This estimate does not take into account the detours made to pick up a passenger, which also emit CO2. The cost of avoiding one tonne of CO2 therefore varies between €512 and €696.

36 The value of climate action (strategie.gouv.fr)

37 <u>https://www.lafabriquedelacite.com/wp-content/uploads/2022/12/Lautocar-express-une-solution-pour-les-deplacements-longs-de-la-vie-quotidienne-JP-Orfeuil.pdf</u>

38 Based on a study conducted by the CGDD (General Commission for Sustainable Development) in 2016.

39 The cost of the subsidy per journey is €2.6 according to the metropolitan authority of Rouen. To finance 2.1 million new trips per day for a year would require an investment of approximately €2 billion.

Mobility

For the Mobile Lives Forum, mobility is understood as the process of how individuals travel across distances in order to deploy through time and space the activities that make up their lifestyles. These travel practices are embedded in socio-technical systems, produced by transport and communication industries and techniques, and by normative discourses on these practices, with considerable social, environmental and spatial impacts. <u>En savoir plus</u> x

Travel Speed

Speed of travel is the relationship between the traveled distance and the time it takes for an individual to travel it.

En savoir plus x

Associated Thematics :

Lifestyles

- <u>Alternative mobilities</u>
- Cars / motorcycles
- Living environments
- <u>Proximity</u>

Policies

- <u>Cars</u>
- <u>Ecological transition</u>
- <u>Cities & Territories</u>

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1 https://www.statistiques.developpement-durable.gouv.fr/resultats-detailles-de-lenquetemobilite-des-personnes-de-2019

2 https://observatoire.covoiturage.beta.gouv.fr/dashboard

3 https://www.youtube.com/watch?v=LX0vDkXOFWs&t=1s

4 https://actu.fr/normandie/rouen_76540/rouen-fraude-sur-l-appli-de-covoiturage-klaxitcas-isoles-ou-phenomene-massif_58472848.html

5 https://www.strategie.gouv.fr/sites/strategie.gouv.fr/files/atoms/files/fs-2019-rapport-la-valeur-de-laction-pour-le-climat_0.pdf

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7 http://forumviesmobiles.org

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9 http://fr.fvm.localhost/modal_forms/nojs/contact