Submission to: Commission on Travel Demand Shared Transport Inquiry

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Background:

40,000 people are dying each year in the UK due to air pollution.

In 2017 transport became the largest emitting sector of UK greenhouse gas emissions, overtaking the energy sector. Since 1990 transport has reduced emissions by just 2% since 1990 compared to the energy sector that has cut emissions by 60%.

> "To achieve emission reductions measures and policy instruments must also address the demand for transport in a serious way. Passenger transport continues to grow, particularly in aviation and cars. Increased car usage and a reduced number of passengers per car negate the improvements gained from improvements in vehicle efficiency.
>
> In addition to technological improvements, **polices to ensure better capacity utilisation within each mode may result in substantial additional reductions of emissions of CO2**."

EEA Term Report 2008

Emissions from transport (39%) are the biggest contributor to emissions in cities and the commute (24%) is the journey purpose with the highest emissions. 67% of commutes are made by car.

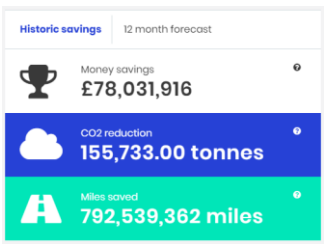
Solutions that make the car commute more efficient have the potential to make the most significant impact on reducing emissions. **There are 36 million empty car seats on the commute in the UK.**

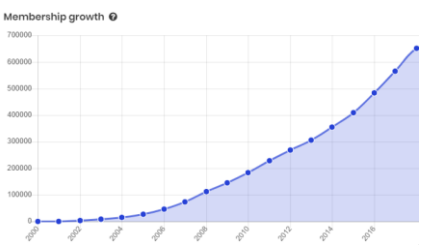
A car with 2 people in it is 100% more efficient than one with just a driver and yet 90% of cars on the commute do not have any passengers!

Liftshare are a multi award winning social enterprise, on a mission to help solve mobility problems through sharing. Founded 21 years ago by CEO Ali Clabburn, and operating from their offices in Norwich, Liftshare aim to make the world a better place by making travel simple, affordable, sustainable, shared and happy.

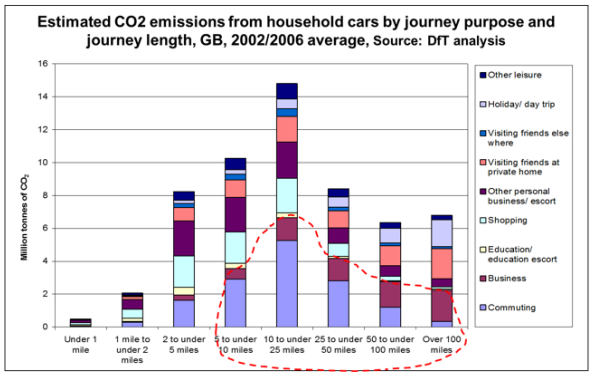
Liftshare do this by providing market leading services for workplaces that solve parking and recruitment problems as well as helping their employees to share their commutes and travel happy.

Liftshare also offer a free car-sharing platform, liftshare.com, to the public, matching members with others travelling in the same direction, whether these be regular commutes or one-off journeys. This results in significant transport cost savings for businesses and individuals alike, solves workplace parking issues and addresses transport poverty, all whilst easing congestion on the roads and making substantial CO2 and emissions savings.

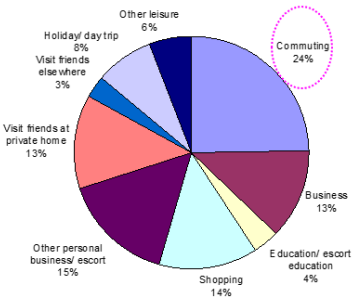




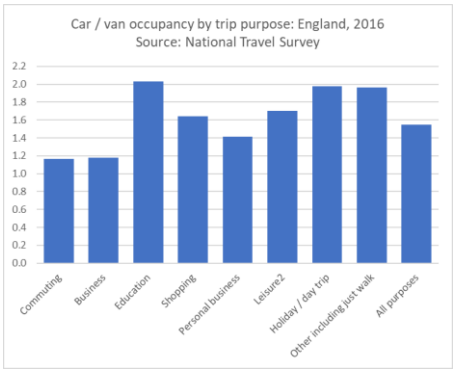
Headline Figures for car commuting:



http://www.dft.gov.uk/pgr/sustainable/analysis.pdf



Estimated CO2 emissions from all modes of passenger transport by journey purpose, GB, 2002/2006 average, *Source: DfT analysis*



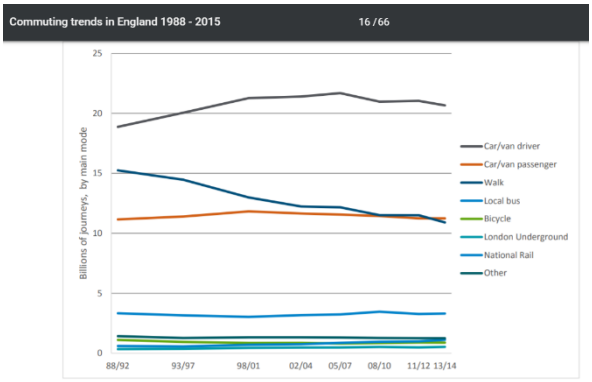


Figure 6 Annual number of journeys, by main mode. Source: Authors' analysis derived from National Travel Survey and ONS Population Estimates[19]

(2011 Census: Method of travel to work, England and Wales)

Place	Number of commuters	% commuters that drive	Number driving to work	Number of passengers	Ratio : drivers per passenger	Number of empty seats each moring (IF 4seats/car)	number of train passengers commuting
ENGLAND	15,200,440	**61%**	9,225,267	825,024	11	36,076,044	875,025
Greater Manchester (Met Co	716,039	**64%**	457,974	43,617	11	1,788,280	19,385
Leicester	74,867	**54%**	40,166	6,284	6	154,379	956
WEST MIDLANDS	1,492,677	**69%**	1,025,426	95,976	11	4,005,730	40,411
Norwich	36,661	**48%**	17,741	1,985	9	68,980	496
LONDON	3,664,433	**30%**	1,090,392	65,543	17	4,296,026	518,383
Richmond upon Thames	90,143	**36%**	32,401	1,385	23	128,221	21,878
Bristol, City of	144,916	**53%**	76,198	7,480	10	297,311	3,039

- 15 million people commute to work in England
- 10 million of these commuters travel by car to work
- 9.2 million drive to work
- 8.5 million drive alone to work
- 1.5 million lift share to work
    - 745,000 give a passenger/s a lift to work
    - 825,000 get a lift to work
- [For reference 875,000 commute by train, 1.25 million by bus/coach, and 1.75 million walk.]
- The average occupancy in cars on the commute is 1.167.
- On average in England there is just 1 car passenger for every 11 car drivers on the commute.
- There are 36 million empty car seats in commuting cars in England. (Assuming cars have 5 an average of seats each.)

The potential for sharing lifts on the commute to reduce car travel.

The table below shows the current situation based on the 2011 census and compares this to 4 scenarios. In each scenario the number of people who commute by car in England is assumed to remain constant at 10 million. The key things that change is the ratio of drivers to passengers in each car and the impact that has on the number of cars needed for commuting.

	Current situation	Scenario 1	% change	Scenario 2	% change	Scenario 3	% change	Scenario 4	% change
	2011 Census stats	'Maximum sharing'		'Possible in theory'		'Liftshare's 2025 goal'		'Realistic 2025 Gov goal'	
Car commuters	10,000,000	10,000,000	0%	10,000,000	0%	10,000,000	0%	10,000,000	0%
Car driving commuters	9,200,000	2,000,000	-78%	7,500,000	-18%	9,000,000	-2%	8,750,000	-5%
Car drive alone commuters	8,500,000	-	-100%	5,000,000	-41%	8,000,000	-6%	7,500,000	-12%
Car lift sharing commuters	1,500,000	10,000,000	567%	5,000,000	233%	2,000,000	33%	2,500,000	67%
Car lift sharing commuters - driving	720,000	2,000,000	178%	2,500,000	247%	1,000,000	39%	1,250,000	74%
Car lift sharing commuters - passengers	820,000	8,000,000	876%	2,500,000	205%	1,000,000	22%	1,250,000	52%
% of commuters sharing	15%	100%	567%	50%	233%	20%	33%	25%	67%
Average car occupancy on commute	1.09	5.00		1.33		1.11		1.14	
No. people in car when lift sharing	2.1	5		2		2		2	

Scenario 1: 'Maximum sharing'

If every commuting car carried 5 people to work then only 2 million cars would be needed. i.e. a 78% reduction from the current figure of 9.2 million commuting cars.

This level of sharing is clearly unlikely and there will be some commutes where the driver does not live near or drive past anyone on their route. [Liftshare's scoping work with employers shows that typically 90% of commuters would have a reasonable match to share their commute with]

Scenario 2: 'Possible in theory'

If half of commuters shared their car with one passenger this would reduce the number of commuting cars by 18%.

This scenario assumes that 50% of car commuters share their commute [based on the 2011 AA research stating that 51% of people would consider car sharing] and assumes that each driver would take 1 passenger on average.

Whilst this level of sharing is very unlikely to be achieved as a national average without any major changes to pricing or legislation, some employers (e.g. Wolseley & National Grid) have demonstrated that it is both possible and beneficial to get 40% of staff sharing their commutes. (see table below)

Scenario 3: 'Liftshare's 2025 Goal'

Liftshare currently work with 500 large UK employers that collectively employ around 1 million staff. The uptake of lift sharing across them does vary significantly but a successful scheme with the right resources, marketing and incentives would aim to get over 20% of their staff sharing.

Examples of Liftshare schemes:

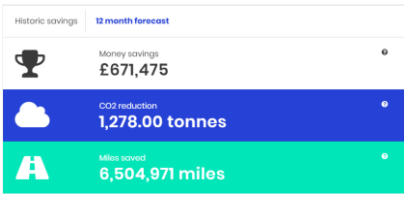
Client	Employees at location	Liftshare scheme members	Lift sharing on commute	% of staff lift sharing
Wolseley	360	231	145	40%
Centrica	899	846	358	40%
[Motor client]	2000	1425	750	37%
National Grid	2600	2511	1154	44%
DFID	630	406	219	34%
Tesco (Welwyn)	4000	2725	1375	34%
National (England)	15,000,000		1,500,000	10%

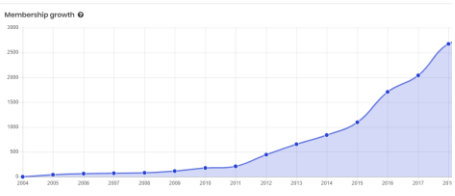
In 2019 Liftshare members will save 270 million car miles by sharing. Liftshare's Goal is to reach 500,000 members lift sharing to work by 2025. (a 10x increase on the 50,000 achieved in 2018). The team believe this will be possible through a combination of helping current clients to increase their average lift sharing numbers, and increasing the number of employers with Liftshare schemes.

National and local government policies that encourage employers to set up lift sharing services and/or that encouraged individuals to share their commute would significantly speed up the take up of sharing commuting journeys.

Case Study: Tesco

In 2005 Tesco launched a Liftshare scheme at their head office in Hertfordshire. Since the launch of the scheme 67% of their staff have joined the scheme and 34% currently share their regular journey.

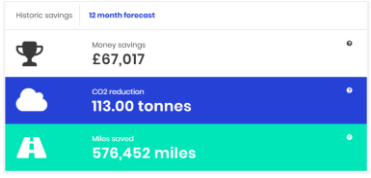


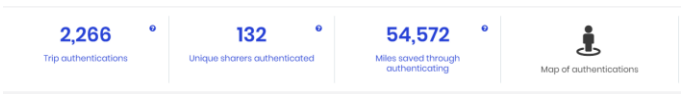


Tesco have reduced the number of cars driving to the site every day by 700. They have achieved this through a combination of having a branded Liftshare scheme restricted to staff, a very engaged car-share co-ordinator, reserved parking bays for sharers and incentives.

Case Study: Wolseley

In October 2018 Wolseley launched a Liftshare scheme at their Warwick Technology Park site. They have 360 employees. Through investing in the full suite of smart mobility solutions that Liftshare offer, ('Scoping' to initially analyse all the transport options available for each member of staff, setting up a Liftshare scheme, and implementing 'Smart Parking' to let the car parking team easily identify which cars shared to work that day) Wolseley save £100,000/year by not leasing 80 car parking spaces and their staff save £67,000/year in travel costs.





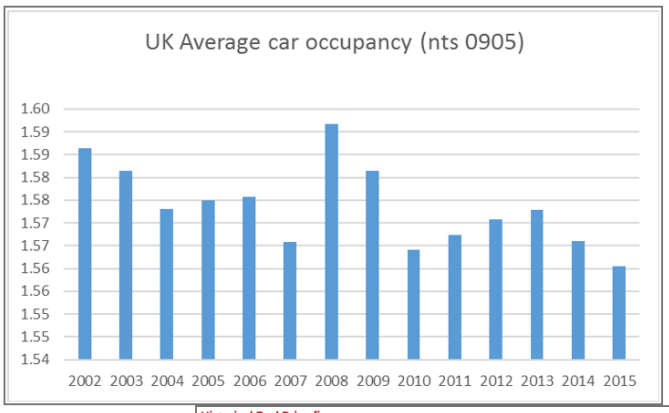
Scenario 4: 'Realistic Gov 2025 Goal'

The Government should aim, as a minimum, to increase average car occupancy on the commute from 1.09 to 1.14 by 2025. This would reduce the number of commuting cars by 5%, save 1.2 billion car miles and cut emissions of CO2 by 235,000 tonnes/year.

[N.B. The average commute distance for sharers on the Liftshare platform is 23 miles each way. This is significantly higher than the average car commute distance of 10 miles].

What impacts the number of people sharing cars?

1) Fuel prices



Historical Fuel Price figures

Here is a snap shot of average prices for a litre of unleaded petrol in the United Kingdom from January 2007 to date, which will give you an idea of how quickly and dramatically fuel prices can change:

Month	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
January	87.4	104.0	87.2	111.4	127.8	133.4	132.9	130.1	108.2	102.3	115.2

There is a correlation between fuel prices and car occupancy. E.g. When fuel prices went up quickly by 20% in 2007-2008, average car occupancy increased by 2.5% (Saving 18 billion car km). Increasing fuel duty would increase sharing numbers.

NB. EVs significantly reduce fuel costs/mile and therefore occupancy levels may decrease as EVs increase

2) Congestion charges

Table 1: Average vehicle occupancy (persons per vehicle) at a sample of entry/exit/internal points. Original central London charging zone, 2002-2005.

Vehicle type	Average occupancy 2002 (pre)	Average occupancy 2003 (post)	Average occupancy 2004 & 2005 (post)
INBOUND			
Car/minicabs	1.27	1.42	1.52
Vans	1.19	1.23	1.26
Lorries	1.26	1.17	1.39
Licensed taxis	0.81	0.67	0.81

When TfL introduced the congestion charge, car occupancy levels increased by 11% and then increased again when the price went up. The increase in lift sharing numbers was significant and similar to the increase in bus passengers.

As more cities across the UK look to introduce ULEZs, congestion charges, work place parking levies and road pricing, they should each have a strategy on how best to maximise the increase in car occupancy levels. Sharing journeys can really help all those people who have no option to travelling by car but struggle to pay any additional costs.

3) HOV lanes

e.g. The A647 Stanningley Road HOV lane, Leeds (1.5km, peak hour operation only): Average vehicle occupancy (AVO) before scheme (1998) 1.35, increased to 1.51 after three years of scheme operation (2002) – a 12% increase in AVO (KBR 2004).

NB: It is very likely that as AVs increase, the average car occupancy will decrease, especially during the rush hour, as some vehicles will have no occupants.

4) Parking charges and incentives for sharers

Finding somewhere to park your car is an essential part of a daily commute. By providing dedicated lift sharing spaces to employees, many employers have manged to significantly increase the number of people sharing cars to work, increasing the number of people/car/space. Some employers offer reduced parking charges for lift sharers and others have e.g. monthly prize draws.

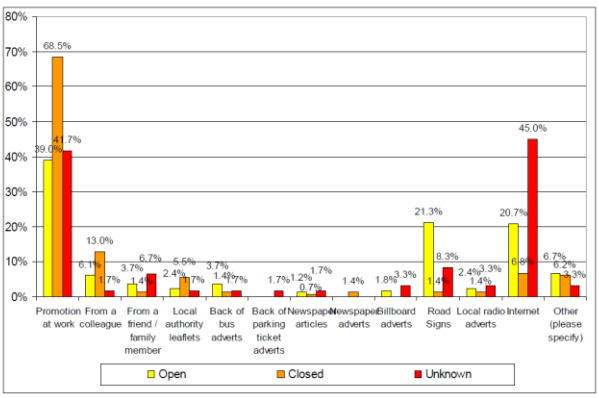
Employers can now use Liftshare's 'Smart Parking' app technology to help them identify who is sharing cars each day, to check people are parking correctly and to reward those who share. Cities could learn from employers and encourage more sharing by e.g. reserving car parking spaces in their own car parks for lift sharers.

5) A way to find matches

A common barrier to sharing is not knowing who you can share with. Finding a lift sharing companion can be done a number of ways. This can be done informally – through family and friends, or formally though a public 'open' service like Liftshare.com, or through an employer's own 'closed' Liftshare scheme – often located on their intranet.

In 2018 80% of new members on Liftshare had at least one good match (and an average of 10 good matches) for their commuting journey.

Figure 3-4: Method members became aware of formal schemes by scheme type



6) A reduction in other travel options

If the availability of other reasonable, affordable, convenient, travel options reduces - E.g. when local bus service are altered or cancelled, or trains go on strike, or a car breaks down, then people will often turn to sharing lifts.

7) Other important factors include:
   a. Senior management support for setting up a Liftshare scheme
   b. A skilled and resourced lift sharing co-ordinator
   c. Ensuring all drivers are made aware of the service and the benefits for them
   d. Changing legislation or taxation: e.g. banning diesel cars or introducing ULEZs
   e. Having more independent published research and evidence to show the impact of lift sharing and the return on investment compared to other options.

8) Who is sharing lifts to work and why/why not?

Liftshare members sharing their commute typically save £1,000, save 1 tonne of CO2, have a happier journey and are less stressed than when driving themselves. They can also benefit from reserved parking spaces at work and increased access to employement.

Figure 3-17: Main reasons for formal car sharing

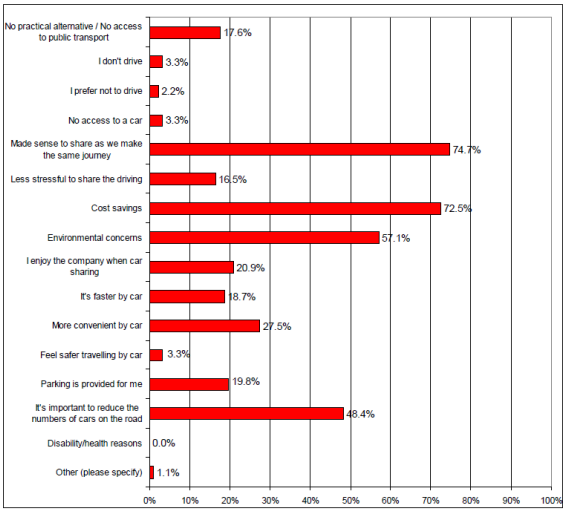
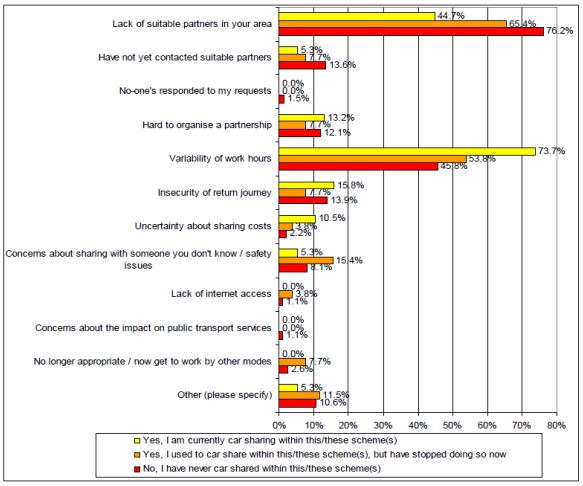
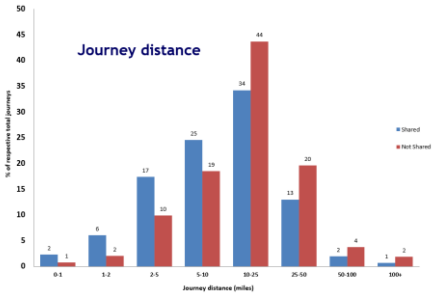
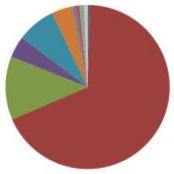


Figure 3-19: Main reasons that members do not formally car share more by type of scheme



How would the commute otherwise be made

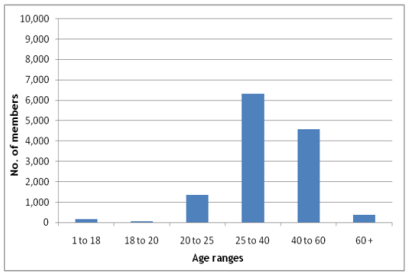


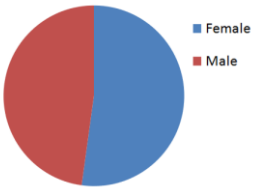


Previous mode on daily commutes

	Shared	
TOTAL	Number	% of total
Error	51	0
I would drive on my own	8225	68
I would drive with 1 or more passengers	1507	12
I would get a lift with someone	508	4
I would go by bus	922	8
I would go by train	513	4
I would cycle	68	1
I would walk	90	1
I would go by plane	28	0
N/A	0	0
I wouldn't go because I have no other options	54	0
I wouldn't go because the other options are too expensive	27	0
I wouldn't go because the other options would take too long	24	0
I would go by scooter or motorcycle	19	0
I would go by taxi	36	0
TOTAL	12072	100

74% previously travelled by car





What should be done?

- Fund a lift sharing demonstration town project/s to quickly provide evidence on what can be achieved and the impact on employers, individuals, congestion and pollution. (DfT have 'nearly' given the go ahead for funding a demonstration town on 4 separate occasions. It has been very frustrating that it has not happened, despite several cities including Norwich and Leeds being very keen to take part.)
- Review the 'car passenger allowance' for business trips. Increasing it from 5p to 20p would shift behaviours quickly.

Further essential reading:

2002 Motorist Forum DLTR 'Car share and Car Clubs' potential impact:

https://www.researchgate.net/publication/237364534_Car_Share_and_Car_Clubs_potential_impacts [Although 17 years old, this report highlights key recommendations that are still valid in 2019.]

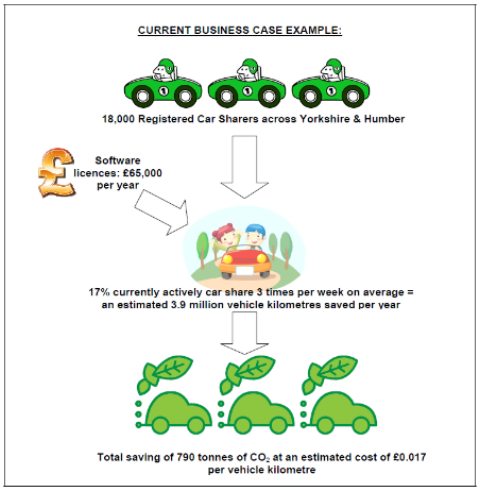
2005 'Making Car Clubs and Car Sharing Work' DfT

https://webarchive.nationalarchives.gov.uk/+/http:/www.dft.gov.uk/pgr/sustainable/cars/makingcarsharingmarch2005.pdf

2008 Sestran Car Share Guide

https://www.sestran.gov.uk/wp-content/uploads/2017/01/car-share-guide.pdf

2010 'Regional Rural Car Share Feasibility Study' ITP



This was one of the most detailed primary research activities undertaken into the sector.

Concluding: Car sharing already provides a valuable role within local rural communities, and is an essential element of the transport network for journeys to work…

The formal schemes … (at an estimated cost of £0.017 per vehicle kilometre reduced) making it a very effective mechanism for shifting behaviour away from single occupancy car use.

Authorities are recommended to 'clearly define an overall strategy for car sharing for the region to be delivered on a sub-regional and local basis.

2012 DAN CALVERLEY PhD : Cumulative emissions reduction in the UK passenger car sector through near-term interventions in technology and use

https://www.research.manchester.ac.uk/portal/files/54536294/FULL_TEXT.PDF

Smart Mobility Deloitte 2015 - Reducing congestion and fostering faster, greener, and cheaper transportation options

> "We estimate that almost 19 million commuters in US metro areas could switch from driving to ridesharing if current barriers to ridesharing were eliminated, resulting in a 27 percent overall modal share. This switch would have enormous societal benefits: **We project maximum potential savings from increased ridesharing at $30.3 billion annually**. These savings would accrue from several sources: $15.8 billion in direct annual savings to new carpoolers due to reduced vehicle upkeep, $11.6 billion in indirect savings from lowered congestion costs, and $1.8 billion in reduced annual road infrastructure costs. Furthermore, traffic-related accidents could fall by 22,915 annually (yielding $847 million annual savings), while carbon dioxide emissions would fall by 9.1 million metric tons annually—yielding societal savings of $338 million."

https://www2.deloitte.com/content/dam/insights/us/articles/smart-mobility-trends/DUP_1027_Smart-Mobility_MASTER1.pdf