

Decarbonizing transportation

We recognize the long-standing challenges faced by cities to provide more mobility options while bearing the considerable environmental consequences of transportation. All vehicles on the road—including those used by drivers on the Uber platform—contribute to emissions and congestion in cities. Rides taken with Uber remain a small fraction of total transportation—but as we grow, we want to help the rides we facilitate use public resources, especially roads and air, as efficiently as possible.

The current state of transportation is unsustainable. Resulting emissions, congestion, and other externalities create challenges for cities globally, and have done so for decades. Both the [Intergovernmental Panel on Climate Change \(IPCC\)](#) and [International Transport Forum \(ITF\)](#) report that transportation emissions have grown faster than any other end-use sector over the last 3 decades (see chart below). CO₂ emissions from the transportation sector account for [nearly one-quarter of the global total](#). Despite a recession-induced lull since 2007, over the last 50 years in the US, vehicle miles traveled (VMT) roughly doubled on a per-capita basis and nearly tripled in total ([State Smart Transportation Initiative](#)).

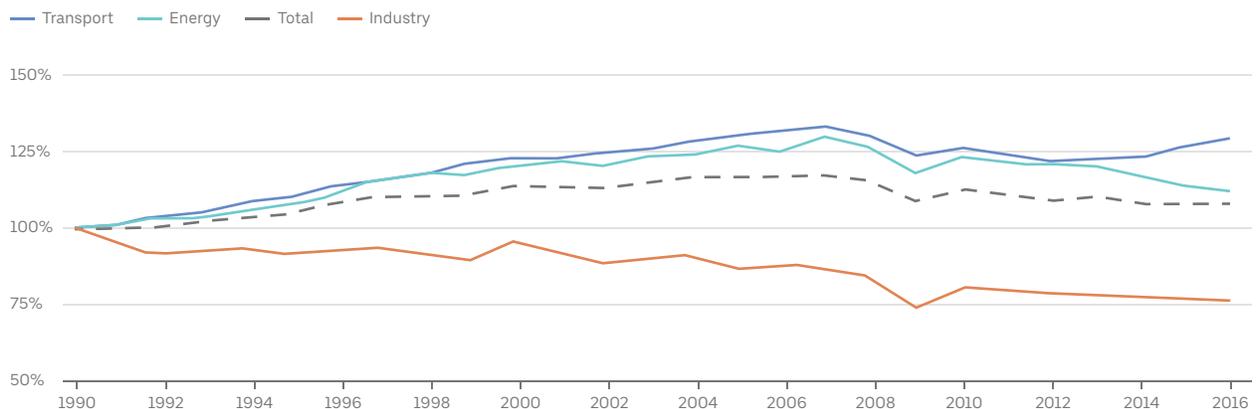
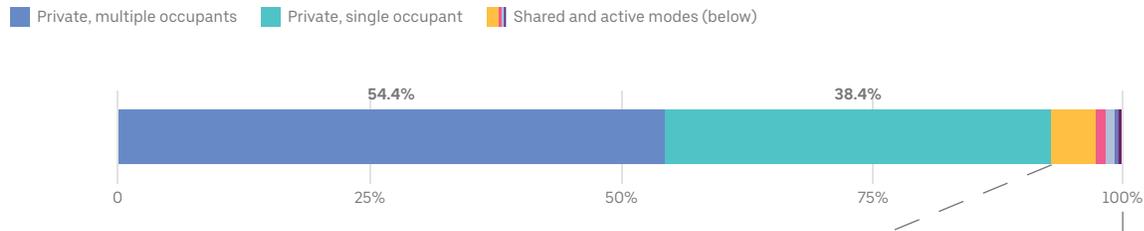


Figure: Relative growth in climate-related emissions by sector, from 1990 base year. ITF (2019). ITF Transport Outlook 2019, OECD Publishing, Paris, https://doi.org/10.1787/transp_outlook-en-2019-en.

The future economic growth of cities depends on a rapid transition to more sustainable modes of transportation. Experts expect demand for mobility (for people and goods) to [double](#) or [triple](#) by 2050. Current ambitions from governments and the private sector, even if fully realized, will fall short of 2°C scenario targets, according to the SBTi. A study of various scenarios by the IPCC shows that the sector will need to reduce emissions by at least 60% to align with societal climate goals such as the Paris Agreement. Over the next 3 decades, we need to find every way possible to move more people and things more efficiently and with only a fraction of today's climate impact.

Travel mode breakdown – personal car modes (distance-weighted)



Travel mode breakdown – shared and active modes (distance-weighted)

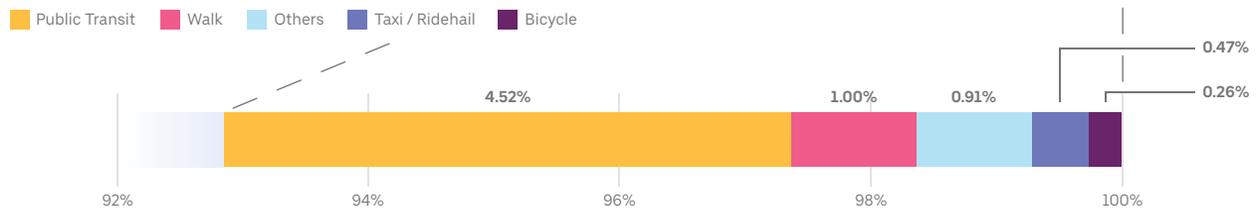
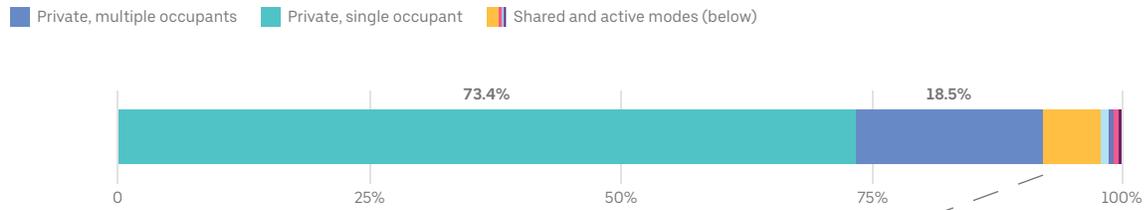


Figure: Ground passenger transportation data sourced from the US Department of Transportation, Federal Highway Administration. (2017). National Household Travel Survey, nhts.ornl.gov.

Under any scenario, the ability of cities to reach their climate goals in the transportation sector depends heavily on reducing reliance on fossil-fueled personal vehicles. Privately owned vehicles [consume about half of all transportation energy](#) globally. In the US, people move more than 92% of miles (for ground travel) by private car (see chart above). In particular, single-occupancy vehicle (driver-only) use by private car owners, among the least efficient modes of transportation, accounts for nearly 40% of all passenger miles. Americans rely on single-occupancy vehicles even more to get to and from work. As shown in the figure below, driving alone dominates the US commute, covering almost 3 of every 4 passenger miles. [Government reports](#) from even a decade ago demonstrate that single-occupancy vehicles have the highest (worst) carbon intensity compared to other mobility options.

Commuting travel mode breakdown – personal car modes (distance-weighted)



Commuting travel mode breakdown – shared and active modes (distance-weighted)

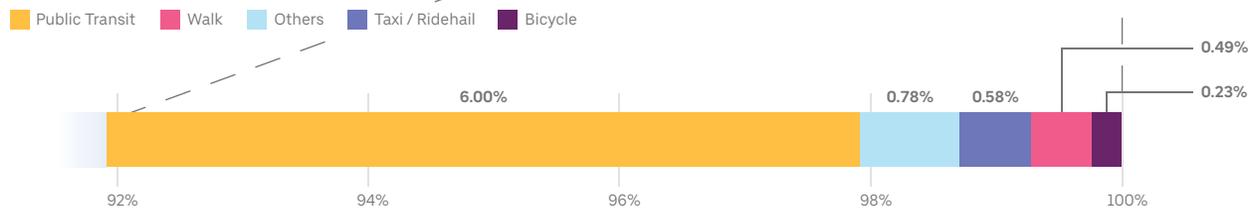


Figure: Ground passenger transportation data sourced from the US Department of Transportation, Federal Highway Administration. (2017). National Household Travel Survey, nhts.ornl.gov.

The number of trips taken with Uber remains relatively small compared to other modes of transport. The latest US government figures (see chart above; US Department of Transportation, Federal Highway Administration, 2017 National Household Travel Survey, nhts.ornl.gov) show that, on a distance-weighted basis, trips taken with taxi, Uber, and other rideshare app companies account for less than 0.5% of all passenger ground-transportation miles, and less than 0.6% of all commuter miles. These figures appear consistent with greenhouse gas emission estimates for rideshare. According to the [California Public Utilities Commission](#) (CPUC), rideshare trips account for about 0.54% of California's transportation-sector emissions.

Travel patterns can vary by geography, of course. The story can be different at the city level. According to a [study of ridesharing by Fehr & Peers](#), the share of total vehicle miles traveled from cars on our platform and Lyft's reach only to single digits or the low teens in the downtown areas of 6 major US cities.

On a trip-by-trip basis, the impact of a ride booked on the Uber app may seem similar to the impact of driving a personal car—or it may even seem worse, given the vehicle deadheading (moving empty, without passengers) that's necessary to provide on-demand, point-to-point service. For this reason, when calculating Uber's climate-related emissions impact, we conservatively include emissions resulting for all the vehicle miles we can record in the normal course of business, including those moved without passengers. This allows for a more robust comparison between rides enabled by our platform and rides taken in personal vehicles, both during single-occupancy and average-occupancy use.

We applaud the efforts of cities around the world aiming to do the improbable: move more people with much less impact.

Benchmarks for personally owned vehicles do not provide perfect points for comparison. For example, we use real-world Uber trip data to calculate our impact metrics, while only average approximations are available for personal vehicles. Furthermore, the utility of on-demand trips taken with Uber is very different from those taken in privately owned vehicles. On a trip with Uber, the rider does not need to consider issues such as parking, refueling, car maintenance, insurance, and more, as they do when taking a trip in their own car. However, we find estimated metrics from privately owned vehicle population averages useful for benchmarking our progress since personal car use remains the overwhelmingly preferred mode of transportation for American consumers, accounting for more than 92% of all passenger ground travel in the US.

We applaud the efforts of cities around the world aiming to do the improbable: move more people with much less impact. An assessment of ambitious climate action plans conducted by WRI shows that a number of major global cities aim to make significant cuts to transport emissions over the next 2 decades. Uber aims to develop technology solutions that can help cities achieve these goals.

City climate action plans – transportation

City	Plan	2025 GHG reduction targets	2050 GHG reduction targets	Components
Los Angeles	Green New Deal	25%	100%	50% share of trips walk/bike/transit/micro-mobility; reduce VMT/cap by 45%; 100% ZEVs
San Francisco	0-80-100 Plan	40%	100%	80% shift to non-auto trips; reduce solo car trips; 100% renewables
New York	OneNYC 2050	25%	-	Charging infrastructure, incentives for ZEV purchases, optimize curb space
London	Zero Carbon London	25%	100%	80% trips by walk/bike/transit; Battery EVs, Fuel Cell EVs
Paris	Towards a Carbon Neutral City	25%	100%	100% renewables, low emission zones, public spaces, "tranquil mobility," last-mile connectivity, freight, hydrogen era
Berlin	Climate-Neutral Berlin 2050	25%	100%	Personal car ownership down to 17% by 2050, parking management, eco-mobility

Figure: Developed by and used with permission from the World Resources Institute.