

Electric scooters: not so eco-friendly after all?

July 6 2019, by Catherine Hours



E-scooters touted as zero-carbon urban transport are flooding city streets worldwide, but just how green they are remains an open question

E-scooters touted as zero-carbon urban transport are flooding city streets worldwide, but just how green they are remains an open question.

The companies—from multinationals to local start-ups—distributing them insist the omnipresent two-wheel vehicles are a boon for the environment and a curb on [global warming](#).

"Bird was founded to help create a cleaner and more hospitable world that prioritises people over cars," the American firm, one of the global leaders in e-scooters, says on its website.

"Scooters cut the use of vehicles and reduce the volume of traffic on the road," it said. "They also help reduce pollution and improve air quality."

Shared scooters that do not require docking ports can be driven door-to-door, avoid stressful searches for parking spaces, and have zero-emission motors.

On paper, they have the potential to radically reduce urban car traffic: 70 percent of car trips between home and work in France, for example, are five kilometres (three miles) or less, according to the French National Institute for Statistics and Economic Research (INSEE).

"Micromobility could theoretically encompass all passenger trips of less than eight kilometres (5 miles), which account for as much as 50 to 60 percent of today's total passenger miles travelled in China, the European Union, and the United States," consulting firm McKinsey said in a report.

In the US, riders made nearly 40 million trips on shared scooters last year, according to the National Association of City Transportation Officials.

Lime, a major player financed by Uber and Google-parent Alphabet, found that roughly one in every three Lime rides in 26 cities around the world replaces a trip by car.

No long-term data

"From this shift, we estimate that our riders have avoided 15 million miles (24 km) of [car travel](#) and prevented 6,220 metric tons of carbon emissions" over a two-year period, the company noted.



A woman uses an electric scooter of the US company in Paris - but the short lifespan of the vehicles is proving a big issue

But do e-scooters live up to all the hype?

With regard to Lime's claims, a survey by research group 6t of 4,500

commuters in Paris, Lyon and Marseilles revealed that only 19 percent used scooters to go to work or school—more than 40 percent of usage was by out-of-town visitors.

Without access to e-scooters, 44 percent of respondents said they would have walked, 12 percent said they would have biked, and 30 percent would have used public transport.

Cars barely entered into the picture.

"But this doesn't mean that we should get rid of e-scooters—absolutely not!", said Jeremie Almosni, head of mobility at the Ademe, the French government agency for energy efficiency.

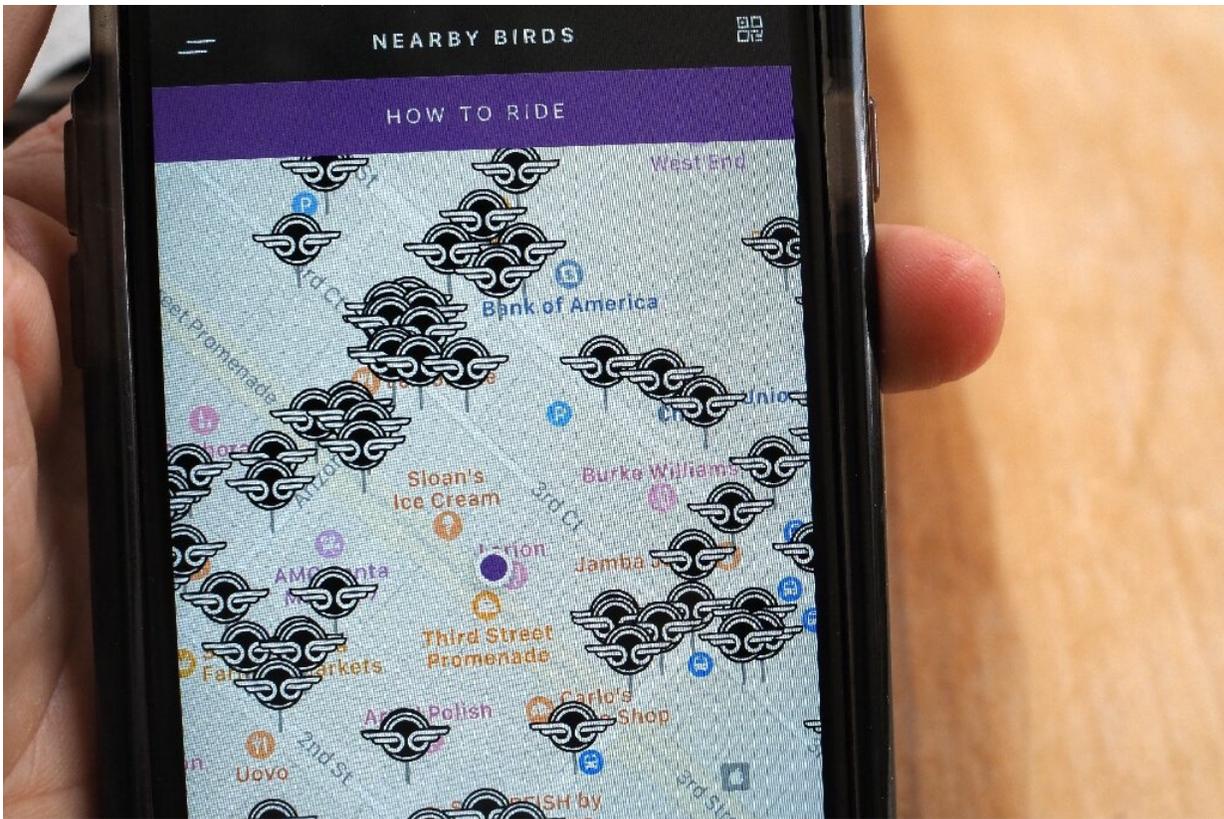
"The fact that half of usage is recreational is striking," he acknowledged. "But at least this favours a more mixed use of transport. It's definitely a way to get people out-and-about more, and perhaps a way of encouraging them to give up cars."

There is also a lot of uncertainty as to the lifespan of shared e-scooters, which varies with hardware and intensity of usage.

It's a key question, because how long they last is a major part of what determines [environmental impact](#).

"As of today, it is impossible to say whether [e-scooters](#) are good or bad for the environment because we lack long-term statistics on life cycles," said Denis Benita, a transportation engineer at Ademe.

One study from Louisville, Kentucky put the average life span at 28 days. Another said it was closer to three months.



Bird, whose Rider app shows available electric scooters in Santa Monica, California, bought competitor Scoot last month and says it is targeting longer life span and carbon neutrality

'We learned a lot'

Across what has already become a multi-billion dollar industry, companies are trying to make the machines more robust, and thus more profitable.

"An electric scooter lasts twice as long today as when we first came to France in June 2018," a Lime France spokesman told AFP.

The company also recycles the hardware—"every piece, down to the last

screw, is reused," according to the spokesman.

The learning curve has been equally sharp for Bird, said Kenneth Schlenker, head of Bird France.

"We've only been operating in cities for about a year and a half," he told AFP. "We've learned a lot in that time."

By consolidating parts from engines, for example, the company plans to expand their life span two years, he noted.

The company aims to make travel by Bird carbon neutral by reducing emissions and through carbon credits."

Batteries are another issue.

The electric scooter and motorcycle market—which could be worth \$14 billion by 2025, according to Markets & Research—has mostly shifted to [lithium-ion](#) (Li-ion) batteries, which are lighter and last longer than other kinds.

But lithium is not problem-free either: it poses an environmental risk related to both sourcing and waste.

Lime has recently partnered with a French company that claims it can recycle 70 percent of spent batteries.

© 2019 AFP

Citation: Electric scooters: not so eco-friendly after all? (2019, July 6) retrieved 20 September 2024 from <https://phys.org/news/2019-07-electric-scooters-eco-friendly.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private

study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.