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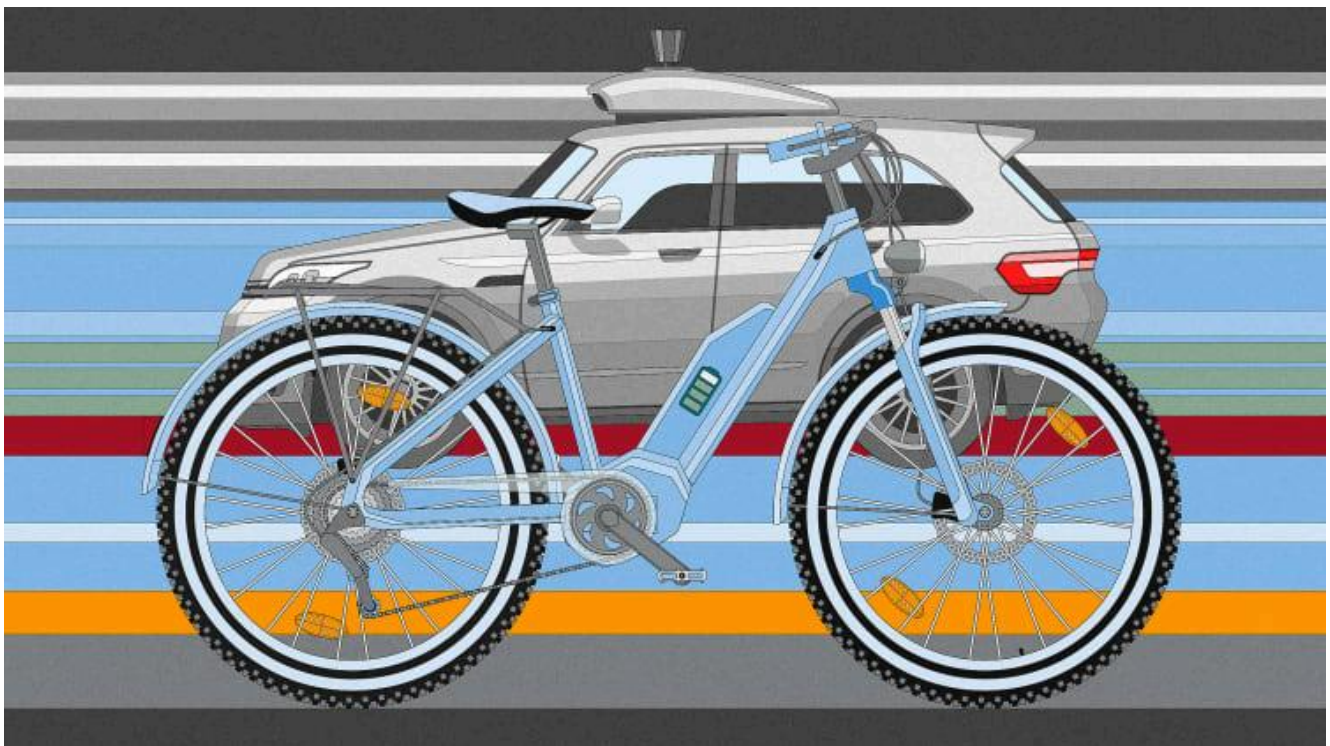
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## Why 2023 was the year of the e-bike and not the self-driving car

E-bikes and self-driving cars both entered the year with momentum. Only one maintained it.



BY **DAVID ZIPPER** 8 MINUTE READ

Eleven months ago, as calendars flipped to 2023, self-driving cars and e-bikes both had momentum on their side—especially in San Francisco. Fleets of robotaxis from Cruise and Waymo were whisking travelers along the city’s streets, while a growing number of bicyclists were using battery power to conquer its famous hills. “San Franciscans Are Buying E-Bikes Like Never Before,” declared a January **headline** in the local Streetsblog website.

What a difference a year makes. The self-driving car companies that once seemed ready to conquer San Francisco—followed by the rest of urban America—now face headwinds from impatient investors, skeptical residents, and wary regulators who have **suspended** Cruise’s driverless permit in California after a horrific crash (and an alleged coverup).

Compared to self-driving cars, and just about any other mobility mode, e-bikes have flourished in 2023, posting strong sales despite a slowdown in the overall bike industry. Many governments now provide a tailwind, with states and cities launching new rebate programs, **opening parks** to e-bike riders, and even establishing “**e-bike libraries**” where curious residents can try one out.

If 2023’s trendline continues, the humble e-bike, not the flashy self-driving car, will be poised to reconfigure American transportation.



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Until recently, the autonomous vehicle industry looked like a juggernaut. Cruise and Waymo were flush with cash from deep-pocketed corporate benefactors (General Motors and Alphabet, respectively), while states like Texas **enacted laws** to attract self-driving deployments. Rather than make AVs available for purchase, the companies focus their efforts on offering robotaxi services that could bring in revenue while allowing them to maintain control over their fleets.

Over the last year, Kyle Vogt, Cruise's chatty CEO, became a fixture in media coverage. During the summer, Vogt claimed that San Francisco **could handle 10 times more Cruise vehicles** than the roughly 300 that then plied city streets; a few weeks later, Cruise vowed to **expand** into numerous markets from Seattle to Miami. Waymo, meanwhile, began serving a broader area of San Francisco and **announced** new service in Austin.

Despite the self-driving bullishness, a few warning signs had been flashing. In October 2022, the **AV company Argo.ai folded** after receiving billions of investment dollars, leading some to wonder whether developing a fully autonomous car would require more money and patience than backers were prepared to offer. A handful of technical experts **cautioned** that AV operations on public roads had a long way to go before they were reliably safe, a concern **echoed by San Francisco officials** who highlighted a litany of incidents where self-driving cars mucked up traffic, blocked transit, or obstructed emergency response.



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## How Detroit's enduring automotive ingenuity legacy shapes the future of transportation

For a while, the self-driving companies could brush such critics aside. But as 2023 unfolded, they found themselves facing something unprecedented: A multipronged public campaign against them.

The trigger was a request from Waymo and Cruise that California regulators allow the companies to deploy unlimited robotaxis throughout San Francisco. Although the city had no official say in the matter, local police, fire, and transportation leaders **implored** the state to decline, citing safety concerns. They were joined by a new movement of Bay Area residents who worried not only that robotaxis were dangerous, but that they could **undermine efforts to replace car trips with transit, walking, and biking**. Activists created a viral social media video encouraging locals to **place a yellow cone** atop a robotaxi's hood, freezing it in place.

In August, Waymo and Cruise ultimately won that California regulatory battle, but only after mounting all-out PR and lobbying campaigns. Over the summer, a **Waymo editorial in the *San Francisco Chronicle*** and a **full-page newspaper ad from Cruise** made similar arguments: If people want to reduce crashes, they must welcome self-driving cars.

That safety argument, already **iffy at best**, imploded on October 2, when a hit-and-run driver struck a San Francisco pedestrian who landed beneath a Cruise robotaxi—which then dragged her 20 feet, potentially worsening her injuries. Later that month, the California Department of Motor Vehicles **suspended** Cruise's driverless permit, accusing executives of trying to conceal what had happened. A few

days later, the company **halted** driverless operations nationwide. Within a few weeks, Vogt **was out** as CEO.

Self-driving defenders have scrambled to **draw a bright line** between Cruise and other, potentially more safety-conscious AV companies. Nevertheless, skepticism of the entire industry is now ascendant. “When it comes to autonomous vehicles,” a former mayor of Mountain View, California (home to Waymo’s headquarters) **wrote** in the *San Francisco Chronicle* in October, “the challenges are many.” In November, Los Angeles Mayor Karen Bass **called on** California regulators to exercise caution deploying *any* robotaxi services in her city—regardless of the company providing them.

Looking ahead, high interest rates and **escalating automaker labor costs** suggest that longtime self-driving investors may grow wary of financing rapid expansions (GM has already **announced** a reduction in its investment in Cruise). For now, at least, moving fast and breaking things is out; expanding slowly and safely is in. Cruise’s new leaders have signaled that a relaunch will happen in just one city—**and not in San Francisco** (perhaps an acknowledgment that operating self-driving cars in a complex, multimodal place is harder than expected).

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Even if self-driving companies tighten their belts and solve their technology challenges, they have yet to address a fundamental question underlying the recent backlash from San Franciscans: Why should urban residents want these things in the first place? As I wrote [previously in \*Fast Company\*](#), if self-driving cars are able to scale, they will induce more car use and exacerbate traffic congestion and pollution. It remains unclear that a city full of autonomous vehicles would be better, not worse, for its inhabitants.

E-bikes raise no such existential concerns. On the contrary, [all signs indicate](#) that a city full of e-bikes would be safer, healthier, cleaner, and less congested than one dominated by cars—no matter how they are driven. And e-bikes really are car replacers: The addition of a battery can enable even mobility-constrained cyclists to conquer hills, haul packages, or beat the heat. Better yet, families can save tens of thousands of dollars by using an e-bike in lieu of a second or third car. And lest we forget: E-bikes are [fun](#).

With new models flying off the shelves, e-bikes are [outselling](#) electric cars in the United States (and also [offsetting](#) more gasoline use worldwide). Although 2023 sales numbers aren't yet available, Ash Lovell, the electric bicycle policy director at industry group People for Bikes, told me that “e-bikes have remained the fastest growing category across the bike industry this year,” with sales of e-cargo bikes—designed to transport children or cargo—showing particular strength.

Many government officials have been praising e-bikes' societal benefits for a while. This year, their encouraging words were increasingly backed by supportive policies.

Following Denver's **wildly popular offer of e-bike vouchers worth hundreds of dollars**, a parade of cities created their own e-bike programs in 2023, including **Boulder**, the **District of Columbia**, and **Pasadena**. States have done so as well, including **Colorado**, **Connecticut**, and **Hawaii**. "The state and local incentives have been an incredibly important driver for e-bikes becoming more popular," said Lovell. As an added bonus, the new e-bikers could add their voices to those of local residents **calling for safer biking infrastructure** that can further expand the ranks of e-bikers.

Public-sector support for e-bikes now frequently extends beyond rebates. San Francisco, for instance, **launched** a pilot program to encourage delivery workers to transport goods using an e-bike instead of a car. In October, Austin **announced** that all pedal bikes in its bikeshare system will be replaced with e-bikes next year. Meanwhile, e-bike libraries are popping up from **California** to **Vermont**.

All of that being said, 2023 wasn't without challenges for e-bike believers. VanMoof, a venture-backed Dutch company offering luxury models, went **bankrupt**, freaking out owners who **feared** being locked out of the company's bespoke app, which provided access to their bike controls. More ominously, a **series of fires** in New York City were linked to electric two-wheelers (the vast majority of the incidents were traced either to under-the-radar e-bike repair shops or cut-rate, imported models used by delivery workers). Although the fire risk of a store-bought e-bike is negligible, a few skittish property managers like **Fordham University** banned e-bikes from their premises. Encouragingly, efforts are now underway to help deliveritas **replace unsafe electric models** and to ensure that all two-wheelers sold in the U.S. **meet fire safety standards**.

Will 2024 bring a course correction, with self-driving cars reclaiming lost momentum while the popularity of e-bikes crests? It's possible, but I suspect the fortunes of these two transportation technologies will diverge further. The reason is simple: E-bikes have proven use cases, and self-driving cars do not.

At some point in the far-off future, self-driving vehicles might be available for purchase, but for now, the only way to take an autonomous car trip is through a robotaxi. And if you look past robotaxis' state-of-the-art sensors and computer systems, the service they provide is virtually indistinguishable from the ride-hail trips that are already universally available throughout the U.S. Case in point: Uber and Waymo recently **unveiled** an integration in Phoenix that lets local Uber users request a Waymo robotaxi instead of an Uber X or Uber Black. A new variation on the standard ride-hail trip may be innovative, but it's not a mobility breakthrough (nor is it one we should celebrate, based on how ridehail has already **increased driving and undermined transit**).

E-bikes, on the other hand, provide an unprecedented mobility cocktail of affordability, healthfulness, convenience, and fun. As their strong sales demonstrate, a growing number of Americans recognize their value. In contrast to the regulatory pushback against robotaxis, enthusiastic public-sector support has encouraged e-bike adoption.

Of course, 2023 is just one year; perhaps in 2024 self-driving cars will rise, phoenix-like, to conquer urban neighborhoods, while e-bikes turn out to be a passing fad. But if I were a gambling man, events of the last year would lead me to wager that e-bikes, not self-driving cars, will be the vehicles that revolutionize how Americans travel.



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