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BUSINESS

# This electric flying taxi has been approved for takeoff — sort of

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By Rachel Treisman





Joby Aviation has gotten FAA permission to begin test-flying its first production prototype aircraft.

*(c) Joby Aero Inc.*

Electric air taxis got one step closer to liftoff this week, when federal regulators gave one company the green light to start flight testing its new production prototype.

California-based transportation company Joby Aviation announced Wednesday that the Federal Aviation Administration had granted its aircraft a "Special Airworthiness Certificate," which allows it to operate in U.S. airspace with certain restrictions.

The FAA confirmed in an email to NPR that it had issued the certificate "for research and development purposes" on June 21. It said it had also granted one to a similar vehicle made by another company, Archer, the week before.

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 **TECHNOLOGY**  
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This is actually the third Joby aircraft to get this certification, the FAA confirmed. The company has been building and flying pre-production prototypes thousands of miles since 2017.

But this time around is significant, because it's the first of its factory-built vehicles to be approved for test flights. Until now, Bloomberg explains, the company could only demo a prototype made by hand — as opposed to the ones now coming off its production line.

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**For The Climate And Fairness, Take Buses And Sidewalks Before Electric Cars**

 For The  
Climate  
And  
Fairness,  
Take Buses  
And  
Sidewalks  
Before  
Electric Cars

Joby aims to begin commercial passenger operations in the U.S. in 2025, pending FAA certification. It has partnered with Delta Air Lines to deliver a "transformational, sustainable home-to-airport transportation service" for fliers, set to roll out first in New York and Los Angeles.

That means customers in those cities would be able to reserve a seat for air taxi trips to and from the airports when booking Delta flights, the companies say.

An animation on Joby's website shows one such journey, from a heliport in downtown Manhattan to John F. Kennedy International Airport, completed in seven minutes (as opposed to 49 minutes by car).

Beyond airport trips, Joby advertises its air taxis as "an aerial rideshare service" that customers can book through an app, as an alternative to ground transportation — at least in some ways.

"Flying with us might feel more like getting into an SUV than boarding a plane," its website says.

But, as safety regulators and urban planning experts told NPR, there's a lot that needs to happen before then — and many accessibility and sustainability questions to address along the way.

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1923

HISTORY

**Here's what 2023 has in store, as predicted by experts in 1923**

## What exactly is a flying taxi?

These Jetson-esque contraptions are technically known as eVTOL aircraft, which stands for "electric vertical take-off and landing."

Joby says theirs is designed to carry four passengers and one pilot at speeds of up to 200 miles per hour, and can travel up to 150 miles on a single charge.

The company says it will be significantly quieter than helicopters — and more affordable, too.

Joby founder and CEO JoeBen Bevirt told the *Washington Post* in 2021 the company hopes to begin services at an average price of around \$3 per mile — comparable to that of an taxi or Uber — and eventually move that down to below \$1 per mile.

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## BUSINESS

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Transcript

"Our goal is to actually be competitive with the cost of ground transportation, but to deliver you to your destination ... five times faster and with a dramatically better experience," Bevirt told Bloomberg TV on Wednesday.

Many eVTOL companies are working closely with automakers to make their products a reality (which *Flying Magazine* attributes to automakers' interest in electrification and manufacturing expertise).

In Joby's case, that partner — and its largest external shareholder — is Toyota. Toyota has invested some \$400 million in the company since 2020, and collaborated on the design of its production line and the manufacturing of the aircraft itself.

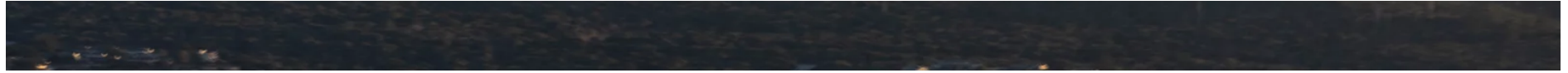
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It's A Bird!  
It's A  
Plane! It's  
A... FLYING  
TAXI?! **It's A Bird! It's A Plane! It's A...FLYING TAXI?!**



Dozens of its engineers work with the Joby team in California, and the two signed a long-term agreement in April for Toyota to supply key parts for the aircraft's production.





The company aims to begin commercial passenger operations in the U.S. in 2025, and already has a partnership with Delta Air Lines.

*(c) Joby Aero, Inc.*

## What happens next?

On Wednesday, Joby unveiled the first aircraft to come off its pilot production line in Marina, Calif., in front of a crowd of employees and guests including California Gov. Gavin Newsom.


"Today's achievement is the culmination of years of investment in our processes and technology and it marks a major step on our journey to scaled production," Bevirt said in a statement.

Despite this week's major milestones, Bevirt says the company is still in the "crawl phase" of its journey.

The pilot manufacturing line currently has the potential to build just "a few tens of aircraft per year," according to Bevirt. He says Joby is working with states to select a site for the first phase of manufacturing, where it can increase that number to hundreds.

And before the air taxis will be available for airport rideshares, they're going to the U.S. military.

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 Chinese  
Tesla  
competitor  
unveils  
plans for  
flying car

TECHNOLOGY  
**Chinese Tesla competitor unveils plans for flying car**

Several are headed to Edwards Air Force Base in California next year as part of Joby's \$131 million contract with the U.S. Air Force. They will be used to "demonstrate a range of potential logistics use cases, including cargo and passenger transportation."

## Regulators — and competitors — are laying the groundwork

The FAA says it's steadily preparing for air taxi travel to become a reality — at least, at some point.

In May, the agency released an updated blueprint for airspace and procedure changes to accommodate this type of aircraft. Earlier this month, it proposed a comprehensive rule for training and certifying pilots.



Reframing  
Your  
Commute

PLANET MONEY

### Reframing Your Commute

And it says it will be releasing an implementation plan next month that shows how all of its efforts can help the industry scale safely.

"Safety will dictate the certification timeline, but we could see air taxis in the skies by 2024 or 2025," the FAA said.

While Joby appears to be towards the front of the pack, it's competing with dozens of companies.

Another frontrunner, Archer, said earlier this month that it — and its partner, automaker Stellantis — are pivoting from the "concept" to "execution" phase, with its Georgia-based manufacturing facility set to come online by mid-2024.



This small  
city  
ditched its  
buses. Its  
public Uber-  
like service  
has been a  
big hit

NATIONAL

### This small city ditched its buses. Its public Uber-like service has been a big hit

And companies in other countries, including Germany and China, are also working on similar vehicles.

Europe could see flying taxis taking off relatively soon: French officials are hoping to offer a small fleet of them to people attending the Paris Olympics next summer.


## Who gets to fly first?

Joby bills itself as providing a "faster, cleaner, and smarter way to carry people through their lives," with "a green alternative to driving that's bookable at the touch of an app."

But, experts say, that doesn't necessarily mean this kind of transportation is going to be available to just anyone who wants to spend less time in rush hour traffic.

It's a great innovation for those with means, says Daniel Sperling, the founding chair of the Policy Institute for Energy, Environment, and Economy at the University of California, Davis.

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 When it comes to cars, there is no housing crisis (just an existential one)

MAIN CHARACTER OF THE DAY

**When it comes to cars, there is no housing crisis (just an existential one)**

But, he writes in an email, the industry faces challenges, from noise to NIMBY concerns. There's also the optics, he says: "Rich people flying above the rest of us normal folks."

Because this type of transportation will likely mainly be provided by private sector companies, there are concerns that it will exclude low-income people, says Petra Hurtado, the director of research and foresight at the American Planning Association.

"Unless there will be funding mechanisms to make this an affordable option to all, integrating it into existing transit systems, I don't think it will be accessible to all," she tells NPR over email, adding that local governments may not have a say in how they operate because the skies are regulated by the FAA.

Hurtado also points out that while air taxis are being billed as sustainable, that depends on how they're being used.

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The  
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Complexion  
For  
Protection.  
How Race  
Shaped  
America's  
Roadways  
And Cities

"If it replaces the person who would be driving or taking a taxi, it might generate less [greenhouse gas] emissions for that one trip, but how many air taxis would we need to replace the majority of cars in one particular route?" she added. "I wouldn't want to see a sky crowded with air taxis."

In an ideal world, Hurtado says, air taxis would fill existing gaps in urban transportation systems rather than create new ones. She'd also like to see cities take a more proactive approach to transportation planning in general, and learn from past mistakes.

That would mean, for example, considering the negative impacts not only of where air taxis land and take off, but along their route as well.

"Too often in the past have transportation projects impacted marginalized communities and disadvantaged populations," she wrote, pointing to highways as an example. "I hope these mistakes won't be repeated with this type of transportation system."

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