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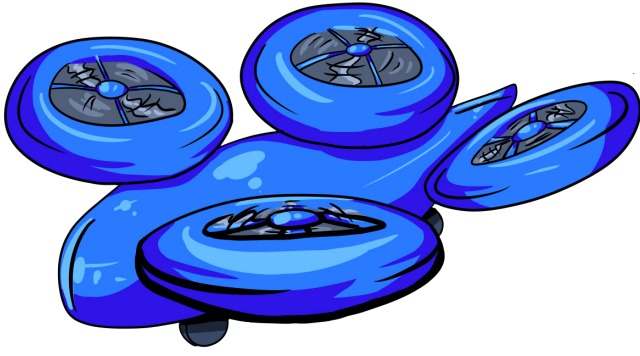
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Japan's flying car prototype paves the way for a new and exciting future for the transportation of humans and goods across considerable distances. Drawing by Eva Dickenson.

Japan's Flying Car

by Behram Dossabhoy, Computer Science Junior

Flying cars are no longer a figment of inventors' imaginations like they were in the 1950s. Japanese electronics company NEC, formerly Nippon Electric Company, has been able to design, manufacture, and assemble one of the world's first flying cars in the span of a year. In August 2019, in Abiko, Japan, NEC tested their first "flying car" prototype, which resembled a drone with four propellers. Powered by a battery, the approximately 330-pound, 13-foot-long car hovered about 10 feet above the ground for one minute.

What defines a flying car? A flying car is a driverless, electric, or hybrid-electric aircraft, that can touch down and take off vertically. This is often called eVTOL for "electric vertical takeoff and landing."

What was the goal of this project? The Japanese government wanted to showcase the country as a leader in flying cars, especially after missing the opportunity to take advantage of ride-hailing services, such as Uber and Lyft, and of the now-booming electric car industry. In addition, the close collaboration between the Japanese government and the private sector is said to push Japan to the top of the flying car industry. Japan also houses a small, yet passionate, flying car community which is adamant that Japan has the resources and expertise it needs to nurture the flying car industry on a global scale. A specialized fund, called the Drone Fund, devoted to the investment of autonomous, flying aircraft, has already been created by venture capitalists in the country.

Japan plans to start shipping goods by flying cars around 2023, and by the 2030s, to start letting people ride in them for short distances in densely populated cities to help alleviate the problem of traffic jams. Kouji Okada, one of the project's leaders at NEC, said, "We are positioning ourselves as an enabler for air mobility, providing location data and building communications infrastructure for flying cars."

Another company, Cartivator, has agreed to partner with NEC to start mass producing the flying car in 2026. Along with NEC, more than 80 other companies such as Toyota and Panasonic also sponsor Cartivator. However, other countries like the United Arab Emirates and Singapore, and even companies such as Uber and Boeing, are in a competition to produce a better flying car. Cartivator already has an advantage, though – the Japanese government has granted them a permit for outdoor flights.

What is the point of these flying cars? Compared to helicopters, flying cars are cleaner, quieter, easier to maintain, and do not require a trained pilot. Furthermore, there is less need for on-the-ground infrastructure for these vehicles. In addition, companies are touting that flying cars will be useful in disaster relief efforts.

But with advantages, there are some hurdles. A flying car needs to be able to safely hold a number of passengers along with its own weight for some length of time. Battery life will also be an issue. Also, government regulations will pose an obstacle to overcome with these contraptions. For a vehicle that's about 330 pounds, 13 feet long, 12 feet wide, and 4 feet tall, it will be quite difficult to meet what will be strict standards.

The future that many dreamed of in the 1900s will soon be upon us. With technology constantly improving day-to-day, a safe, efficient, quiet flying car is not far from us – the 2030s are just a decade away.

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