

NEW THINK

THE **AMAZING!** IDEAS THAT SHAPE OUR WORLD

EDITED BY JULIE COE

LOFTY ASPIRATIONS

OFF TO A FLYING START

Is Terrafugia's Transition Roadable Aircraft the wave of the future—or just pie in the sky? BY ERIC BUTTERMAN

Terrafugia founders Anna Mracek Dietrich and Cari Dietrich with the company's Transition Roadable Aircraft, a hybrid car-plane debuting this year



What's worse; being stuck in bumper-to-bumper traffic, or an interminable airport security line? In our modern world of convenience, transportation is one area that retains its capacity for aggravation. Debuting this year, the Transition Roadable Aircraft, a plane with foldable wings that converts into a car—or is it the other way around?—may someday change that. Created by Massachusetts company Terrafugia, it's the brainchild of Carl Dietrich, an aerospace engineer with a Ph.D. from MIT. He and his colleagues have been working on the Transition since 2006; by late 2008 they had built a prototype, and this past fall they moved into their initial production facility. Though the idea of a flying car might inspire jokes about the Jetsons, it's worth considering what travel might look like if Dietrich's invention really takes off.

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Fad or Functional?

Despite its science-fiction associations, the Transition is all about practicality. Airport delays and bad weather are no longer an issue: Pilots can just fold up their wings and drive. Baggage claim and rental cars become things of the past. Parking at home means no hangar costs, which can run \$6,000 a year or higher.

But the Transition's success will be predicated partially on whether getting a pilot's license can become as routine as getting a driver's license. And maintaining this kind of vehicle is more complicated than going for a regular car tune-up. The Federal Aviation Administration normally has no jurisdiction over cars, but it will

regulate the Transition. The usual oil-change place just won't get the job done: As of now, only Terrafugia and the manufacturer of the craft's Rotax 912ULS engine are authorized to provide service and repairs, at locations that will be determined closer to the Transition's debut.

Environmental Impact

In the long run, more Transitions in the air could also mean less road traffic. And according to Joseph Vaughan, an engineering professor at Washington State University who studies atmospheric pollutant transport, that could be better for air quality. Carbon monoxide disperses better at higher altitudes because there's

more wind. Still, a plane emits roughly twice the CO₂ of a car, so it isn't exactly carbon-neutral.

The Daily Commute

Dietrich is quick to caution that the Transition won't have everyone literally flying to work anytime soon. "We're rolling it out slowly," he says. But 40 years from now, will we look back at this as the start of a revolution? "Possibly," he says. Still, traffic jams in the sky are a long way off. "There would need to be a ton of these kinds of aircraft in the air before congestion would ever be a factor," Dietrich says. "It's amazing to even think of that."

Aircrafts begin at \$200,000, including a \$10,000 deposit; terrafugia.com.

GOING PLACES

Faced with the inadequacy of our own two feet, humans have been dreaming up ways to travel faster and farther since the dawn of time. Some of these, starting with the wheel, have proved to be remarkably effective, while others—Leonardo da Vinci's stunning sketches of human wings come to mind—never quite got off the ground. Here's a look at what may, or may not, get us around in the future.

HIGH-SPEED TRAINS

Compared to Europe, Japan and China, the United States is woefully behind when it comes to high-speed rail. The Obama administration has allotted \$8 billion for developing new tracks, focusing on California and Florida, but that's not even a quarter of what would be needed for the West Coast line alone.

DRIVERLESS CARS

Google has outfitted seven Priuses and an Audi with sensors that enable them to drive themselves. So far they've logged 140,000 miles, even on San Francisco's curvy Lombard Street, without incident. At last year's Shanghai Expo, GM unveiled its EN-V, a fully automated two-person concept car that the company hopes to make a reality by 2030.

JET PACKS

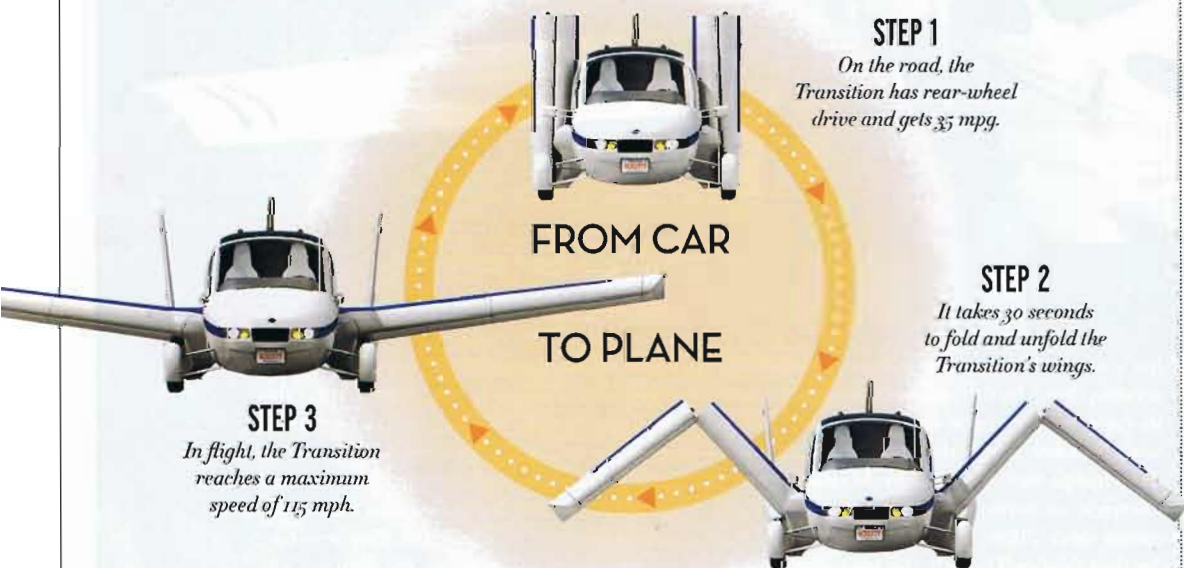
In 2008 Yves Rossy, a former Swiss air force pilot, flew himself across the English Channel using a jet pack of his own invention. New Zealand-based company Martin plans to start trial runs of its own version this year. But perhaps more plausible is NASA's Puffin, a prototype for an enclosed single-person flying machine that's part jet pack, part helicopter.

COMMERCIAL SPACESHIPS

Richard Branson's Virgin Galactic has been taking \$20,000 deposits for its space flights since 2005. The Norman Foster-designed Spaceport America is currently under construction in New Mexico, 51 miles northeast of Las Cruces, but no date has been set for the Galactic's first run.

CYCLING MONORAIL

New Zealand company Shweeb is developing a concept that would have us all pedaling to work on recumbent bicycles, each encased in an individual pod attached to a network of suspended monorails. Traveling at speeds of 12 mph would require less energy than walking. It may sound farfetched, but Google recently invested \$1 million in the project.



FACT! To accommodate the weight of car-safety features like air bags, the FAA allowed the Transition an extra 110 pounds over the takeoff maximum.