WHAT THE FUTURE HOLDS

THE FUTURE OF TRANSPORTATION

FROM ELECTRIC CARS TO JET PACKS

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Words in bold are in the glossary.

INTRODUCTION

CHANGES IN TRANSPORTATION

How might transportation look in the years to come? People have made many bold predictions. Some were not quite right. In 1958, *Popular Science* magazine predicted people might soon be able to fly using jet packs. But human-powered individual flight has never become reliable or popular. Jet packs have remained loud, heavy, and very expensive.

Other predictions have been closer to the truth. In the 1930s, some people said self-driving cars would be in use by the 1960s. The timeline was wrong, but fully self-driving cars do exist today. They're not legal to use on public streets, though. Another prediction came from the 1962 television cartoon *The Jetsons*. The show was set in 2062. Characters moved from one room to another inside vacuum tubes. This is similar to an up-and-coming mode of transportation called Hyperloop.

Many exciting advances in transportation technology may lie just ahead. From flying taxis to high-speed trains, change could happen fast.

A young man demonstrates a Gravity Industries jet pack in Basingstoke, UK, in 2019.

FUTURES STUDIES

Historians study the past. Futurists study the future. How can you study what hasn't happened yet? Futurists analyze what is happening today. They think about issues that might come up in the future. Using social science and imagination, they create different scenarios, or stories, of what the future could be like.

Some futurists have ideas of what the future of transportation could look like. They look at all aspects of **transit**. They try to figure out how to get people more quickly from place to place. For example, what kinds of transit could avoid traffic? Futurists also look at safer modes of transportation. They study nonpolluting methods of transportation and look at what technology is currently being developed. Futures studies is a growing field. In the coming years, futurists may help travelers find the most efficient ways to move around the world.

In the future, people may travel in Hyperloop capsules. With this system, capsules would move at high speeds inside special tubes.

CHAPTER 1

WHAT IS JUST AHEAD?

SELF-DRIVING CARS

Self-driving cars will likely be important in future transportation. This idea isn't new. The 1939 World's Fair featured an exhibit on self-driving technology. It showed **autonomous** driving in cities of the future.

Most people haven't used totally self-driving cars. But some self-driving features are common in today's vehicles. Adaptive cruise control can adjust a car's speed based on the speed of the cars in front of it. The automatic parking feature tells a driver if a parking space is big enough for the car. It may also automatically steer the car into that spot.

In the future, cars may become fully autonomous. Google has tested its self-driving cars on public roads in several states, including Arizona, Nevada, and California since 2012. Other companies, such as Uber, are testing self-driving cars too.

Google tests self-driving cars in parking lots, such as this one in Mountain View, California.

HOW SELF-DRIVING CARS WORK

Human drivers use their brains to operate cars. But self-driving cars have computer "brains." These computers process information from many sources, including cameras, lasers, radar, and more. Most self-driving cars send out laser beams in all directions. Doing this lets the car map out what's around it. Then the car can tell whether a car, a bicycle, a building, or another object is nearby. This information helps a car's computer figure out when to speed up, brake, and change lanes.