## BY ANDREW FOERSTER

n the morning of December 17, 1903, near Kitty Hawk, N.C., years of hard work paid off for Orville and Wilbur Wright. The two bicycle makers from Dayton, Ohio, successfully flew a heavier-than-air machine for the first time in history. Their invention would change the way people travel and conduct business.

From the first time they saw a flying contraption - a toy given to them by their father during childhood – the Wright brothers were obsessed with flight. However, it wasn't until 1896 that they started feeding their obsession, prompted by the death of famous gliderdeveloper Otto Lilienthal in a crash.

In 1899, Wilbur wrote to the Smithsonian Institution in Washington, D.C., requesting materials so that he could "avail [himself] of all that is already known [about flight]." The brothers then started building and testing kites and gliders. In the process, they developed flight control techniques and other technologies that formed the basis of aeronautical engineering.

They chose Kitty Hawk to test their powered glider because of its constant winds and wide beaches. After a number of unsuccessful attempts in 1903, they successfully lifted off the ground on December 17 and did so four times that morning. The first flight lasted 12 seconds and covered 120 feet; the fourth lasted 59 seconds and spanned 852 feet.

The Wright brothers made significant progress in the following years. In 1905, they created an airplane that allowed Wilbur to fly 24.5 miles in 39 minutes. Four years later, they founded

the Wright Company to continue their work. Today, the ancestor of this company - New Jersey-based Curtiss-Wright Corporation - produces aerospace products from several plants, including two in North Carolina.

Orville and Wilbur knew that their first successful flight was significant. But they - and society as a whole probably didn't foresee all the economic benefits that aviation would yield.

Early airplanes carried few people and traveled only short distances, making extensive passenger service unrealistic. The first regularly scheduled passenger flights didn't occur until 1914, and that service lasted only three months. The Benoist Company operated an airboat that transported the pilot and one passenger between Tampa and St. Petersburg, Fla., in 23 minutes. A one-way ticket cost \$5, which was cheap enough for businessmen who wanted to avoid the two-hour ferry ride across Tampa Bay or the six-hour train trip around it.

By the 1930s, Americans were flying coast to coast, but airplane engines consumed so much fuel that planes had to stop several times to refill. As a result, air travel was still time-consuming and expensive for passengers.

The development of the jet plane in the 1950s made commercial aviation a much stronger business. Jets could travel faster, better accommodate passengers, and go farther without having to refuel. These factors helped lower the cost of flying.

In subsequent decades, air travel has improved business communication executives can fly almost anywhere to

meet with clients or to oversee facilities - and enabled vacationers to go practically wherever they want. The Bureau of Transportation Statistics (BTS) reports that over 595 million passengers boarded planes in the United States during 2001.

Airplanes also have facilitated the rapid transport of goods over long distances. Airlines dedicated exclusively to cargo service emerged after World War II and are a crucial part of today's economy. According to the BTS, approximately 15 billion ton-miles of cargo were shipped on airlines in 2000.

Today, planes support our integrated, "just-in-time" global economy. Businesses know they can get goods quickly and cheaply from a distributor, so they can maintain smaller inventories. Likewise, customers can order products from other states or countries, giving them more selection and creating competition between firms.

Air transportation also has indirectly fueled regional economic growth. The advent of jet planes in the 1950s led to the construction of airports away from cities, since their loud engines proved annoying. In many cases, the new airports prompted businesses to locate nearby, generating a small hub of economic activity.

It is impossible to directly discern how much economic growth over the past century has been a result of manned flight. But there is little doubt that air travel has had a huge effect on the way we do business and communicate. And it all started a century ago with two brothers from Dayton making a mere 120-foot flight. RF