

You are Right to Admire the Wright Brothers ! © Kevin Maloney 2024

You may be wondering “What have they done for me lately?” And the answer to that question is LOTS! It might seem odd to think that these aviation pioneers have done anything to touch your life, but the answer is that through a chain of events starting on December 17th, 1903, the brothers have touched the lives of every person on earth now and in those 120 intervening years. History tells us that on that day in 1903 the brothers flew an engine powered airplane, The Wright Flyer, four miles in Kitty Hawk, North Carolina. The flight was significant because the airplane was heavier than air, self-propelled, and had directional control in three axes of space. It went forward, left and right and up and down. The combination of these controls meant that flight could now be controlled by man. When we look back at that now, what looked to be a simple invention would come to be one of the most important advances in mankind and would touch every person on earth.

To appreciate the courage, dedication and ingenuity of Orville and Wilbur Wright you need to understand that they worked diligently to test and refine flight control systems, propeller design and optimization, balance weight with power, and create stable flight skills to pilot the plane. They used their own money, experiences in printing and bicycle building, and their high school educations. In today’s world we see innovations in space and aircraft flight by companies or countries that employ tens of thousands of people, deploy billions of dollars, and have legions of engineers. These humble brothers have, with great will and ingenuity, changed the world in ways completely unforeseen by them in the early twentieth century. The ability to control flight in three dimensions is the innovation that has spawned millions of new innovations, billions of flights, hundreds of billions of travellers, and hundreds of trillions of dollars of business.



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We look at how the world has changed in the 120 years since the first controlled flight to see that there are so many ways which the Wright Brothers have touched our lives today. In the early days of aviation, the airplane was used for freight, personal transportation, exhibition, and had military applications.. In the intervening years aviation has become a critical means of personal transportation, freight, recreation, scientific discovery, aerial data collection, and military supremacy. The first and second world wars brought air forces from around the world to realize that “those that control the sky control the war”. Transcontinental and Transatlantic transportation were forever changed by the airplane. The freight industry has grown exponentially to use air travel for moving high value products and perishable products quickly and in a safe and climate-controlled environment. The manufacture of aircraft, the infrastructure to support the airline industry, the vacation industry, business travel, travel by sports teams and the list goes on.

The airline industry which caters to personal air travel for pleasure, vacations, business, and family gatherings are founded on the basic principles of controlled flight pioneered by The Wright Brothers. People can travel great distances in short periods of time. This has happened in the last 80 years and has really grown since the jet age became popular in the last fifty years. The ability to board an airplane and cross an ocean or a continent in hours has changed the world. There are industries and cities which would not exist without the ability to travel by jet airplane. Think of the resort industry. People in cold northern climates hop on an airplane in the morning and can relax poolside by the afternoon in a tropical paradise. There are thousands of hotels, resorts, and vacation homes in far off destinations because of the efficiency of air travel. The cruise industry owes its existence to air travel as well. Without quick and cost-effective air travel, people would not be able to reach the cruise departure ports for ocean or river cruises. Then there are destination cities such as Las Vegas. A few decades ago, it was but a dusty desert town, and now it's an extravagant city of lights, entertainment, gaming, and culinary indulgence. For the business traveler, air travel has made meeting customers or clients a reality. This has enabled businesses to source and trade in goods around the world. It has enabled deals to be made to bring new goods to new markets. Football, basketball, hockey, baseball and soccer would never be able to have intense schedules in such diverse locations without air travel. Do you like the state of professional sports today? If you do, thank air travel.

In the entertainment industry, live shows have become the main source of income for many musical performers. Football fans were treated to a Cinderella Story this year in 2024, when The Belle of The Ball was able to perform in Japan, and then fly back to Las Vegas to watch the Superbowl live, where her Prince Charming was catching passes on the way to the Championship. Even Football Fans can appreciate a good love story, and it's all possible because of air travel. Of Course we mean Taylor Swift and Travis Kelce.

There are industries which would not exist if they could not ship their products by air freight. Because of the nature of some highly perishable foods, air freight is the only way to transport these goods to customers and markets in far away lands. In the north

Atlantic Ocean, examples are fisheries that catch and sell BlueFin Tuna and Lobster. The BlueFin Tuna is highly prized in Japan, and lobster has become popular in many Asian countries, and fresh sources would not be possible without air freight. Very high valued items like computer chips, cell phones, and medicine ships by air. High value fashion items which have limited seasons for sale ship by air. These industries would not exist or would exist on a much smaller scale than what they do today without air freight.

Scientific discovery has been aided by air travel in so many different ways, we can only begin to scratch the surface of what has become possible with aircraft-based research. High altitude photography has enabled us to map many regions, many weather events, and geological events such as volcanoes erupting. Aircraft have allowed us to map and better understand glacial accretion and recession, sea ice, atmospheric composition, and characteristics. There are planes which fly over oceans mapping icebergs, to make marine travel safer, so that we don't have another event like the Titanic. Brave meteorologists fly in the Eye of a Hurricane to measure wind speed and barometric pressure to help understand and plan for extreme weather events.

The actual infrastructure which is required to run a modern-day airport is quite staggering when you look at the systems required to service the air traveller and air freight. The actual airports where you see terminals, line ups, security, customs, restaurants, stores, washrooms, waiting areas, departure lounges, arrivals and baggage pick up are only a small part of the total infrastructure. There are road networks, highways, bridges, trains, subways, buses, taxis, and trucks that are needed to bring people and goods to airports. There is infrastructure which we don't see such as radar installations, runways, tarmac, control towers, freight terminals, food and beverage service for inflight meals, aircraft refueling and maintenance, and hangers to park airplanes. There is a huge world of interconnected services which are required to provide timely and reliable service to the flying public.

The actual design and building of aircraft are an enormous undertaking requiring hundreds of thousands of people. The modern aircraft is composed of 3 to 6 million parts. The 747-8 has more than 6 million parts! There are companies which specialize in manufacturing these components. The exacting nature of the assembly dictates precise manufacture, checking and rechecking parts, testing, sub-assembly, and building the final aircraft designed to fly billions of passenger miles in safety, comfort, and efficiency. There are regulatory bodies to ensure aircraft are built exactly right, and operators are exacting professionals. The FAA and other regulators have exhaustively studied accidents and incidents to make improvements to machines, procedures, and human factors so that now air travel is the safest, fastest, and most economical means of travel.

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What lessons can we take from this ? We need to look at innovations that we see today, and some which have been around for years. These innovations are not just a single event, but they are a seed for exponential growth. Every seed can produce fruit which contains hundreds of more seeds and those hundreds of seeds can become tens of thousands. There are new ideas, innovations, new tools, new forms of entertainment, new means of developing energy, new sports, new media and new medicine all around us. We need to look for these and find ways to use them to advance our lives and our businesses. There are ways to use the new ideas to make new complementary products, to provide new and better services to their customers and clients. Every innovation can sprout many new industries, expand services, create new infrastructure, or enhance security. Leaders need to constantly look for these opportunities. People need to take chances on finding new applications, develop new products from the original seeds of a single innovation and grow a farm load of new produce. Try new things, accept and learn from your failures, but be confident that new ideas will sprout wealth and make for a better world. Be bold and build that better world in every way that you can. Challenge yourself to be part of it. We are providing a new Guaranteed Unique Number Set which has applications in education, cognitive enhancement, gaming, fun games, research, quality control and user interface security applications. We are looking for new uses, applications, and partnerships, and we ask you how can you be part of this coming innovation?



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