In the early days of aviation airports were nothing more than a simple grass field from which airplanes could take off. These days there are airports that are enormous in size, and fulfil many more functions than simply allowing aircraft to take-off and land. The airport has shown a remarkable evolution.

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THE RISE OF THE AIRPORT

Airports as we know them have risen after the First World War. Before that, airports were nothing more than grass fields allowing spectators to watch the first airplanes to take-off and land. The first air shows could also be viewed from the fields. During World War 1 the armies in Europe developed air fields to allow the first fighter planes to have faster and better take-off and landing possibilities. After the war ended, commercial airlines began to share their airfields and they started to build more facilities for the passengers, where previously only hangars were present. At Le Bourget for instance, the first building dedicated to commercial aviation, later known as the terminal, was built. In those days it was called an air station. The terminals much resembled a train station. Le Bourget was one of the earliest airports. Another one was located in Croydon, near London, which opened in 1920. The site was previously used by the RAF and the National Aircraft Factory. Croydon served as the new kind of airport of London, as well as the customs port of the country. Its terminal was built in 1926 and became the largest of that time. Croydon also hosted the first control tower which was compared to the bridge on a ship or the traffic office of a railway station.

Airports began to arise all over the Western world, not just in Europe, but also in the United States. The first networks arrived, that went as far as up to Australia. To fly this far airfields had to be built en-route, since the range of aircrafts used in these times was still very limited. Germany was the country that in the thirties promoted civil aviation the most. Important politicians, like Hitler, used the airport as a stage. The airports began to expand. The airport in Berlin, Tempelhof (see figure 1), became a symbol of the Nazi expansion. During the Second World War civil aviation was of course very limited, and the airports were mainly used for military purposes. It did however provide a large boost to the world of aviation. The aircraft itself was developed at a much faster pace, as well as some important navigation measures. This resulted in a strong boost for civil aviation after the war, the construction of Heathrow airport symbolizes this. The larger and heavier aircraft required better runways, and the concrete runway was introduced. In the 1950s the jet aircraft was developed. The jet aircraft allowed for faster, higher and further flights than before. Important models
were the Comet 4 and the Boeing 707. It was a revolution for civil aviation. In 1954 the first transatlantic jet flight was flown from London to New York.

**THE MODERN AIRPORT**

Until this time flying was always for the rich. Prices dropped a bit in the sixties, but it was with the coming of the Jumbo that flying became a possibility for the normal family. This big aircraft, introduced in the seventies, allowed much more passengers on board than what was previously possible, and this allowed the prices of flight to drop. It changed the way and the cost of travel. The price drop created a large growth in air traffic. Charter flights were introduced. More and more people took holidays using the airplane. This required airports to grow a lot as well. The limitations on airports like Heathrow became visible, which had a problem with its amount of runways. Another important problem of the airport arrived: the noise. The Jumbo made a lot of noise, and people living around the airport protested more and more against the growing air traffic.

Then in 1974 something happened to air traffic that hadn’t happened ever before, the traffic dropped by millions of passengers. The main reasons for this drop were the economic crisis and the rising oil prices, causing some airports to shut down and plans for new airports in for instance Britain were cancelled. A bomb explosion at Heathrow Airport made things even worse, as it indicated that the lives of the passengers were really in the hands of the security at the airports.

Security in 1970 was simply not present, people could just walk in and out as they liked. The security grew in the years after that. Also because the first planes were being hijacked in those times. They were hijacked and landed in the desert, where the hijackers demanded the release of prisoners. Nobody died in those incidents, but it had a great influence on the feeling that people had about aviation. The US airports lead the way in the growth of security, where X-rays and metal detectors were introduced. The amount of hijacks dropped, so the increase in security proved to work. Another major jump in the security level of the airport was caused by the 9-11 incident. It massively increased all security measures up to a point where we are beginning to wonder whether the freedom of flight comes at a bit too much of a price.

Another major change in the aviation industry that made the modern airport what it is, is the rise of the budget airlines. After the government in England redeveloped Stansted Airport the first budget airlines began to operate from this airfield. The budget airlines, like Ryanair, offering tickets for much lower prices on short distance flights opened up the world of aviation to a larger public. This development increased the total size of air traffic largely, and it imposed different requirements on airports.

The modern airport serves as much more than just a runway with a control tower and a terminal. It is a centre and symbol of international connections and business. The airport also serves as a large job employer for the cities around an airport. The airport can be seen as a giant city in its own right.

**THE FUTURE OF THE AIRPORT**

The remarkable evolution of the airport continues. The air traffic will continue to grow and now that the world is more and more focussing on environmental impact the requirements for airports will change. Not just from a CO₂ perspective, but for noise as well. Will new airports arise that provide less noise problems as compared to for instance Schiphol has around Amsterdam? Time will tell. Larger aircraft, like the Airbus A380, impose different requirements on the runway as compared to the other new aircraft style like that of the Boeing 787. Integration will always remain a key function of the airport. Aircraft, luggage and people all have to be at the right place at the right time.

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**References**

BBC: The Secret Life of the Airport


**Aviation Department**

The Aviation Department of the Society of Aerospace Engineering Students ‘Leonardo da Vinci’ fulfills the needs of aviation enthusiasts by organizing activities, like lectures and excursions in the Netherlands and abroad.