

Is there a future for Berlin's Tempelhof airport?

Tempelhof airport is one of the last inner-city airports left in the world. Located only four kilometres from the Bundestag, this monumental airport is on the nomination to be closed by the Berlin city council and by the Berlin Airport Authority (BAA). Tempelhof airport is one of three airports in Berlin, apart from Tegel and Schönefeld. The construction of the new main airport of Berlin, Berlin Brandenburg International (BBI), will replace the three existing airports. The question is: can one airport handle the whole capacity of the Berlin metropolis.

By Olaf van Tol and Bart Steverink

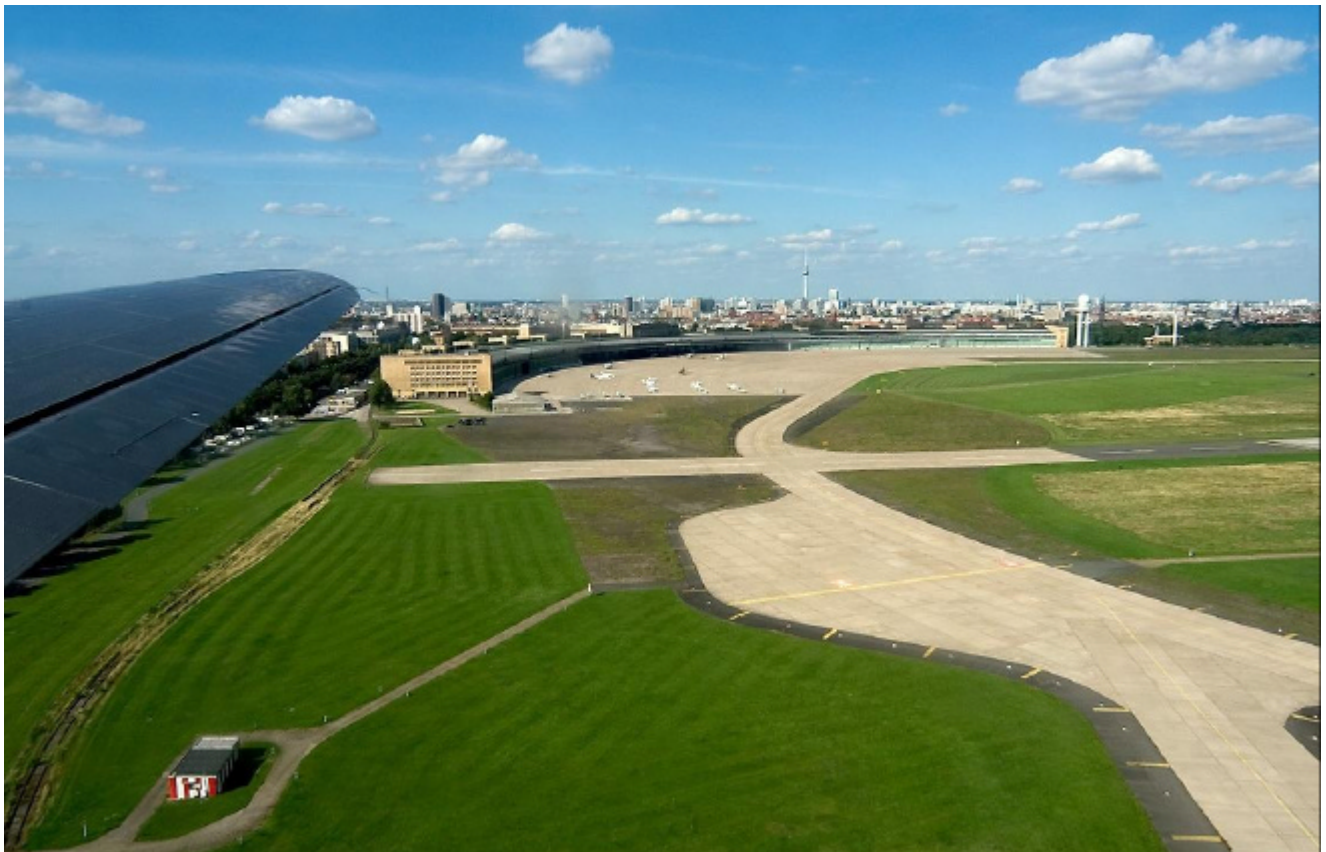
History

The airport was originally a Prussian military training field. In 1923, the Weimar Republic ordered the construction of a modern terminal. The new terminal was not much more than a wooden terminal building and two wooden hangars. This terminal was designed for expansion, but after ten years, it was insufficient for its time, so it was broken down and replaced by the present terminal.

The architect of Tempelhof was not Albert Speer, the house architect of the Nazis, but Ernst Sagebiel. Sagebiel had worked in the office of the architect Erich Mendelsohn. Around 1914, Mendelsohn made a giant design what he called an aerodrome. The design featured a grand curving terminal building with a fitting apron for six airships. Mendelsohn never had the order to design Tempelhof. However, his former employee Sagebiel copied the design and received orders from Speer to design the airport Tempelhof.

The design had to be grand to fit in 'Speer's' Berlin master plan for the new capital of the Third Reich, Germania.

In 1926, Tempelhof airport handled over 33,000 passengers. Schiphol (Amsterdam), Croydon (London) and Le Bourget (Paris) handled 8,000, 25,000, and 20,000 passengers respectively. As the European frontrunner, Tempelhof handled more than 100,000 passengers in 1934 – an incredible figure at the time.



Tempelhof Airport, Berlin

After the Soviet occupation after World War II, the American armed forces took over the command of Tempelhof. In the late 1940s, the Americans repaired and finally completed the airport. In 1948, the Soviets closed the city and the allied forces started the airlift campaign (1948-1949). Every 90 seconds, an aircraft arrived and departed to supply the starving people of Berlin with food and supplies. In total, the airlift campaign carried 2.3 million tonnes of supplies during the 212,612 flights. The campaign was described as a road or bridge across the sky. This explains the German word for this campaign, Luftbrücke (Air Bridge).



The Airlift campaign 1948-1949. Courtesy of ICAT.

After the Cold war, Tempelhof was the main airport of Berlin with a vast amount of destinations and a great number of passengers. In the last decades, the airport lost its function as the main airport and is currently facing a decreasing number of destinations and passengers.

Current Situation of Tempelhof Airport

Tempelhof is no longer the main port of Berlin that it was in the 60s and 70s. The airport suffers from declining traffic movements and the terminal building is virtually empty. The Berlin city council and the BAA want to close the airport in order to

relocate and centralise the air traffic to the new main port BBI. Located outside the city boundaries, it is set to replace the three current airports. The closure of Tempelhof was planned to take place in October 2004, but until BBI becomes operational around 2011, it is likely that Tempelhof will stay open. Tegel is operating at maximum capacity and is not able to handle the capacity of Tempelhof in case of earlier closure. Schönefeld had a growth of 100 percent in 2004 compared to 2003, and there is no end in sight. Easyjet and Germanwings want to further expand their operations in 2006, and even then they would not be able to handle the capacity of Tempelhof.

Another reason for closure is the annual loss of 13–15 million EUR. Nevertheless, the airlines that fly on Tempelhof filed an objection against the closure. Deutsche BA and Germania threatened to move all their traffic from Tegel and Schönefeld to Tempelhof. After some pledges were made, the Deutsche BA and Germania retracted their threat. Germania even considered buying Tempelhof, but this was rejected by the Berlin city council.

For the bankrupt city of Berlin, Tempelhof is one loss too many and is standing in the way for the rapid completion of BBI. The losses mainly consist of maintenance costs of the building. Because the building is virtually empty, it generates no income to compensate its maintenance costs. If the airport disappears, the cost for maintaining the building remains for the city, because Tempelhof is a protected and listed building.

Other European cities like Stockholm and Belfast have been keen on preserving their city airports or, in the

case of the City of London, turning it into a successful airport. The EU expansion and especially the accession of some Eastern European countries could provide an extra traffic flow to Berlin because of the emerging markets there. Every day, there is a business flight with the elite managers from booming business cities who are taking advantage of the inner-city airport. Business travellers require a fast and flexible airport. Tempelhof is the ideal business airport because of its inner-city location and its fast ground handling.

Today, only domestic flights and flights from seven European countries land at Tempelhof. The airport is also used by medium-sized aircraft dealers, a maintenance centre and charter operations, like Windrose Air and some flight schools.

The future of Tempelhof airport

The future of Tempelhof is uncertain. The city council and the Berlin Airport Authority already wanted to close the airport in October 2004. The users of Tempelhof filed an appeal against this decision and won.

BBI will become operational in or around 2011. Its estimated capacity is 20 million passengers and it will have a slot capacity of 82 an hour (see table 1).

	Million passengers p.a.	Flight movements (peak hours)
Tempelhof	4,5	32
Tegel	9,5	42
Schönefeld	4,5	36
	18,5	110
BBI (2010)	20	82
	20	82

Table 1. Maximum passengers and slot numbers

Source: ICAT Nutzungskonzepte 2003

There are expansion plans to accommodate another 20 million passengers, but this will require the construction of an additional terminal. The current plan is to proceed with the current capacity of 20 million passengers and

if they want to build the additional terminal, that will take some time. When you look at the expected growth of the Berlin airport system in figure 1, you can see that this capacity will not be sufficient.

point-to-point connections that are essential for the LLC formula. In the current situation, the Berlin airport of Schönefeld is undergoing a growth, due to the increase of the LLC market in Berlin. The new BBI airport will be

time. The first is to expand the existing business travel market with extra capacity and provide the business market with extra possibilities. The second one is to turn the terminal building into a business complex to house several international offices with direct access to their business jets. Because business flights cannot fill all available slots, there is also room for general aviation from Berlin. It is very plausible that BBI will not allow or limit general aviation activity, because general aviation is not wanted at a main airport such as BBI. It will take up too big a part of the landing slots at BBI.

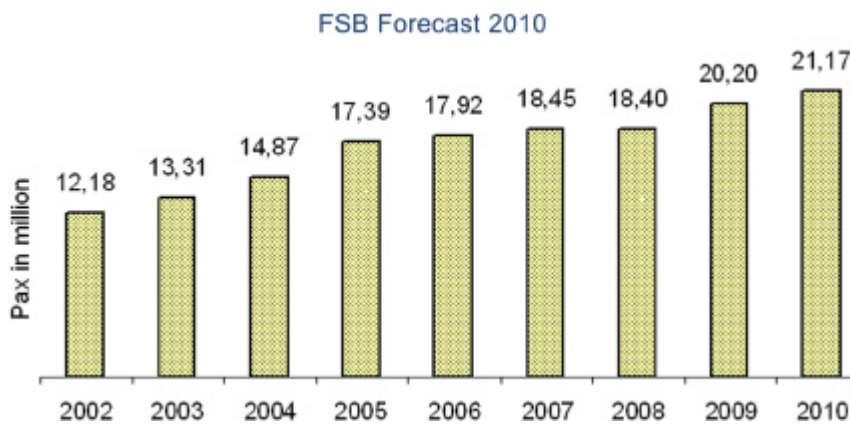


Figure 1 Expected passengers.
Source: Flughafen Schönefeld Berlin GmbH

BBI will consist of two independently usable runways. In order to reach the 20 million passengers and 82 landing slots, a constant flow of large aircrafts is needed. As BBI replaces all three airports, there will certainly be a considerable amount of general aviation (GA) and business flights. Both GA and business flights will use a lot of slot capacity. In 2004 alone, there were 13,000 flight movements of general aviation and this number will only increase over the next few years.

the only airport in Berlin for LLCs, and the city will not have a suitable airport in the hinterland. The LLC concept works with multiple airports in the vicinity of a city, similar to airports in London, Paris, Rome and Amsterdam. There is a need for small cheap airports with a quick turnaround time. The point-to-point system needs these small airports in order to avoid the use of the big hub airports which is expensive.

Who are we?

Project Tempelhof is an international workgroup, assigned to research if there is a future for Tempelhof airport. The call for this project came from the German Aviation Research Society (GARS) and Netherlands Airport Consultants (NACO). The project team consists of two Dutch students and two German students: Olaf van Tol, student Aviation Management (Amsterdam), Bart Steverink student Aviation engineering (Amsterdam). Falko Weiser and Karsten Frölich, both student International Economics (Bremen). The progress and results will be presented at several GARS seminars throughout Europe.

It is shown that many European newcomer airlines are relatively cost efficient (low cost carriers). Due to the EU expansion, the air traffic market could be overwhelmed with extra capacity. This is related to the expansion to the Eastern part of Europe, which is the poorest part. However, as people from Eastern Europe will experience an increasing disposable income, their travelling patterns will certainly change.

The most feasible future concept for Tempelhof is the business concept, which targets two markets at the same

For more information and an overview of the research, visit: www.project-tempelhof.tk.

Conclusion

There is a future concept for Tempelhof as a low cost carrier (LCC) airport. If we only consider the two biggest LCCs, Easyjet and Ryanair, their plans involve using Berlin as a strategic central point of Europe. Its geographical position in the centre of Europe makes it a good base for the



Tempelhof Airport Berlin. Courtesy of DigitalGlobe.