Security Measures at Zurich Airport

After the 2016 attacks in Brussels and Istanbul, security measures at international airports were temporarily tightened, as was the case in Zurich. As a result of the attacks, ways of improving landside security are now being discussed, as well as whether certain security checks ought to be brought forward. However, no fundamental changes were made to the security arrangements as a result of the events.

By Matthias Leese and Lisa Wildi

The security risk in aviation once again became the subject of public awareness on March 22, 2016, when three assailants launched a bomb attack on Zaventem Airport in Brussels. Only three months later, Atatürk Airport in Istanbul was the target of a bomb attack. In both cases, "Islamic State" (IS) claimed responsibility for the bombs set off in the entrance areas of the airports. After the attack, Brussels-Zaventem was closed for about ten days. Once the closure ended, every person arriving at the airport was checked before entering the airport area. However, this measure was revoked after only two months due to complaints from many travellers. In Istanbul, tightened security measures had already been in place before the attack. Baggage items were checked before entering the airport building, and suspicious vehicles in front of the terminal were inspected by police officers. As the perpetrators arrived by taxi, they were apparently able to avoid a closer inspection of their vehicle.

Since the attacks, the issue of enhanced airport security is once again the topic of conversation, also in Switzerland. Zurich Airport, which is an international transport hub, serves as an example in this debate.

The Airport as a Security Area
Modern airports are complex entities with many different functions. Besides the controlled access to gates and aircraft, called

Shortly after the attacks on Brussels airport in March 2016, at Zurich Airport, too, police presence and security checks were increased. *Arnd Wiegmann / Reuters*

airside, airports nowadays generally also have a large area that is accessible to the public. This so-called landside not only comprises the check-in counters but also shops, supermarkets, restaurants, service providers, conference and office complexes as well as hotel facilities. Airports are embedded in the local and trans-regional transport infrastructure so that passengers, consumers and other stakeholders are able to arrive and depart. From the point of

view of security, this means that the exact demarcation of an airport is often not entirely clear.

The interaction between security services at airports is similarly opaque and varied. National, regional or local police authorities, customs and immigration authorities, airport operators or private security providers may be involved, depending on the national security landscape and the respective le-

gal framework. National authorities often take part in border control because they are responsible for border protection and customs, and airports constitute borders within a country. As a result of cooperation, jurisdictions and competences may also overlap, even though the political regulation – as in the case of passenger control standards – has now been strongly harmonized at the international level. Modern airports bring together a multitude of interests and competences, which require a sophisticated and well-coordinated security arrangement.

If nothing else, airports are also symbolic places. A modern airport represents a globalized lifestyle, and as such it can become a target for attacks. In addition, terrorist groups hope that an attack against such a heavily frequented transport hub will affect many people and severely disrupt international air traffic. As a result of this complex situation, security needs at airports are high, which in turn leads to proportionally greater security precautions. In comparison with other public and semi-public spaces, airports are subject to stricter rules of conduct, more security personnel are present, and more powerful and more expensive technologies are used.

The Zurich Airport Hub
Zurich Airport is connected to the wider transport network by the freeway, train, bus and tram. In addition to the flight infra-

The authorities are continually reviewing, questioning and, if necessary, adapting the security arrangements at Zurich Airport.
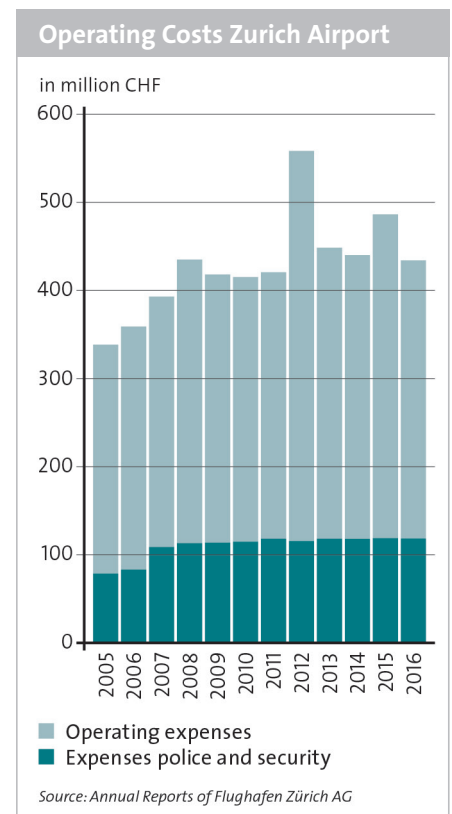
structure, there are numerous restaurants, shopping facilities, offices and one hotel in the airport building. Nearly 27,000 people work at the airport, and more than 27 million air passengers were handled in 2016 (see box p.3). The airport police, which are part of Zurich Cantonal Police, are responsible for ensuring security throughout the entire airport area. Plainclothes and uniformed police officers patrol the area. In addition, „airport police security officers" and „border control security assistants" work for the airport police and carry out checks on baggage, persons and passports. The staff of Custodio, a private security company, carry out security checks on the cargo and airmail. Together with the company Protectas, they are also responsible for the security checks on airport employees.

The emergency services (Schutz & Rettung) of the City of Zurich provide the medical and fire services.

Flughafen Zürich AG (FZAG) is responsible for purchasing the equipment necessary for screening passengers and baggage, and for financing all security measures. The technical equipment and the security measures must comply with the requirements of the Federal Office of Civil Aviation (FOCA). These, in turn, are based on international standards adopted by the United Nations' International Civil Aviation Organization (ICAO) and the European Commission and which are mandatory for their members and associated partner countries. The FOCA is responsible for ensuring that the minimum requirements of the ICAO and the EU are met. It can impose additional security measures on Swiss airports, which also happens. Compliance with these standards is monitored by the FOCA, EU delegations and in writing by the ICAO. In addition, FZAG's security department and the airport police carry out internal quality control checks, which are also prescribed by the FOCA.

The FOCA and the airport police cooperate with numerous partner institutions to provide information about the risk situation and to ensure the best possible response to any emergency. These include the Federal Intelligence Service (FIS), the Border Guard Corps, the Federal Office of Police (fedpol), police authorities at home and abroad, partner airports, immigration authorities, law enforcement and customs authorities but also airlines and foreign aviation authorities. The coordinated response to emergencies is regularly trained through exercises that are based on current threat scenarios. The preventive work of the FOCA, the airport police and the airport operator also consists of preparing for eventualities. Therefore, the authorities are continually reviewing, questioning and, if necessary, adapting the security arrangements at Zurich Airport. The airport police, in particular, take into consideration possible emergencies such as hijackings, attacks, major fires, traffic and railway accidents, cyber attacks or pandemics, and prepare for them.

The responsibilities of the airport police range from public order tasks to policing measures related to security, crime, traffic and borders all the way to the screening of passengers and baggage. Compared with

Operating Costs Zurich Airport

in million CHF

Legend:
- Operating expenses
- Expenses police and security

Source: Annual Reports of Flughafen Zürich AG

the rest of Europe, Zurich Airport is unique in that operational security is administered practically by a single source and the actors are integrated within the regional security architecture. Thus, it is able to design and implement an inclusive and comprehensive security concept.

Evolving Security Measures
When Zurich Airport was opened in 1948, there was neither a fence around the site nor any checks on baggage or persons. Five civilian employees of the cantonal police were responsible for passport control; the city police force of Kloten was responsible for criminal cases; two night watchmen, a gatekeeper and a cantonal police officer were responsible for guarding the site. In 1959, the airport perimeter was still not secured even though more than one million passengers were already using the airport. A police post was only established in 1961 together with the airport guard. This unit, originally consisting of five members and reporting to the cantonal public works office, was armed in 1966 and one year later increased to 25 members. The number of passport controllers was also raised. In 1968, 24 border police officers checked the passports of around 3.5 million passengers.

The first security controls were introduced at the end of the 1960s in response to terrorist attacks and hijackings. In the wake of the attack on an aircraft operated by the Israeli airline EL-AL in February 1969, security measures at Zurich Airport were immediately reinforced. Almost hastily, police officers from all departments of the cantonal police were deployed to guard aircraft. After that, border police officers carried out the first random security checks; passengers and hand luggage were searched in front of the stairs leading to the aircraft. One year later, a parcel bomb brought down a Swissair plane over Würenlingen. Another aircraft was hijacked by terrorists and blown up in Jordan after the hostages had been released. As a result, security measures were drastically increased. From then on, airmail was X-rayed, the airport fire brigade was armed and "total passenger and hand luggage control" was introduced. Security checks were relocated from the airfield to the airport building, and additional security personnel were recruited as quickly as possible from police forces, border guards, border police and Swissair employees. Soldiers assigned to the cantonal police guarded the site of Zurich Airport for several months. In 1971, the federal government and the cantons withdrew personnel support for the systematic checks on persons. This task was transferred to the border police, which had to recruit new personnel. The military troops were also withdrawn, and the airport guard once again took on the responsibility of securing the airport.

As a result of further terrorist attacks on international airports, the airport guard was permanently placed under the command of the cantonal police from 1975 onward. Since then, Zurich Cantonal Police have been responsible for all security matters. In 1980, the police post at the airport became a main department known as "Airport Police" and the airport guard became the "Airport Security Police". Until 2004, the training for airport security, border and cantonal police officers differed in a number of ways. Today, all those aspiring to join Zurich Cantonal Police receive the same basic training and work at the airport in the second year of their training. The border police officers – today's "airport police security officers" and "border control security assistants" – undergo a nine- to ten-week training.

Over the years, the increasing number of passengers has also meant an increase in the number of security personnel at Zurich Airport. In addition, new control measures and technologies have been introduced. Therefore, the cost of the security infrastructure has increased in recent years (see figure). New measures are mostly the result of new international requirements, which in turn are often inspired by security-related incidents. At the beginning of 2002, for example, checks on shoes were intensified after a passenger in Paris was found to be carrying explosives in his shoes. Further significant changes include the restriction on the quantity of liquids allowed in hand luggage, which has been in force since 2006, as well as the requirement, which took force in 2008, that employees who enter the secure airport area must also undergo checks. The last major change was the introduction of explosive detectors. Since 2015, passengers are randomly selected to have their hands, clothes or bags checked for traces of explosives. In the last few years, new technologies have also been tested at Zurich Airport during normal operations. In 2014, for example, the so-called "body scanner" met with the positive approval of passengers. For the time being, however, it will not be introduced due to operational and economic reasons.

The Response to Brussels and Istanbul

The attack on Brussels Airport last year was not the first attack on the landside of an airport. In 2011, the arrivals hall at Moscow's Domodedovo Airport was targeted in an attack, and in 2012 it was the turn of the arrivals terminal at Burgas Airport in Bulgaria. Thus, security officials have also directed their attention toward protecting the landside. Ensuring security in this area is comparable to safeguarding other spaces accessible to the public such as railway stations or town squares. Security measures such as video surveillance or patrols are used accordingly. The measures are adjusted based on the assessment of the current situation. This allows security personnel to respond dynamically to threats and to confront potential offenders with unforeseen defensive measures.

Just a few hours after the attacks in Brussels and Istanbul, when no details about the background to the attacks were known, the police presence and security checks at Zurich Airport were increased. Among other things, the number of patrols with explosive detection dogs was raised. In addition, vehicles approaching the airport were stopped and checked. In some cases, baggage control checks were already carried out at this point. In addition, the security officers of the airport police were told to be particularly aware of identifying and reporting suspicious behavior. Security officials at Zurich Airport emphasize that it was not necessary to redefine the security concept after the attacks. The security arrangements are designed in such a way as to provide a fast and adequate response to major emergencies and to allow for the existing security concept to be expanded and built upon in the event of an emergency. Also, the threat scenario has not changed fundamentally. Since the attacks in Paris in November 2015, threat levels continue to be high. Since then, police presence has been increased at critical points. In addition, after the attack in Nice in the summer of 2016, parts of the Zurich police force

Zurich Airport in Figures 2016	
Number of passengers	27.67 million (compared to previous year: +5.3%), of which 27.6% are transfer passengers
In comparison: Brussels-Zaventem 2015	*23.46 million*
Number of aircraft movements	269,160 (+1.5%)
Number of tons of freight	433,577 (+5.3%)
Number of destinations	125 European destinations in 38 countries 53 intercontinental destinations in 27 countries
Number of retail stores	59 on the landside and 66 on the airside
Number of restaurants	28 on the landside and 20 on the airside
Total employees at the airport*	almost 27,000
Number of public transport users per day 2015	68,000
Police officers	520
Airport police security officers	approx. 900
Border control security assistants	approx. 80
Total security personnel	around 1,500**

* incl. Flughafen Zürich AG
** excl. employees of private service providers

were equipped with new bulletproof vests and their machine guns were fitted new sighting devices. The aim of all these measures is to be able to deliver an appropriate response in the event of an emergency but also to give travellers a sense of security and trust and to deter potential perpetrators.

After the attacks in Brussels and Istanbul, a fundamental review took place at Zurich Airport. On the one hand, structural security aspects that would come to bear in the event of an attack were reviewed. On the

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other hand, it was considered whether certain security checks could be brought forward. However, a security check for arriving vehicles would entail the vehicles being checked after exiting the freeway, which would lead to traffic jams on the freeway. Railway passengers would probably have to pass through a security check at Zurich's main train station. This would prove difficult to implement at a train station serving more than 400,000 passengers a day. In addition, the crowds gathering at the security checkpoint could, in turn, become a target for attacks. Moreover, relocating security checks does not provide a safety guarantee,

as the attack in Istanbul also showed. For these reasons, this approach is not being pursued further for the time being.

Foreseeable Innovations

The attacks in Brussels and Istanbul did not lead to any overly zealous activity in Zurich. They did, however, push the discussion on how to improve landside security measures further up the agenda. More so now than before, security measures at Zurich Airport are being designed and planned for the long term, so that the overall concept does not have to be questioned in the wake of individual attacks. Security officials are not only acting in response to major emergencies, but they are also trying to anticipate emergencies in a preventive manner. Meanwhile, regulations on airport security are constantly evolving. At the international level, new concepts, technologies and measures are being discussed and adopted. These may then have to be implemented at national and regional level and reconciled with infrastructural, structural and, not least, financial aspects.

Presumably, the ICAO regulations on landside security measures, which have so far been formulated fairly generally, will become binding standards and thus will draw attention to the part of the airport accessible to the public. In Zurich too, secur-

ing the landside will remain a priority. The large-scale building project "The Circle", which is being built right next to the airport, will attract many visitors with its numerous shopping facilities, hotels, restaurants, office and conference rooms and a university medical center.

Changes are also foreseeable in the area of technology. In the next few years, scanners are expected to be more sensitive to different materials, so that it will no longer be necessary to remove and screen electronic devices and liquids separately. Furthermore, the concept of unpredictability will gain in importance, which reinforces the risk-based, forward-looking implementation of protective measures. Security officials at Zurich Airport are also working on the assumption that after years of increasing security controls, intelligence information will be of growing importance, so that individual passengers who raise suspicions can be filtered out.

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