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Political Newsletter

2018

Editorial	03	Going forward with a modernised terminal	08	Focus on sustainability at THE CIRCLE	10
Aviation policy report – implementation of measures	04	The baggage system at Zurich Airport	09	Calibration flights guarantee the precision of navigation systems	11
Forward-looking infrastructure planning	06				

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P.O. Box, CH-8058 Zurich Airport
politikbrief@zurich-airport.com
www.zurich-airport.com



Editorial

Dear Readers,

With this issue of our digital Political Newsletter, we are pleased to bring you once more news of current political topics relating to the operation of the airport.

In its 2016 aviation policy report, the Federal Council undertook a comprehensive analysis of the current state of Swiss civil aviation, on which it then based its aviation policy goals and strategies for the next 15 years. Some initial important steps have been taken, but further measures are necessary to strengthen Switzerland's aviation industry and eliminate the increasingly tight capacity constraints at its international airports.

Current forecasts indicate that the number of passengers at Zurich Airport will continue to see average annual growth of two to three percent over the coming years. In order to cope with this rising demand for air travel and guarantee safe and frictionless operation, since privatisation in 2000 Flughafen Zürich AG has invested an average of one million Swiss francs per working day in the maintenance, modernisation and expansion of the airport's infrastructure, and is committed to maintaining a similar level of investment in future.

Zurich Airport's role as an aviation hub is particularly important. Thanks to a closely coordinated network of short-, medium- and long-haul flights, it is possible to fly directly to many attractive destinations with comparatively few connections. However, this system only works if efficient infrastructures are in place to handle transit passengers, transfer baggage and airfreight within guaranteed transit and transfer times, including during peak periods. With its complete overhaul of the baggage handling system by 2025, Flughafen Zürich AG is helping to ensure short transfer times well into the future.

This issue of our Political Newsletter contains more on this and other interesting topics relating to Zurich Airport. I wish you a stimulating read.

Joana Filippi
Head Public Affairs

Aviation policy report – implementation of measures

In its 2016 aviation policy report, the Federal Council set out its long-term strategies and goals for the development of civil aviation in Switzerland. Following publication of the detailed plan for Zurich Airport in the Sectoral Aviation Infrastructure Plan (SAIP) in August 2017, some key initial steps were taken to address the most urgent challenges relating to optimising operations and safety. However, important goals such as resolving the existing and increasingly tight capacity constraints at the Zurich intercontinental hub in particular, as well as spatial planning challenges remain unresolved. The federal government is called upon to deal with the legislative and spatial planning changes required.

For its updated aviation policy report in 2016, the Federal Council undertook a comprehensive analysis of the current state of Swiss civil aviation. It then used this as the basis for formulating its aviation policy goals and strategies for the next 15 years. Besides resolving existing, increasingly tighter capacity constraints at Switzerland's major airports, the report also focuses on the primary objective of safety. At the same time, the Federal Council is seeking to implement various measures to strengthen Switzerland's aviation industry and safeguard its further development. Key measures expressly cited are better resolution of spatial planning conflicts, the preservation of existing operating hours, and the specification of capacity and performance targets. It explicitly states that Zurich Airport should continue to support operation as an airline hub, and thus safeguard the economically vital accessibility of Switzerland.

Initial important steps taken

With its approval of the SAIP detailed plan for Zurich Airport (SAIP2) in August 2017, the federal government created the basis for optimising operations at the airport, enabling in particular significant improvements to the operating concepts associated with the least capacity and lowest safety margins. Permitting straight southern take-off routes during bise and during fog conditions, optimisation of departure routes and flight operations on extended runways will enable the airport operator to seek approval for the measures necessary to improve safety margins, stabilise operating concepts for all weather conditions, and thus significantly reduce the likelihood of delays.

Demand still rising

Owing to lengthy approval and related judicial processes at various levels, however, it will be several years before these measures can be implemented. Meanwhile, the demand for air travel continues to rise. In 2017, 29.4 million people arrived at or departed from Zurich Airport, up over 6 percent compared with the previous year. At the same time, various forecasts indicate that this number will continue rising at an above-average rate. The capacity constraints already evident at peak times at Zurich and Geneva airports will be further accentuated. This jeopardises Zurich Airport's hub operation and the direct flights that are vital for good accessibility, and consequently negatively affects the locational appeal of Zurich.

Challenges identified – solutions outlined

The Federal Council has highlighted these challenges in its aviation policy report and concluded that, in order to maintain the competitiveness of the national airports and in particular, the hub operation in Zurich, the public interest in demand-oriented development and the associated constructional and operational measures at the existing, site-bound airports must be given very high priority. According to the aviation policy report, the federal government should support and steer further development through sectoral planning. In particular, operations should be optimised to eliminate existing and foreseeable bottlenecks in the short to medium term, while construction projects are also necessary over longer-term horizons. Performance and capacity targets should



Capacity is already limited today at peak times.

be formulated and spatial planning conflicts resolved in ways that will safeguard the long-term development of the airport and improve safety margins. Moreover, any further restriction of operating hours at Swiss airports – already highly restrictive compared with other countries – must be avoided, and this should only be looked at again if more stringent night-time curfews than imposed by the current Swiss regime come into force at neighbouring European airports.

Further measures necessary

Against this background, all those involved are called upon to implement the measures for solving the challenges identified by the Federal Council. As part of its 2017 operating regulations submission, therefore, Flughafen Zürich AG has asked the Federal Office of Civil Aviation to approve the optimisation measures outlined in SAIP2. It is also preparing to meet rising demand by continued investment in maintaining and expanding infrastructure that supports terminal and flight operations. Since Switzerland's major airports constitute key infrastructure of national importance, the federal government must also take in hand the necessary changes to legislative and spatial planning frameworks in order to enable the development of these airports in line with demand over the medium to long term.

Forward-looking infrastructure planning

Since privatisation, Flughafen Zürich AG has invested an average of one million Swiss francs every working day to maintain, modernise and renew the airport's infrastructure. As well as ensuring the safe and smooth running of the airport, this underpins the delivery of high-quality services. The airport's hub function, the continuing rise in demand for air travel and the long service life of the infrastructure all play a central role in forward-looking infrastructure planning.

As a licenced company of the federal government, Flughafen Zürich AG is mandated to provide the infrastructure to meet the demand for air travel today and in the future, and to ensure safe flight operations. In its 2016 aviation policy report, the Federal Council formulated clear objectives: "Zurich Airport should be able to fulfil its role as a European hub for global air transport now and in future. It must provide the framework within which an airline can use the airport as a hub."

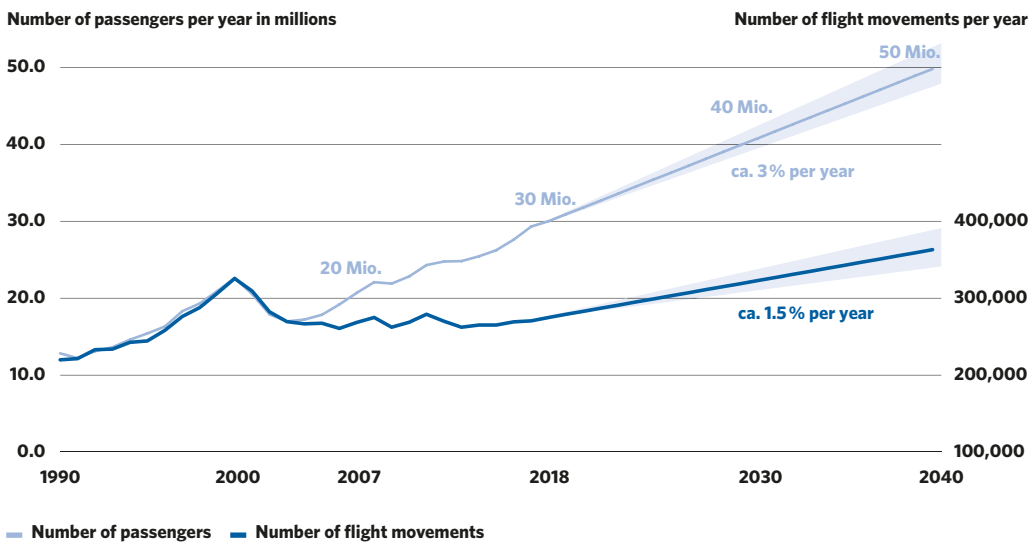
Rising demand for air travel

Over the last ten years, the number of passengers at Zurich Airport has increased by over ten million to 29.4 million passengers a year in 2017, and this is set to rise further. Current forecasts predict passenger growth of two to three percent. Accordingly, it can be assumed that 40 million passengers will use Zurich Airport in 2030, and close to 50 million passengers in the year 2040. Airport infrastructure with a longer service life must be designed to cope with this forecast demand. The ongoing trend for larger aircraft coupled with better capacity utilisation supports disproportionately high growth in the number of passengers in relation to the number of flight movements. The latter is limited at Zurich Airport because of the runway system. According to the Sectoral Aviation Infrastructure Plan (SAIP), the present runway system can handle a maximum of 350,000 flight movements.

High-quality infrastructure safeguards competitive hub operation

It is not only the number of passengers that is important, the operation of Zurich Airport as an intercontinental hub is also a key measure of its infrastructure. In its 2016 aviation strategy, the Federal Council explicitly underlined the enormous significance of hub operation at Zurich Airport for Switzerland as a whole. To remain competitive with rival hubs abroad, efficient facilities and systems are essential. These must be able to turn around a large volume of transfer

The demand for international mobility will continue to rise





passengers, baggage and air freight very quickly – even at peak times. Flughafen Zürich AG provides this high-quality infrastructure and associated services. For instance, in addition to an adequate number of aircraft stands, hub-relevant infrastructure includes passenger and cargo terminals, the baggage handling system, security and border control systems, and an efficient runway system. Passengers who spend extended periods at the airport must be offered the best possible experience. Investment in retail units and restaurants is therefore also important. An efficient parking infrastructure is another essential prerequisite for airport accessibility.

Zurich Airport is committed to quality

Various awards regularly attest to the high quality of the airport's infrastructure. For instance, Zurich Airport ranked third among European airports at the 2017 Airport Service Quality Awards presented annually by the international umbrella association of airport operators. In the same year – and for the 14th time in succession – Zurich Airport won the World Travel Award for “Europe's Leading Airport”. Zurich Airport can therefore count itself among the best in Europe, and is seeking to maintain this level of excellence in future for the benefit of its passengers.

Infrastructure requires refinancing

Since privatisation in 2000, Flughafen Zürich AG has invested on average over one million Swiss francs per working day in maintaining and expanding the airport's infrastructure and services in line with demand. In total, it has spent over five billion Swiss francs on buildings

and systems over the last 17 years. These costs must be refinanced. To enable it to continue making long-term investments in the core aviation infrastructure, Flughafen Zürich AG levies charges. In contrast to airlines, which are able to alter their services to meet demand from one season's timetable to the next, an airport's infrastructure is necessarily bound to its particular location and generally has a service life of 30 to 40 years. Investments and refinancing therefore often stretch over many decades.

Favourable regulatory environment for development

Flughafen Zürich AG is already planning efficient infrastructures over a medium- to long-term time frame and investing the necessary financial resources. It will continue investing in operational plant and equipment in future to the tune of around one million Swiss francs per working day. However, if it is to further develop the airport's infrastructure in line with demand, a favourable regulatory environment is also essential. Planning and approval processes must be shorter, spatial planning conflicts must be resolved, and legal and planning certainty must be established. It is also worth mentioning that Flughafen Zürich AG does not receive any subsidies, but finances all investments itself.

Going forward with a modernised terminal

Terminal 1 and Dock A have been gradually extended over the last 70 years, but now are in need of comprehensive upgrading and expansion. At the same time, owing to the increasing internationalisation of business and society, the demand for air travel is steadily rising. To ensure sufficient capacity for the lifetime of a terminal, when planning buildings Flughafen Zürich AG bases its calculations on current demand and on the forecast growth in passenger volumes.

Every year, Flughafen Zürich AG invests some 300 million francs in modernising and expanding the airport's infrastructure. When planning replacements, it must factor in medium- to long-term demand forecasts so it can provide enough space for passengers and aircraft over their entire lifespan.

Changing patterns of business and leisure travel

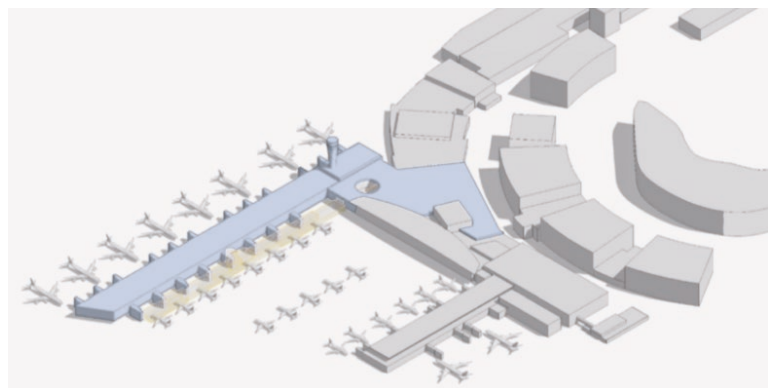
Over the last fifteen years, the number of passengers per year at Zurich Airport has risen by more than 10 million to 29.4 million passengers. This is due to the increasingly international nature of society and business. As it is both a major tourist destination and heavily dependent on foreign trade, Switzerland is reliant on excellent air transport links to the world's major cities. At the same time, relationships between families and friends are becoming increasingly international. The knock-on effect this has had on travel patterns has led to a rise in air travel. Current demand forecasts for Zurich Airport predict a long-term average passenger growth rate of two to three percent a year. Accordingly, around 40 million passengers are expected in 2030, and close to 50 million passengers by the year 2040.

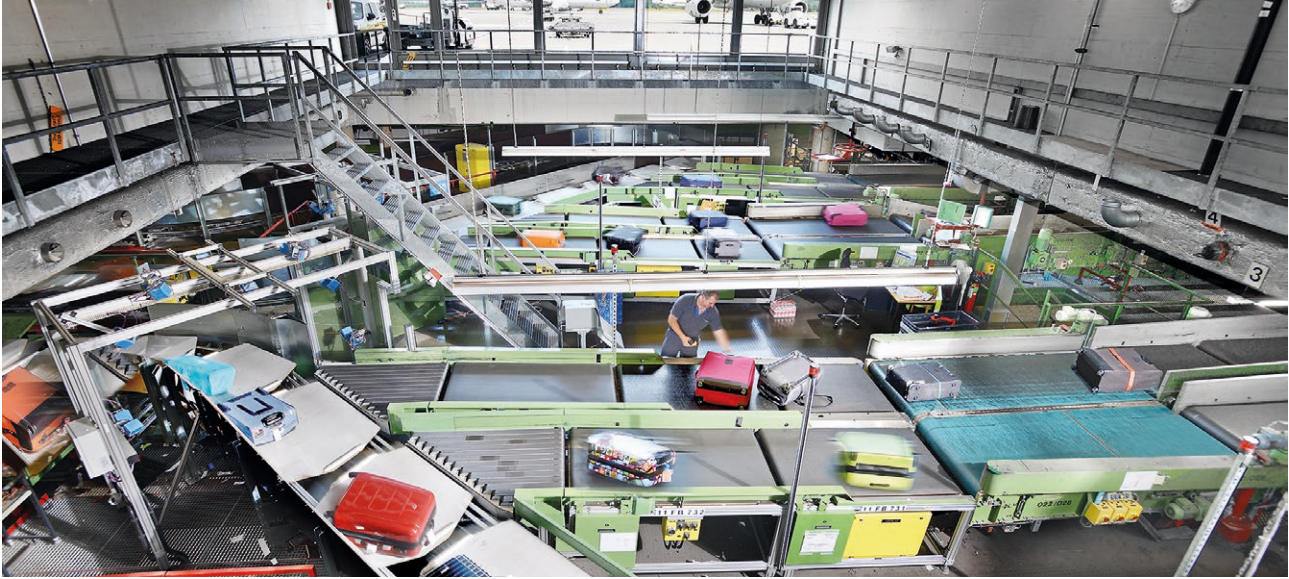
For the most part, these higher passenger volumes will be covered by larger aircraft and better capacity utilisation. In the medium term, however, an increase in the number of flight movements must be expected. According to the Sectoral Aviation Infrastructure Plan, the present runway system can handle a maximum of around 350,000 flight movements. 270,000 flight movements were recorded in 2017, 55,000 fewer than in the year 2000 when an all-time record of 325,000 flight movements were counted.

Upgrading of Terminal 1 and Dock A

If it is to handle increasing passenger numbers, Flughafen Zürich AG must upgrade its infrastructure. This also involves renovating Dock A and Terminal 1, including the tower which is also part of this building. The project is currently at the very early planning stages of requirements formulation and identifying solutions. It will not be possible to commence construction for at least five years, once the planning and approval processes have been completed. Commissioning is expected between 2025 and 2030. Flughafen Zürich AG is responsible for ensuring that the building can handle the medium- and long-term passenger volumes forecast. Only in this way will it be possible for Zurich Airport to maintain its pre-eminent position as a high-quality airport in future.

Visualisation of the new Terminal 1 and Dock A





Flughafen Zürich AG's baggage system currently sorts, checks and transports up to 50,000 items of baggage a day and is crucial for the hub operation of the airport.

The baggage system at Zurich Airport

The baggage sorting system will soon be coming to the end of its life and will require replacement during ongoing operation of the airport. When it comes on stream in 2025, the sorting capacity of the new baggage sorting system will be 35% higher, and will consequently ensure the continued operation of Zurich Airport as a high-quality hub in the long term.

Over the next five years, Flughafen Zürich AG will invest some 470 million Swiss francs in the new baggage system. After 20 years in service, the existing baggage sorting system has come to the end of its life, so a complete overhaul plus expansion is necessary.

Efficient baggage system vital for hub operation

Flughafen Zürich AG's baggage sorting system currently handles up to 50,000 items of baggage a day and is crucial for the hub operation of Zurich Airport. The system ensures that the baggage of departing and transferring passengers arrives at the correct flight on time. It must be able to sort, check and transport baggage items to their sorting destination quickly and reliably, even during peak periods, otherwise it will not be possible to maintain the shortest transfer times for passengers compared with other international hubs.

Replacement during ongoing operations

Once planning had been completed and tenants relocated, on 19 March 2018 the project officially began with decommissioning. To ensure the continued smooth running of the airport as a hub,

the building work is being carried out during ongoing operations. The central part of the baggage system being replaced is in the vicinity of Terminal 1. However, the building work also includes parts of the system at various other places in the airport. The pre-sorting and main sorting systems at Dock E, as well as all connections between the terminals and from and to Dock E, are also being replaced.

Sorting capacity to be increased by a third

As well as the increasing demand for air travel, when upgrading the baggage system it is necessary to take into account the latest security and quality standards, among other things. The sorting capacity will be increased by around a third, and the number of early bag stores will be increased from 600 to 2,500. In addition, more space will be required for the larger security screening equipment incorporating the latest technology which will soon be required due to more stringent EU regulations.

Commissioning by 2025

The new system will come on stream in a number of phases, with completion of the work scheduled for 2025. Once completed, the system will have a 35% higher sorting capacity, and will consequently also safeguard the high quality of Zurich Airport's hub operation in the long term.

Facts and figures

Current average/maximum number of baggage items transported per day: 30,000/50,000

Increase in sorting capacity with the new baggage system: approximately 35%

Number of future sorting destinations: 122 (currently 92)

Number of future transfer unloading quays: 15 (currently 12)

Number of early bag stores: 2,500 (currently 600)

Investment volume in new baggage system:

approx. 470 million Swiss francs

Construction period: 2018-2025

Focus on sustainability at THE CIRCLE

THE CIRCLE is an attractive complex of buildings that aims to enhance Zurich Airport as a go-to destination for services. THE CIRCLE is to receive "LEED" sustainability accreditation. This is awarded in recognition of features such as good public transport links, the use of alternative energy for heating and cooling systems, or low water consumption.

Flughafen Zürich AG endeavours to operate and develop the airport in an environmentally responsible way. For many years it has been successfully working to minimise the impact of its operations on nature and the environment. It is consequently paying particular attention to sustainability in THE CIRCLE project. Currently the biggest construction site in Switzerland, THE CIRCLE is aiming to strengthen Zurich Airport as the go-to destination for all kinds of services. The complex is being built by a co-ownership company, with Flughafen Zürich AG and Swiss Life AG holding stakes of 51% and 49% respectively.

THE CIRCLE to be LEED-certified

LEED stands for "Leadership in Energy and Environmental Design", and is the most internationally recognised building rating system. Successful LEED certification constitutes confirmation by the Green Building Council that a building has been developed, planned and constructed in accordance with measurable sustainability standards. To receive LEED certification, certain criteria must be met with respect to construction, the water and energy supply, indoor environmental quality, the materials used and innovations, among other things. For instance, a large proportion of the rubble and construction waste from the car parks that had previously stood on the site will be recycled and fed back into the materials cycle. The aim is to achieve at least 75 percent. Recycled materials will account for a significant percentage of the materials used for the new buildings too.

Energy and water

The use of alternative sources of energy is also a major feature of THE CIRCLE. For instance, any waste heat from a building which cannot be utilised immediately will be temporarily stored in a large thermal store and then used for heating later. THE CIRCLE will therefore be virtually self-sufficient with respect to heating needs. At the same time, more than half the heat given off during cooling is reused. A photovoltaic array on the

roof harnesses the sun's energy to provide two percent of electricity requirements emission-free. In addition, rainwater will be collected from the 30,000 square metre roof area of THE CIRCLE and stored in subterranean tanks. The water will be used for flushing toilets, saving approximately 20,000 m³ of fresh water annually.

Excellent transport links and access to local recreation area

In addition to direct access to the autobahn network, there are 360 rail, 400 tram and 790 bus services linking THE CIRCLE to the region and the whole of Switzerland. It is anticipated that over 60 percent of travellers to the airport will use public transport. For the use of private transport, charging points for electric vehicles will be installed within a short walking distance from the services. A large number of cycle racks will also be provided. THE CIRCLE is directly adjacent to a large local recreation area on the "Butzenbüel" hill. This 80,000 square metre wooded and green space is being redesigned and upgraded at the same time as the buildings are being constructed. By the time it opens, an attractive recreational space will be created here which will be open to everyone visiting Zurich Airport and THE CIRCLE.

Further reduction of environmental impact in future

THE CIRCLE is scheduled to open in the first half of 2020. Flughafen Zürich AG is committed to ensuring that sustainability remains a major criterion for any further new infrastructure, thus stabilising or even reducing the environmental impact of Zurich Airport, despite further growth in air traffic.

THE CIRCLE is rising up at Switzerland's currently biggest construction site.



Calibration flights guarantee the precision of navigation systems

To ensure the accuracy of instrument landing systems, skyguide conducts inspection flights twice a year. Some of these are flown outside normal operating hours.

Highly accurate instrument landing systems play a major role in ensuring safe and efficient handling of flights approaching Zurich Airport. To maintain the accuracy of these high-tech, expensive infrastructure systems, and consequently ensure that aircraft do not deviate from the runway during instrument-guided approaches, they must be periodically tested and calibrated by means of measurement flights.

Air traffic control regularly calibrates navigational systems

Skyguide is responsible for maintaining the navigational systems, and therefore also for planning and conducting calibration flights. It carries these out jointly with Flight Calibration Services GmbH (FCS), a joint venture comprising the three air traffic control providers Deutsche Flugsicherung (DFS), Austro Control and skyguide, using a Beechcraft King Air 350 twin-engined turboprop fitted with the latest navigational aids and high-precision flight inspection technology. Signals from the systems to be calibrated are recorded and subsequently evaluated. Inspections are carried out twice a year, usually over one week. To check the navigational systems, each runway is approached multiple times using different procedures. Approaches deviate both laterally and horizontally from the published flight path, and consequently also from the usual approach paths in some cases.

Some calibration flights flown outside normal operating hours

Any inspection flights where daylight is not essential are always flown at night outside normal operating hours so arriving and departing aircraft are not affected, the safety margin is increased, and complexity is reduced at Zurich Airport. This is a requirement that was stipulated in the federal government's 2012 safety review. Every year, Flughafen Zürich AG therefore submits a petition the Federal Office of Civil Aviation to carry out these periodic flight inspections at night. A low-noise aircraft is used, and flights are completed by 2 a.m. in order to minimise noise during the night.

A Beechcraft King Air 350 flight inspection aircraft equipped with the latest navigation technology. **Photo: Skyguide**



Traffic Development

All figures January to May 2018

The monthly traffic statistics are published under:
www.zurich-airport.com/the-company/investor-relations-en

