Editorial

Dear Reader,

Flughafen Zürich AG is delighted that the new noise protection hangar came into operation on 18 June 2014. It is one of the most modern facilities of its kind in the world and will prevent local residents being exposed to noise generated during necessary aircraft engine ground testing.

However, erecting a modern noise protection hangar is only one element of a comprehensive range of noise protection measures. For instance, at Zurich Airport a ban on night flights between the hours of 11.30 p.m. and 6 a.m. applies. Over the last 25 years the area around the airport that is affected by excessive noise during the day has been reduced by more than two thirds, and to date Flughafen Zürich AG has invested 170 million Swiss francs in sound insulation measures in 13 neighbouring municipalities.

Another very welcome development is the fact that in 2013 43% of all passengers, employees and visitors used public transport to get to Zurich Airport. This is 3% more than in 2009. In collaboration with companies operating at the airport, Flughafen Zürich AG is keen to continue this positive trend and to maintain and, where possible, extend its existing attractive range of public transport services.

However in order to maintain the high quality of its infrastructure, continue meeting the demand for air travel and air freight transport, and survive in a highly competitive international market, Zurich Airport needs optimum operating conditions. This is where policymakers must play their part. We are therefore following the revision of the federal government’s aviation policy report with close interest. The report must aim to strengthen the competitiveness of the Swiss aviation industry.

You will find plenty of interesting information about these topics in this edition of our Political Newsletter. The guest contribution from Professor Gian-Luca Bona on the subject of “Technology and emotions” rounds off our current issue.

I wish you a stimulating read.

Michael Schallhart, Chief Service Officer
Extensive noise mitigation and sound insulation measures at Zurich Airport

As the owner of the airport’s infrastructure and the airport’s operator, Flughafen Zürich AG is obligated to take steps to mitigate the impact of excessive air traffic noise. From the very outset the airport operator has sought to protect local residents from noise exposure as much as possible.

The Federal Noise Abatement Ordinance obliges Flughafen Zürich AG as the owner of the infrastructure to reduce noise emissions to the greatest possible technical and operationally feasible extent and as far as is economically viable. The airport operator complies with this ordinance as far as possible. Following privatisation and the establishment of the current Flughafen Zürich AG, the Airport Zurich Noise Fund (AZNF) was set up for this purpose (see page 4). To date, as part of its “Programm 2010” sound insulation project, Flughafen Zürich AG has used this fund to pay for passive sound insulation measures costing a total of around 170 million Swiss francs in 13 neighbouring municipalities. In addition, it has paid out around 30 million francs in settlement of 115 noise-related compensation claims from formal expropriations (compensation for reductions in value due to noise limits being exceeded).

Noise protection and sound insulation a high priority
Flughafen Zürich AG has long accorded noise protection and sound insulation a high priority. In 1980 Zurich Airport was one of the first airports in the world to introduce noise charges. As a consequence, airlines began introducing the newest and least noisy of their available aircraft on flights to Zurich from an early date. At the same time, operational rules have been continually updated to minimise noise exposure in neighbouring municipalities. For instance, stringent rules have also long been in force at Zurich Airport regarding the use of thrust reversers during landing and the use of APUs (auxiliary power units for supplying electricity on the ground). The opening of the new noise protection hangar (see page 4) represented another noise mitigation milestone which will further reduce noise exposure for residents in the vicinity of the airport.

Low-noise flight procedures
As well as reducing operating noise on the ground, Flughafen Zürich AG has endeavoured to use low-noise flight procedures ever since its inception. While taking security and demand into account, it consequently puts forward and supports procedures that expose as few people as possible to aircraft noise. Moreover, in 2010 the stricter night-time flight restric-
tions supported by Flughafen Zürich AG came into force. Since then a ban on flights between the hours of 11.30 p.m. and 6 a.m. has been in force, with the period between 11 p.m. and 11.30 p.m. being reserved solely for handling delayed flights. As a consequence, residents around Zurich Airport benefit from a high level of noise protection during the night compared with other airport regions around the world.

**Comparatively few residents affected by noise**

Over the last 25 years, the combined effect of all these measures together with continual technical advances in aircraft design have seen the area affected by excessive noise during the day being reduced by over two-thirds. Although Zurich Airport now lies in a relatively densely populated area as a result of above-average population growth in this region, only comparatively few people are affected by air traffic noise. In its 2009 study into air traffic noise in Switzerland, the Federal Office for the Environment (FOEN) estimated the number of people affected by aircraft noise during the day to be 65,000 (95,000 during the night). Significantly higher numbers of people are affected by railway noise (70,000 and 140,000 respectively) and by road traffic noise (1,200,000 and 700,000 respectively). Foreseeable technical advances in engine and aircraft design are also likely to further reduce the noise levels associated with flight movements in future.

**Continuing on its successful path**

Flughafen Zürich AG welcomes this development and will also continue to incentivise airlines to deploy their newest and quietest aircraft on their Zurich routes. This will enable the best possible reconciliation of the divergent interests of local residents, the Swiss travelling public and the airlines. To achieve these objectives, however, Zurich Airport is also reliant on understanding and support from politicians. When making decisions, policymakers must also take a balanced view of the different interests of the population – on the one hand for noise protection and on the other hand for mobility. Only in this way will it be possible for Zurich Airport to survive as an economic driver amid ever fiercer international competition and pro-

vide the all-important access to the world and its markets necessary to secure Switzerland’s long-term economic success.
Inauguration of noise protection hangar

Flughafen Zürich AG has opened its new noise protection facilities and is proud to offer access to one of the most modern noise protection hangars in the world. The hangar will provide optimum protection from noise emanating from aircraft engine testing. Since it was not built for operational reasons but purely to mitigate noise for local residents, the noise protection hangar was financed from the Airport Zurich Noise Fund.

Aircraft need to be inspected and repaired at regular intervals, and tests then need to be performed to ensure everything is working properly. These checks include running aircraft engines on the ground. For operational reasons, these tests are often carried out during the more noise-sensitive shoulder periods and at night. Less than two years after ground-breaking, the new noise protection hangar at Zurich Airport was officially opened on 18 June 2014 by Government Council member Ernst Stocker, SWISS Chief Executive Officer Harry Hohmeister and Thomas Kern, CEO of Flughafen Zürich AG. Following the opening of the new noise protection hangar, local residents will be even better shielded from the noise emissions emanating from engine ground testing. The new hangar is an impressive 126 metres long, 82 metres wide and 25 metres high. This will enable all the aircraft regularly maintained at Zurich Airport to be tested in the hangar, from relatively small aircraft serving regional routes right up to the new Boeing 747-800 jumbo jet.

Airport Zurich Noise Fund finances noise protection costs

Flughafen Zürich AG has invested around 30 million Swiss francs from the Airport Zurich Noise Fund (AZNF) in constructing this 100,000 m³ hangar. The AZNF is used to finance the costs resulting from excessive aircraft noise (sound insulation measures, compensation for formal expropriations, etc.). The fund is financed by noise charges. The louder an aircraft type is, and the later it takes off or lands, the higher the respective noise charge levied. On the one hand, this ensures sufficient funds to pay compensation claims arising from aircraft noise, and, on the other, the sliding-scale charges based on noise emissions and take-off slots encourage the shift to a more modern and quieter fleet mix and incentivise airlines to avoid taking off and landing during shoulder periods and at night. Since the noise protection hangar was erected solely in order to shield local residents from noise and has no particular operational or financial benefits, it qualified for funding by the AZNF.
Of technology and emotions

It is no easy matter to find a way through these competing tensions and objectively analyse the complex interrelationships with all their advantages and drawbacks. We appear to be more successful at this when it comes to technology rather than with more emotional issues such as an open society and free immigration. In matters of technology, the facts are (usually) known. Noise exposure from aircraft has been recorded in minute detail for many years already and has been precisely modelled, and the development can be reliably predicted. With its know-how in materials research and technological development, Empa is playing a leading role here. The number of people living around the airport is nevertheless continually increasing as, although noise is a nuisance, we accord a higher priority to having access to an economic and cultural centre. We accept the one for the sake of the other.

Similarly, the same holds true for modern societies. On the one hand separation and isolation are not an option for a small nation in the heart of Europe, while on the other hand we wish to remain in full control. If we are to find viable solutions, constructive dialogue is imperative – both domestically, but also with our partners abroad. Over centuries the Swiss have learned to build bridges and be open to the foreign and the new. This cosmopolitan outlook offers great opportunities – if we have the courage to take risks in a targeted manner and nurture our capacity to forge international links on as wide a scale as possible. For only in this way can innovative ideas flourish and safeguard our wellbeing and our high standard of living in the long run. This is the basis on which Switzerland can continue to write its success story. The airport as a vital hub is the very embodiment of these interactions.

Gian-Luca Bona
Since 2009 CEO of Empa and Professor for Photonics at the Swiss Federal Institutes of Technology in Zurich and Lausanne.

Gian-Luca Bona

There can hardly be a more fitting symbol for our modern-day society than airports to reflect the current tensions at play in Switzerland. As a small nation, our globally dependent economy can only flourish and help us maintain our high standard of living if we are well-connected on the international stage. This is the lifeblood of our innovative companies, and as an international hub Zurich Airport is both testament to and an impressive manifestation of this cosmopolitan outlook. Aircraft impress us with their technology and precision, and awaken many positive emotions about the “big wide world”. Especially during holiday periods.

At the same time, many Swiss citizens are increasingly unsettled by the high level of immigration we have seen over recent years. They perceive their culture, and sometimes even their jobs, to be under threat, and talk of being helpless victims of “density stress”. Airports then become a symbol of uncontrolled immigration and excessive mobility, and also of a less than efficient use of our limited resources. Despite remarkable advances in lightweight components and in engine design, environmental performance per kilometre is still poorer than for cars and trains. In addition aircraft noise is a strain to local residents.
Strengthening the competitiveness of Swiss aviation

Airports provide a dynamic high-quality infrastructure that enables Switzerland to benefit from optimum connections to European and intercontinental destinations. To ensure this can also be continued in future, it is essential to strengthen the competitiveness of the Swiss aviation industry and provide optimum operating conditions for airports. These objectives must be prioritised during revision of the aviation policy report of the Federal Council.

The aviation industry has constantly moved forward over the last ten years. During the coming months the report on the federal government’s aviation policy published in 2004 is therefore being reviewed and updated to take account of the new circumstances. Strengthening the competitiveness of airports must also be accorded a high priority in the revised report. The “Monitoring the competitiveness of the Swiss aviation industry” study conducted in 2012 on behalf of the Federal Office of Civil Aviation (FOCA) and stakeholders in the aviation industry is a key document in this regard. This study looked at international competitiveness in the areas of demand, infrastructure and transport offering, the political and fiscal framework, environmental protection and flight safety.

Swiss aviation above average for efficiency and quality

The monitoring report published on 6 November 2012 (available on FOCA’s website) shows that Swiss aviation is competitive in many respects. Positive highlights are the high percentage of passengers who use public transport to travel to the airport (see page 7). Swiss aviation is also rated above average for efficiency and quality. Likewise, good progress has been made in developing environmental protection and flight safety aspects.

Infrastructure and capacity bottlenecks evident

In other areas, Swiss aviation rates significantly worse in international comparisons. This applies, for instance, to obligations to pay compensation for air traffic noise, or the need to bear the costs of territorial security measures undertaken by public sector agencies. Bottlenecks in the provision of infrastructure and capacities are also already becoming apparent. Without some moderate development, these bottlenecks will get worse in future.

Continued demand-led development of infrastructure

When revising the 2004 aviation policy report, it is therefore particularly important to focus on shaping the regulatory environment so that the airports can continue to develop their infrastructure to meet demand in future and consequently contribute to the competitiveness of Switzerland’s aviation industry.
Positive trends in modal split

Zurich Airport is well on the way to meeting the modal split targets set by the federal government. Last year 43 percent of all passengers, visitors and employees travelled to Zurich Airport by public transport. This is three percent more than in 2009. To achieve or even surpass the ambitious targets, however, all the parties involved are called on to improve the conditions for the use of public transport within their own particular domains. Along with Flughafen Zürich AG, these include the companies who operate at the airport as well as public sector agencies and transport companies.

A modal split stipulation is laid down in the Sectoral Aviation Infrastructure Plan (SAIP) for Zurich Airport. It prescribes that 42 percent of all passengers, visitors and employees must travel to the airport by public transport by 2020, and 46 percent by 2030. As analysis of the latest survey shows, last year already 43 percent of all people travelled to the airport by public transport. This value has risen steadily since the first survey and has jumped a further three percentage points since the last survey in 2009.

Challenges remain

However, this current success must not distract from the fact that major efforts are required to ensure we stay on track to meet the long-term targets. The attractiveness of public transport stands and falls with the services offered. Regular connections, frequent services and sufficient seating at all times of the day, including the early hours of the morning and late evenings, are important prerequisites for motivating the steadily increasing number of passengers and employees to use public transport to come to the airport.

Airports, transport companies and public sector agencies must all play their part

This is, however, only possible if the ongoing capacity and infrastructure expansion again positively influences timetable development in future, enabling the public transport offering at Zurich Airport to be enhanced. Flughafen Zürich AG calls on politicians and public transport companies to do everything possible to ensure that access to Zurich Airport by public transport is even better in future. Companies based at the airport must also step up to the mark: they must continue to promote travel by public transport to their employees and customers, and consequently help achieve the modal split targets.

Modal split: Percentage of public transport

- 40% in 2009
- 43% in 2013
Traffic statistics

Origin and destination of passengers by European countries
More than every sixth passenger at Zurich Airport is travelling to or from a German airport. With 3.9 million passengers, Germany leads the passenger ranking, a fact which reflects the strong economic interdependence of Switzerland and Germany. Attractive connections between these two countries are an important factor in Swiss-German relations. Second and third place go to Spain, with 2.3 million passengers, and Great Britain, with 2.0 million.

You will find these and other interesting statistics on flight operations at Zurich Airport in the Statistical Yearbook 2013 of Flughafen Zürich AG and at www.zurich-airport.com/statistical-yearbook.

Origin and destination of passengers by country
(Scheduled and charter flights in 2013)

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<th>Rank</th>
<th>Country/region</th>
<th>No. of passengers</th>
<th>Share in %</th>
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<td>Germany</td>
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<td>Spain</td>
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Traffic trends, January to June 2014
Between January and June 2014, 11,884,873 passengers used Zurich Airport. This represents a year-on-year increase of 0.5%.

The number of local passengers rose by 4.1% to 8,113,521 in the first half of 2014. During the same period the number of transit passengers dropped 6.6% over the previous year to 3,727,822. In percentage terms, the share of transfer passengers was 31.4% (2.4 percentage points below the previous year’s figures).

At 128,289, the number of flight movements during the first half of 2014 was 0.2% down on the previous year.

Between January and June 2014 Zurich Airport handled 211,814 tonnes of air freight, up 3.5% compared with the first half of 2013.

Traffic trends during the first half of 2014

<table>
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<th>January–June 2014</th>
<th>January–June 2013</th>
<th>Change in %</th>
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<td><strong>Passengers</strong></td>
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<tr>
<td>Local passengers</td>
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<td>Transfer passengers</td>
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<td>Share of transfers</td>
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1 incl. transit, general aviation and other

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