

Building Resilience: Zurich Airport Case Study



Emanuel Fleuti, Vice President Sustainability
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Zurich Airport

ZRH Airport and Initiatives



270,000 movements
32.5 million passengers



80 million airport users
46% modal split



Net Zero THG in Scopes 1
and 2 by 2040: on track

Two runway extensions to stabilize
operations in all weather conditions.



New passenger pier infrastructure
for use 2035-2075.

Transition to renewable locally
generated energies both for
heat and electricity: on track





Building resilience for the future

Mitigation options following the climate risk assessment study

The climate risk assessment, in conjunction with geopolitical and societal assessments, reveal risks, challenges and opportunities.

- Operational resilience: Implement alternative technologies and procedures: Diversity in fuel options aiming at decarbonizing operations.
- Infrastructure resilience: Designing, building and preparing for adverse chronic and acute impacts: Increasing summer temperatures, more severe storm events (wind, lightning, precipitation).
- Transitional resilience: Address geopolitical upheavals, mobility and socio-political demands and develop awareness and knowledge to strengthen the global expertise and resilience.

SAF at Zurich Airport

First SAF and then beyond SAF

Operational resilience is also developing alternatives to fossil fuels.

The dilemma: Zurich airport is not in the aircraft fuel business: no production, no purchase, no sale, no handling, no usage.

- Sole role is acting as facilitator and enabler: First test import of SAF in 2020*, development of a regular import process in 2021, several physical SAF batches supplied since.
- Beyond HEFA: Support development of PtL diesel (as a by-product to syn Jet-A1). Worldwide first synDiesel powered airport passenger bus in 2025 and offtake agreements 2027-2032.

* credits to Jet Aviation, Neste and several Swiss authorities



Building for the future

Changing standards from past to the future

Challenge: Infrastructure design parameters are based on climate periods in the past (30 years = 1990-2020).

Future conditions will significantly differ: Increased summer temperatures, storms and extreme wind gusts, Extreme precipitation and storm water discharge.

Review airfield surface design and construction for extreme heat ($>60^{\circ}\text{C}$ surface temperature).

Review minimum runway length for critical aircraft type under extreme conditions.

New Pier A (>2035) designed for future climate conditions, energy supply expectations (geothermal, solar) and circularity/carbon sink (wood).



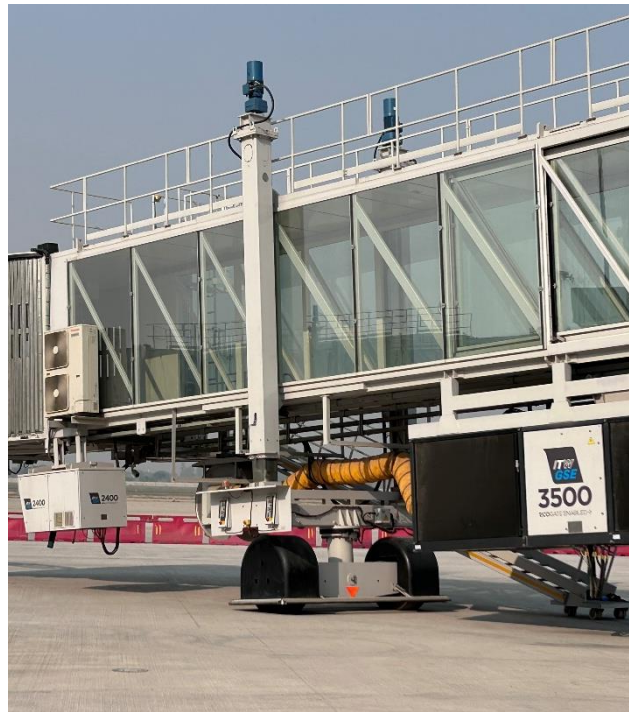
Transitional resilience

Sharing is gaining

Share knowledge and raise awareness through global cooperations (e.g. ACI APEX Environment).

Transfer technologies and approaches to new assets: new green-field airports Noida (IND); implement proven programs into existing assets (Brazil).

Support trade associations to link operational experience with industry and regulatory developments.



A large commercial airplane is shown from a low angle, flying directly towards the viewer. The aircraft's landing gear is deployed, and its headlights are on. The background is a warm, orange-hued sky at sunset or sunrise. In the foreground, there are airport lights and a runway. The overall scene is a dramatic and iconic representation of aviation.

Thank you

If you always do what you always did, you will always get what you always got.

Zurich Airport

Contact



Emanuel Fleuti

Vice President Sustainability

Emanuel.fleuti@zurich-airport.com

+41 43 816 21 81