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#GreenerMobilityExchange

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Stay grounded, keep connected ETH Zurich's air travel project

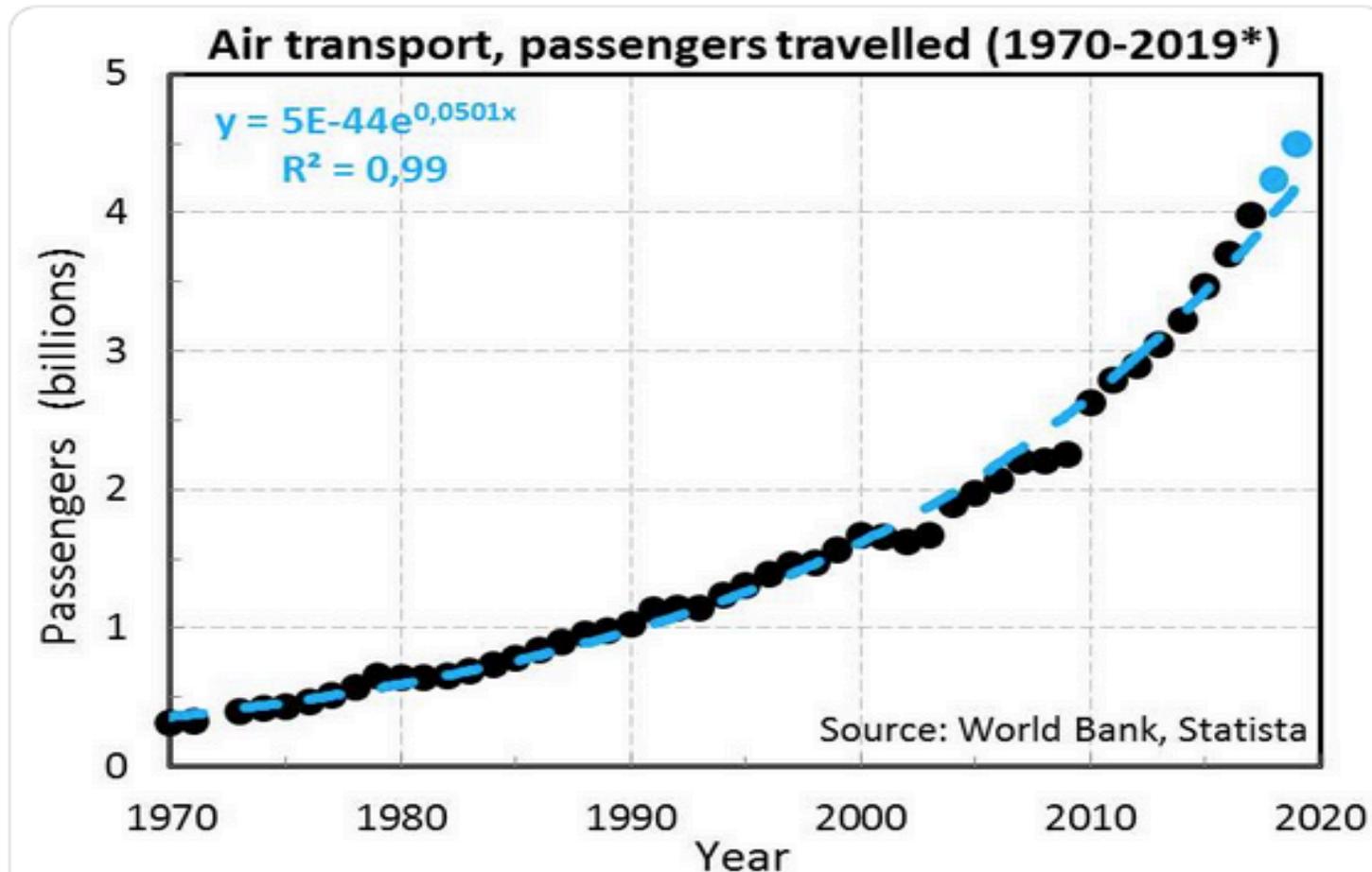
Making Higher Education Institutions' exchange and mobility greener

Susann Görlinger, Co-Lead Mobility Platform ETH Zurich, www.ethz.ch/airtravel

Overview

- Flight reduction (general)
- Flight reduction project at ETH Zurich
- Lessons learned

Development of worldwide air travel from 1970 – Jan 2019



from: <https://twitter.com/Lacertko/status/1089558645606625282>

Why is the reduction of flights relevant for universities?

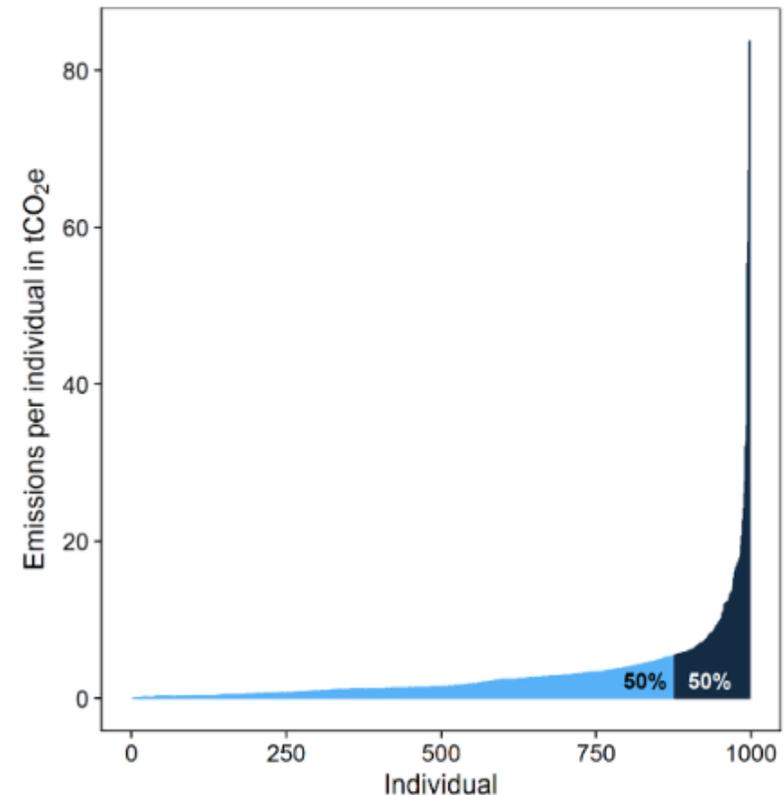
1. Scientist fly a lot more than the average person (Burian, 2018)*

2. Few academic fliers are responsible for most emissions (Wynes and Donner, 2018)

Air travel emissions of 1509 individuals across 8 departments at University of British Columbia:

- 1/3 did not fly
- 80% emissions by 25% fliers
- 50% emissions caused by 8% fliers

*<https://lup.lub.lu.se/student-papers/search/publication/8947780>



Wynes and Donner, 2018: Cumulative emissions of 1509 individuals from UBC. Light blue indicates those travellers responsible for the first 50% of emissions and dark blue indicates those responsible for the second 50%

Why is the reduction of flights relevant for universities?

3. Leading by example/Trendsetting

“The results of the research suggest that there is an **‘appetite for leadership’** when it comes to tackling emissions from aviation ... **Leading by example by giving up flying appears to send a powerful and effective message ...**”

([Westlake](#), 2017, <http://dx.doi.org/10.2139/ssrn.3283157>)

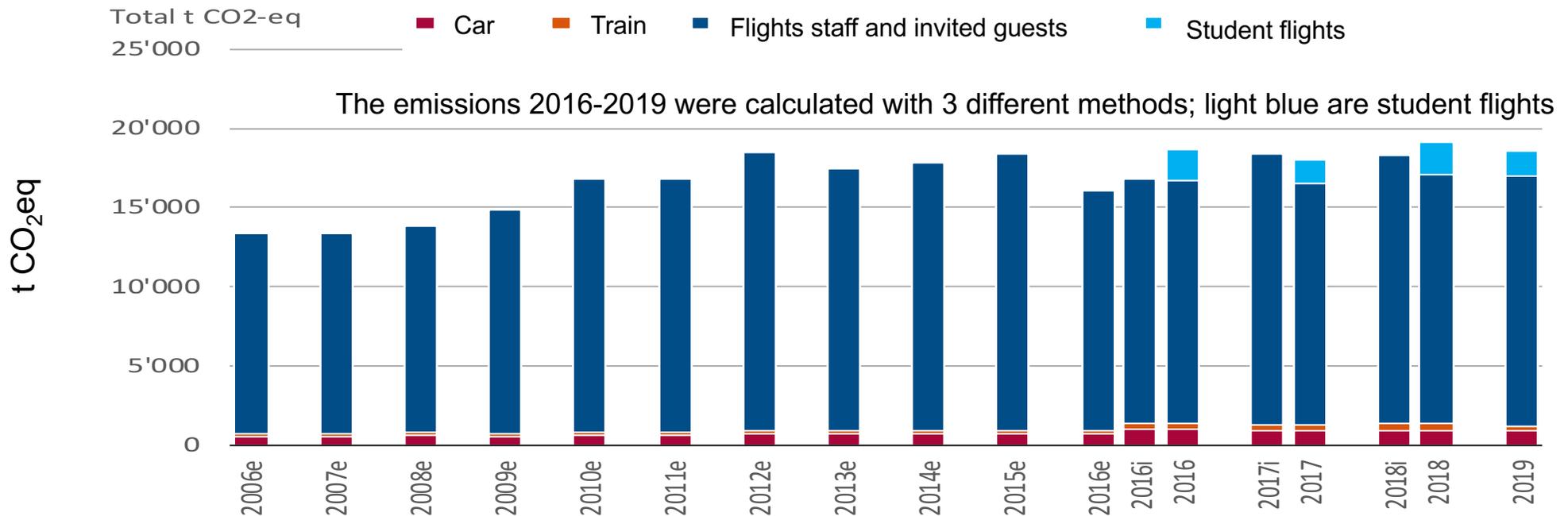
4. Credibility

The public finds scientists who fly less more credible (Attari et al., 2016, Climate Change)

5. Scientific Success:

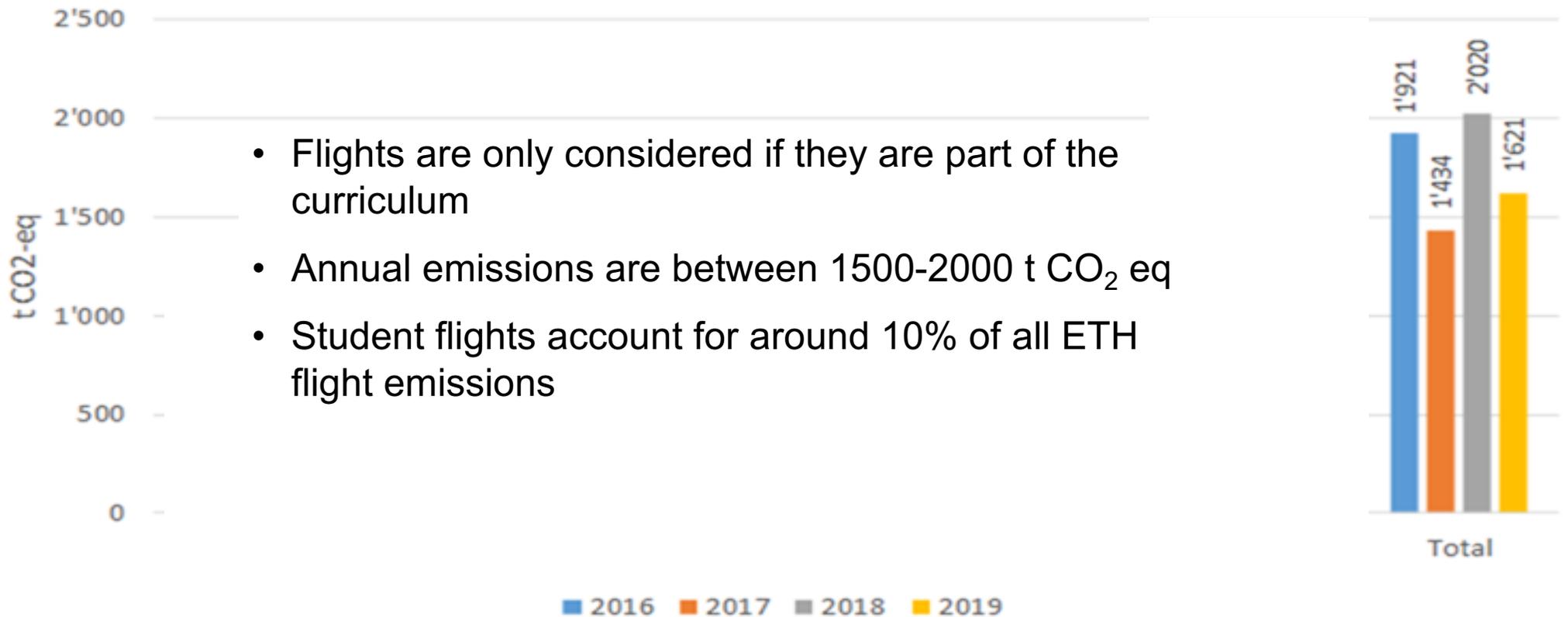
Academic air travel has limited influence on professional success (Wynes et al., 2019, J. Cleaner Production)

Why is air travel the #1 leverage to reduce CO₂ emissions at ETH?



- More than **half of CO₂** emissions at ETH are from [business travel](#), 93% from flights, mainly overseas
- Total emissions increased since 2006; emissions per FTE nearly constant
- **New monitoring system based on flight number, class and date**

Emissions from student flights 2016 – 2019



Emissions from student flights 2016 – 2019 by distance categories



Activities at ETH Zurich

- 2016/2017: **Student** initiative to reduce air travel emissions
- 2016: Vice President for Infrastructure initiates the **mobility platform** with a thematic focus on flight reduction ([www.ethz.ch/air travel](http://www.ethz.ch/airtravel))
- 2016: Mobility platform commissions a **concept** on how to reduce air travel at ETH
- 2017: **Top down** decision by the executive board
- 2017/2018: **Bottom up** implementation by the departments to define their **reduction goal** with respective **measures**
- 2018: ETH-wide reduction goal of on average **11%** (without compensation and efficiency gains of airlines)
- 2019 - 2025: **Implementation** and **monitoring**
- 2022 und 2025: **Evaluation**

Air travel reduction at ETH Zurich – Status quo:

- Measures of the departments
 - Internal Carbon Pricing: money can be used for compensation, internal research projects and teaching
 - Compensation: only preliminary measure, not part of the reduction goal
 - Recommendations: one intercontinental conference per PhD; train until 600–800 km (incentive: 1. class ticket); combine different activities
 - Support conferences in Europe, bi-annual conferences (instead yearly)
 - Support VC ETH-wide, adapt ETH regulations (less incentives for flights)
- PhD project to study the transformation process related to ETH Zurich's flight reduction project (Agnes Kreil)

Lessons Learned

- Top down support is essential
- Bottom up travel decisions by individuals → involve all staff and students (not just interested individuals)
- Transparency
- Good database for monitoring
- Change framing: from reduction to alternatives for flights
- Important role of champions and influencers, Trendsetting
- Discussion about conflicting targets (personal contacts/international research cooperations/field work AND climate goals)
- Wicked problem → there are no simple solutions but different and creative approaches (trial and error)
- Cultural change needs endurance, but sometimes (like now), it can speed up
- Common approach of many organisations needed to be successful

