Sustainability of Staff and Student Travel at the University of Auckland, context paper for Waipapa Taumata Rau's Sustainability Strategy Development

Background

Until recently, academic hypermobility has received little attention in the literature. Researchers and students in higher education institutions have often taken their domestic and international travel privileges for granted (Arsenault et al., 2019; Crumley-Effinger & Torres-Olave, 2020). Air travel for conference participation, fieldwork, study abroad and the development of international collaborations has been incentivised by university travel grants and student exchange programmes and plays an important role in academic promotions, career progressions and student recruitment. As many tertiary education institutions develop their own sustainability strategies and promote sustainability research, more attention is being paid to how staff and student air travel contributes to climate change. This is particularly relevant for the University of Auckland which prides itself in its global partnerships, strategic international engagement, and internationalisation of the student learning experience. Aotearoa's geographical isolation is generally cited as a major reason why a high amount of carbon-intensive international air travel has been justified and normalised by New Zealand universities (Hopkins et al., 2016).

Review of relevant literature

A qualitative policy study on academic air travel in Australian universities by Glover et al. (2018a) found that 23 out of 43 (53%) Australian universities fell under the category "**air travel ignorers**", while a smaller group of nine universities (16%) recognised academic air travel as a significant source of carbon emissions without adjusting their policies. Thirteen Australian universities (30%) were classified as "**air travel substituters**", with video- and teleconferencing being the major means of substituting air travel. In her study of academic staff members' responses to the ETH Zurich's air travel reduction policy, Kreil (2021) found that proponents argued that **reduced air travel would improve the university's reputation, turn academics into positive role models and provide greater consistency with teaching** sustainability principles to students. Opponents to the policy expected **reduced air travel** to **negatively affect their research productivity, academic excellence and freedom, internationality, and visibility**. Drawing on research among academic staff at the University of British Colombia, Wyles et al. (2019) found that there was **no significant correlation between air travel emissions and research outputs**. The authors found a strong relationship between salaries and emissions, demonstrating that **academics generally travel more as their career progresses**. Similarly, Arsenault et al. (2019) found in their study at the Université de Montréal that professors travelled nearly four times longer distances per annum than the average member of the university and close to three times the annual distance travelled by international students and study abroad students. Reporting on the École Polytechnique Fédérale de Lausanne, Cier et al. (2018) also found that the **travel footprint increases dramatically with researcher seniority**, i.e., tenfold from PhD students to professors.

In their study of the carbon footprint of a sustainability research project at the University of Maine, Waring et al. (2014) found that **carbon emissions varied substantially by**

purpose of travel, with **dissemination of findings at conferences creating a much larger carbon footprint than the actual research**. Chalvatzis and Ormosi (2021) examined participants in economics conferences and found that there was a **positive relationship between the number of conferences attended and the number of citations** researchers obtained for their presented papers. Yet, they found **no correlation between the distance travelled and the number of citations** (with the exception of European academics), which indicates that **participation in local and regional conferences can be as valuable for researchers as long-distance international conferences** to enhance their research impact and visibility. Opposition to reduction of conference travel is often based on the argument that **virtual face-to-face meetings cannot adequately substitute physical (bodily) presence at a major academic event** that involves a range of social interactions beyond the conference rooms, referred to as "conference sociality" (Glover et al., 2018b, p. 9). Other than going completely virtual – which can cut carbon emissions by up to 99.9% (Klöwer et al., 2020), recent literature presents various options to reduce the carbon emissions of academic conferences, ranging from **alternating between virtual and in-person events** (Bousema et al., 2020), **decentralised delivery through regional hubs** (Klöwer et al., 2020; van Ewijk & Hoekman, 2021), **using alternative means of transport**, such as overnight trains and long-distance busses (Quinton, 2020), **changing from annual conferences to biennial events** (Klöwer et al., 2020) and **conferencing over staggered time zones** (Ruddick, 2019). Using alternative means of transport, such as overnight trains and long-distance busses, carbon taxing and carbon offsetting as suggested by Quinton (2020) has been described as largely ineffective by van Ewijk & Hoekman (2021).

What is the unique situation of the University of Auckland?

In 2019, staff air travel accounted for 35% of the University of Auckland's overall greenhouse gas emissions, according the UoA Verified baseline carbon Audit (2019). At first glance, this seems comparable to the share of staff air travel in total emissions at Victoria University of Wellington (VUW). However, VUW does neither include international nor domestic students' air travel in its calculations, while UoA includes an estimated figure for international students' air travel and excludes domestic students' air travel. With the caveat of differences in carbon accounting, the UoA's share of staff air travel in total emissions appears to be twice as high as Monash University's (see Table 1 in Appendix). It would be helpful to have disaggregated data for long-distance (intercontinental), short-haul (Oceania) and domestic staff (and student) air travel to identify viable options for air travel reductions across the UoA community.

A comparative study of academic travel policies in three New Zealand universities by Hopkins et al. (2016) identified an "economic, rather than sustainability, focus for travel decision-making" (p. 388) at UoA and that "[a]cademic travel appears to be embedded in policy as an aspiration or expectation of an academic staff member's career" (p. 392). More recently, UoA has internally acknowledged staff and student air travel to be a significant contributor to carbon emissions but has yet to adjust its policies. For example, frequent travellers (more than 20 trips per year) can apply for having their airline flight club membership paid for by UoA, as per current travel policy. Going forward, UoA will have to reconcile its objective of being a globally engaged university of international standing with the moral imperative of contributing to wider societal goals of reducing carbon emissions if it wants to move to the status of an "air travel substituter".

How are other universities addressing the goal of reducing staff air travel?

Many globally engaged universities have put in place specific policies to reduce staff air travel. The University of Southampton has invested in **high-quality virtual collaboration and communication technology** and plans to implement a **points system which helps academics to estimate the value of their own travel** and to gauge whether the perceived benefits outweigh the environmental costs. Arizona State University charges a **flat fee on each academic trip** which is then used to fund local carbon offset initiatives. The University of Adelaide identified that **consistent messaging about the impact of air travel on carbon emissions** can be effective in changing faculty and staff attitudes toward air travel. École Polytechnique Fédérale de Lausanne has suggested to **eliminate all business class travel** and asks academic travellers to **avoid layovers in their travel itineraries** as much as possible. The University of East Anglia's Tyndall Centre for Climate Change Research developed a **voluntary Code of Conduct to support a low-carbon research culture**, consisting of principles of self-monitoring, setting personal objectives to reduce travel-based emissions and providing incentives for developing a low-carbon research career pathway. It is generally acknowledged that incentive-based policies are more effective and meet lower levels of resistance among academic staff than rigid, top-down regulatory measures (Janisch & Hilty, 2017).

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Appendix

Table 1. Share of staff air travel in the total carbon footprint of selected universities

University	Share of staff air travel in overall carbon footprint	Reference year
Monash University*	17%	2018
University of Southampton*	27%	2018/19
École Polytechnique Fédérale de Lausanne	33%	2016
Victoria University of Wellington*	34%	2019
University of Auckland**	35%	2019

Note: *Overall carbon footprint does neither include international nor domestic students' air travel; **Overall carbon footprint does not include domestic students' air travel

Sources: Ciers et al., 2019; Helmers et al., 2021; various self-reporting of universities