

- introduce the purpose of the webinar
- introduce the Travel Better Package
 - Questions and Answers Tool
 - the Travel Better Pledge Template
 - the Air Travel Justification Tool
 - roleplay #1
 - roleplay #2
- questions/comments



Purpose of the Webinar

- introduce the Travel Better
 Package to the sector
- provide practical guidance on how to use the resources in the package
- gauge understanding and use of the package



Purpose of the Package

- support a reduction in air travel in the FHE sector
- facilitate reflection on individual and institutional reliance on air travel
- facilitate in mapping and brainstorming ways to travel better



Questions



8

Your concerns, our answers.



Development

- Initially a point/counterpoint document
- Accessible: friendly-tone, data from a variety of sources
- Does not always provide the answer you want to hear, but asks readers to re-think norms and behaviours
- Peer-reviewed by a few individuals in the sector

Travel Better: Questions & Answers v. 1

Questions & Answers addresses concerns you may have when attempting to reduce your air travel while working in the further and higher education sector (FHE). To use this tool, think about why you may face difficulty in reducing your air travel- check the summaries of each question to see if your concerns may be addressed. Hyperlinks to sources are embedded in the document, simply hover over a blue word and the term boxes.

Contents

"What if my individual impact makes no difference?"

This section discusses why it is important to address air travel on both individual and institutional scales. Referencing works by Dr. Joseph Nevins, Jonathen Franzen, Dr. Kimberly Nicholas and others.

Key words: privilege, social justice, influence, top-down changes

"What if I reduce my environmental impact in other ways?"

Here, we discuss how air travel has a larger impact on the environment than most individual behaviours and ask you to be wary of moral licensing.

Key words: carbon budget, lifetime emissions, moral licensing

"Can't technology mitigate the environmental impact of flying?"

This section addresses the demand for travel outpacing any technological advancement, going into detail about biofuels and electric planes.

Key words: biofuels, electric batteries, consumer demand

"Can I continue regular air travel if I purchase carbon offsets?"

10

This section sheds light on some assumptions on which carbon offsets rely to support you in making informed decisions about purchasing carbon offsets.

Key words: net-zero carbon impact, carbon calculations, additionality, leakage. culture change

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Travel Better: Questions & Answers v. 1

"Won't reducing air travel impact my research?"

Here we highlight important research from the University of British Columbia and elsewhere, studying how air travel impacts careers in the FHE sector.

Key words: hla index, credibility

"Doesn't travelling by air save time?"

This question is addressed by highlighting instances when train travel is faster than air travel. It also asks you to reconsider the actual benefits to saving time.

key words: hypermobility, benefits to saving time

"Isn't virtual conferencing technology difficult to use for meetings?" 18

Here we discuss accepting online meetings as a supplement, rather than a substitute, to in-person gatherings.

Key words: substitute vs. supplement, rethinking collaboration

"Will reducing air travel in universities and colleges affect women **19** and groups underrepresented in the sector?"

In this section, we discuss the implications our reliance on air travel can have for marginalised groups, and begin to re-think the sector with more equity and diversity from reducing flying.

Key words: gender inequality, gender roles, visas, accessibility

Please note

In this tool, we use the term carbon emissions in place of greenhouse gas emissions. Flying produces carbon dioxide, nitrous oxide, methane and water vapour.

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15

13



"Can technology decrease the environmental impact of flying?"

It makes sense that we may look to technology to provide solutions to climate change; we are constantly told that technological fixes will allow us to go about our lives while also halting climate change. There is also a lot of conversation surrounding technological solutions to the environmental impacts of air travel, including the use of biofuels and electric batteries, instead of kerosene, to fly planes. Thankfully, media sources and academic literature on air travel have begun to address the misguided, albeit understandable, belief that technological advances and silver bullets will allow us to continue, and even increase air travel without harming the environment, also known as the 'technological hoax'.

Although there have been advances in technology that can theoretically reduce the environmental impact of air travel, one of the most important reasons why we cannot rely on technology to make air travel cleaner is that demand for flights is accelerating quickly and technological advancements can currently only work on smaller scales. To quote Dr. John Broderick, lecturer and chair of the Carbon Action Group at the University of Manchester, 'increase in traffic has historically outpaced the improvements in technology.'

"increase in traffic has historically outpaced the improvements in technology." The aviation industry has committed to cutting its emissions in half by 2050 and relies on access to alternative jet fuels to help them reach this goal. Yet, this may not be realistic.

Biofuels made from plants, including corn and sugarcane, have been used since before the invention of automobiles. Biofuels have been used for 150, 000 flights since 2008. yet, the amount of biofuels produced for aviation in 2018 accounted for only 0.1% of fuel consumption in air travel. A rough calculation shows that switching our global, overall consumption of kerosene fuel to biofuels would require an expansion of global agricultural land by around 7%. Evidently, we may not have enough land to grow plants for food and also to produce enough biofuels to curb carbon emissions from air travel. It is estimated that the production of alternative jet fuels in North America, which has lots of land, may still only account for 5% of carbon emissions from international flights by 2030.

However, research is ongoing.

While there have been some advances in <u>electric</u> planes, airplanes are very sensitive to weight and mass (think about how airlines meticulously weigh check-in luggage), and batteries that would store enough energy for a longhaul flight would be very heavy, making it nearly impossible for longhaul flights to run off electricity. There are currently batteries that can provide energy for a small, air taxi to carry 4 passengers for around 100 kilometers.

Lastly, technological solutions to the environmental impact of air travel take time. Scientists are still trying to understand how we can produce enough biofuel to meet increasing consumption of goods and services without compromising food supply or more greatly contributing to climate change through deforestation. Additionally, batteries improve on average 3-4% per decade; Academics writing for the Conversation estimate that at this rate, we may only develop the batteries needed to fully run a commuter plane by 2050.

We don't have that much time.



Travel Better: Questions & Answers v. 1

"Can I continue regular air travel if I offset my emissions?"



Carbon offsetting is controversial. There is a plethora of literature both praising and criticising carbon offsets. Yet, despite the range of conflicting opinions, interest in, and purchases of carbon offsets have risen in the past year.

Put simply, carbon offsetting involves paying money into scheme that is undergoing or developing a project, like planting trees or providing communities with clean-burning stoves, that will remove, or in the future prevent the amount of carbon associated with your individual travel. In theory, purchasing carbon offsets hopes to make your action have a net-zero carbon impact.

There are many reasons why carbon offsetting is not an ideal solution to the negative impacts of air travel on the environment. This answer will focus on a few (false) assumptions on which carbon offsetting relies.

The first assumption on which offsetting stands is that calculating carbon emissions from air travel and then measuring carbon storage from offsetting is straightforward and that the data is completely accurate. It's not. Calculating carbon emissions from most activities is complicated, but calculating the emissions from one flight is especially difficult due to differences in aircraft, weight of passengers and luggage, business and economy seats and radiative forcing, or the additional warming caused by water vapour and nitrous oxide in higher altitudes. Additionally, calculating how much carbon has been stored by projects, like planting trees, is also complicated. It is difficult to know exactly how much carbon trees are storing much without cutting them down and burning them (which defeats the purpose of planting them, of course).

Also, an important part of carbon offsets is proving additionality, meaning, proving that a project, like installing wind turbines would not have happened without the scheme and money paid into the scheme to offset existing carbon; this is frustratingly difficult to prove, yet, without proving additionality, we cannot say for certain that an action has had its carbon truly offset.

We should also worry about leakage- or the idea that a carbon offsetting project in one area may cause extra carbon emissions elsewhere. Dr.Barbara Haya, a researcher at the University of California Berkley, told ProPublica that it is a "delusion" to believe we can accurately measure the impact of carbon offsetting. She instead hopes these programmes help the climate in unmeasurable ways, saying "I think that's the best of what offsets can be."



When a tree is destroyed, all the carbon accumulated over its lifetime is released back into the atmosphere.

Image from ProPublica's 2019 piece on unsuccessful offsetting schemes in Brazil



Development

- inspired by the Flying Less
 Pledge
- inspired by Concordia University
- consultations with EAUC-Network
- Initially a working pledge, now an informational resource

Travel Better Pledge Template v. 1

The Travel Better Pledge Template and the Sustainable Development Goals

The Travel Better Package and the Travel Better Pledge Template support the realisation of multiple Sustainable Development Goals (SDGs), as highlighted below:



SDG 12: Responsible Consumption and Production seeks to reduce material consumption and the over-extraction of natural resources. The Travel Better Pledge Template encourages a reduction in flights and thus, consumption of kerosene used to fuel aircrafts. It also provides individuals with knowledge to live 'in harmony' with nature.



SDG 13: Climate Action seeks to mitigate and adapt to climate change. The Travel Better Pledge Template contributes to this goal by sharing knowledge about carbon intensive activities and impact reduction. Travel Better Pledge Template v. 1

Air Travel and Climate Change

Climate change poses a serious threat to humanity. Air travel is responsible for around 2.4% of global carbon emissions from fossil fuel use, helping propel global warming. Demand for air travel is projected to double over the next 20 years, causing air travel to contribute to over 20% of global carbon emissions, assuming other sectors decarbonise. This is a significant proportion of carbon emissions that will hinder the IPCC'surge to cut emissions by 90% to maintain a 1.5 °C increase in the earth's temperature.

Air Travel and the Further and Higher Education (FHE) Sector

The FHE sector relies heavily on air travel. Whether it is to attend a conference, work on global research, sit on international boards or promote universities to international students, success in the sector is often understood to be synonymous with air travel. As a leading sector in climate change mitigation and adaptation, we must address this behaviour and reevaluate the emphasis placed on air travel.

How to Use this Resource

This resource is a pledge template that can be used to:

- 1. Inform individual behaviour change
- 2. Inform departmental/institutional policy, statements, pledges etc,

Through the three goals and ten steps, individuals, departments and institutions can develop ways to travel better while influencing colleagues and peers to do the same.

Hyperlinks to sources are embedded in the document, simply hover over a blue word.

The Purpose of your Promise



Be better informed about the harmful impacts of air travel

A 2018 poll by Possible identified a pervasive lack of knowledge about the environmental impacts of air travel with only 15% of 1.750 respondents correctly identifying taking one less flight as having the biggest impact amongst individual actions against climate change in a year-long period.

Although knowledge alone cannot change behaviour, an awareness of the situation can provide some useful context. Additionally, studies show that knowledge of the consequences of an action allows people to better understand their responsibility to think more deeply about the action and change their behaviour where possible.



Make better decisions regarding travel

Turn your knowledge into practice and try your best to make better decisions regarding air travel. This may look like properly justifying a trip involving air travel, or choosing to prioritise collective ground travel for certain trips. Making better decisions regarding air travel can also affect others. The same 2018 poll by Possible found that only 61% of respondents were willing to reduce their flying. However, if aware of other people also changing their flying behaviour, 69% of respondents were willing to reduce their flying.

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Challenge workplace norms and push for institutional change where possible by influencing peers and engaging in discussions to reduce air travel in the FHE sector

Changing individual behaviour is important. Individual change can also contribute to a change in workplace norms, which may in turn influence institutional change. While personal norms are important for behaviour change, an appropriate organisational climate is also needed. Organisational climate refers to how individuals (or employees) perceive an action is encouraged or promoted by a governing organisation (ie. an employer). Therefore, the third goal aims to normalise a reduction in flying in the workplace to improve the organisational climate of the FHE sector in supporting and encouraging less flying. Our work in the sector will challenge, instead of reproduce, a need for air travel in the sector.

Be better informed about the impacts of air travel

I will use EAUC-Scotland's Question & Answer Tool to address any concerns I may have about avoiding or reducing flying before booking a flight or deciding on a trip

EAUC-Scotland's Question and Answer document provides information to address concerns individuals in the FHE sector may have about reducing air travel. Although the information provided may not give an ideal alternative or alleviate all concerns, it provides useful facts and figures on the impacts of flying and how flying and the FHE sector interact to allow you to re-evaluate your need for, and relationship with, air travel.



I will actively look for articles, essays and other ways to educate myself about the impacts of air travel if I have any concerns before booking a flight or planning a trip

There is a wealth of both academic and grey literature on the impacts of air travel across many sectors. A simple internet search may provide you with answers to your most pressing concerns in a myriad of ways. Additionally, the Flying Less blog has collated a plethora of resources on reducing flying in the HE sector. Also, online forums, like the Roundtable of Sustainable Academic Travel can help you to connect with individuals working on reducing air travel in their institutions, better inform yourself about the impacts of air travel and learn more about what is being done to reduce air travel in the sector through network membership.

Make better travel decisions



I will use decision trees when deciding whether to fly to a conference/business trip

Decision trees can support you in lowering carbon emissions by reducing flying. By asking you to address certain circumstances surrounding your trip, it helps you to gauge whether air travel is really necessary to attend an event or conference. Tyndall Centre for Climate Change Research and the University of Iceland have both published decision trees regarding air travel.



I will use EAUC-Scotland's Air Travel Justification Tool to assess whether I will benefit from attending a conference/event to which I must fly

EAUC-Scotland's Air Travel Justification Tool is as an extension of a decision tree. If you have completed a decision tree and found that your only option is to fly to a conference/event, this tool will support you in reflecting on whether it is important, or beneficial, to even attend the conference/event.



I will travel by train, bus or carpool to destinations within 6 hours from my original location

While other pledges encourage ground travel (ie. trains, buses etc.) for destinations within 12 hours, it may be more realistic to set aside 6 hours to begin with. On average, certain journeys take a shorter amount of time by train than by flight and it may be beneficial to avoid flying in these cases.



If flying, I will try to extend business meetings and incorporate other meetings/conferences as well as leisurely activites into my trip

Why not feed two birds with one worm? If it is necessary to fly somewhere, make the most of these carbon emissions. For example, consider whether it is possible to conduct research, meet other colleagues or family members or see a site you have been meaning to visit in the same location, or nearby. This will maximise the benefits of your emissions and allow you to reduce flying elsewhere by possibly avoiding flying for another business trip or holiday.



If flying, I will travel economy class to avoid increased emissions from business and first class

Flying economy class is an easy way to travel better. Depending on the airline, the extra seat space business and first class seats offer means your individual journey takes up a larger proportion of the flight's emissions. For example, according to the UK Government's 2019 emission conversion factors for carbon reporting, a business or first class seat on a longhaul flight is responsible for 3 or 4 times more CO2e than an economy seat, respectively.

C Challenge workplace norms and push for systemic change where possible



I will publicise times when I am successful in avoiding a flight on social media/in conversation with colleagues and/or students

If you have avoided a flight, publicising your success may inspire others to do the same, or reassure them that it is possible and even enjoyable. This information can be publicised through social media (Twitter, Instagram, LinkedIn), at lectures, on curricula vitae etc. It may make the idea of avoiding flying more normalised for your colleagues and the students at your institution.

Be sure to publicise this information without shaming others who may not be able to do the same at the current moment. This can be done by specifying exactly how you were able to avoid flying and providing an acknowledgement that it may not always be possible.

On social media or in conversation you can mention:

- The purpose of your trip
- 2. Why you decided to avoid air travel
- How your networks, job position and access to tools enabled you to avoid flying
- 4. Your reflections on avoiding flying
- If communicating on social media, don't forget to use the hashtag #travelbetter



I will support my peers, supervisors and students in reducing air travel by engaging in discussion, providing information on reducing air travel and rewarding a reduction in air travel if and when possible

You can support students, staff and colleagues at your institution to reduce their air travel by sharing or developing local research/internship/study/grant opportunities or other opportunities that do not require air travel.

Some academics have prioritised asking graduate students or early-career academics to attend conferences and events in their place. This can publicise the need to reduce non-essential travel and reduce air travel while improving equity and diversity in academia.

Lastly, rewarding a reduction in air travel may incentivise individuals in the FHE sector to limit flying and reconfigure the relationship between air travel and career progression that is pervasive in the sector. A reward can look like publicising research that does not require air travel which can increase citations, an award, offering research/job opportunities etc.

I will discuss the impacts of and benefits of reducing air travel with my colleagues, supervisors, students and other individuals and organisations

> If you are aware of an individual at your institution who is struggling with reducing their air travel, discussing with them ways you have reduced air travel and its emotional, and physical benefits, may provide necessary support.

Additionally, if you come across organisations or groups within your institution working to institutionally change the sector's relationship with air travel, providing support and experience can ensure a more sustainable shift.

For example, The Academic Flying Petition by Professor Parke Wilde and Professor Joseph Nevins asks individuals in the sector to petition their institutions:

"(a) to include all university-related flying (whether directly paid by the university or by others) in their environmental impact measurement and goal-setting

(b) to support and work to realize marked reductions in flying by faculty, staff, and students commensurate with the cuts suggested by climate science

(c) to establish and publish short- and medium-term benchmarks for reductions; and

(d) to use their influence with professional associations to reduce reliance on flying for academic and research conferencing."

Should I attend the



Conference/Meeting Air Travel Justification Tool



Development

- Noticed the question "is the trip important" multiple times
- Extension of a decision tree
- Not a conclusive measurement, solely offers guidances and suggestions and supports reflection
- Pilot group of 17 academics

The Air Travel Justification Tool and the Sustainable Development Goals

The Travel Better Package and the Air Travel Justification Tool support the realisation of multiple Sustainable Development Goals (SDGs), as highlighted below:



SDG 5: Gender Equality seeks to dismantle structures that create barriers to opportunities, rights and empowerment for women. Women are underrepresented in managerial and senior positions and often shoulder more domestic tasks than men. This tool considers the obligations women may have when justifying a flight in order to achieve gender equality in the further and higher education sector.



SDG 12: Responsible Consumption and Production seeks to reduce material consumption and the overextraction of natural resources. This tool encourages a reduction in flights and consequently a reduction in the consumption of kerosene used to fuel aircrafts by supporting users in property justifying air travel and avoiding non-beneficial business travel.



SDG 13: Climate Action seeks to mitigate and adapt to climate change. This tool contributes to this goal by supporting reductions in air travel, a carbon intensive form of travel that contributes to greenhouse gas emissions causing global temperature changes.

About this Tool

Flying is a carbon intensive form of travel: one long-haul flight emits as much carbon as many people do in one year. With global annual passengers expected to double in the next 20 years, emissions from air travel are only set to increase. In the further and higher education sector (FHE), air travel to attend conferences is pervasive and encouraged. However, the current trend of air travel cannot continue if we are to limit a global temperature increase to 1.5°C and strive toward a net zero carbon sector and society.

Purpose of the Tool

Decision trees allow one to assess whether or not to fly to a conference. The Air Travel Justification Tool provides support once you have reached the end of a decision tree, by helping you determine the importance of attending a particular conference or event after you have established that there are no alternatives to flying (ie. you cannot take the train, present/learn remotely etc.)

Please note:

- The tool does not ask you to completely eliminate flying, but rather to travel better and only attend the most beneficial business meetings and conferences
- The tool recognises instances when you must attend a conference/meeting to which you must fly and instead asks you to be more conscious of non-essential flights
- The tool recognises the importance of informal meetings and conversations that occur during conferences and meetings and understands the necessity of occasionally engaging in informal spaces provided by in-person conferences and meetings

Decision-making and assessing the importance of an action can be difficult. Often, the particular issue at hand becomes unfocused or mental shortcuts may produce decisions that do not reflect the reality of the situation. Many approaches to behaviour change and decision-making rely on improving knowledge of a situation. This may ignore the role social practices and interactions with physical and technical infrastructures play in our everyday lives.

Utilising ideas from the ISM framework developed for the Scottish Government, the Air Travel Justification Tool considers the individual, social and material contexts that shape behaviour and decision-making, facilitating a clear focus in assessing the importance of attending an event/conference to which you must fly in order to participate.

The tool also facilitates self-reflection, supporting you to engage with your individual, social and material boundaries and evaluate your needs.

How to Use this Tool

Firstly, please consider a conference/event/meeting to which you must fly.

The Air Travel Justification Tool is comprised of six assessments based on individual, social and material contexts. Each assessment consists of statements with which you may agree or disagree or feel neutral toward depending on your circumstances. Responses are assigned a number. For some statements, the numbers assigned to responses may be higher due to perceived importance. Please choose neutral if you are unsure of your answer.

At the end of each assessment you may calculate your score based on your responses and the assigned numbers. Please read the discussion guide, titled "Interpret your Score," to help you understand your personal importance of attending a conference to which you must fly.

Each assessment can be completed independently. It is not necessary to complete every assessment, although it is advised to complete all relevant assessments to better engage with and understand the situation at hand. Please note that rationale for attending a conference eg. networking, research and to share work, may overlap.

Additionally, the discussion guide will help you brainstorm alternative methods to network, conduct research and share knowledge on local, regional and international scales.

Hyperlinks to sources are embedded in the document, simply hover over a blue word.

Consider this

Flights are often taken by an elite few: in the United Kingdom, 70% of flights are taken by 15% of the population. In academia, research shows that senior male academics travel the most while early-career researchers travel much less.

Additionally, at times, early-career academics and non-tenured faculty may feel forced to fly to conferences, despite their climate concerns, due to its normalisation in academia and link to career progression and perceptions of success.

To minimise emissions from air travel while improving diversity and equity in academia, it is imperative to consider your identity and influence in academia and to scrutinise goals and motivations in attending a conference to which you must fly. The self-reflective nature of the tool will facilitate this consideration.

Disclaimer: the purpose of the tool is not to provide a conclusive, scientific measurement of importance or a ready-made decision, but rather, to help you reflect on why you may or may not choose to participate in a conference or meeting to which you must fly.

Additionally, this tool does not intend to simplify the issue of flying in the higher and further education sector or suggest that academics, researchers and staff must completely eliminate flying. Rather, it asks you to rethink the idea that we can and must always fly and to normalise other ways of coordinating, collaborating, researching and being, as academics.

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Going through the tool

Who am I?

I am a postdoctoral researcher in international development studies at a university in the South of England. I am working on understanding women's rights amid the climate crisis in the Global South and I am hoping to attend the International Development Conference in Istanbul to meet specific researchers working on similar topics. There is no option to attend remotely and I cannot travel by train or bus.

It is quite a broad and big conference with over 1,500 attendees, yet I am only interested in speaking with a few attendees in order to network to find opportunities to collaborate or perhaps learn about a permanent teaching and research position. I have met most of these individuals already at other international conferences and am simply hoping to catch-up. I also met two individuals 3 months ago at an event in London where I was able to speak with them extensively.

I would like to chat with some of the presenters who I have not yet met, as I am familiar with their work and it is somewhat related to my own. However, I am not sure if I will be able to meet presenters after their talks given the size of the conference. Additionally, there is not much information available online about the facilities and layout of the conference.

A few other academics from my research team are attending the conference and we are hoping to travel together to Istanbul.

Assessment 2: Social Context

The social context considers social networks, identity, level of influence and relationship to institutions in assessing the importance of attending a conference to which you must fly. For this section, choose whether you are networking, learning and/or presenting at the conference and work through the relevant sections.

I am attending the conference to network:

	Disagree	Neutral	Agree
1. I am an early-career academic/researcher	0	1	4
2. At the conference, I will meet academics/researchers I have not met before	0	1	2
3. At the conference, I will meet academics/researchers I have not met in person in over 1 year	0	1	2
4. At the conference, I will meet academics/researchers with whom I cannot connect virtually	0	1	2
5. At the conference, I will meet academics/researchers I cannot meet locally	0	1	2
 I will get an appropriate opportunity to chat with these particular academics/researchers (enough time, one on one interactions, comfortable environment etc.) 	eg. 0	1	2

c	Disagree	Neutral	Agree
7. I am the only academic representing my department/research team at the conference	0	1	2
8. I cannot ask early-career academics/researchers to attend this conference in my place to provide them with new opportunities (disagree if you are an early-caree academic)	0	1	2
9. If I do not attend this conference in order to avoid flying, my actions may encourage others t avoid flying as well	o ⁰	1	2

Interpret your Score

0-6 In this context, you may have lots of flexibility in deciding whether or not to attend the

conference. If you are attending the conference to network, it may be useful to re-evaluate what you expect from networking, or, what networking means to you. Sometimes, we may put more of an emphasis on networking than necessary. It may be important to ask yourself why you want to meet specific individuals attending the conference and how it may benefit you, and more broadly, society.

If you have already met face to face and have a working relationship, perhaps it may be helpful to email your contact about their upcoming plans to see if you can travel by train to another conference/event they are attending, meet halfway or brainstorm another meeting through some form of more sustainable travel. Additionally, you may both be flying to a conference that may be more necessary in the future, and can connect there.

Remember: your time as a researcher and academic is valuable. Networking that is truly beneficial may look different than how you imagine, or have been taught to understand from academic norms.

7-13 You are in a crucial spot: it does not seem overly important for you to attend this conference, although it is not completely fruitless.

In this instance, it may be helpful to reflect on what is most important to you in networking. For example, who are you hoping to meet and what exactly are you planning on discussing? Is this contact/speaker crucial to your research at the moment, or will there be a better time to reach out to them in the future (perhaps when they present more locally)? Are you hoping to collaborate on a project? Are you looking to discuss ideas? Are you an early-career academic looking for some career guidance? Reflecting on what you want out of networking may allow you to make more focused decisions about attending conferences to which you must fly.

Although networking at conferences can allow organic meetings with individuals you may not have known before, perhaps reflecting on how useful this has been in the past, or whether these organic meetings can be emulated in other ways may provide you with some focus.

14-20 It seems it may be quite important for you to attend this conference to strengthen professional relationships.

It may be useful to plan ahead: how can you make the most of this interaction? What questions would you like to ask and how can you access additional contacts through this meeting? You can also plan how you may continue the professional relationship without regular air travel. It may be beneficial to mention your plan and why you are hoping to reduce air travel to your new contact. Asking how they feel about your plan to reduce air travel may allow you to coordinate future meetings in more sustainable ways.

Going through the tool

Who am I?

I am a **professor** in neuroscience at a university in Scotland. I have been researching Alzheimer's disease for the past 30 years.

I am currently leading a project with a team of 10 researchers, many who have just completed their PhDs. My team and I have been invited to share our progress and preliminary findings at a small conference in Shanghai. We cannot present remotely or take any other mode of transport to the city.

I shared some of our findings at a relatively big conference in London 5 months ago but am eager to present the work more internationally to gain more feedback.

Organisers will provide us with AV facilities to present, as well as sufficient time to speak and for questions and answers but I am not sure who will be attending the session.

Assessment 4: Social Context

I am attending the conference to present:

	Disagree	Neutral	Agree
1. I am an early-career academic/researcher	0	1	4
 At the conference, I will be presenting research I have not shared before 	0	1	2
3. I am presenting research I cannot share locally/virtually at another conference	0	1	2
4. I am confident that my work is ready to share, or if my work is unfinished, I am confident it is ready for feedback	0	1	2
5. At the conference, I will be given an appropriate platform to share my research/ideas (eg. enough speaking time, proper technology, relevant audience)	0	1	2
 Sharing my research through this platform will enhance my academic reputation or increase my likelihood of getting published 	-	1	2
 Attending the conference despite flying will not hinder the credibility of my research (eg. work on climate change, social justice etc.) 	0	1	2
8. I cannot ask early-career academics/researchers to attend this conferenc in my place to provide them with new opportunities (disagree if you are an early-career academic)	_	1	2
9. I am the only academic from my department/research team attending the conference to share ideas/research	0	1	2

Navel Justification Tool v. 1

Interpret your Score

Attending this conference may not be a priority for you.

It may be useful to reconsider why you want to share your research and ideas at this particular time and through this particular platform. Would it benefit your research and your career if you took more time to present these ideas? Would it benefit your research and career if you presented your research elsewhere, perhaps more locally?

Additionally, if you are in a research group, consider why you may be the best person to share this work and how it would look for another teammate to share the work. What other ways may be more appropriate to share your ideas at this particular time? Can you ask another academic to mention your work, if they are presenting something similar?

Lastly, research shows that green academics, particularly climate researchers, with large carbon footprints often lose credibility. Alternatively, communicating your own behaviour in relation to climate change might be particularly effective- thus, avoiding this conference may be a way to draw attention to your work.

8-13 It may be neither important, nor unimportant to attend this conference.

If you have scored within this interval, it may be useful to gauge which statements are most relevant to your situation.

For example, if it is the right time for you to share research, is this the right conference at which to present, and why? What are your criteria for the most beneficial conferences at which to share your work?

Depending on your field, not attending the conference may improve credibility and reputability; attendees may find your consideration of the environmental impacts of air travel inspiring.

14-20 It may be important, and an appropriate time/platform to share/present your ideas.

At this conference, try and plan ahead so that you make the biggest impact with your presentation.

If you are interested in reducing your flying, inform your audience of this goal; perhaps they will support your goal and collaborate with you, or seek out your research through alternative means, contributing to a shift in academic norms.

Think about what elements of your work you would like to present, and why. What are the next steps for your research and how can this presentation support those steps? My funding does not include stipulations to speak internationally and I have already shared my work locally.

I have 3 children and do not often get the chance to attend overseas trips for work. Because of this, we may try and extend the trip to also take a family holiday during this time.

I can present at more local conferences, if need be, however I cannot present virtually as I am hoping to get feedback and engage in discussions with other scientists about my findings.

Assessment 5: Material Context

An assessment of the material context considers technologies, rules and regulations and time and scheduling in evaluating the importance of attending a conference to which you must fly.

C	Disagree	Neutral	Agree
 Attending this conference would fulfil certain grant requirements 	0	1	2
 I risk losing my grant/funding if I do not attend this particular event/conference 	0	1	4
3. I rely strongly on this particular grant	0	1	4
 There are no local or virtual events/conferences that could instead fulfil my grant requirements 	0	1	2
5. Online platforms or other fora are not appropriate for disseminating my research/idea (eg. not interactive enough, not enough traction)		1	2
6. This is the only non-local conference/event I can attend all year (eg. due to teaching obligations, familial obligations, lack of funding etc.)	0	1	2
7. I am able to visit friends/family, attend other conferences/professional meetings or conduct research due to the location of the conference	0	1	2

0-5

Interpret your Score

The aforementioned material considerations may not stop you from engaging in a more sustainable career path.

However, certain material limitations may be more important than others, including grant stipulations and whether your research can be disseminated through other means. It may be important to consider what is truly important and non-negotiable when deciding whether to attend a conference to which you must fly.

Regardless, based on these material considerations, you may have some flexibility in deciding whether or not to attend this conference. For example, if there are other ways to fulfill your grant requirements, taking the time to consider these options may be helpful. Additionally, if you are considering also attending another overseas conference, perhaps deciding which conference may be more beneficial to your work and your career can help you reduce air travel.

6-12 You may be in a tricky spot. Based on the material context, it may be neither pressing, nor unimportant to attend this conference.

Which material context is the most binding? And why?

If there are multiple elements that may cause challenges to avoiding the conference or maximising the benefits of the trip, how do they differ? Is one more challenging than the other?

Here, it may be useful to evaluate your capacity to change, or alter your material realities to better gauge the importance of attending the conference. Perhaps focusing on the material factor that is easiest to change can illuminate more sustainable ways to engage in research and collaboration.

For example, is it possible for you to reschedule events to be able to attend more local, or more beneficial conferences? Alternatively, can you ensure that you can gain other benefits from travelling to the conference, like meeting family members or conducting research at the location?

13-18 It seems that material considerations, like technology, regulations and scheduling make it important for you to attend the conference.

Although it is often out of our scope to alter our material realities, in the future, if possible, early planning may prevent schedule hindrances or allow you to make the most out of the trip by visiting family/friends, planning meetings or conducting research at the conference location.

Additionally, awareness of grant stipulations may offer you some bargaining power, the ability to discuss grants beforehand or if possible, the ability to choose different grants, although this may be difficult for many.

Thank you

