Introduction

One of the key discussions pursued by the sustainability working group since the Grenoble biannual in May 2019, has been the desire to come up with a series of recommendations around the business travel impact of Aurora's activities. This paper seeks to articulate a set of principles that we would encourage the Board to adopt and to disseminate to member institutions.

In the first instance, this is aimed at travel undertaken as part of the Aurora Universities Network, but we hope that this Aurora initiative will inform the wider discussions that we know all partners are currently having about the impact of the travel footprint of their operations.

Proposal

The Sustainability Working Group seeks to encourage Aurora partner institutions to adopt a shared, robust approach to monitoring, reducing, and mitigating travel emissions associated with participation in the network.

The Travel Codex, or guidelines, produced below offer a transparent framework through which Aurora partners can be invited to manage their travel impacts. We believe it is important that Aurora establishes a shared mindset in relation to emissions generated in pursuit of the network’s activity. That shared mindset should emphasise a hierarchy that places avoidance of emissions (through prevention and reduction) at its heart, before adopting agreed standards for the compensation of any residual emissions.

This proposal assumes that Aurora activity will, at some point, return to a pattern approximating the pre-pandemic model i.e. physical bi-annuals and occasional partnership meetings. Although not a formal recommendation of this paper, we strongly encourage Aurora to initiate dialogue about a more radical shift towards online working, with consideration given to virtual activities wherever possible.

We appreciate that this is a bold challenge. However, these are times for bold solutions, and for bold organisations willing to embrace them. The recent Virtual Community Event highlighted the challenges inherent in achieving the more informal relationship building that helps reinforce networks like Aurora; but it also indicated that the potential is there. Organisations around the world are embracing these challenges and finding ways to migrate to more inclusive online modes of working that enable greater participation than those that require face-to-face interaction. For now, we are content to commend the proposals contained here as a staging post on the way to a much more radical operating model.

Beyond the work of Aurora, we hope that a further by-product of this proposal will be that those institutions that are yet to establish formal business travel guidance are able to utilise the principles outlined here to inform their own institutional journeys.

Actions

The Board and General Council of Aurora is invited to consider the following actions:

Proposal 1: Board / GC to support the Travel Codex in principle.

Proposal 2: Board / GC to advise what amendments or clarifications the Codex requires.

Proposal 3: Board / GC to encourage Aurora members to apply the Codex for Aurora business.

Further Information

Is available from Ilka Roose (UDE), Tanja Taestensen (UDE), Anke Bockreis (Innsbruck), Ivar Maas (VU) and Fraser Lovie (Aberdeen).
INTRODUCTION

The Sustainability Working Group of the Aurora Universities Network has developed a Travel Codex to assist member universities in assessing the optimal mode and volume of travel related to their participation in the network. The codex provides a series of principles and simple management tools intended to encourage member universities to measure and reflect upon the environmental impact of the travel associated with their participation in Aurora.

Academic travel is a significant contributor to an institution’s carbon emissions, and it is essential that all universities understand the scale of that impact and how they can begin to reduce it.

The Travel Codex is designed for use when institutions are planning the size and travel mode for the delegation they intend to send to an Aurora Universities Network meeting or biannual conference. Each Aurora member institution is encouraged to follow this codex and to assess the travel impact of its involvement in the network.

We also hope, however, to encourage each member of the network to consider how best to integrate the principles of this codex more broadly into their institutional travel policies.

CURRENT CONTEXT

The societal shift and changes in behaviour forced on everyone as a result of the coronavirus pandemic offer considerable scope to learn lessons and embed positive behaviours. Online participation in conferences, meetings, working groups and international networks has been shown to be possible, with rapid improvement and uptake in the infrastructure required to support it at most universities.

The positive environmental impact of a significant reduction in global air travel and reduced demand for carbon intensive behaviours is already measurable. It is important that we build on these enforced positive behaviours and avoid any rush to return to a more carbon intensive model of undertaking our activities when it is eventually possible to travel freely.

Aurora has an opportunity to take a decisive stand, emphasising the need for the kind of longer-term thinking and culture change that is incumbent on any organisation or network with sustainability at its heart. Rather than focussing on the negatives of reduced travel and the fear of ‘missing out’, there is an opportunity to think differently, seeing the inherent opportunity to increase accessibility and participation through technology, while simultaneously decreasing the negative environmental impact of undertaking the network’s activities. We encourage Aurora to be bold and to initiate dialogue about what the network might look like with a significant reduction (or no) physical meetings.

While this paper focusses on the effort to PREVENT, REDUCE and COMPENSATE for the travel emissions associated with Aurora’s activity, we encourage Aurora to think about whether it might be possible to ELIMINATE these emissions entirely.

PRINCIPLES

The guiding principle of the codex is to:

“Travel only if necessary and with the least amount of negative impact on the environment.”

This travel codex follows the logic of Prevent, Reduce and Compensate. This means that, first and foremost, all travel activities should be considered to assess if they are necessary, or if they can be avoided. Secondly, consideration should be given to how CO2 emissions can be minimised in the event of travel e.g. by adjusting the travel mode. And thirdly, any CO2 emissions caused by the trip should be compensated.

In all cases, this requires institutions to actively track and manage the scale, mode and emissions associated with their travel in order to fully understand its impact.
1. **PREVENT**

1.1 **Work strands should meet no more than once a year.**

Each Aurora work strand should meet physically at most once a year. Where necessary to maintain links between colleagues across work strands, a maximum of one or two nominees should attend the ‘other’ biannual and only where their attendance is vital e.g. to contribute actively to other discussions or to provide formal briefings. Wherever possible, work strands should seek to conduct their business by default via online technologies. Physical participation should be the exception rather than the default. We believe that the experience of 2020 provides a robust model around which to proceed.

1.2 **Short or unnecessary meetings should be avoided.**

Institutions are invited to consider the nature of the contribution attendees will be able to make in attending a meeting physically. Where that attendance will be for meetings that will last for less than four hours, or where an attendee is unlikely to play an active role in discussions, we recommend that attendance should be discouraged.

1.3 **Individuals to play a part in assessing the value of their attendance.**

Furthermore, before physically attending a conference/meeting etc. each member should consider the following questions before endorsing physical attendance:

- Is it necessary for me to attend in person?
- Is my physical presence necessary for the aim of the meeting?
- Is professional networking necessary?
- Does the length of the event justify my trip?
- Is it possible to alternate attendance between different people from my University?
- Is it possible that someone else can attend the meeting from my University or can represent me?
- Is it possible to attend virtually? Can I encourage virtual attendance?

1.4 **Aurora to actively promote video and electronic conferencing**

Aurora members institutions are encouraged to actively consider viable alternatives to physical meetings wherever possible. This will require widespread understanding in the use of these technologies and may require some improvement in the facilities available to staff. We would encourage all Aurora universities to ensure that they offer appropriate support for video and e-conferencing options, moving towards a preferred shared platform or platforms where appropriate.

2. **REDUCE**

Where physical attendance is deemed necessary, each member is encouraged to consider ways to keep their travel emissions as low as possible.

While flights are often the cheapest and fastest option, they are unlikely to be the most environmentally conscious option. We strongly encourage each institution to consider introducing its own local guidance encouraging train travel. This should consider when the higher costs and longer travel times associated with long-distance rail travel (or bus/boat travel) can be supported by the institution.

Where individuals wish to use lower emission travel options, we would encourage Aurora institutions to support this preference to the best of their abilities.

Moreover, individuals are encouraged to use the decision tree at Figure 1 below to help them establish the optimal mode of travel.
Figure 1: Decision Tree.

A matrix with estimated travel times between Aurora institutions is included as Appendix A below.

We would encourage Aurora to consider going further than simply adopting the above approach and to consider the following enhanced guidance:

- Where trips can be completed in less than six hours by train, flights should never be permitted (or reimbursed) except in exceptional circumstances (and with prior approval).

- Where individual delegates are willing to undertake travel by train, boat or bus, but where that travel will take in excess of 12 hours (but less than 24 hours), institutions should support them in doing so, acknowledging that this might require overnight travel or accommodation. Such additional travel time should be deemed part of the work trip if this ensures that short distance flights can be avoided.

3. **COMPENSATE**

Where travel has been deemed necessary and emissions cannot be reduced further, the Aurora network must be willing to compensate for the remaining emissions produced by our activities.

**MONITORING**

A guiding principle of this codex is that institutions take responsibility for their own travel decisions and to that end, and in order to keep the process transparent, active tracking and monitoring of emissions by all institutions is necessary.

A simple mechanism to track the transport mode, travel distance, delegation size, and estimated emissions (calculated using a commonly adopted calculator wherever possible) should be provided as routine to the Aurora office for every physical Aurora meeting e.g.

<table>
<thead>
<tr>
<th>Institution</th>
<th>Delegate</th>
<th>Name</th>
<th>Journey (all modes)</th>
<th>Distances (km)</th>
<th>Factors</th>
<th>Emissions (kg / tCO2e)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uni A</td>
<td>1</td>
<td>Dr X</td>
<td>Coach Transfers (All)</td>
<td>40</td>
<td>0.02732</td>
<td>1.09 kg CO2e</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Rail Transfers (All)</td>
<td>80</td>
<td>0.03694</td>
<td>2.96 kg CO2e</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Main Journey: Air (Econ)</td>
<td>4000</td>
<td>0.15298</td>
<td>611.92 kg CO2e</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Taxi Journeys (All)</td>
<td>20</td>
<td>0.14549</td>
<td>2.91 kg CO2e</td>
</tr>
<tr>
<td>Uni A</td>
<td>2</td>
<td>Prof Y</td>
<td>Coach Transfers (All)</td>
<td>0</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Rail Transfers (All)</td>
<td>0</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Main Journey: Rail</td>
<td>4000</td>
<td>0.00497</td>
<td>19.88 kg CO2e</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Taxi Journeys (All)</td>
<td>20</td>
<td>0.14549</td>
<td>2.91 kg CO2e</td>
</tr>
<tr>
<td>Totals</td>
<td>2</td>
<td></td>
<td></td>
<td>8160</td>
<td></td>
<td>641.67 kg CO2e</td>
</tr>
</tbody>
</table>

= 0.642 t CO2e

Compliance with the scheme should be demonstrated by every institution within Aurora by completing the above table comprehensively for every delegate. The aggregated data should be shared at regular intervals, with an annual emissions report produced by the Aurora office. The intention is to increase the expectation that, wherever possible, travel is undertaken in the most environmentally friendly way possible.

Note that we have not, at this stage, identified a specific emissions calculator but will do so if the Codex is adopted. In the UK, universities report formally on business travel emissions using standardised Governmental emissions factors. However, for the purposes of this exercise, we believe that a more readily available online tool may prove more useful in keeping this activity simple and consistent across the network.

**APPORTIONING EMISSIONS**

We have identified three principal options for the apportioning and eventual off setting of emissions as follows:

1) **Institutional**: perhaps the simplest method for operationalising this commitment would be to place the onus on each individual institution to track, assess, and offset its own emissions using whichever conversion factors and off-setting regime it identifies as appropriate.

2) **Network Wide (Directly Proportionate)**: this option would see emissions declared by each network member, those emissions collated by the Aurora office, with an off-setting charge then levied against each institution by the Aurora office that reflects the *total emissions for which the University was responsible*.

3) **Network Wide (Equally Distributed)**: this option would see emissions declared by each network member, those emissions collated and aggregated by the Aurora office, with a charge for offsetting levied against each institution by *dividing total emissions equally between all of the network members*.

We recognise that no model can offer perfect fairness and that variants of all the above models are possible e.g. by delegation size, travel mode, location of host institution etc. We are aware that some institutions are disadvantage due to their geographical location, while others may have more modest emissions footprints because they are centrally located. A variety of complex mechanisms to consider distributed and collective models, weighted by delegation size, or adapted to reward positive travel behaviours could be identified.

We do not, however, want this exercise to be administratively complex nor should it detract from what we believe is the basic principle of this guidance i.e. that all institutions need to understand their own emissions, be prepared to track and monitor them, and to take appropriate action to PREVENT, REDUCE and COMPENSATE for them.

*To that end, the Sustainability Working Group’s suggestion is to adopt Option 3 – although we seek General Council and Board’s view on all three options.*

**We believe, however, that this option balances the need to encourage institutional responsibility for their own emissions, while simultaneously doing so within the collaborative context of the Aurora network. This option would emphasise our shared responsibility for the network’s emissions. Collation and distribution of the data detailing institutional emissions and travel modes would ensure full transparency, including where efforts were being made to adapt travel behaviours.**

**CAMPUS OFF-SETTING**

We would encourage Aurora to adopt a preferred high-quality off-setting scheme (or schemes) and to offset its emissions through that scheme with appropriate accreditation. Should the Codex be adopted, we would be happy to make a formal recommendation as to a preferred scheme, but we are aware that Aurora may wish to conduct a more robust due diligence exercise to select a scheme.

We have in the past discussed the option of off-setting emissions through the identification of campus-based staff or student projects linked to the host of the biannual. The logic of this paper is however that we need to adopt a high-quality standard for offsetting (for example [https://www.goldstandard.org/](https://www.goldstandard.org/)) that guarantees carbon reductions. As these campus projects might not achieve that standard, in order to ensure our emissions are wholly compensated, a regime that offers a consistently robust methodology should be adopted.
We do not, however, want to abandon the celebration and encouragement of campus-based projects and would be keen to explore separately, how we can encourage and celebrate such projects in different ways e.g. by reviewing the possibility of an Aurora sustainability award, or the identification of more collaborative ways of engaging Aurora's staff and student communities in carbon reduction initiatives.

RESPONSIBILITIES

A simple table of responsibilities is produced below to detail the individual, institutional, and network commitments that this codex envisages:

<table>
<thead>
<tr>
<th>Hierarchy</th>
<th>Commitments</th>
</tr>
</thead>
</table>
| Individual | - To take personal responsibility for considering whether you need to travel to attend an Aurora network event.  
- To consider whether a less carbon intensive mode of travel is viable for the journey you are making. |
| Institutional | - To collate a full inventory of emissions for the delegation sent to an Aurora network event.  
- To consider how the Aurora Travel Codex can be incorporated into (or can inform) local discussions of wider travel policy.  
- To action the agreed off-setting regime (if Option A is adopted).  
- To share with other Aurora partners detailed assessment of public transport options for visiting the institution. |
| Network | - To collate and report to General Council / Board regularly (and include in annual reporting) the travel related emissions impact of the network.  
- To action the agreed off-setting regime sharing the cost between network members as agreed (i.e. if Option B or Option C is adopted). |
## Aurora: Public Transport Times & Travel Distances Matrix

<table>
<thead>
<tr>
<th>Location A / Location B</th>
<th>Vrije Universiteit Amsterdam</th>
<th>University of Iceland</th>
<th>University of East Anglia</th>
<th>University of Duisburg-Essen</th>
<th>University of Aberdeen</th>
<th>Università Napoli Federico II</th>
<th>Université Grenoble-Alpes</th>
<th>Universitat Rovira i Virgili</th>
<th>Universitats Innsbruck</th>
<th>Palacký University Olomouc</th>
<th>Copenhagen Business School</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vrije Universiteit Amsterdam</td>
<td>2017.16 km</td>
<td>244.72 km</td>
<td>165.44 km</td>
<td>694.08 km</td>
<td>1465.59 km</td>
<td>800.62 km</td>
<td>1281.47 km</td>
<td>734.69 km</td>
<td>917.37 km</td>
<td>621.05 km</td>
<td></td>
</tr>
<tr>
<td>University of Iceland</td>
<td>no option</td>
<td>1844.58 km</td>
<td>2178.99 km</td>
<td>1323.62 km</td>
<td>3477.07 km</td>
<td>2713.95 km</td>
<td>2963.20 km</td>
<td>2751.24 km</td>
<td>2809.58 km</td>
<td>2106.85 km</td>
<td></td>
</tr>
<tr>
<td>University of East Anglia</td>
<td>8-10 hrs</td>
<td>no option</td>
<td>&gt;12 hrs</td>
<td>396.47 km</td>
<td>1635.65 km</td>
<td>887.38 km</td>
<td>1279.80 km</td>
<td>935.41 km</td>
<td>1160.77 km</td>
<td>807.11 km</td>
<td></td>
</tr>
<tr>
<td>University of Duisburg-Essen</td>
<td>3-4 hrs</td>
<td>no option</td>
<td>&gt;12 hrs</td>
<td>855.37 km</td>
<td>1310.24 km</td>
<td>698.11 km</td>
<td>1222.12 km</td>
<td>572.32 km</td>
<td>768.58 km</td>
<td>607.39 km</td>
<td></td>
</tr>
<tr>
<td>University of Aberdeen</td>
<td>&gt;12 hrs</td>
<td>no option</td>
<td>&gt;12 hrs</td>
<td>&gt;12 hrs</td>
<td>2158.08 km</td>
<td>1434.58 km</td>
<td>1798.28 km</td>
<td>1427.64 km</td>
<td>1525.53 km</td>
<td>914.94 km</td>
<td></td>
</tr>
<tr>
<td>Università Napoli Federico II</td>
<td>&gt;12 hrs</td>
<td>no option</td>
<td>&gt;12 hrs</td>
<td>&gt;12 hrs</td>
<td>&gt;12 hrs</td>
<td>844.44 km</td>
<td>1091.33 km</td>
<td>749.66 km</td>
<td>1001.28 km</td>
<td>1654.24 km</td>
<td></td>
</tr>
<tr>
<td>Université Grenoble-Alpes</td>
<td>8.5 hrs</td>
<td>no option</td>
<td>10-11 hrs</td>
<td>8-10 hrs</td>
<td>&gt;12 hrs</td>
<td>&gt;12 hrs</td>
<td>&gt;12 hrs</td>
<td>581.01 km</td>
<td>492.44 km</td>
<td>994.18 km</td>
<td>1260.62 km</td>
</tr>
<tr>
<td>Universitat Rovira i Virgili</td>
<td>&gt; 12 hrs</td>
<td>no option</td>
<td>&gt;12 hrs</td>
<td>&gt;12 hrs</td>
<td>&gt;12 hrs</td>
<td>&gt;12 hrs</td>
<td>&gt;12 hrs</td>
<td>1057.50 km</td>
<td>1560.71 km</td>
<td>1816.49 km</td>
<td></td>
</tr>
<tr>
<td>Universität Innsbruck</td>
<td>11 hrs</td>
<td>no option</td>
<td>&gt;12 hrs</td>
<td>8.5 hrs</td>
<td>&gt;12 hrs</td>
<td>8-10 hrs</td>
<td>10-12+ hrs</td>
<td>&gt;12 hrs</td>
<td>503.81 km</td>
<td>938.98 km</td>
<td></td>
</tr>
<tr>
<td>Palacký University Olomouc</td>
<td>&gt; 12 hrs</td>
<td>no option</td>
<td>&gt; 12 hrs</td>
<td>10-12+ hrs</td>
<td>&gt; 12 hrs</td>
<td>&gt; 12 hrs</td>
<td>&gt; 12 hrs</td>
<td>8.5 hrs</td>
<td>745.90 km</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Copenhagen Business School</td>
<td>no option</td>
<td>no option</td>
<td>no option</td>
<td>no option</td>
<td>no option</td>
<td>no option</td>
<td>no option</td>
<td>no option</td>
<td>no option</td>
<td>no option</td>
<td></td>
</tr>
</tbody>
</table>

The matrix details the estimated duration of travel between Aurora partner institutions by public transport. In most cases the fastest option will be by train, but boats or buses could also be used.

For illustrative purposes the matrix also provides straight line (single journey) distances between Aurora cities using the [https://www.distancecalculator.net](https://www.distancecalculator.net) online calculator.