Multi-Site Conference Hosting Initiative (MULCH): Enhancing the Human Aspect of Low-Carbon Long-Distance Conferencing

Overview

This collaboration led by Tufts University will develop and pilot an innovative format for hosting simultaneous linked in-person conferences in multiple sites. We will offer links for 4 main conference components:

1. **Keynote Presentations.** Building on proven existing technology, we will enhance procedures for remote questions and effective testing protocols to avoid mishaps.
2. **Panel Discussions.** For panels of 1 to 4 people, we will enable varying combinations of in-person and remote participation.
3. **Receptions and Social Settings.** We will develop and pilot an arrangement for numbered camera/screen locations along a wall in a reception hall, linked across sites.
4. **Online participation.** For participants not attending one of the in-person sites, we will provide an online participation option. Blair MacIntyre, a professor at the Georgia Tech and a developer with Mozilla Hubs, is helping us develop a virtual reality (VR) space for online participants.

Past Experience

The most ambitious implementation of a multi-site conference to date was organized by Professor Richard Parncutt at Uni Graz in Austria. For the main 2018 international conference in music and psychology (ESCOM), the traditional fly-in conference was replaced by sites in 4 continents. For a pilot student event in preparation for the ESCOM meeting, Tufts University hosted the North American site, giving us important early experience.

Parke Wilde and Tina Woolston (Director of the Office of Sustainability) organized a fall 2018 webinar for the Association for the Advancement of Sustainability in Higher Education (AASHE), on hybrid conference innovations with a human touch.

ESCOM, 2018

Our Team

Tufts University

- Parke Wilde, Professor, Friedman School of Nutrition Science and Policy, and co-organizer of the #flyingless initiative (flyingless.org).
- Jason McClellan, Senior Director of Auxiliary Services.
- Adam Cotton, Director of Conference and Event Services.
- Yuemeng (Maureen) Li, Sophomore.

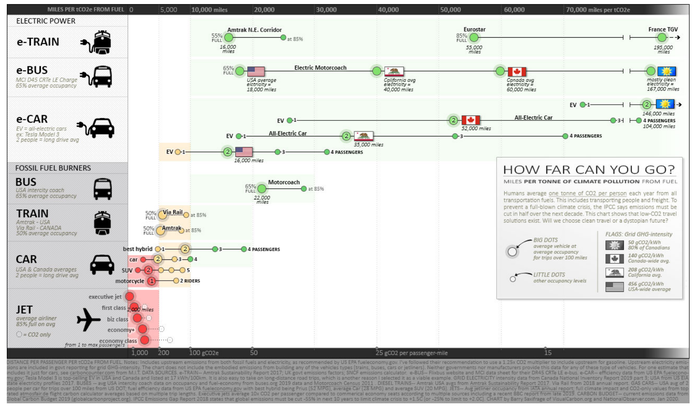
Potential Partner Universities

- Georgia Tech, Atlanta. Professor Kim Cobb, Climate Science, will be program chair for the pilot event. Professor Blair MacIntyre, Computer Science, will provide expertise on using Mozilla Hubs virtual reality.
- University of Washington, Seattle. Professors Jamie Meyerfield, Aseem Prakash, and Nives Dolsak support this project and are providing introductions to conference staff.

We have support from other researchers in multiple fields, including climate science, psychology, and communications.

Climate Impact of Transportation Modes

Innovations by universities and professional associations to reduce flying may have two effects: (1) reducing total miles travelled and (2) reducing emissions per mile with most mode substitutions. These effects are multiplicative.



Saxifrage, 2020.

The Problem

In this time of climate crisis, academic and professional associations need alternatives to traditional in-person conferences. The current fly-in conference model is environmentally unsustainable and excludes some potential conference participants based on care-taker responsibilities, geographic access, and funding.

Alternatives, such as online webinars, lack some of the "human touch" of traditional fly-in conferences.

There is a great need for new alternatives that preserve the in-person experience of a traditional conference, but with only a fraction of the carbon emissions.

Tufts UNIVERSITY

Innovation

Online conferencing technology is well-developed, and procedures for keynote speeches and panel sessions already work well. Our project will innovate and improve on human aspects of the participant experience in several respects:

- Improve the protocol for linking social settings, such as receptions, and for integrating online participants.
- Focus on U.S. national rather than global conferences, because the time zone is easier to manage.
- Build an ongoing partnership, so early investment in troubleshooting will pay off over multiple events.
- Provide a price-competitive service for academic associations as clients, lowering their planning burden.
- Facilitate bus and train travel, with schedules and discounts as is typically done for airlines.
- Develop methods for estimating the greenhouse gas reduction from this conference format, allowing clients and partner universities to visibly demonstrate their climate impact.

Evaluation

Our greenhouse gas reduction estimates will use travel information from a post-conference survey, with analysis methods from a growing literature. Wynes and Donner (2018) found air travel at the University of British Columbia was responsible for 26k-32k tons of CO2 equivalents per year, or 63-73% of UBC campus emissions. Judith Totnam Parrish (2017) estimated the impact of the American Geophysical Union's large annual meeting (24k participants). For the Nearly Carbon Neutral (NCN) online format, Ken Hiltner (2018) estimated emissions much lower than for an in-person fly-in event.

Wynes, S. and Donner, S.D., 2018. Addressing Greenhouse Gas Emissions from Business-Related Air Travel at Public Institutions. Pacific Institute for Climate Solutions.

Putnam, J. T. 2017. Should AGU have fly-in meetings anymore? EOS. https://eos.org/opinions/should-agu-have-fly-in-meetings-anymore

Hiltner, K. 2018. A Nearly Carbon-Neutral Conference Model: White Paper / Practical Guide. https://hiltner.english.ucsb.edu/index.php/ncnc-guide/

Timeline (Gantt)

TASK NAME	2019 Q4 Oct	Nov	Dec	2020 Q1 Jan	Feb	Mar	Q2 Apr	May	Jun	Q3 Jul	Aug	Sep	Q4 Oct	Nov	Dec
Preliminary planning and partner recruitment (already in progress)															
Project start and brainstorming meeting with partner universities															
Audio/visual testing and dress rehearsal							X								
Planning fall 2020 pilot event												X			
Draft methods and protocol document for conducting conference													X		
Revised methods / protocol document														X	
Business plan and price list								X							
Revised business plan, price list, and marketing materials															X

Budget (Revised)

Internship. Assumes 5 hours/week, 29 student weeks, $16/hour, for student leader/organizers.	$ 2,320
Additional staff for pilot event. Assumes 4 volunteers plus 2 staffpersons, 10 hours, $30/hour.	$ 900
Catering for pilot event. Catering for 100 persons, $30/person, 50% from registration fees.	$ 1,500
Audio/visual equipment vendor service costs. 30% of preliminary vendor estimate for a full-scale commercial event of $15k-$20k, based on discussion with Adam Cotton and Jason McClellan.	$ 5,250
TOTAL	$ 9,970