

# Impetus Digital's Guide to Sustainable Meetings



## Environmental impact of in-person vs. virtual meetings - quick facts



Flying to attend a scientific meeting can result in carbon emissions > the annual per capita emissions of some countries.<sup>1</sup>



In Impetus Digital's recent survey among healthcare provider participants, the minimal environmental impact was voted as the **third most important benefit of virtual meetings** after the superior flexibility/convenience and the fact that there is no need to take time off work or away from patients.



Climate change has led to an increased risk of extreme and unpredictable weather events, which in turn increase the risks of **flight cancellations** and poor road conditions.<sup>3</sup>



Virtualizing an in-person meeting can reduce the meeting's carbon footprint and energy use by **94%** and **90%**, respectively.<sup>2</sup>



On average, in-person event attendance is responsible for **one-third** of a scientist's carbon footprint.<sup>4</sup>

## Contributors to the environmental footprint of various meeting types <sup>5</sup>

| Factor                             | In-Person/Hybrid                                                                                                                                                                                                                                                                                                  | Web Meeting                                      | Asynchronous                                     |
|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|--------------------------------------------------|
| Flights                            | Depending on the meeting distance, emissions from flights are typically the largest contributor to a meeting's carbon footprint.                                                                                                                                                                                  | None                                             | None                                             |
| Ground transport                   | Most in-person meetings (unless held at the attendees' workplace) require the participants to drive to the venue, either to and from their home/work or the airport. Unless all participants drive electric cars or take public transportation, emissions from driving can quickly add up.                        | None                                             | None                                             |
| Venue & accommodation              | Heating and cooling a large meeting room and/or multiple hotel rooms can be carbon-intensive. The larger the meeting and hotel room(s), the larger the carbon footprint.                                                                                                                                          | None                                             | None                                             |
| Technology, AV equipment, lighting | If the meeting requires large projectors or advanced AV or lighting equipment, the meeting's energy use, and thereby environmental footprint, will go up.                                                                                                                                                         | Minimal footprint                                | None                                             |
| Food & beverages                   | Food provided during the meeting can create additional carbon emissions compared to a normal day's food and drink intake. If there is a lot of food waste, disposable packaging, and/or carbon-intensive foods (e.g., beef, dairy), or if the food was transported a long distance, the emissions will be higher. | None                                             | None                                             |
| Printed materials                  | Printed agendas, workshop materials, signs, notepads, and other reading materials can produce large amounts of waste and may contribute to deforestation.                                                                                                                                                         | None<br>(pre-reads are usually shared virtually) | None<br>(pre-reads are usually shared virtually) |
| Waste generation                   | Meeting materials, food, and food packaging can create large amounts of waste.                                                                                                                                                                                                                                    | None                                             | None                                             |

# Best practices for reducing the environmental impact of in-person/hybrid and virtual meetings



## In-person meetings

- Allow attendees to attend virtually if preferred (hybrid format) to minimize the number of people having to travel.
- Consider hosting multiple regional events instead of one large national/international meeting to reduce travel-related emissions.
- If air travel is required, purchase carbon offsets at the time of booking.
- If driving is required, help participants organize carpools or navigate public transportation options.
- Select an eco-friendly venue and location.
- Minimize paper handouts by providing pre-reading and workshop materials in digital format. If unavoidable, opt for 30–100% recycled paper.
- Avoid using plastic and other difficult-to-recycle materials during the meeting.
- Use a meeting room of an appropriate size (not too big).
- If possible, lower the room temperature in winter and use fans instead of air conditioning in summer.
- Serve locally made, low-carbon foods. Opt for fresh food over pre-packaged snacks and serve mainly vegan/vegetarian dishes, with no or very few beef/dairy products and processed food options.
- *Whenever possible, **choose virtual over in-person meetings.***

## Virtual meetings

- Keep web meetings short ( $\leq 3$  hours) and instead supplement them with asynchronous, text-based collaboration and insight-gathering.
- Encourage participants to watch videos/webinars in standard vs. high definition.
- Compress large media files before sharing with participants.
- For webinars without an active discussion portion only, have participants keep their web cameras off.
- *Work with a vendor that offers **sustainable virtual meeting software and professional services.***

### Did you know?



COVID-19 temporarily reduced the environmental impact of life science meetings and events: the cumulative carbon footprint of > 7000 attendees to three virtual conferences in 2020 was similar to the average footprint of a single participant at one in-person conference in 2019.<sup>6</sup>

# Example: Impact of virtualizing an in-person advisory board meeting<sup>7</sup>



2023 – 19 advisors – Canada – 4 virtual touchpoints

**11.7  
metric tons**



in avoided flight  
emissions

**0.45  
metric tons**



in avoided ground  
transportation  
emissions

**\$37,000+**



flow-through  
cost-savings

**4.8/5.0**



average participant  
satisfaction rating

## Our commitment to the environment



## References:

1. Sarabipour S, Khan A, Seah YFS, et al. Changing scientific meetings for the better. *Nat Hum Behav.* 2021;5:296–300.
2. Tao Y, Steckel D, Klermes JJ, et al. Trend towards virtual and hybrid conferences may be an effective climate change mitigation strategy. *Nat Commun.* 2021;12:7324.
3. Gössling S, Neger C, Steiger R, et al. Weather, climate change, and transport: a review. *Nat Hazards.* 2023;118:1341–60.
4. Achten WMJ, Almeida J, Muys B. Carbon footprint of science: More than flying. *Ecol Indic.* 2013;34:352–5.
5. University of Michigan - Office of Campus Sustainability. *Your Virtual Event's Environmental Footprint.*
6. Skiles M, Yang E, Reshef O, et al. Conference demographics and footprint changed by virtual platforms. *Nat Sustain.* 2022;5:149–56.
7. Petrus, C. Case Study: Reducing the Environmental Impact of Pharmaceutical Advisory Boards. 2023.

