

CONVENTIONS, CARBON, AND CENTRALITY

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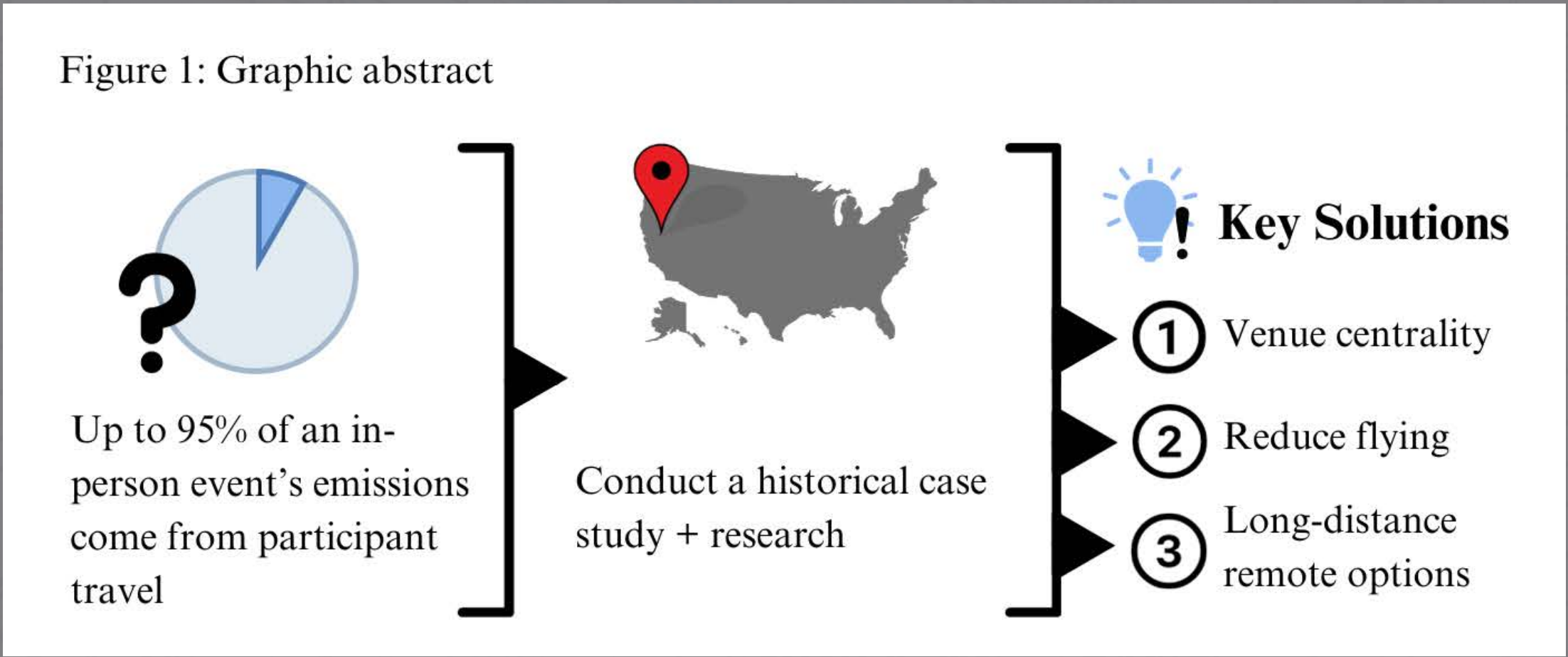


REDUCING EMISSIONS FROM TRAVEL IN THE EVENT AND CONVENTION INDUSTRY

BACKGROUND

- Air travel accounts for 5% of total global greenhouse gas (GHG) emissions, and air travel is one of the fastest growing sectors of emissions
- Up to 95% of the GHG footprint of an in-person event or convention comes from participant travel
- Conferences and trade shows are a large industry, accounting for 1 trillion in spending annually

There is a research imperative to quantify emissions related to event travel, and to identify ways in which we can reduce those emissions without losing the benefits of in-person conferencing in a large and growing industry



INTERNSHIP & METHODS

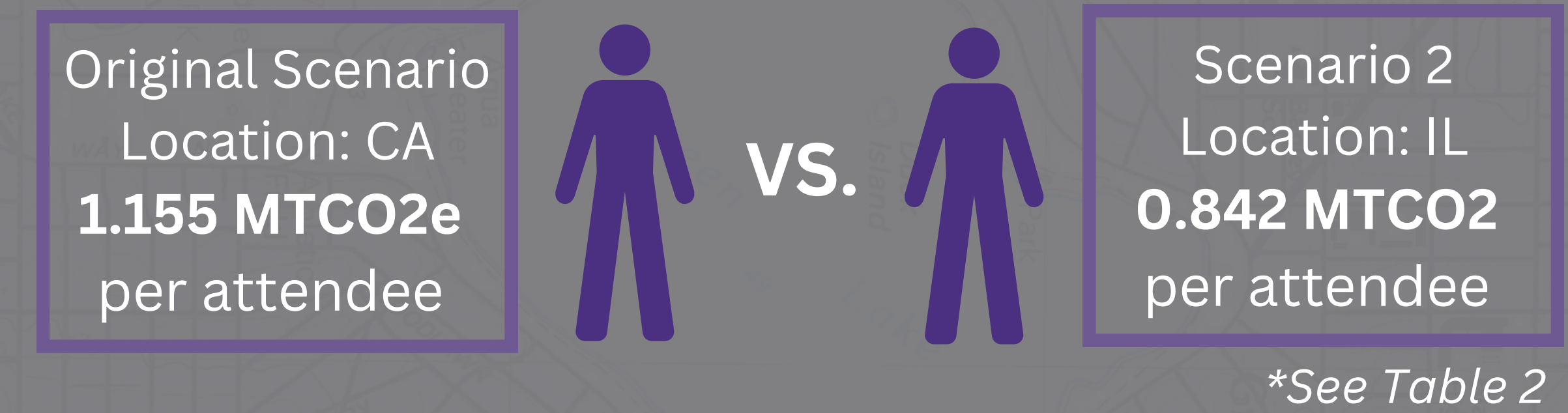
- Worked at AQ Green TeC, an emissions management consulting firm in Hamburg, Germany, primarily focused on carbon calculations for travel data
- Analyzed a historical event attendee travel dataset
 - Evaluated counterfactual event location scenarios to determine opportunities for emissions reductions

RESEARCH QUESTION

What are methods for reducing emissions from attendee travel in the event and convention industry, and how can we enable their implementation?

RESULTS

- Case study analysis of the attendee travel carbon footprint of a real in-person event



- International attendees have the longest average flight distances and the highest per attendee emissions
- Partial online attendance can reduce emissions by 37%
- Reduction in the mean distance travelled per attendee is associated with lower carbon per attendee (Table 2)

The carbon footprint of an in-person event is intrinsically linked to the average distance an attendee must travel

The most effective method for reducing emissions is by choosing the most geographically efficient location for your target audience

The geographic distribution of your target audience can be revealed by data on past events

Table 2: Scenario Comparisons

Scenario	MTCO2e	% of attendees flying	MTCO2e per attendee	Mean distance (km)
Scenario 1 - California ¹	35,437.31	59.09%	1.155	4,596.45
Scenario 2 - Illinois	41,376.71	94.68%	0.842	5,271.35
Scenario 3 - New York	51,211.98	94.48%	1.044	6,528.49
Scenario 4 - Partially online ²	22,332.56	49.82%	0.728	3,213.72
Scenario 5 - 3000km limit ³	2,169.92	8.92%	0.042	554.55

¹Original location
²International participants attend online
³Participants over 3000km away attend online
Figures exclusive of host state

RECOMMENDATIONS

Reduction recommendations for event organizers

- 1. Choose the most central venue for your target audience
- 2. Reduce attendees flying long distances
- 3. Limit international participants to online participation + offer enhanced remote participation options

Attendee travel data quality and availability must be improved to enable the implementation of these recommendations industry-wide, and to determine venue centrality

SIGNIFICANCE

- Knowing your audience is key to choosing a carbon efficient location, and good data collection is key to knowing your audience
- Quality online options make partial online participation a real option, and also increase accessibility regarding disability & finances
- By thinking about institutionalizing responsibility for environmental impact and mitigation instead of working on the individual level, we can make a larger impact with the force of an industry
- There is a need for further research quantifying event travel emissions

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