

Post Trip Report for

IET National Travel Award

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Nov 2024

1. Background to the Event

The event, held from 29th to 31st Oct 2024 in London, is one of the leading programs for those tackling the climate emergency. The program aimed to support ideas capable of reducing at least 10 million tons of CO₂ equivalent (CO₂e) emissions annually.

The event's structure combined workshops, networking sessions, and a hackathon, with guidance from mentors and domain experts. As a participant, I was immersed in collaborative sessions that covered themes such as teaming, rapid ideation, and venture building. The goal was to empower participants with the tools and mindset to address urgent environmental challenges through innovative businesses.

Attending this event was crucial for me as a researcher focused on industrial decarbonisation. By participating, I aimed to bridge my technical knowledge with entrepreneurial action, building solutions to mitigate climate change at scale.

2. Technical Focus of the Event

The event emphasized innovation in climate technologies across various domains, such as CCUS, hydrogen technologies, artificial intelligence (AI), new materials, and thermal energy systems. Participants explored solutions to reduce greenhouse gas emissions, improve energy efficiency, and foster sustainable industrial practices. Each topic was addressed through workshops and facilitated discussions, encouraging participants to think critically about market opportunities and technological feasibility.

My technical focus during the event was on CCUS, a field where I have research experience. Discussions on this topic revolved around leveraging advancements in monitoring, measurement, and verification (MMV) technologies, new materials, and optimization to enable effective carbon sequestration. The event provided an excellent platform to delve into the challenges and opportunities within CCUS, particularly the need for scalable and economically viable solutions.

Additionally, the hackathon sessions encouraged participants to apply creative problemsolving skills to climate challenges. The technical themes explored during the event were not only relevant to my expertise but also inspired new ideas for integrating innovative technologies into decarbonization applications.

3. My Participation in the Event

My involvement in the event was active and multifaceted, spanning various structured and unstructured sessions over three days:

- 1. **Hackathon:** I worked collaboratively with a diverse group of participants to develop a potential venture addressing industrial methane emissions. We focused on detection technologies and AI-driven monitoring. This exercise required us to identify a problem, brainstorm innovative solutions, and articulate a compelling pitch.
- 2. Workshops and Facilitated Sessions: I participated in sessions that provided insights into key aspects of venture building, such as identifying market opportunities, team formation, and impact assessment. These workshops were instrumental in broadening my understanding of the entrepreneurial process.
- 3. **Networking:** I engaged in meaningful conversations with mentors, peers, and industry experts, discussing potential collaborations and gaining valuable feedback on my ideas. The networking opportunities were particularly enriching, enabling me to connect with individuals who share a commitment to combating climate change.
- 4. Sector-Specific Discussions: During the facilitated small group discussions, I focused on new materials for carbon capture, where I contributed my technical knowledge and learned from other participants and experts. This exchange of ideas was invaluable in refining my understanding of the sector's challenges and opportunities.

4. My Presentation at the Event

One of the highlights of my participation was presenting our team's hackathon pitch. Our concept focused on detecting methane from industrial equipment, addressing challenges related to methane leakage, its safety considerations, and monitoring. The presentation included:

- **Problem Statement:** Highlighting the critical need for efficient and reliable methane detection to meet global decarbonization targets.
- **Proposed Solution:** Leveraging AI-driven models and advanced monitoring techniques to enhance detection processes.
- **Climate Impact:** Demonstrating how the solution could contribute to significant CO₂e emission reductions at scale.
- **Market Feasibility:** Outlining the economic potential and scalability of the proposed venture.

The feedback from mentors and peers was extremely constructive, providing new perspectives on refining the idea and addressing potential challenges in implementation.

5. Networking Opportunities

The event facilitated extensive networking opportunities, allowing participants to connect with experts, peers, and mentors from diverse fields. We engaged in small-group discussions with EiRs specializing in CCUS, hydrogen, and AI, gaining insights into industry trends and best practices. In addition to formal networking sessions, informal interactions during co-working hours and social meetups provided opportunities to build relationships with potential co-founders and collaborators. These connections will undoubtedly play a pivotal role in my future endeavours.

6. Technical or Academic Visits Made

During the event, I utilized the co-working spaces at Geovation and Techspace, participating in technical discussions and brainstorming sessions. These environments were designed to foster collaboration and creativity, offering an ideal setting for small-group activities and deep dives into technical challenges.

7. Contribution of the Award to My Research

The IET Travel Award significantly contributed to my ability to attend this event and derive maximum benefit from it:

- **Technical Advancements:** The event deepened my understanding of the latest developments in CCUS, particularly in monitoring and optimization. These insights will directly inform my ongoing research and entrepreneurial projects.
- **Collaborative Opportunities:** I established connections with experts and peers who share a commitment to addressing climate change. These collaborations have the potential to lead to joint research initiatives and innovative ventures.
- **Skill Development:** Through workshops, hackathon activities, and pitching exercises, I honed skills in problem-solving, teamwork, and communication—critical competencies for both academic and entrepreneurial success.

By enabling my participation, the award has amplified my ability to contribute to the fight against climate change through innovative solutions.

8. Sustainable Travel Option

In alignment with the event's focus on sustainability, I chose to travel to London by train rather than by car. Train travel emits significantly less CO₂, and each of my journeys showed a reduction of approximately 67% in emissions compared to car travel. This decision reflects my commitment to reducing my carbon footprint and promoting sustainable practices in both personal and professional contexts.

Moreover, this sustainable travel choice complements the IET's values of advancing technology in harmony with environmental stewardship. By consciously opting for a low-carbon travel option, I reinforced the principles of sustainability that underpin my research and entrepreneurial endeavours.