



Green Remote Collaborations

9th September 2019

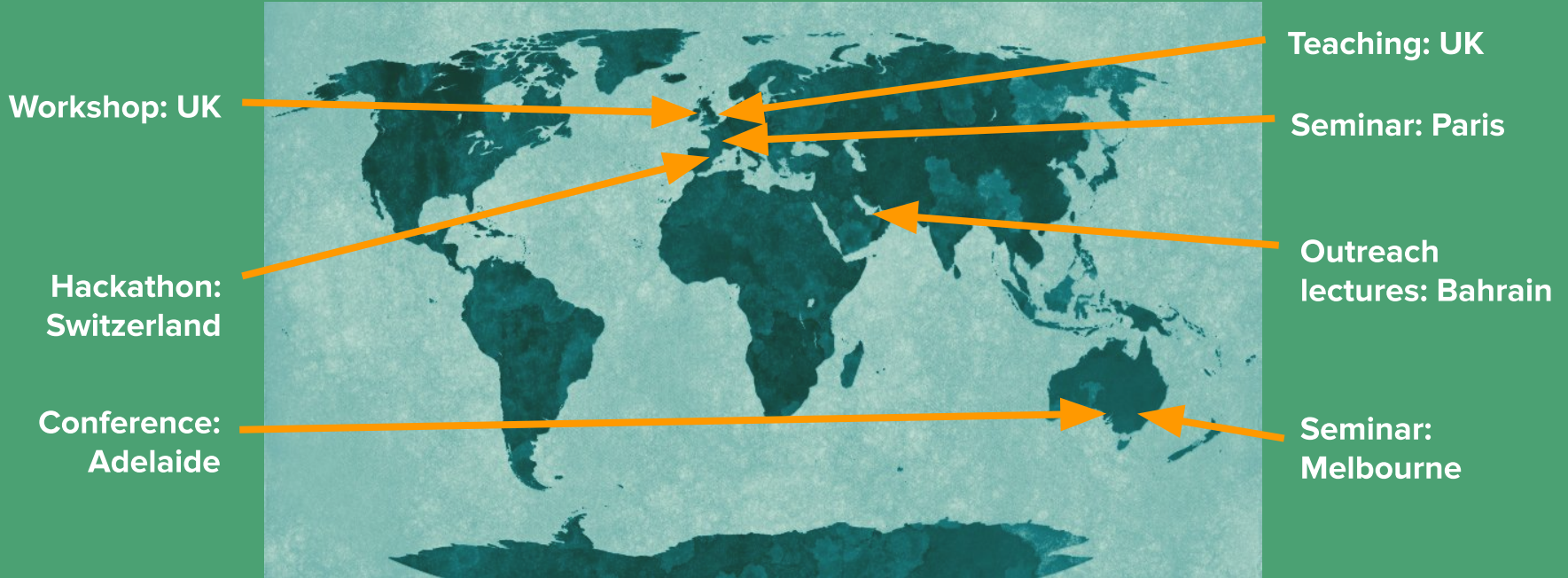
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My next few months:



My flights alone: 35.5 thousand kilometers, 2.443 tonnes of CO2

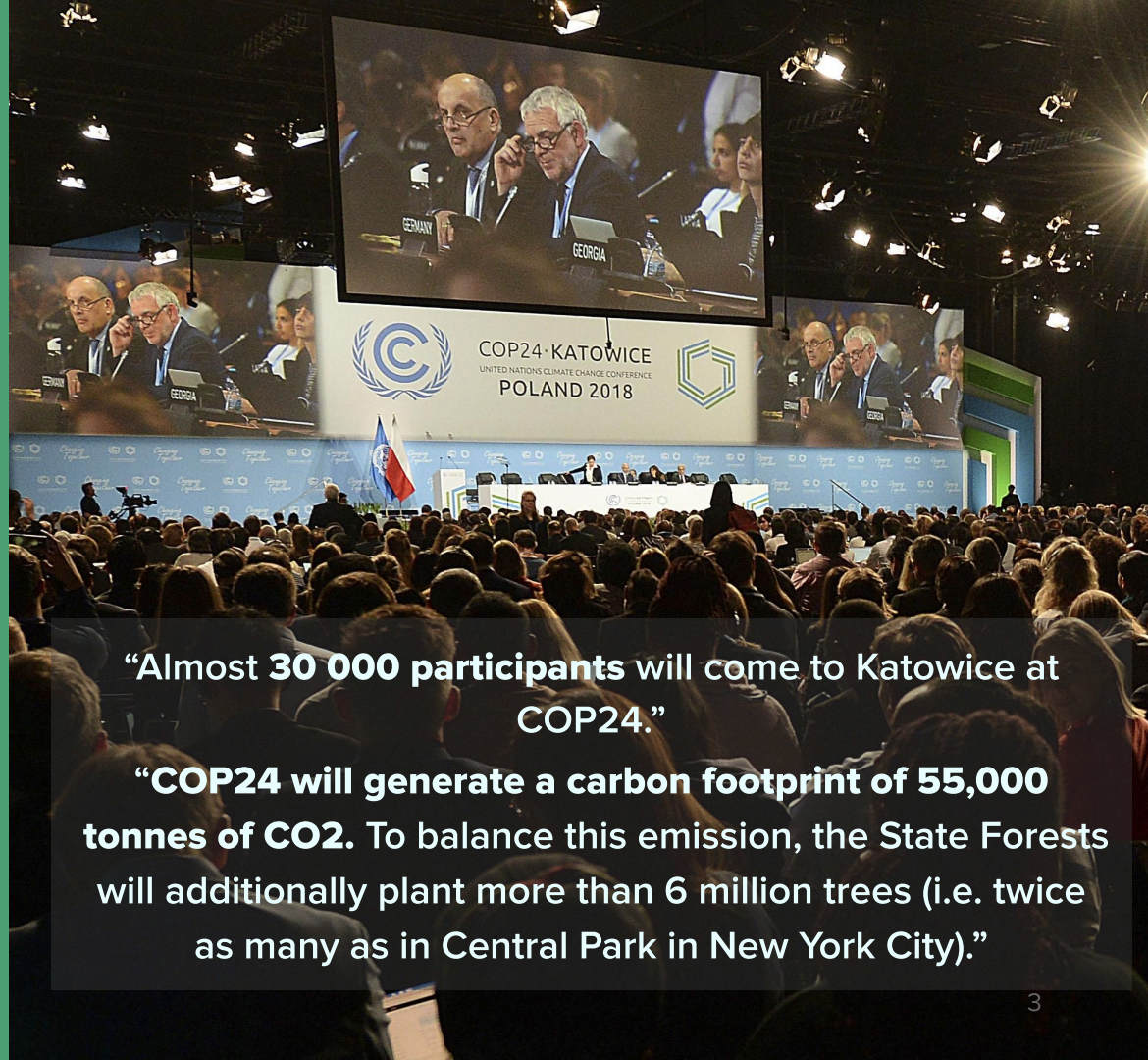
Based on: <https://www.icao.int/environmental-protection/CarbonOffset/Pages/default.aspx>

Particle physics not alone, COP24:

COP24 = United Nations Climate
Change Conference in Katowice in
Dec. 2018

From

<https://cop24.gov.pl/news/news-details/news/basic-facts-about-the-cop24-conference-in-katowice/>



“Almost 30 000 participants will come to Katowice at COP24.”

“COP24 will generate a carbon footprint of 55,000 tonnes of CO₂. To balance this emission, the State Forests will additionally plant more than 6 million trees (i.e. twice as many as in Central Park in New York City).”



312 signatures for “sustainable particle physics”

“Input to the European Strategy Update: Ensuring the Future of Particle Physics in a More Sustainable World” <https://indico.cern.ch/event/765096/contributions/3295714/>

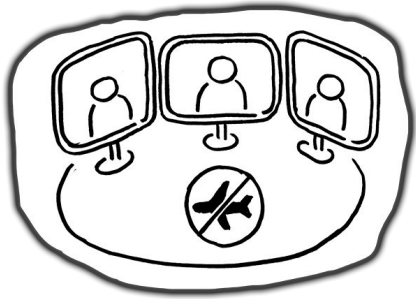
Recommendation:

- “As part of their grant-giving process, European laboratories and funding agencies **should include criteria evaluating the energy efficiency and carbon footprint of particle physics** proposals...”
- “Recommendation 3: European laboratories should **invest in the development and affordable deployment of next-generation digital meeting spaces** including virtual reality (VR) tools in order to minimize the need for frequent travelling to the laboratory, thereby **minimizing the travel carbon and energy footprint** of their users”



Humanitarian Hackathon

- First held 2014
- Runs at the IdeaSquare at CERN
- 60 hour hackathon with 4 to 6 weeks remote preparation
- Around 6 teams taking on different challenges
- 10 or so people per team with mixed backgrounds



This years' Green Remote Collaboration challenge @ THE Port

Travelling for meetings has many issues

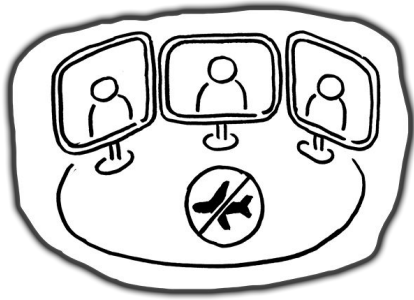
- Environmentally harmful
- Expensive
- Harder on family life
- Not accessible to all

Technology enables remote collaboration

- Video Conferencing
- Instant messaging (e.g. Slack)
- Collaborative editing (e.g. Google docs)
- High-speed internet
- Virtual reality
- Augmented reality

No-fly meetings are still not common

- Is the technology lacking?
- Is there a cultural problem?
- Is there a lack of information?



Where might the team go?

Challenge very open-ended

Teams free to push challenge in any direction

Possible ideas:

Technology

- Market research
- Better instant messaging?
- Using AR / VR for meetings?

Cultural

- Social events for no-fly meetings
- Skeleton plan for running no-fly meetings
- Etiquette or code of conduct for no-fly meetings

Information

- Environmental impact calculator for events
- Location of minimal travel for hosting in-person events

After THE Port

I have money from UK's Software Sustainability Institute to run several “hack-shops” on different computing-for-physics topics

- Hack-shop = half workshop, half hackathon
- Hands-on work to experiment, learn, develop, deploy new ideas
- Will use outcomes of THE Port to run these as “no-fly”

Can we get CERN and other community members to adopt the outcomes or support them?

Continue developing and exploring technological solutions

**I'd love to know
your thoughts!**



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Thank you