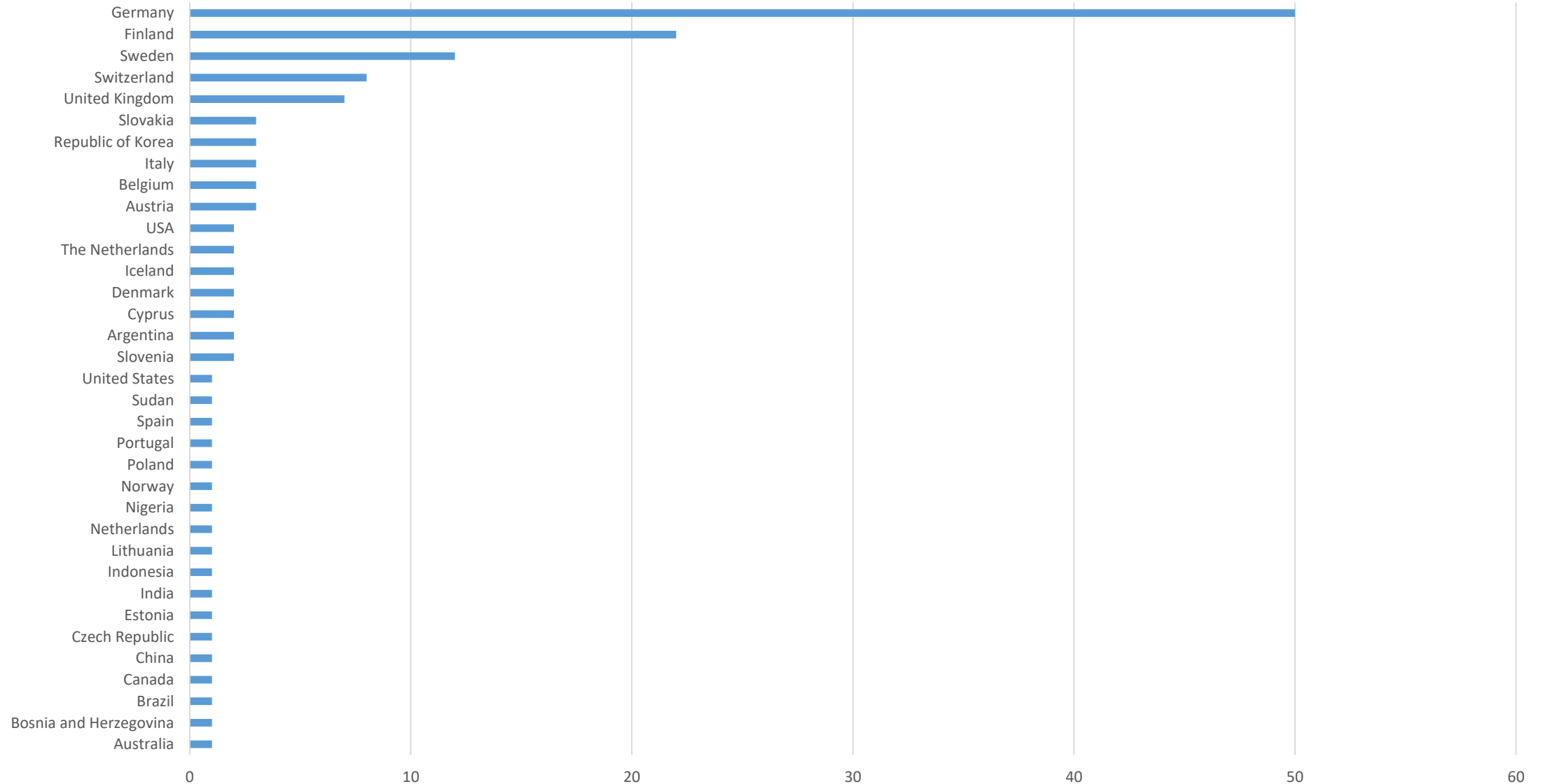


Carbon Footprint IFPM3

Sebastian Jäckle, University of Freiburg

How much Co_{2e} have been saved by having the IFPM3 online instead of in Copenhagen as originally planned?

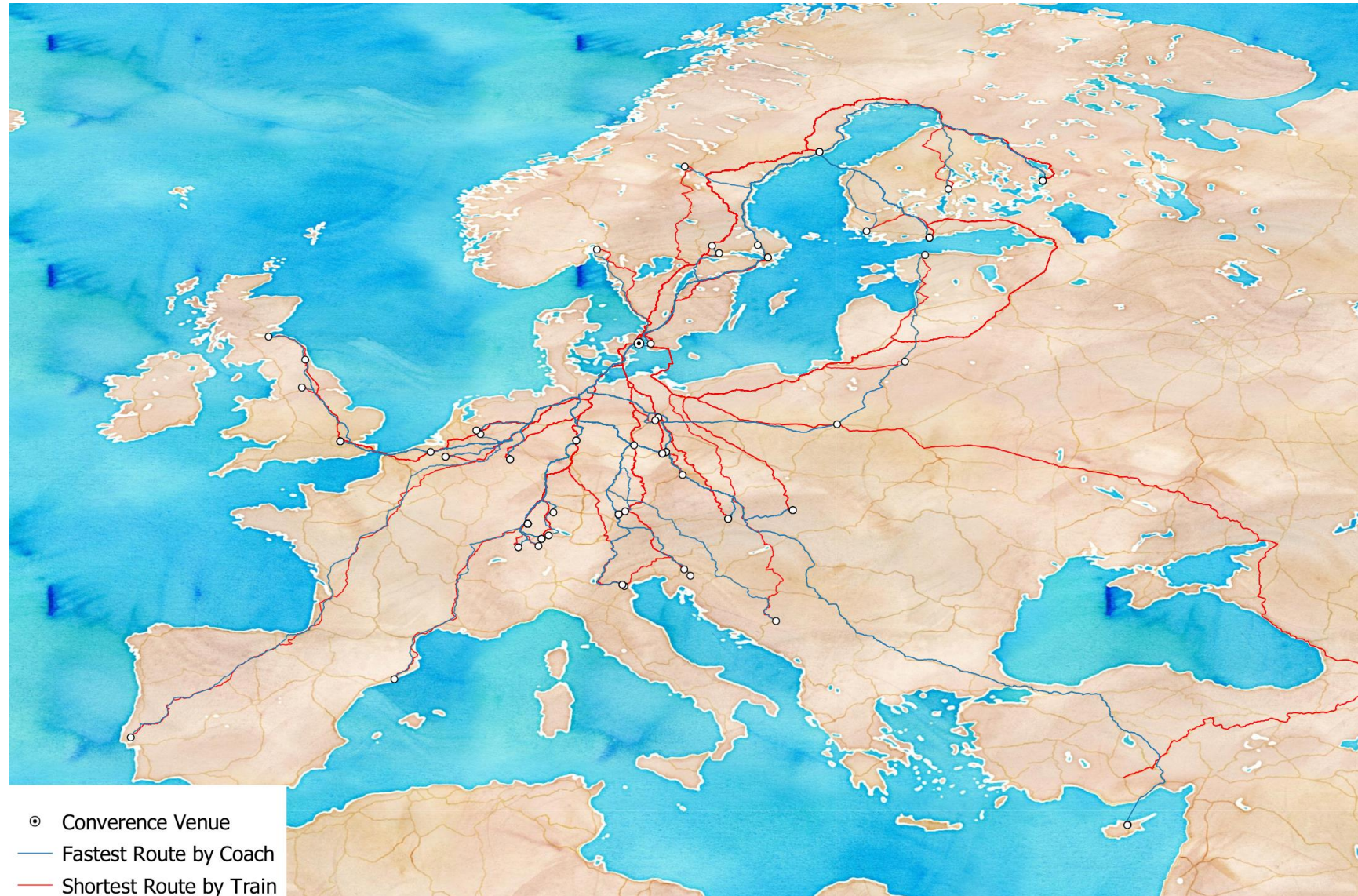
Participants by country



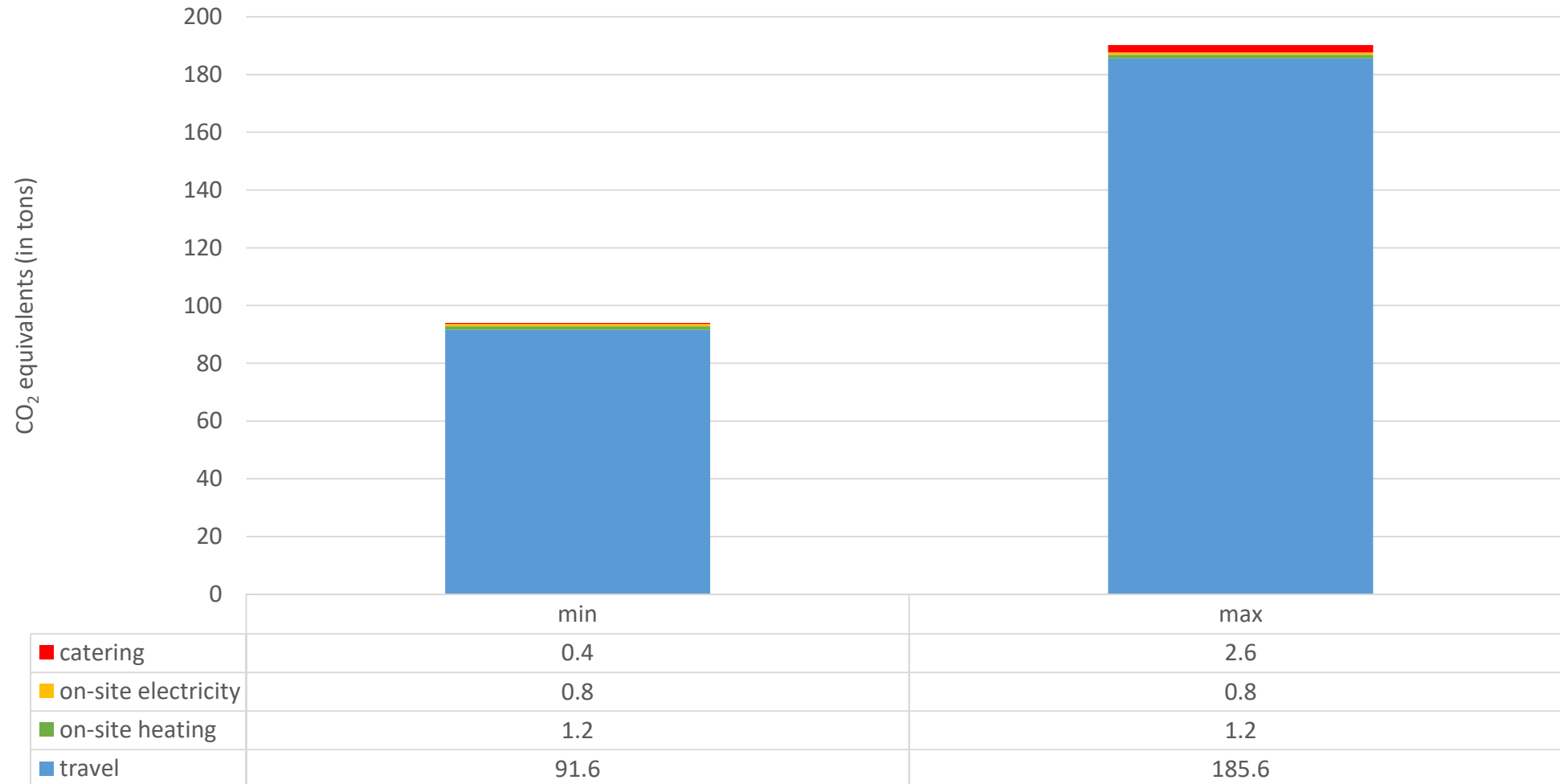
Participants flight distances



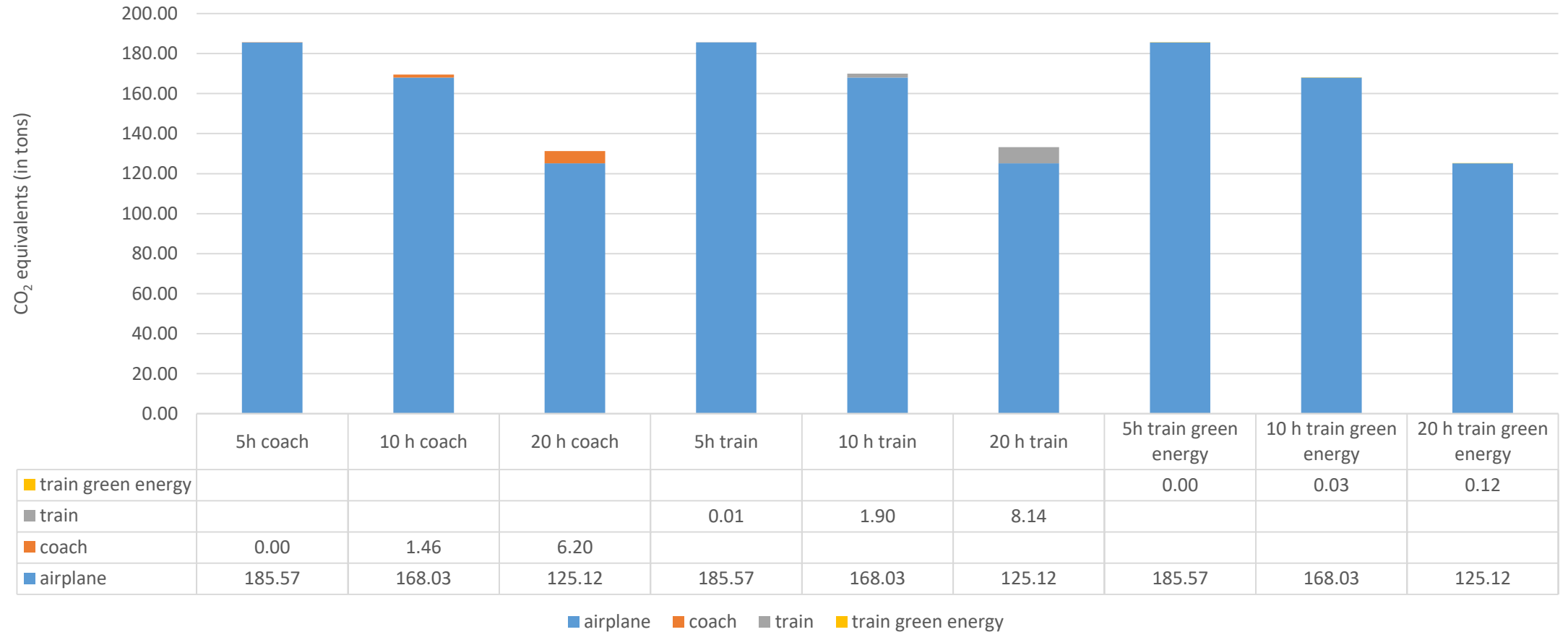
Participants routes by bus and train



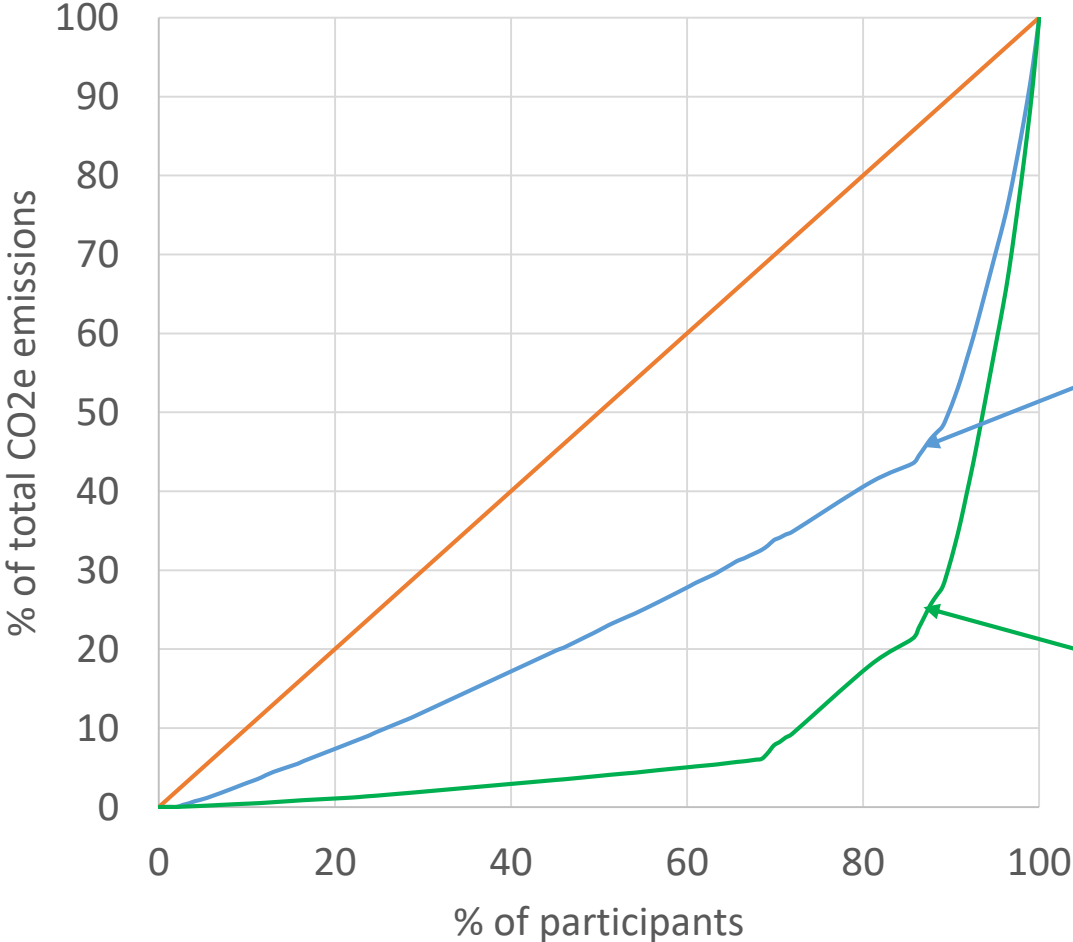
Total Carbon Footprint if the conference had taken place in Copenhagen (min/max-estimation)



Total travel induced carbon footprint by means of transportation and accepted hours of traveling



Distribution of carbon footprint

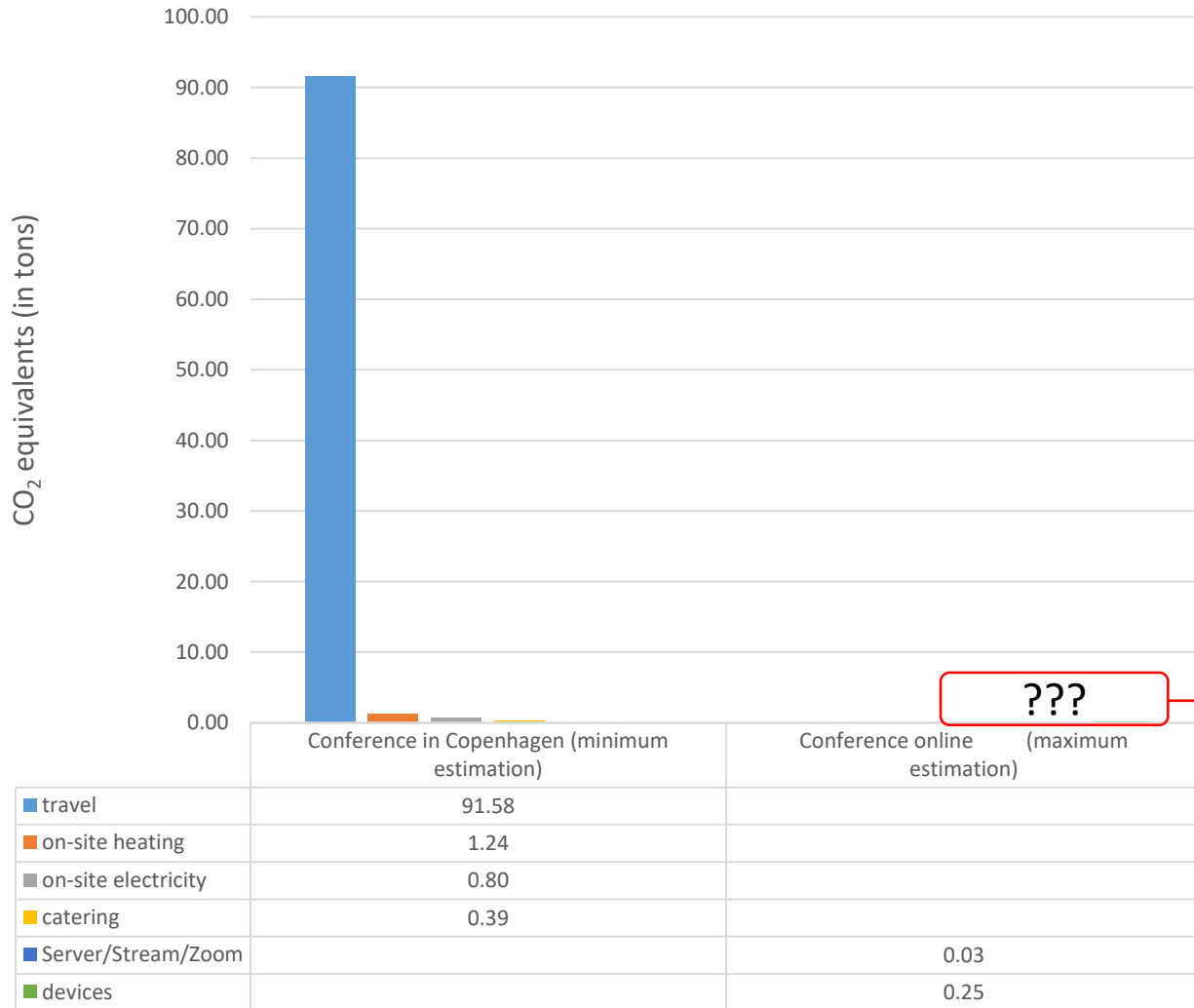


If participants accept a maximum of 5h travel time landbound:
10% of participants produce 50% of the travel induced emissions.

If participants accept a maximum of 20h travel time landbound:
10% of participants produce 70% of the travel induced emissions.

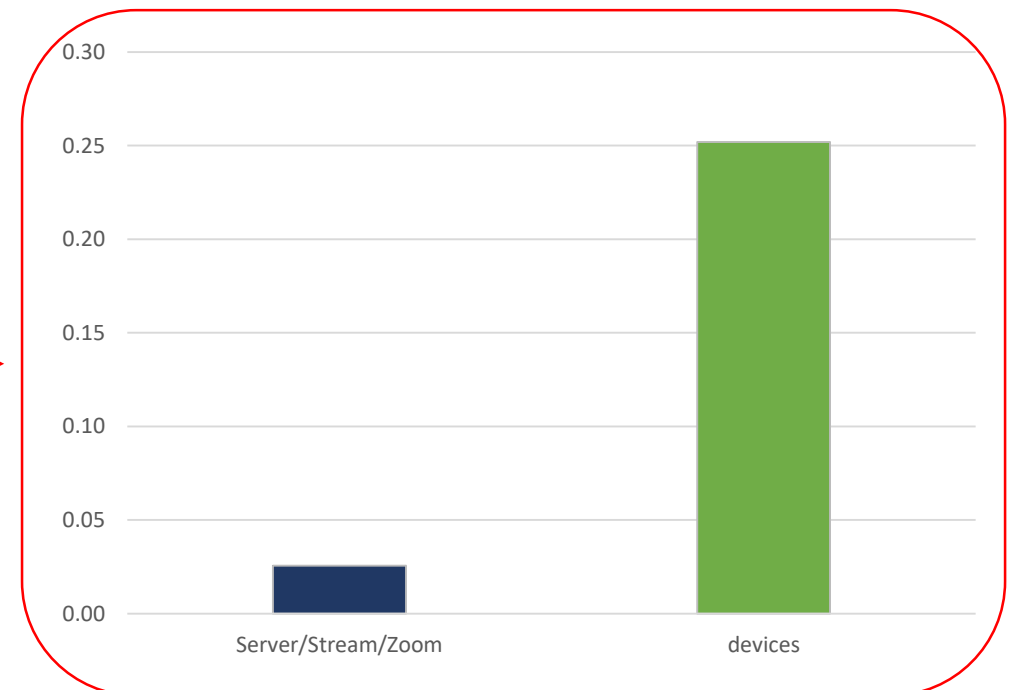
- landbound travel time < 5h by train, > 5h by airplane
- landbound travel time < 20h by train, > 20h by airplane

Carbon footprint in person vs. online event (in tons CO₂e)



Even if we use the minimum estimation for the in-person event and the maximum estimation for the online event*, the physical event produces more than **340x** more CO₂e than the online event.

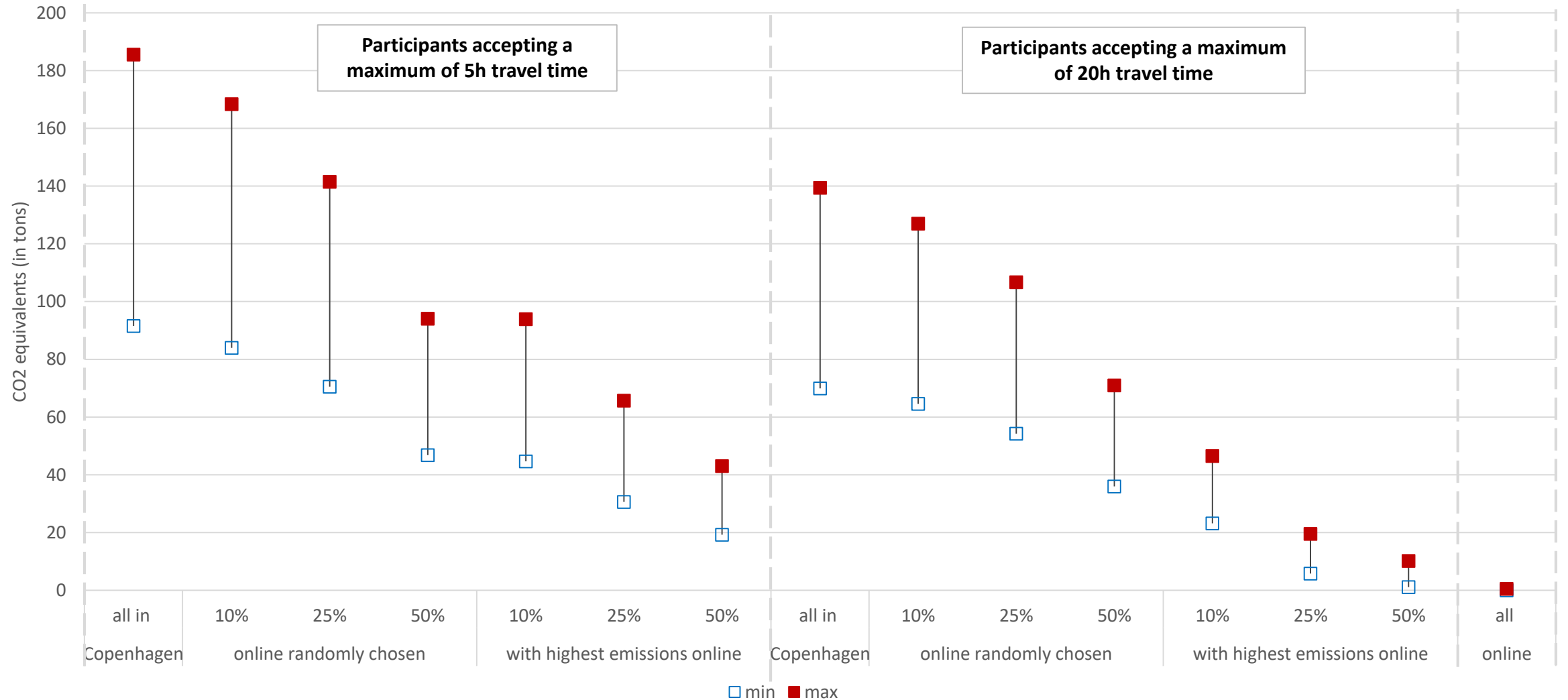
* 100% attendance rate for 20 hours on Zoom, PC + monitor (no laptops), emission factor for electricity = 719 g/kWh (Poland 2019)



Carbon footprint in person vs. online event (in tons CO₂e)

	Virtual			Copenhagen	
	Realist est.	Min est.	Max est.	Min est.	Max est.
Participants' devices	0.096	0.002	0.420	-	
Internet data transfers (Zoom)	0.010	0.000	0.078	-	
Travel*	-	-	-	91.581	185.577
Accommodation in hotels (electricity + heating)	-	-	-	1.269	
Conference venue (electricity + heating)	-	-	-	0.769	
Catering	-	-	-	0.389	2.626
Total	0.106	0.002	0.498	94.008	190.241

Comparison between in person, hybrid and online conference (min/max estimation)



Source

Estimations based on the approach described in Jäckle, Sebastian (2021): Reducing the Carbon Footprint of Academic Conferences by Online Participation - the Case of the 2020 Virtual ECPR General Conference, in PS: Political Science & Politics, online first DOI: [10.1017/S1049096521000020](https://doi.org/10.1017/S1049096521000020).