

Technical and Behavioural Barriers to Good Ventilation in Hospitality Venues

Dr Abigail Hathway¹, Dr Zhangjie Peng¹, Dr Sophie Pott², Vinh Vu¹, Alisha Suhag², Edward Murphy³ and Dr Chantelle Wood²

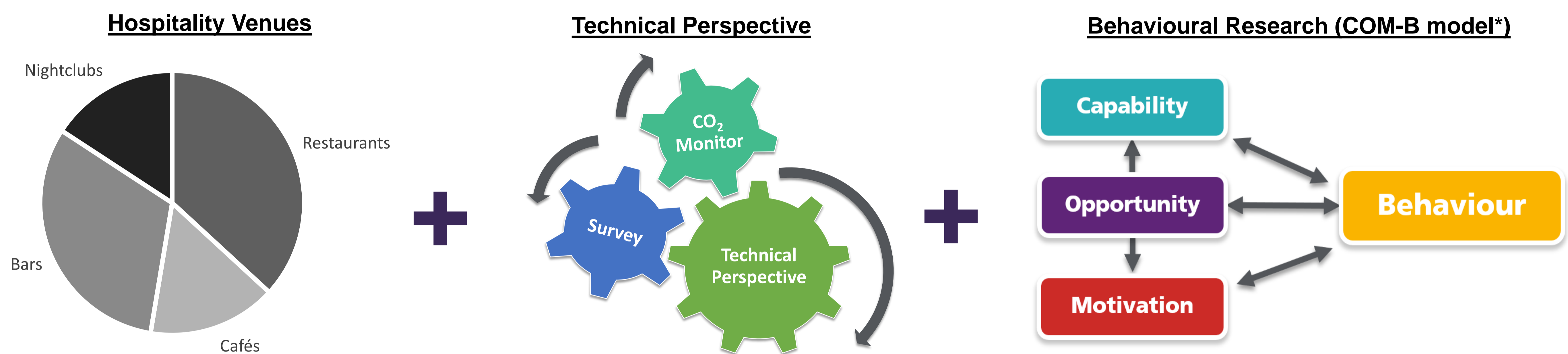
1. University of Sheffield, Department of Civil and Structural Engineering, Sheffield, 2. University of Sheffield, Department of Psychology, Sheffield, 3. Ollio Consult, Kollider, Sheffield

Background & Objective

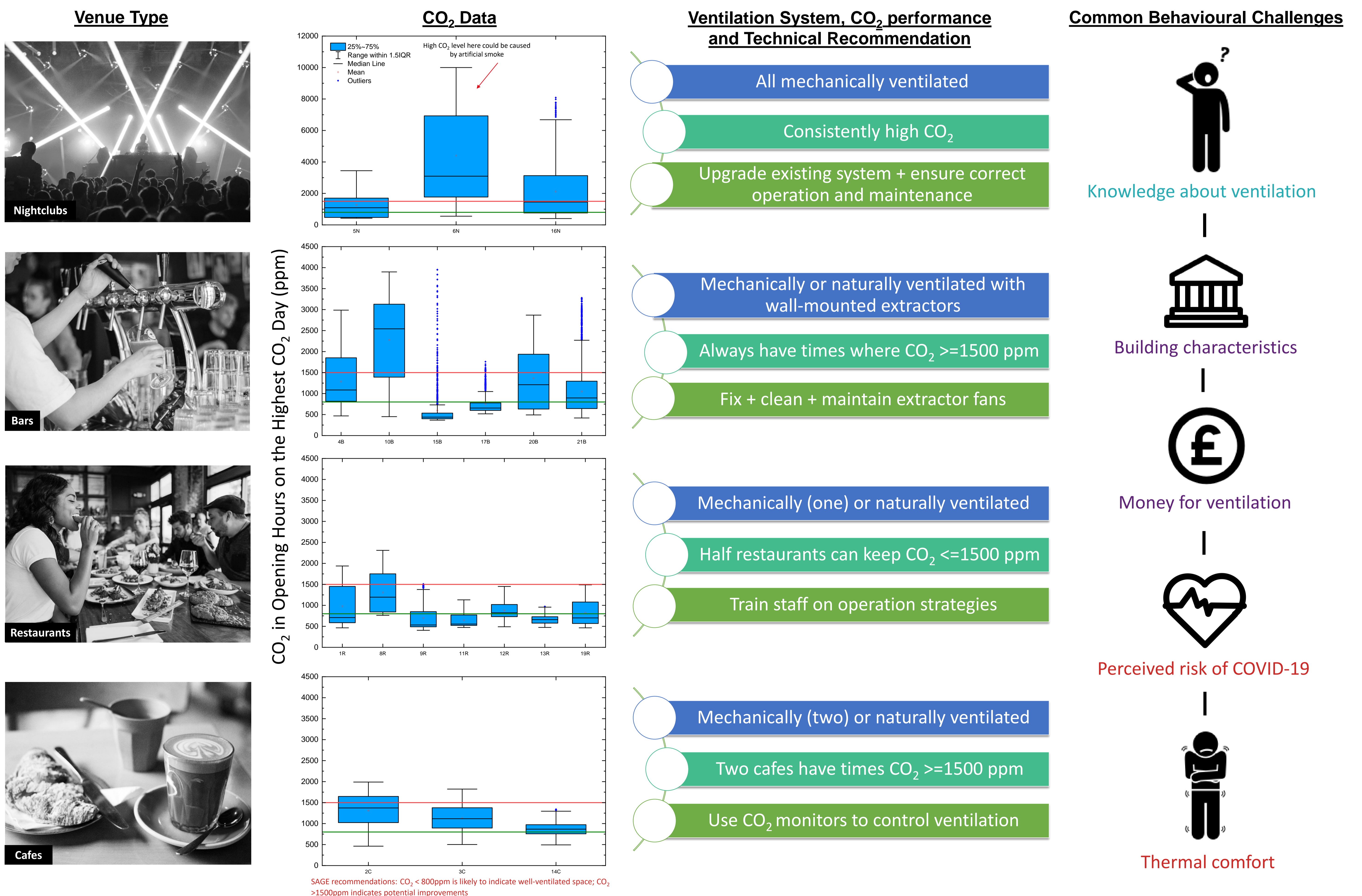
Many small and independently owned venues where people enjoy themselves and socialise have little on the ground expertise in building management and are struggling with achieving adequate air exchanges indoors to reduce the risk of COVID-19 transmissions. The objective of this project is to investigate the current ventilation provision in hospitality venues and the technical and behavioural barriers to improvements.

Methodology

19 hospitality venues were studied using a combination of CO₂ monitoring, walk around surveys, and interviews.



Results



Conclusion

- Monitoring demonstrated that all venues struggled to meet the guidance for CO₂ values to remain below 800 ppm. In several cases during busy periods, the values were significantly over 1500 ppm.
- Gaps in knowledge, building constraints, high costs of improving/using ventilation, variations in perceived COVID-19 risk and concerns around thermal comfort appear to be common behavioural factors affecting use of ventilation strategies.
- Future research is needed to identify how to implement technical solutions in the context of behavioural barriers.

*Reference: Michie, S., Van Stralen, M. M., & West, R. (2011). The behaviour change wheel: A new method for characterising and designing behaviour change interventions. *Implementation Science*, 6(1), 42.