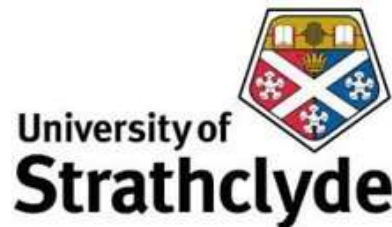


Air Quality: Coupling Indoor and Outdoor Environments

Prof. Maarten van Reeuwijk (mvr@ic.ac.uk)

Imperial College London

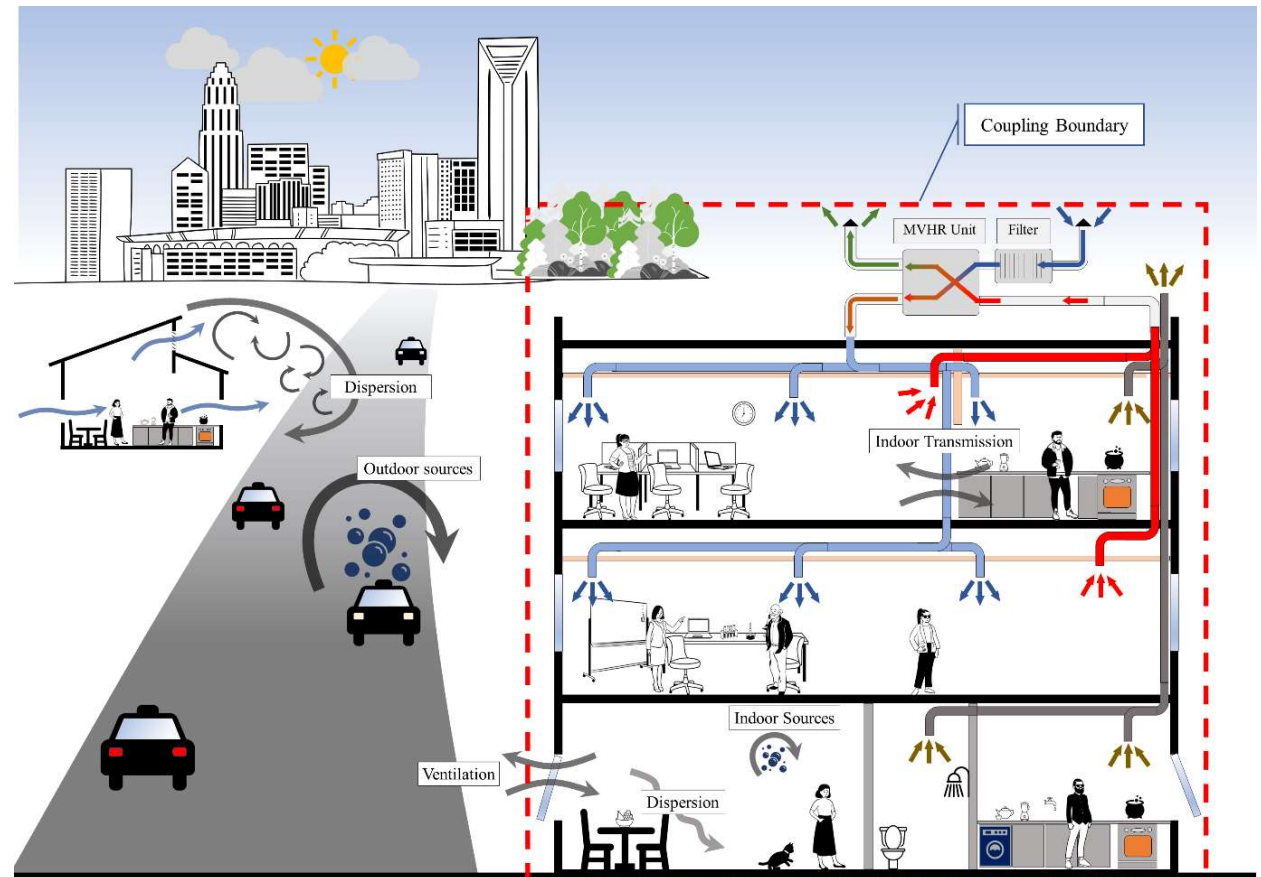
Future Urban Ventilation Network



Indoor-outdoor interaction is complicated and important

- Indoor sources
- Outdoor sources
- Turbulence and dispersion
- Deposition, resuspension
- Ventilation / HVAC
- User behaviour

- Providing healthier indoor conditions in urban environments needs to reflect the (changing) realities of local contexts, rather than a suboptimal one-size-fits-all solution.



Position paper

- We have assembled a group of stakeholders (modelers, regulators, ventilation suppliers, design consultants, architects) within FUVN Theme 1 to write a position paper that discusses the following
 - PHYSICAL MECHANISMS (sources, transformations, flow, ventilation, user behaviour)
 - STATE OF THE ART (guidelines, modelling)
 - CHALLENGES
 - INNOVATION OPPORTUNITIES
- To be submitted by the end of the year
- Come and talk to us to discuss!

Real-world performance

Trade-off between ventilation and energy use

Thermal stratification, dead zones

