

COMPLIANCE THROUGH INFORMATION SHARING IN BELGIUM

Setting up a legal framework to structurally improve IAQ

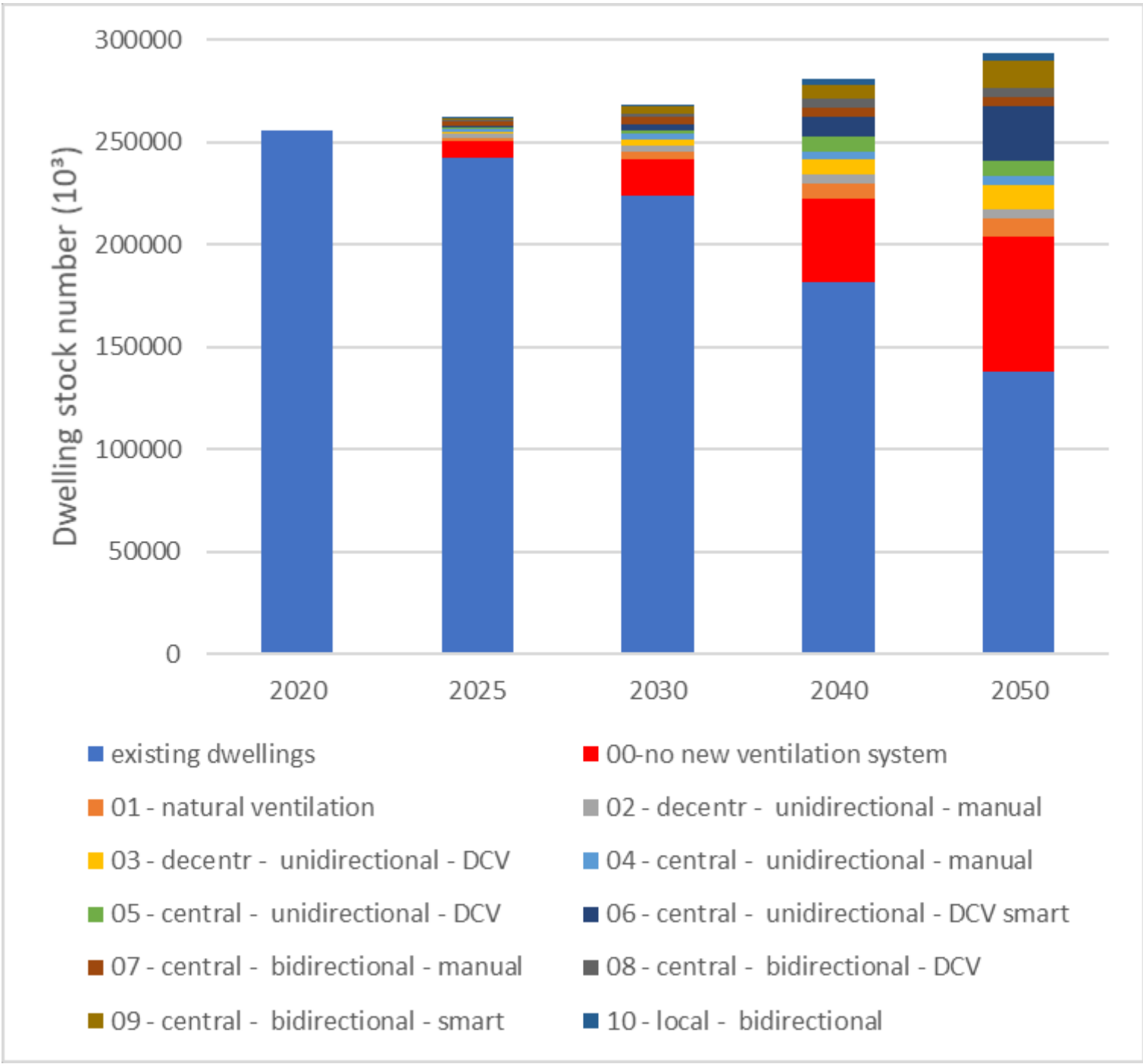


KEY POINTS

- Great science, standards and guidelines vs. **old stock**
- **Informed consent** as a useful framework
- Monitoring = **making IAQ visible**
- Certification and labeling = **making IAQ management visible**

CONTEXT: OLD STOCK

OVERNIGHT STOCK UPDATE...



**Final report – Technical study
on the possible introduction of
inspection of stand-alone
ventilation systems in
buildings**

Figure 5: EU evolution of the total number of new and retrofitted dwellings with a specific ventilation system, and an assumed increase of 20% in newly installed systems compared to the option with no actions (Figure 2)

MONITORING AND INFORMED CONSENT

STEP 1: MAKING AIR QUALITY VISIBLE

- Policing IAQ / ventilation challenging
- Informed consent
- Public monitoring makes air quality visible => cheap and quick



NEED FOR ADEQUATE INFORMATION

- Clear performance criteria
- Reliable marketing
- Technology neutral
- ‘Accessible’ for the public



WHY STEP 2?

⇒ Accept limitations of monitoring strategies

- ‘accessible’ information
- Calibration of sensors
- Positioning of sensors
- Which pollutants?

⇒ Making IAQ management visible

Air Infiltration and Ventilation

AIVC's COVID-19 Working Group FAQs

Can a measured CO₂ concentration show a building is SARS-CoV-2 safe?

*Benjamin Jones, University of Nottingham,
Jelle Laverge, Ghent University & Pawel Wargocki, Technical University of Denmark*

than normal ventilation rates are advised. However, as a rule-of-thumb, if the CO₂ concentration is >1400 ppm the building may be considered to be under ventilated. There are circumstances where a CO₂ concentration cannot be used as a proxy for under ventilation. For example, in low occupancy or large volume spaces where

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ASHRAE

ASHRAE Position Document on Indoor Carbon Dioxide

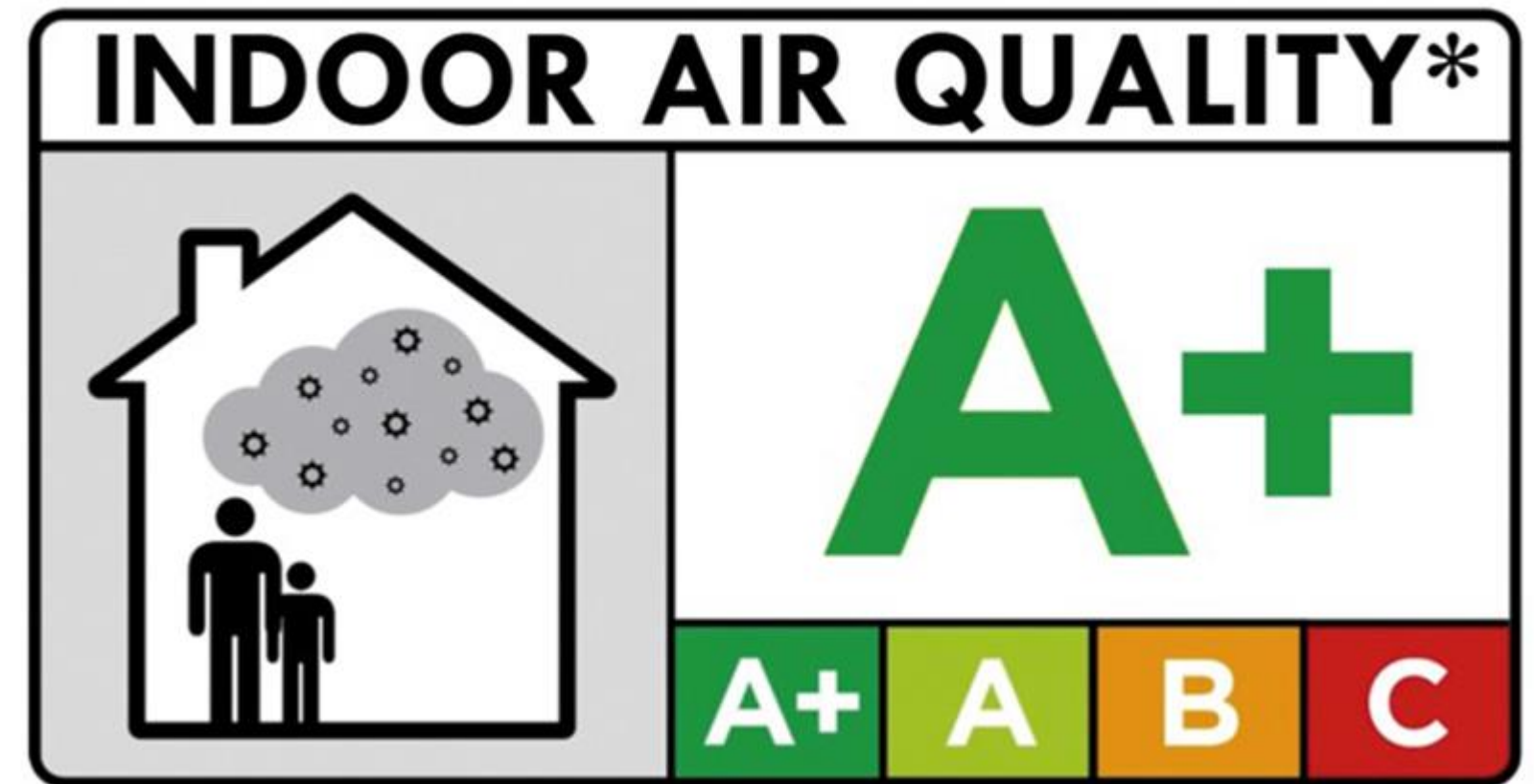
Approved by ASHRAE Board of Directors
February 2, 2022

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February 2, 2025

CERTIFICATION AND LABELING

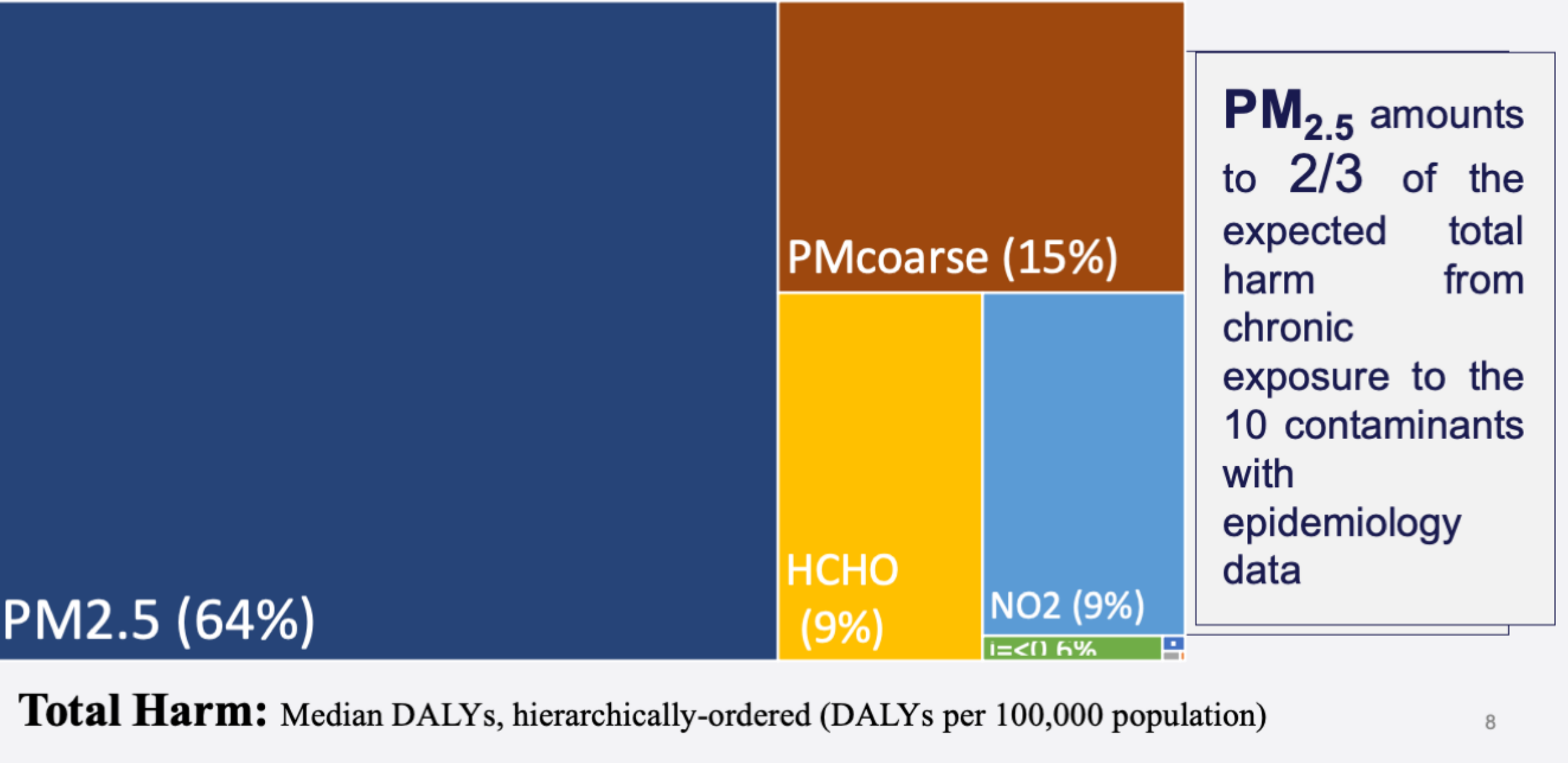
STEP 2 AS IMPLEMENTED IN BELGIUM

- Risk assessment
- Certification
- Labeling
 - ⇒ visible
 - ⇒ easy to police
 - ⇒ Flexible: no 'grade'
 - ⇒ How to label 'capability' ?



* Example of the French label for building product emissions

PRIORITY POLLUTANTS FOR HEALTH



+ about 5% for air based transfer of communicable disease?

Giobertti Morantes, AIVC 2022

DALY

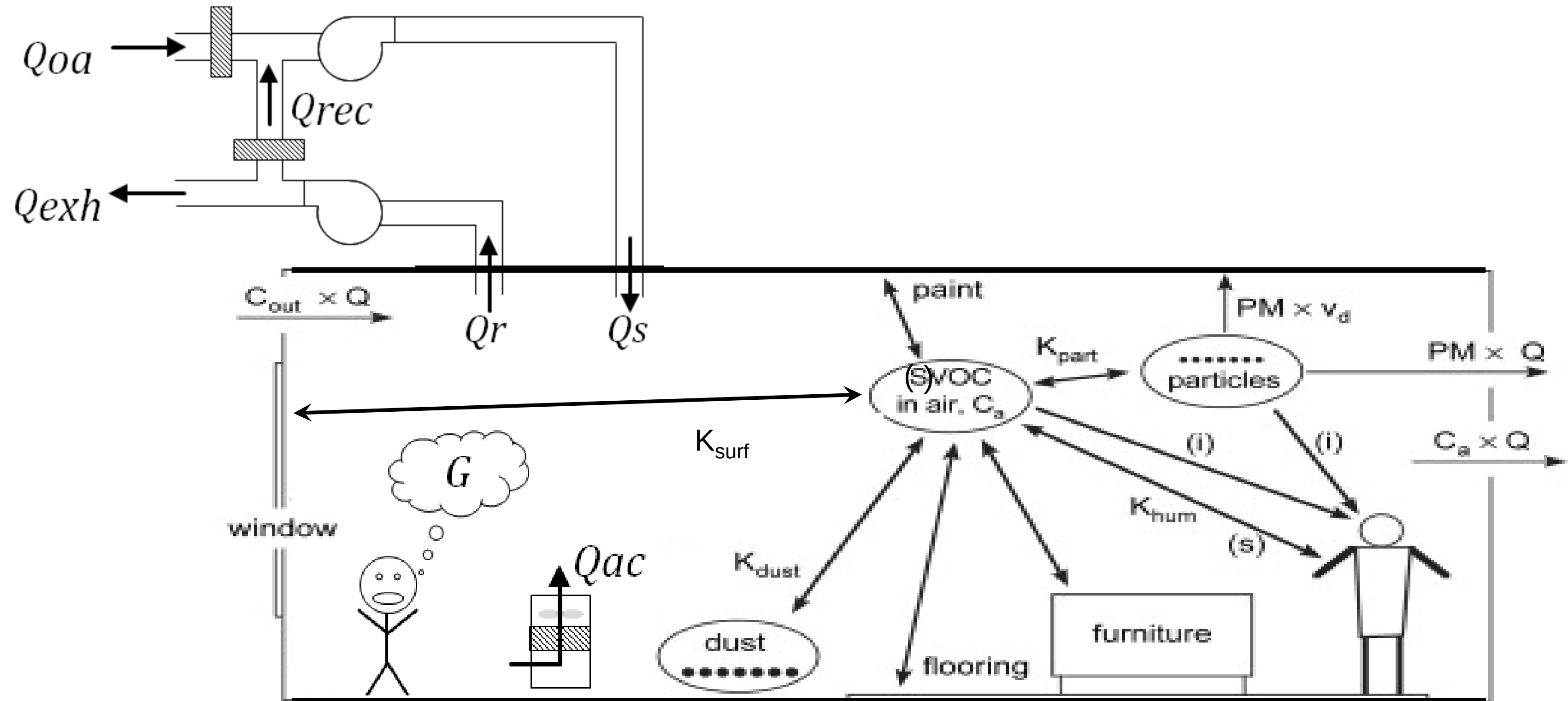
Disability Adjusted Life Year is a measure of overall disease burden, expressed as the cumulative number of years lost due to ill-health, disability or early death

$$DALY = YLD + YLL$$

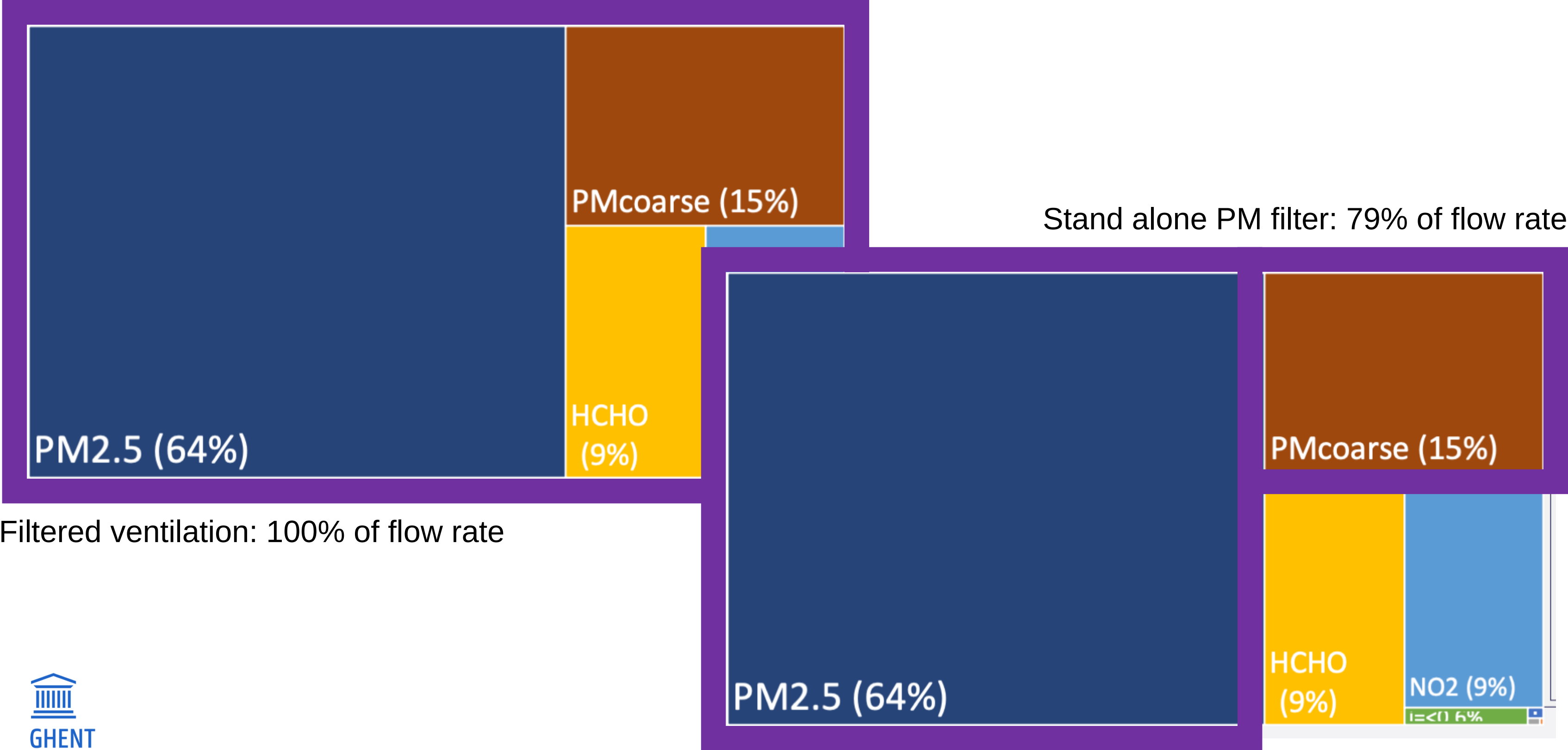
Years Lived with Disability + Years of Life Lost



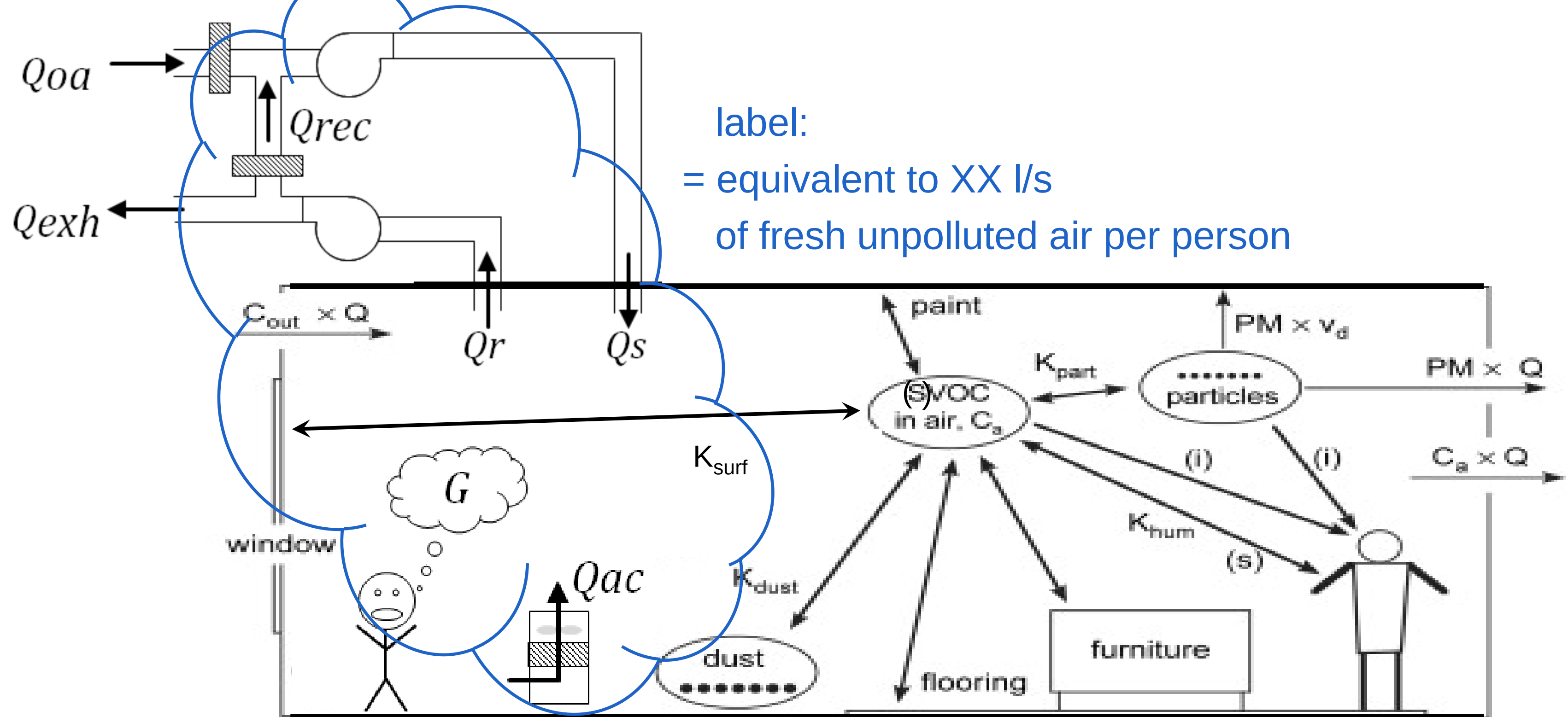
IAQ (MANAGEMENT) CAN BE COMPLEX



DALY WEIGHTED CADR



IAQ MANAGEMENT CAPABILITY



NEXT STEPS

- Stakeholder involvement
- Research agenda
- Making more detailed information available (both monitoring and certification)
- More detailed risk and impact assessment
- Updating public health and other policies
- **Communication!** (educating using the above)

WRAP UP

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- **Informed consent** as a useful framework
- Monitoring = **making IAQ visible**
- Certification and labeling = **making IAQ management visible**
- **Public buy-in is key!**

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