COMPONENT AWARD 2016

Cost efficient ventilation for residential buildings

COMPONENT AWARD 2016

Cost efficient ventilation for residential buildings

Reason: Ventilation with heat recovery is still expensive, especially for residential buildings

COMPONENT AWARD 2016

Cost efficient ventilation for residential buildings

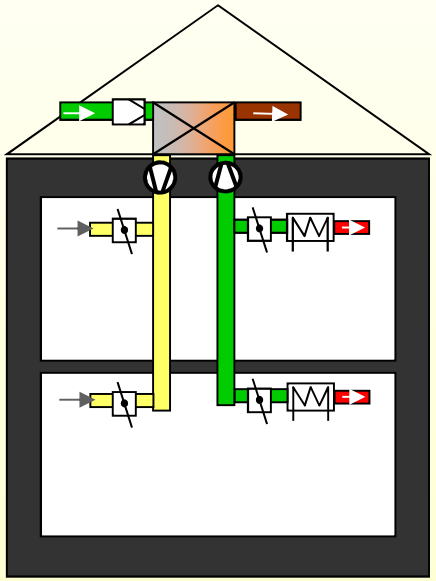
Wanted: cost efficient solutions considering the **whole ventilation system!**

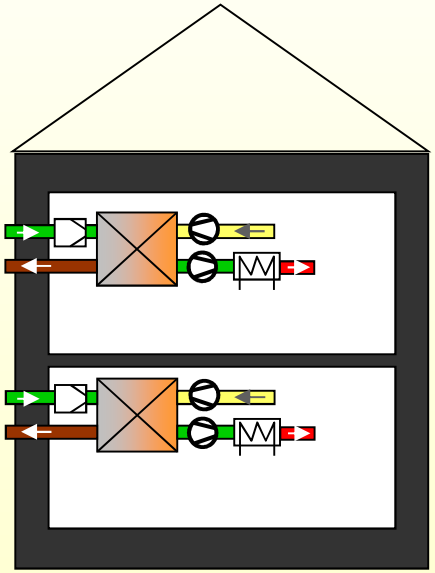
- ✓ heat recovery unit
- ✓ ducting system
- ✓ Installation and additional costs (e.g. false ceiling)
- ✓ Maintenance costs

COMPONENT AWARD 2016

Cost efficient ventilation for residential buildings

No preference for central or flatwise solutions!
Energy and cost efficient solutions for both types needed!





Winner of the Award is the best end most cost efficient solutions!!!

Example Germany:

55% of all flats located in multi - family houses

70% of all flats located in houses built before 1989

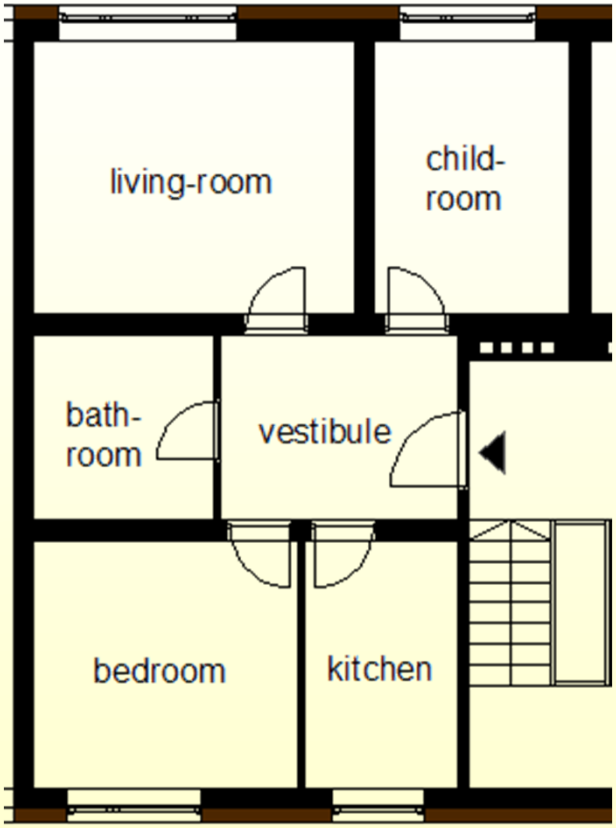
50% of all flats are 3 – 4 room apartments

COMPONENT AWARD 2016

Passive House Institute

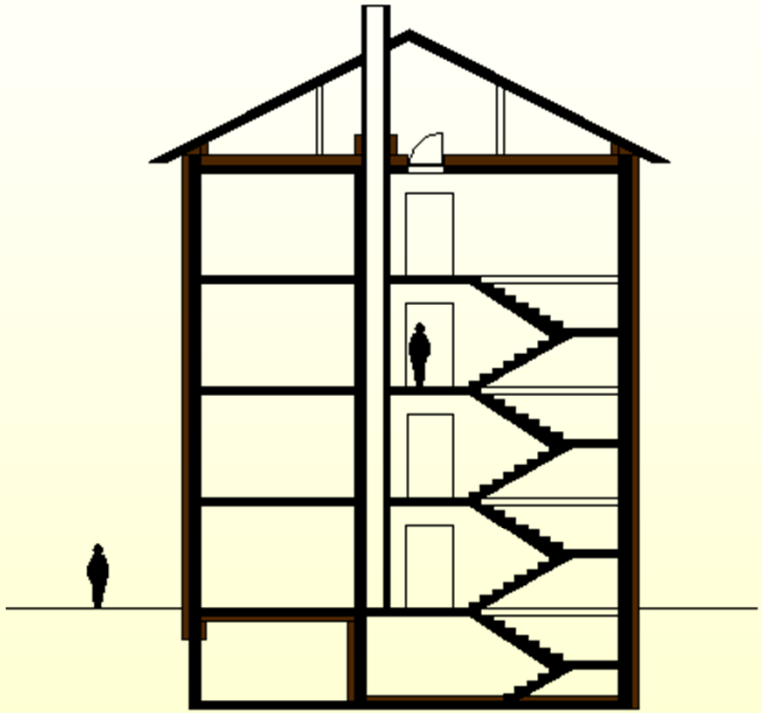
COMPONENT AWARD 2016

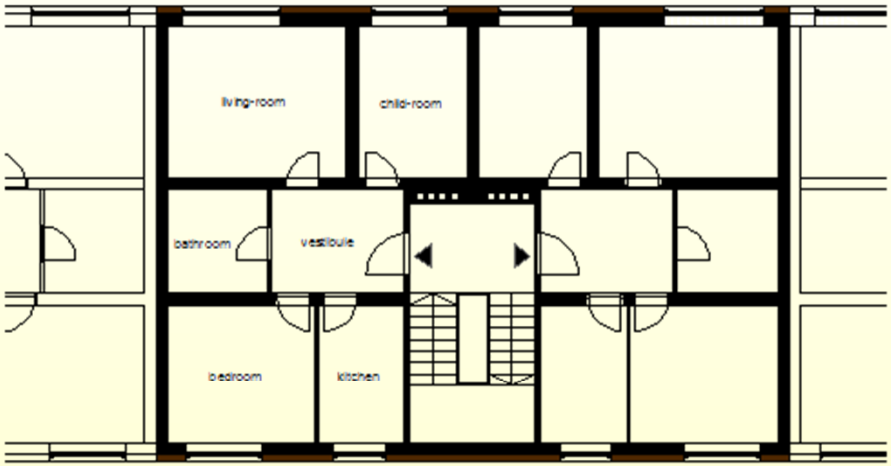
Focus on: **refurbishment of multi-family houses**
3 room apartment



COMPONENT AWARD 2016

Focus on: **refurbishment of multi-family houses**
3 room apartment





EuroPHit

THE CHALLENGE

COMPONENT AWARD 2016

Passive House Institute

COMPONENT AWARD 2016

Requirements: Certified Passive House Components

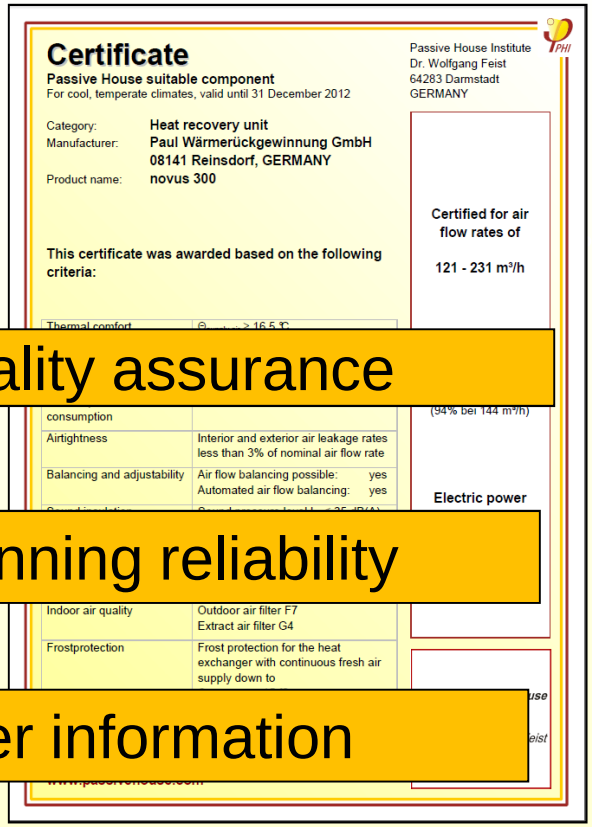
1. Hygiene criterion
   Outside air filter at least F7, Exhaust Filter at least G4

2. Comfort criteria
   Minimum supply air temperature: 16.5 °C @ -10°C outside air temperature

3. Efficiency criteria
   a. Heat: η_{HR} > 75 %
   b. Electricity (1): max. 0,45 Wh/m³
   c. Electricity (2): Standby: max 1 W

4. Control strategy
   Min. 3 ventilation level

5. Frost protection



Quality assurance

Planning reliability

User information

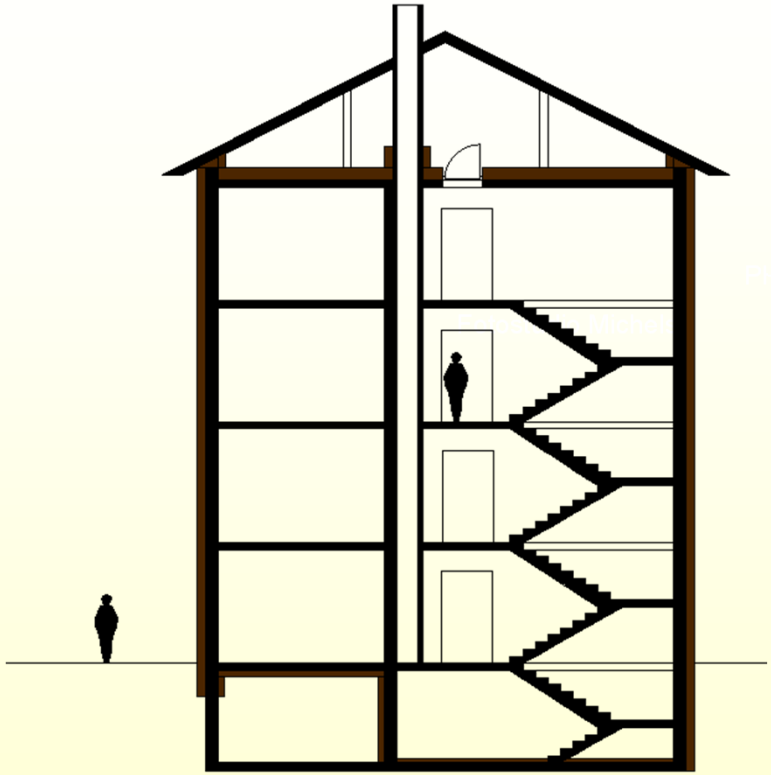
COMPONENT AWARD 2016

Additional requirements:

1. Air flow rate
   90 – 120 m³/h/ 8 dwellings

2. Noise protection
   Max. 30 dB(A) in functional rooms and 25 dB(A) in living rooms

3. Summer ventilation concept



COMPONENT AWARD 2016

Supported by:

Innsbrucker Immobilien Gesellschaft

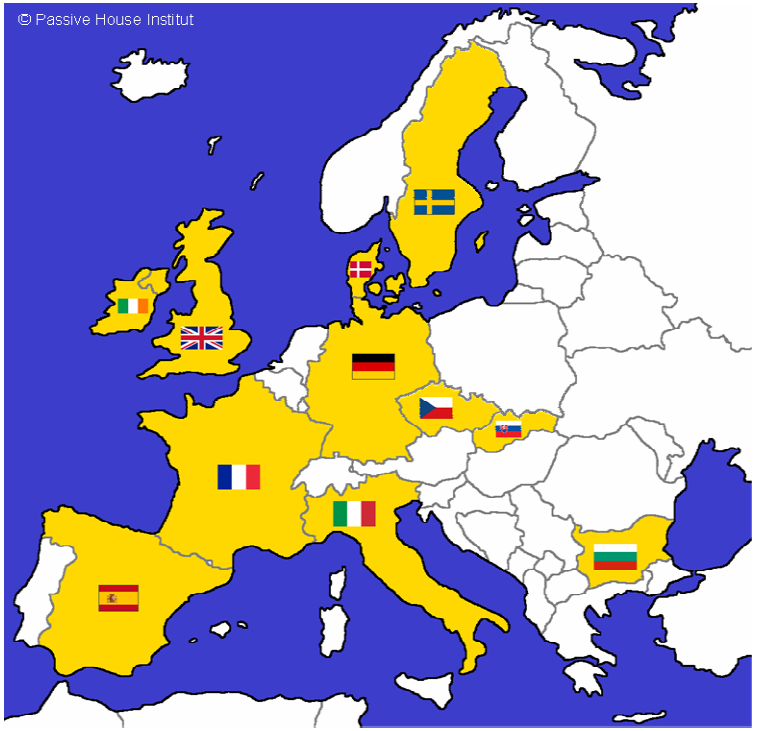
BASF Wohnen + Bauen

beside economical aspects, also practical aspects will be taken into account, which will be task of an independent Jury

EuroPHit

Thank you
for your attention

www.europhit.eu



Co-funded by the Intelligent Energy Europe Programme of the European Union

Supporters: