



International Workshop

## Securing the quality of ventilation systems in residential buildings: status and perspectives

Brussels, Belgium  
18-19 March 2013



**Peter Wouters and Rémi Carrié**  
INIVE EEIG



International Network for Information on Ventilation and Energy Performance





**BUILD UP**  
energy solutions  
for better buildings

March 2013  
AIVC/venticool/TightVent Workshops, Brussels

## Welcome

Dear Workshop Participant,

This BUILD UP 4U issue is dedicated to the workshops organised by AIVC, TightVent and venticool on:

- the quality of ventilation systems in residential buildings, and
- ventilative cooling, in collaboration with the new IEA Annex 62.

Find out how, in the context of AIVC, TightVent and venticool, we make use of the information and services provided by BUILD UP, the official EU portal on energy efficiency, for a wider information spread. I wish you a pleasant and informative reading,

**Peter Wouters**  
Manager INIVE EEIG



**Günther Oettinger,**  
EU Commissioner  
for Energy

"(...) If we want to transform our society into an energy efficient and decarbonised one, energy-intelligent buildings will play a vital role. Let us work together towards cleaner and more energy intelligent buildings for the future. (...)"





BUILDING AND SUSTAINABLE AIRBORNNESS PLATFORM  
the international platform for ventilative cooling



*The IEA Information Centre on Energy Efficient Ventilation*

2011  
2011  
2011

**countries**  
**countries**  
**countries**



**Newsletter**  
AIVC Air Infiltration and Ventilation Centre

AIVC now counts 15 members countries

2010-2011: Indoor Air Quality and ventilation systems in low energy buildings

2011-2012: Indoor Air Quality and ventilation systems in low energy buildings

2012-2013: Indoor Air Quality and ventilation systems in low energy buildings







BUILDING AND DUCTWORK AIRTIGHTNESS PLATFORM

Diamond partners



Platinum partners



Gold partners



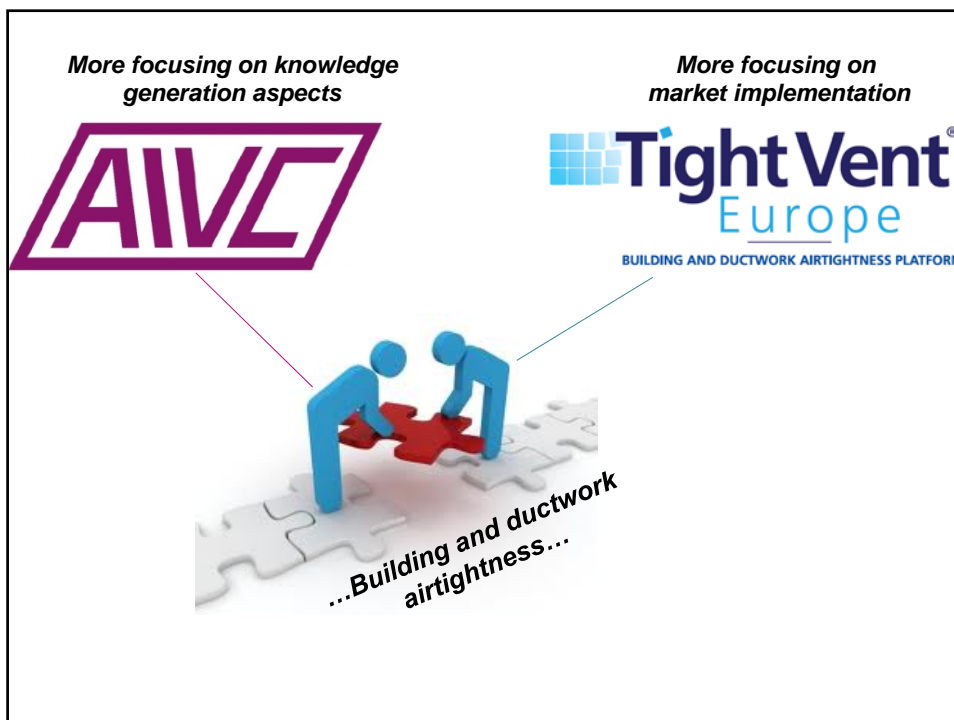
Associate partners



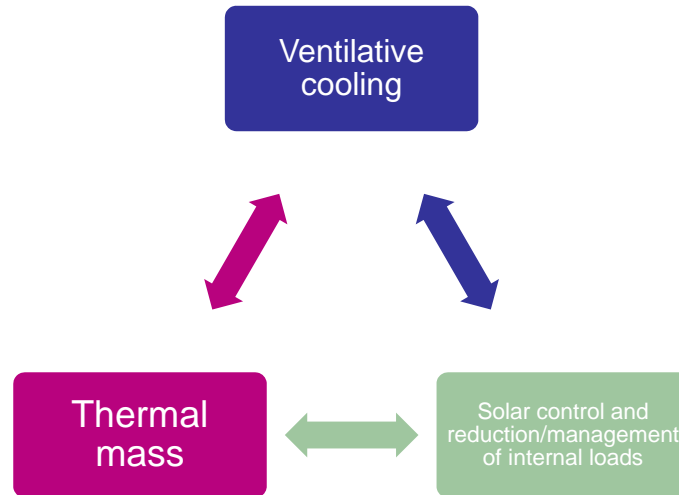


has given substantial support during the first phase of the platform.

3



# In the context of an energy efficient thermal comfort strategy...



**Prof. Per Heiselberg**

*More focusing on knowledge  
generation aspects*

**IEA Annex 62**  
(in preparation phase)

*More focusing on  
market implementation*

**venticool**



**venticool**  
*the international platform for ventilative cooling*

The Ventilative Cooling Platform is at present  
supported by:



## Events

- Airtightness workshop in Washington DC, 18-19 April 2013
  - ▶ [www.aivc.org](http://www.aivc.org), [www.tightvent.eu](http://www.tightvent.eu)
  - ▶ Registration at [http://www.nibs.org/events/event\\_details.asp?id=280378](http://www.nibs.org/events/event_details.asp?id=280378)
- 2013 AIVC conference, Athens, Greece, 25-26 September 2013
  - ▶ [www.aivc2013conference.org](http://www.aivc2013conference.org)



## AIVC Projects

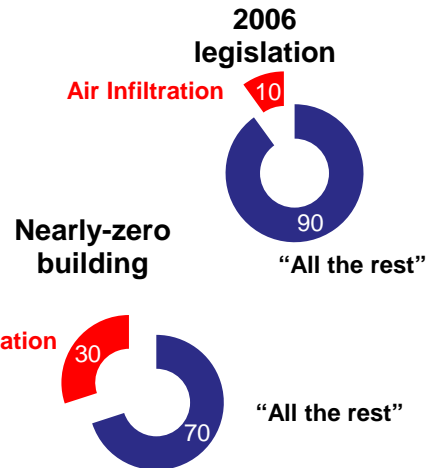


- |   |   |   |
|---|---|---|
| ✓ | Envelope air leakage databases                                  |   |
| ✓ | Philosophy on airtightness requirements                         |   |
| ✓ | Quality approaches for building airtightness                    |   |
| ✓ | How tight and insulated ducts should be?                        |   |
| ✓ | Durability aspects of airtightness                              |   |
|   | Ventilative cooling   | ✓ |
|   | Ventilation needs and health                                    |   |
| ✓ | Steps to improve the quality of residential ventilation systems |   |

## Why so much attention to ventilation and infiltration ?

### ■ Challenges

- ▶ **Comfort and health**
  - Indoor air quality
  - Noise
  - Draught
- ▶ **Significant energy use**
  - Can represent over 50% of the space conditioning energy use
  - Fan energy use, if any
- ▶ **Safety**
  - Fire hazard



Example : Flemish legislation – typical dwelling – no assessment of airtightness

## Why so much attention to ventilation and infiltration ?

Before 2020 :  
Many countries will impose  
near zero energy buildings

↙ **BUILD Tight** ↘  
**VENTILATE Right**

**Building Airtightness**  
*will implicitly become a  
mandatory point  
of attention*



Energy efficient  
**ventilation**  
systems will become  
mandatory

# Why so much attention to the quality of residential ventilation systems ?

## ■ Great opportunity for the ventilation sector

- ▶ Obviously significant progress can be made
- ▶ New paths are worth exploring for:
  - Product development
  - Construction methods
  - Commissioning
  - Building operations



## Key questions addressed during this workshop

What is the knowledge regarding the quality of ventilation systems in residential buildings in various countries?

What is the status with existing approaches to improve the quality of these systems?

How can quality frameworks help improve the situation and how can they converge with existing regulations or programmes?

What can we learn from targeted efforts to characterize or monitor real ventilation system performance?

**Over 80 participants to discuss these issues based on contributions from 13 countries and international organizations**

***On behalf of AIVC, TightVent and INIVE, we wish you a pleasant and informative workshop***