

Overview of the AIVC activities

Peter Wouters – Operating Agent AIVC

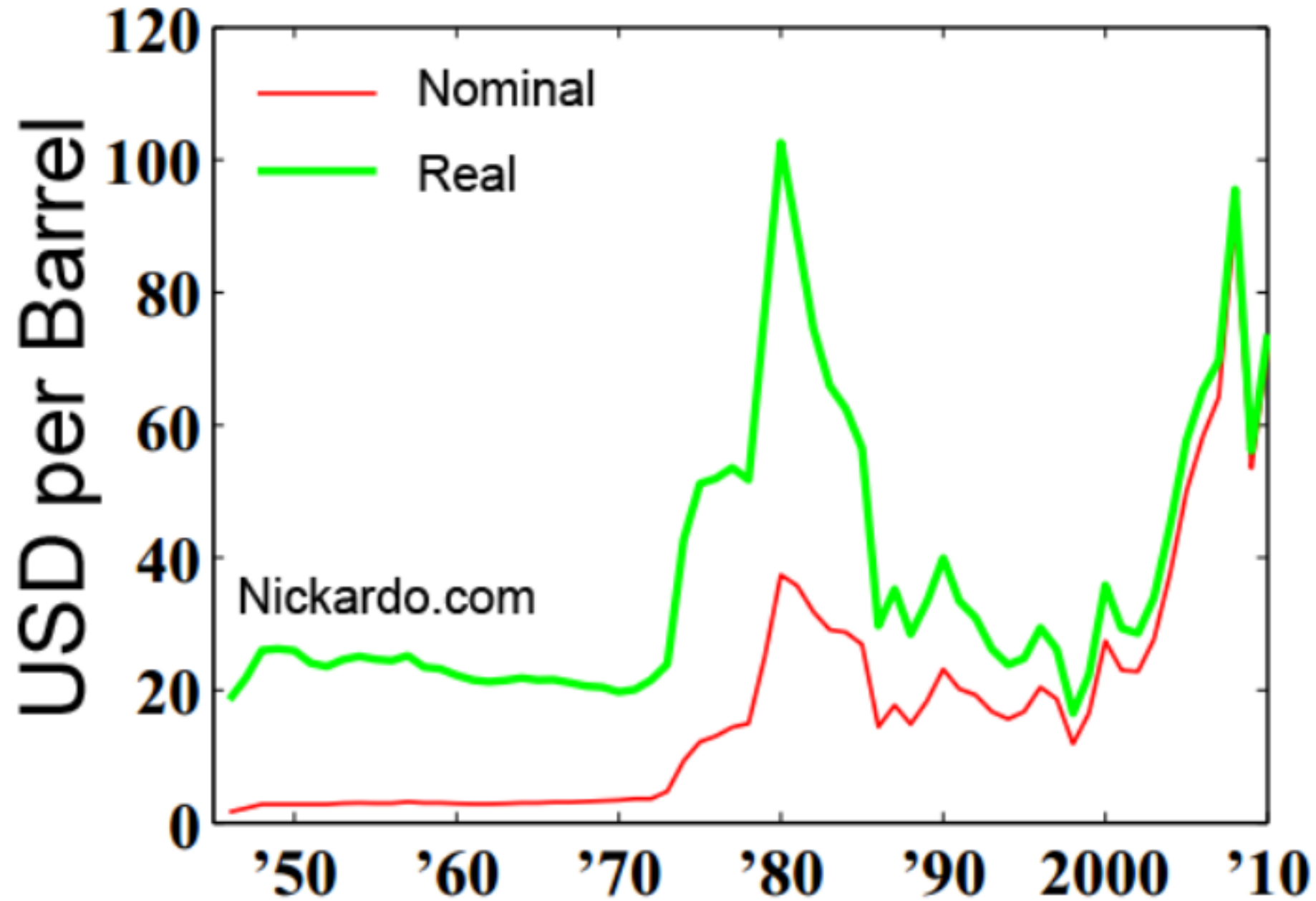
Sydney - 23 March 2018





4 November 1973 - First oil crisis

Price of Oil



...1975...

- Start of IEA implementing agreement **ECBCS**:
 “Energy conservation in Buildings and Community Systems”
- Most countries: limited interest and almost no knowledge on ventilation, air infiltration and indoor air quality
- Few countries were ahead: Sweden, Canada, Netherlands, ...

...1980...

- ECBCS **AIC** (Air Infiltration Centre – Annex 5) running
 - Annex 1 had indicated that many questions existed regarding air infiltration
- Policy in several countries: Built tight! (no concern about IAQ)
- Airtightness was research topic in some countries
- IEA annex 8 Occupants' behaviour
- IEA Annex 18 Demand Controlled Ventilation
- In research and in some countries growing interest for health and comfort



INTERNATIONAL ENERGY AGENCY
energy conservation in buildings and
community systems programme

Technical Note AIC **10**

**Techniques and instrumentation
for the measurement of
air infiltration in buildings
– a brief review and
annotated bibliography**

May 1983



Air Infiltration Centre
Old Bracknell Lane West, Bracknell,
Berkshire, Great Britain, RG12 4AH

1986

AIC became AIVC

The 'Air Infiltration and Ventilation Centre'



Annex 8



INTERNATIONAL ENERGY AGENCY
energy conservation in buildings and
community systems programme

Technical Note AIVC **23**

**Inhabitant Behaviour with Respect
to Ventilation – a Summary Report
of IEA Annex VIII**

March 1988



***Air Infiltration and
Ventilation Centre***
Old Bracknell Lane West, Bracknell,
Berkshire RG12 4AH, Great Britain.

Annex 9

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energy conservation in buildings and
community systems programme

Technical Note AIVC **26**

**IEA Annex IX
Minimum Ventilation Rates and
Measures for Controlling Indoor Air Quality**

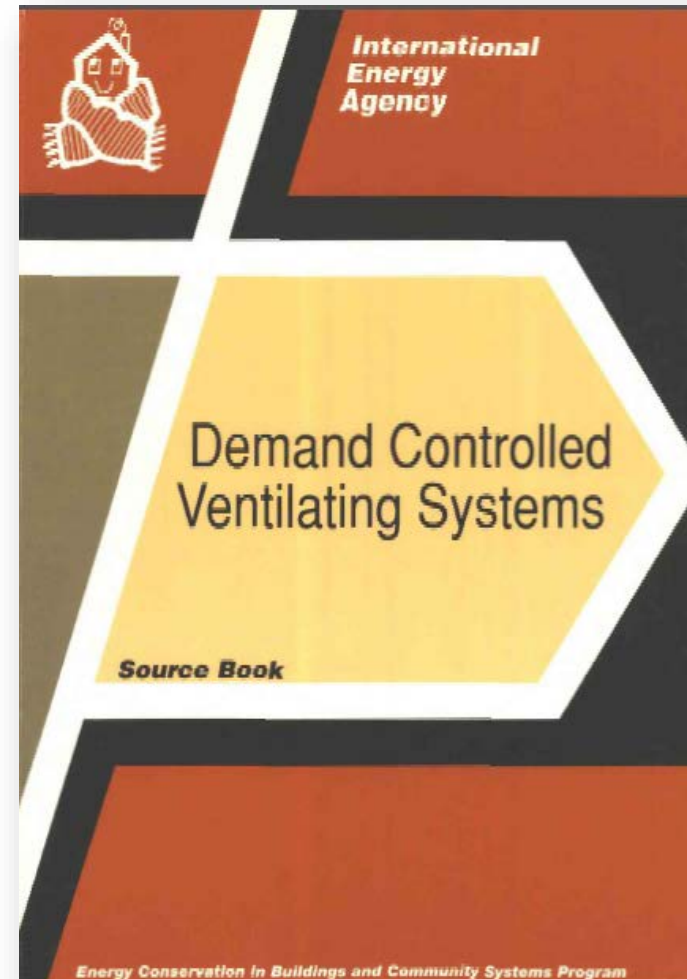
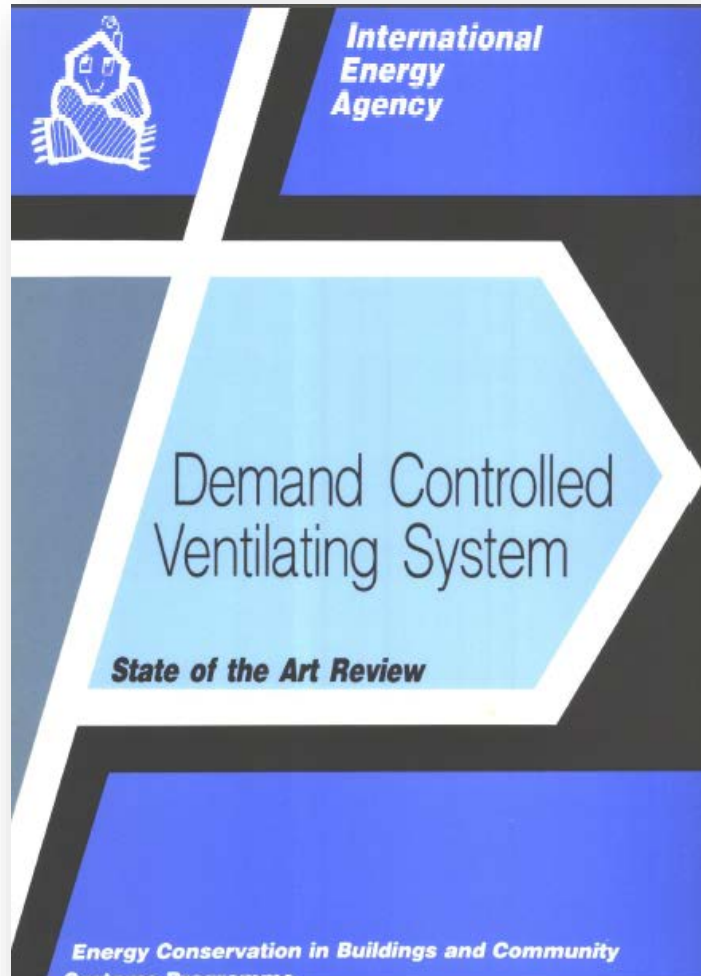
October 1989



***Air Infiltration and
Ventilation Centre***
University of Warwick Science Park
Barclays Venture Centre
Sir William Lyons Road
Coventry CV4 7EZ
Great Britain

IEA EBC Annex 18

Demand Controlled Ventilation Systems (1987-1992)

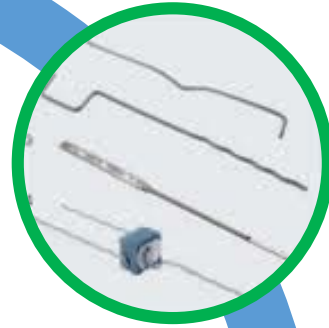


Today (...2018...)

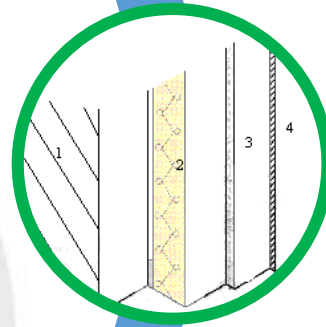
- Towards nearly-zero energy buildings
- Millions of airtightness measurements
- Concerns about quality of ventilation systems and workmanship







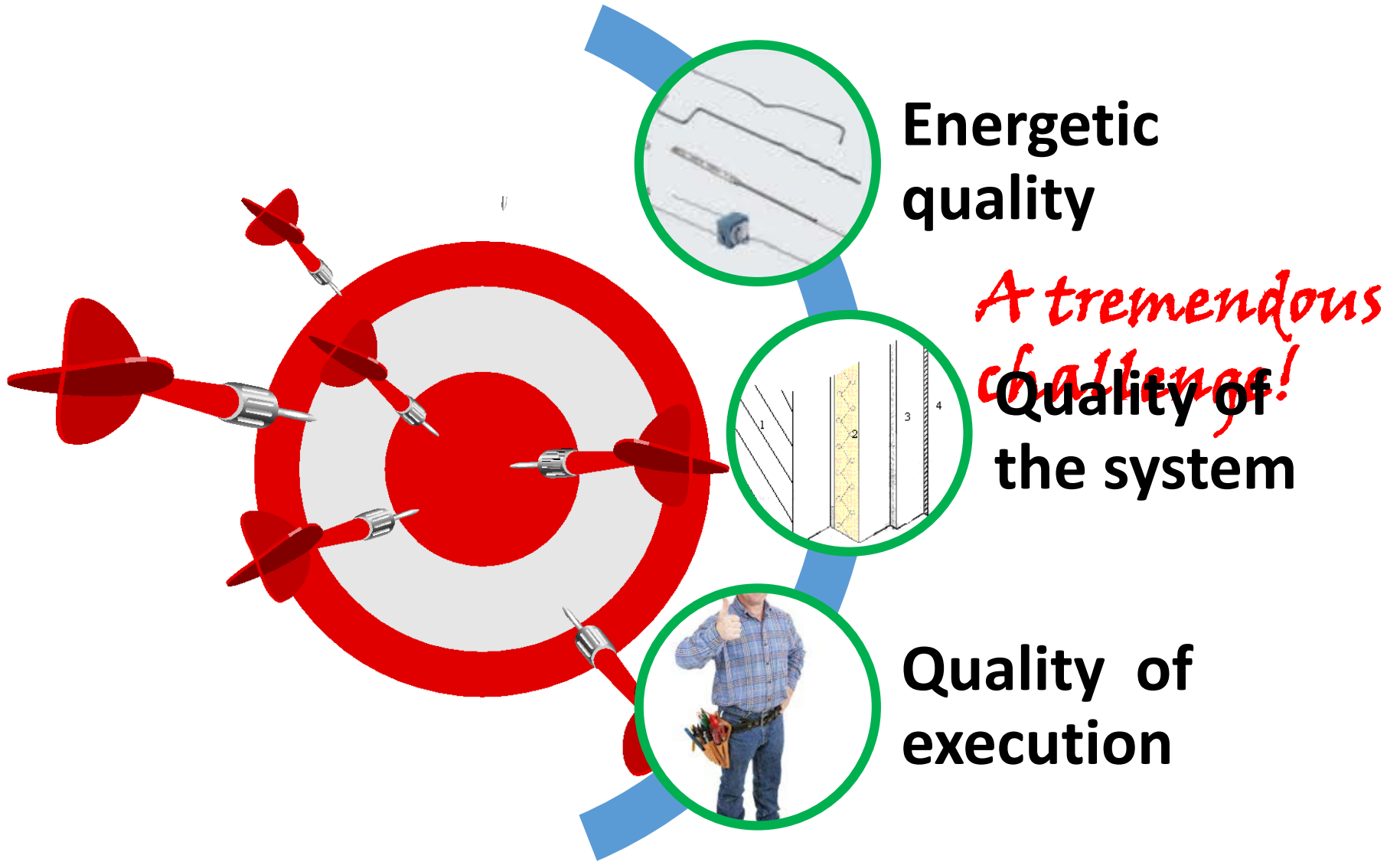
**Energetic
quality**



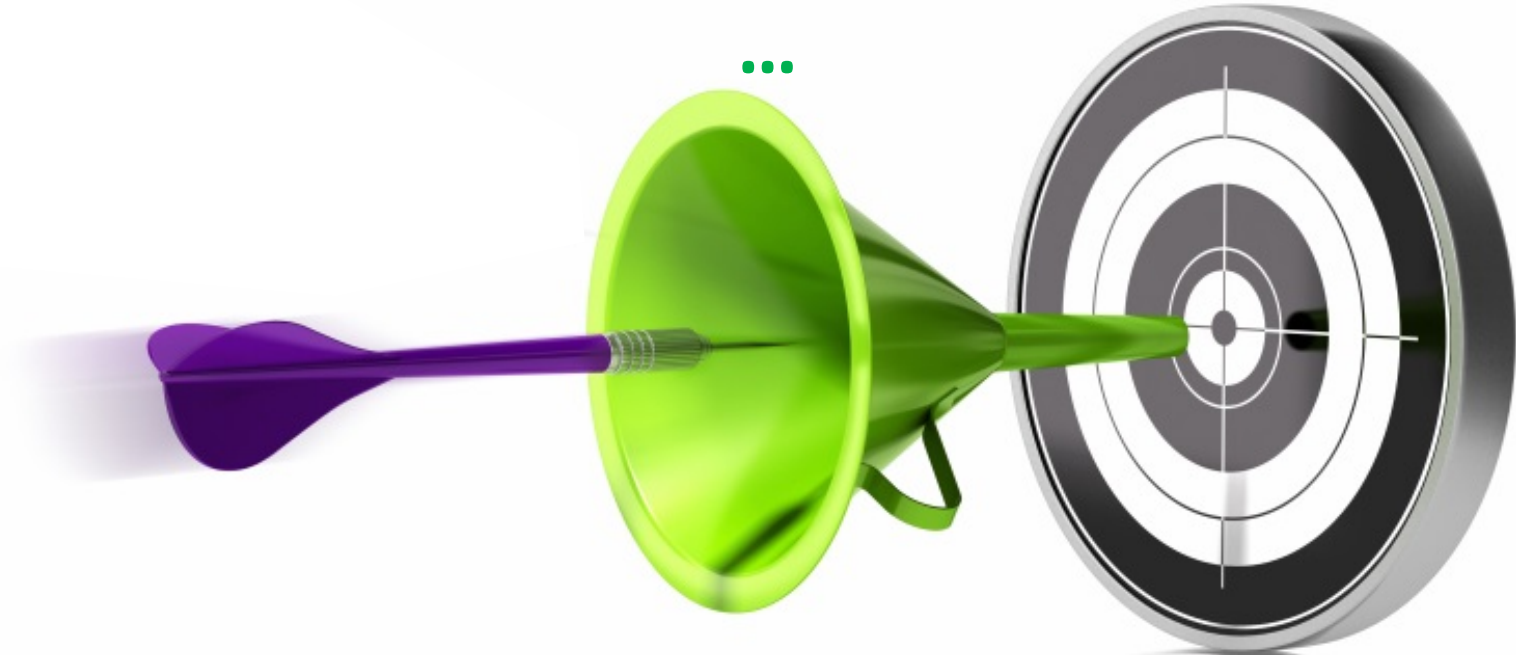
**Quality of
the system**



**Quality of
execution**



International collaboration International events



Lessons Learned

recognize mistakes

observe what works

document them

share them

EBC



Energy in Buildings and Communities Programme



Air Infiltration and Ventilation Centre

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Recent News

Highlighted News



AIVC 2018 Conference - Abstract submission...

New deadline is 20 March, 2018

> 02 March 2018

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Register now for the AIVC webinar on smart...

6-March-2018, 15:00-16:30 (CET)

> 01 February 2018

MORE ▶



23 Mar-18 - AIVC Workshop "Ventilation for..."

Sydney, Australia

> 15 January 2018

MORE ▶

AIRBASE

Click here for searching in a database of 22279 publications with 15778 pdf documents



Top events



6 March 2018, Webinar – IAQ sensors for smart ventilation of buildings

AIVC defines smart ventilation as a process to continually adjust the ventilation system of a building in order to provide the desired Indoor Air Quality (IAQ) benefits while minimizing energy consumption, u

MORE ▶



19-20 March 2018, Workshop, Wellington (NZ) - Towards higher-performing buildings: The role of airtightness...

The objective of this AIVC workshop is to discuss and identify ways to improve the quality of our homes with respect to airtightness and ventilation, as well as discussing the impact suboptimal performance h

MORE ▶



18-19 September 2018, Conference, Juan-les-Pins, 39th AIVC conference

The 39th AIVC conference: "Smart ventilation for buildings" will be held on 18 and 19 September 2018 in Juan-les-Pins. France.



Did you know?

What is Ventilation Efficiency?

LEARN MORE ▶



Key Publications



VIP 37: Impact of Energy Policies on...

This Ventilation Information Paper analyses both the policy instruments used (...)

> Valérie Leprince, Maria Kapsalaki, Rémi Carrié, EU

MORE ▶



VIP 36: Metrics of Health Risks from...

In a recent review of 31 green building certification schemes used around the...



AIVC Member countries

- Belgium
- China
- Denmark
- France
- Italy
- Japan
- Korea
- Netherlands
- New Zealand
- Norway
- Spain
- Sweden
- United Kingdom
- United States

→ Interest from several other countries



More focusing on knowledge generation aspects



More focusing on market implementation



BUILDING AND DUCTWORK AIRTIGHTNESS PLATFORM

More focusing on market implementation



the international platform for ventilative cooling

IEQ Global Alliance

For better indoor environment quality



Mission of the IEQ Global Alliance

The mission of IEQ-GA is to provide an acceptable indoor environmental quality (thermal environment-indoor air quality-lighting-acoustic) to occupants in buildings and places of work around the world and to make sure the knowledge from research on IEQ get to be implemented in practice. >> [Read more...](#)

Keynote speakers at the 38th AIVC – 4th venticool – 6th TightVent joint conference



The keynote speakers for the 38th AIVC – 6th TightVent – 4th venticool conference: “Ventilating healthy low-energy buildings” have been announced. The joint conference, co-organized by the International Network on Ventilation and Energy Performance (INIVE), on behalf of the Air ...

[Continue reading →](#)

User’s Manual for 2016 IAQ Standard Published by ASHRAE



ATLANTA – A manual to help users navigate the changes in ASHRAE’s 2016 ventilation standard is now available. The User’s Manual for ANSI/ASHRAE Standard 62.1-2016, Ventilation for Acceptable Indoor Air Quality, provides information on the requirements of the standard and ...

[Continue reading →](#)

REHVA Journal issue 6 / December 2016



The REHVA Journal December issue on **EPB Standards Published for Formal Vote & Energy Efficient Renovations** is now available online @ www.rehva.eu

Workshop details



14-15 March 2017, Workshop, Brussels - Is ventilation the answer to indoor air quality control in buildings? Do we need performance-based approaches?

Brussels, Belgium 03/14/2017 - 09:15

Indoor exposure to contaminants should be minimized to avoid adverse health and comfort effects. Experience shows that this qualitative statement is difficult to translate into measurable terms, such as performance indicators or metrics, which can be used as a basis for defining and assessing requirements in regulations and standards while holistically reflecting indoor air quality. The simplest and most commonly used approaches rely on ventilation airflow rates determined by experts or codes. These approaches have fundamental shortcomings in practice for systems that do not have steady contaminant sources or do not provide a constant airflow rate, such as natural, hybrid, or demand-controlled ventilation. More sophisticated approaches can be based on health damage, pollutant exposures, or perceived air quality but they generally entail a number of assumptions about the pollutants of concern and occupant scenarios. Such methods could lead to useful metrics. However, as of today, there is no clear set of metrics that can be used to assess the overall ventilation performance of a building with regard to its indoor air quality, or used in standards or regulations.

This workshop aims to identify the pros and cons of performance-based approaches and metrics that can be considered to assess the IAQ performance of ventilation systems, as well as to draft guidelines for their use in standards and regulations.

AIVC 2017

38th AIVC - 6th TightVent & 4th venticool Conference, 2017

Ventilating healthy low-energy buildings

13-14 September 2017, University Of Nottingham, Nottingham, UK

95 14 45 22
DAYS HOURS MINUTES SECONDS



The University of
Nottingham

UNITED KINGDOM · CHINA · MALAYSIA

Ventilating healthy low-energy buildings

DEADLINE FOR ABSTRACTS: MARCH 20

AIVC 2018

39th AIVC - 7th TightVent & 5th venticool Conference

Smart ventilation for buildings

18-19 September 2018, Antibes Juan-Les-Pins Conference Centre,
Antibes Juan-Les-Pins, France

195 17 36 34
DAYS HOURS MINUTES SECONDS

Smart ventilation for buildings

**Ventilation
Information
Paper
n° 38**

March 2018

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and Management
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B-1060 Brussels – Belgium
inive@bbri.be - www.inive.org

International Energy Agency
Energy Conservation in Buildings
and Community Systems Programme



Air Infiltration and Ventilation Centre

What is smart ventilation?

François Durier, CETIAT, France
Rémi Carrié, ICEE, France
Max Sherman, LBNL, USA

Topical sessions at 2018 conference ...

1. IAQ metrics
2. Smart ventilation control
3. Sensors for smart ventilation
4. Rationale behind ventilation requirements and regulations
5. Utilization of heat recovery
6. Integrating uncertainties due to wind and stack effect in declared airtightness results
7. Ductwork airtightness
8. Residential cooker hoods
9. French initiatives for indoor air quality
10. Demand controlled ventilation in French buildings – 35 years of wide scale experience
11. Commissioning of ventilation systems – Improving quality of installed ventilation systems
12. Measurement Accuracy of air flow and pressure difference
13. Air cleaning as supplement for ventilation
14. New annex on resilient cooling
15. BIM and Construction 4.0 opportunities in relation to ventilation and airtightness

Workshops in Wellington and Sydney

130 inscriptions



19-20 March 2018, Workshop, Wellington (NZ) – Towards higher-performing buildings: The role of airtightness and ventilation

Wellington, New Zealand 03/19/2018 - 08:00



23 March 2018 Workshop Sydney (Australia) – Ventilation for IAQ and cooling

Topical sessions at 2018 conference ...

1. IAQ metrics

2.

Max Sherman:

3.

4. **Why do we care about IAQ Metrics?**

5. Utilization of heat recovery

6. Integrating uncertainties due to wind and stack effect in declared airtightness results

7. Ductwork airtightness

8. Residential cooker hoods

9. French initiatives for indoor air quality

10. Demand controlled ventilation in French buildings – 35 years of wide scale experience

11. Commissioning of ventilation systems – Improving quality of installed ventilation systems

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1. IAQ metrics
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4. Rationale behind ventilation requirements and regulations
5. Utilization of heat recovery
6. Integrating uncertainties due to wind and stack effect in declared airtightness results
7. Ductwork **airtightness**

Willem de Gids:

Measuring airtightness of dwelling with a domestic ventilation system

11. Commissioning of ventilation systems – Improving quality of installed ventilation systems
12. Measurement Accuracy of air flow and pressure difference
13. Air cleaning as supplement for ventilation
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Topical sessions at 2018 conference ...

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- 11. Commissioning of ventilation systems – Improving quality of installed ventilation systems**

Peter Wouters:

**Ventilation and airtightness: European experiences
of on-site performances and approaches for improvement**

AIVC Newsletter



Foreword

The major roles of the Air Infiltration and Ventilation Centre (AIVC) are to disseminate information and to facilitate international co-operation in the field of ventilation and air quality. Several projects have just been approved for the 2017-2021 operating period in our last board meeting. AQ metrics, assessment requirements, air tightness testing, and performance criteria, residential cooker hoods, and heat recovery are key issues addressed in these projects.

This newsletter gives you an overview of our latest achievements and initiatives. We encourage you to visit our website and follow us on Twitter and LinkedIn to find out more and of course to mark your agenda for the upcoming 38th AIVC Conference on 13-14 September 2017, in Nottingham UK. We wish you a pleasant reading and look forward to seeing you in our future events!

Feder Wouda, Operating Agent AIVC



no 11

March 2017

13-14 September 2017 - 38th AIVC conference in Nottingham, UK

The 38th AIVC, 13th TightVent & 4th Vertical conference "Ventilating healthy low-energy buildings" will be held on 13 and 14 September 2017 in Nottingham, UK. The event will place its focus on:

- thermal comfort and ventilation cooling (the application of ventilation to cool indoor spaces and reduce overheating risk in buildings);
- air infiltration through cracks in the building envelope and ductwork;
- the relationship between ventilation, indoor air quality and health.

The conference will consist of 3 parallel tracks largely devoted to air tightness issues, ventilative cooling, ventilation in relation to AQ and health. It will consist of a mixture of topical sessions, presentations on invitation and presentations selected from the call for papers (more than 150 abstracts were submitted).

The conference is organised by

- the International Network on Ventilation and Energy Performance (INVE) or Behavioural Air Infiltration and Ventilation Centre (AIVC), TightVent Europe (the Building and Ductwork Air Tightness Forum), and Vertical (the international platform for ventilation cooling); and

- Brunel University London
 - The University of Nottingham
 - The Chartered Institution of Building Services Engineers (CIBSE)
- is the conference website <http://aivc2017conference.org> for further information.

Alexandria 2016 conference focused on AQ

The 37th AIVC Annual Conference was held in Alexandria, VA, USA in collaboration with ASHRAE's IAQ services conference. The previous two conferences attended the conference. This conference had a special focus on indoor air quality, and confirmed the relevance of future research topics identified by the AIVC including IAQ metrics, air cleaning, cooker hoods, and measurement methods.

In this issue

Foreword
13-14 September 2017 - 38th AIVC & 13th TightVent conference in Nottingham, UK
A survey of 2016 conference focused on AQ
AIVC publishes new series on air tightness for people with different building types
Hugo Hertz captures efficiency Standard Status Update
News from ISA EBC Area 88 Indoor Air Quality Design and Control in Low Energy Buildings
News and focus on AQ research
ASHRAE IAQ services conference: The previous two conferences attended the conference
IAI/ENVER 62 "Ventilative Cooling" Summer course, London, 25-26th May 2017
AQVEC 2016 Conference on Healthy & Green Buildings
List of AIVC board members

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Energy Efficiency and Indoor Climate in Buildings

... with specific information on AIVC, IEQ-GA and the platforms QUALICHeCK, Dynastee, venticool and TightVent

Monthly newsletter

News.inive.org

HEADLINES EU NEWS AIVC VENTICOOL TIGHTVENT ALL ARTICLES

Friday, Mar. 02, 2018 | Archives | < | Q

AIVC 2018 Conference - Abstract submission deadline extended

Shared by INIVE eeig



aivc.org - The abstract submission deadline for the 39th AIVC - 7th TightVent - 5th venticool joint conference "Smart ventilation for buildings" to be held on 18 and 19 September 2018 in Antibes Juan-Les-Pins, ...

SAVE THE DATE for our upcoming webinar on ventilative cooling – 25 April 2018, 10:30-12:00 (CET)

Shared by venticool



venticool.eu - The FREEVENT project and venticool are organising the webinar: "Ventilative cooling and summer comfort: Freeevent project in France" to be held on Wednesday 25 April at 10:30 AM (CET). The programme i...

AIVC Workshop on airtightness & ventilation, 19-20 March 2018, Wellington, NZ

Shared by INIVE eeig



tightvent.eu - New Zealand homes and apartments have become more and more airtight and have reached a level of airtightness that requires dedicated ventilation. Despite the fact that there is no airtightness requir...

23 Mar-18 - AIVC Workshop "Ventilation for IAQ and cooling"

Shared by INIVE eeig



aivc.org - The AIVC (Air Infiltration and Ventilation Centre) and the Cooperative Research Centre (CRC) for Low Carbon Living warmly invite you to participate in a free, one-day workshop Ventilation for Indoor ...

AIVC Workshop on airtightness & ventilation, 19-20 March 2018, Wellington, NZ

Shared by INIVE eeig



tightvent.eu - New Zealand homes and apartments have become more and more airtight and have reached a level of airtightness that requires dedicated ventilation. Despite the fact that there is no airtightness requir...

China joins the AIVC

Shared by INIVE eeig



aivc.org - The AIVC is very pleased to welcome China as new participating country! China will be represented in the AIVC board by Guoqiang Zhang, Dean of Institute of Sustainable

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INIVE eeig

INIVE EEIG – International Network for Information on Ventilation and Energy Performance



Editor's note

Dear Reader,

We wish you a healthy 2018!
With this monthly information paper on energy efficiency and indoor climate, we hope to keep you informed about new interesting information on the internet.

In addition, it provides information related to several specific areas of interest:
- Activities with a link to the **Air Infiltration and**



Ventilation

**Indoor air
quality**

Comfort

Airtightness