

EBC



Air Infiltration and Ventilation Centre



Energy Efficient Ventilation: Overview of AIVC related activities

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IEA and ventilation: Overview

AIVC at present and 2014-2016

Combining forces: TightVent

Combining forces: Venticool

Combining forces: QualiCheck

Conclusions



IEA and ventilation: Overview

- AIVC at present and 2014-2016

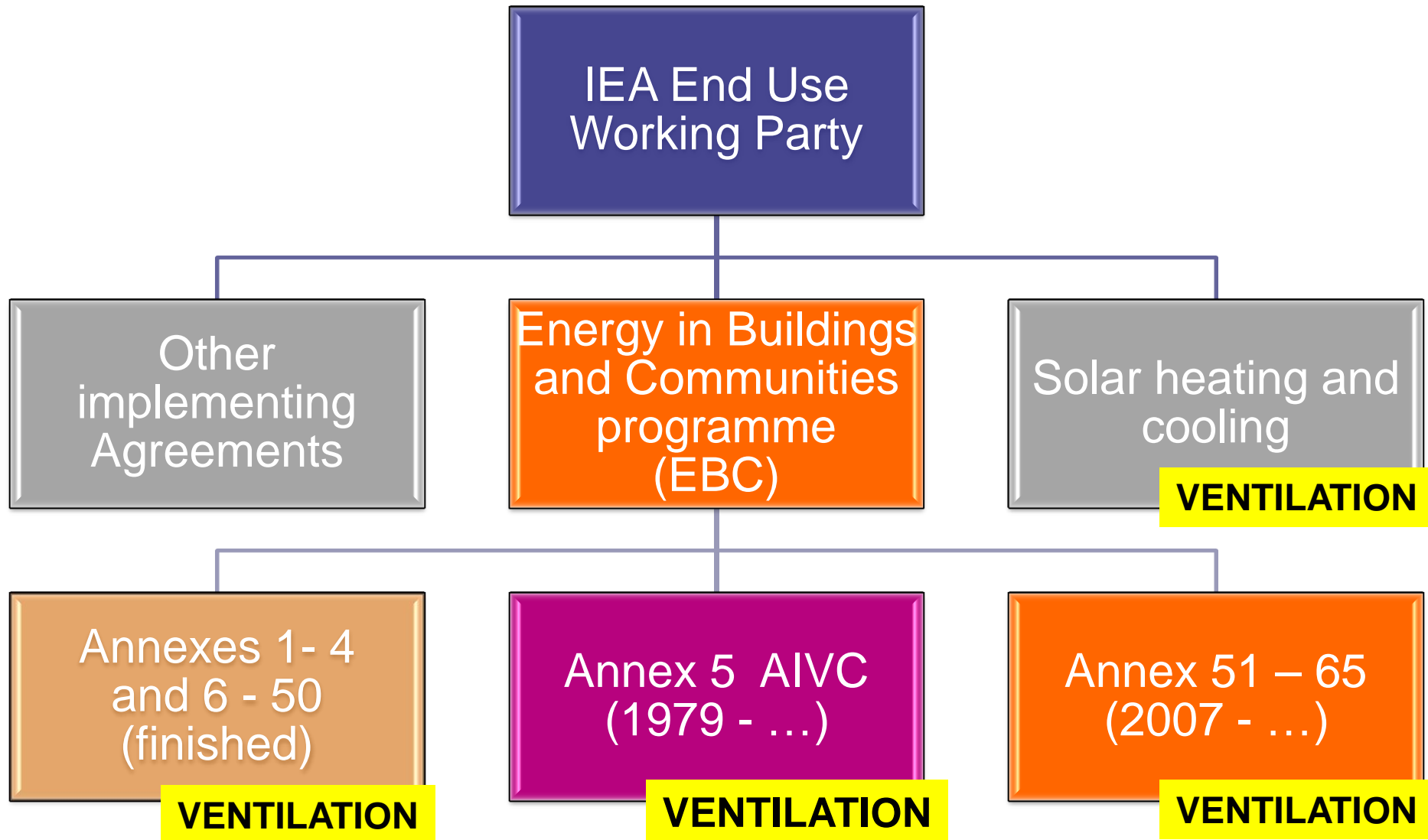
- Combining forces: TightVent

- Combining forces: Venticool

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- Conclusions

Ventilation related activities of IEA ...



Ventilation related projects in EBC implementing agreement...

- **Annex 5: Air Infiltration and Ventilation Centre**
- **Annex 8: Inhabitant behaviour with regard to ventilation**
- **Annex 9: Minimum ventilation rates**
- **Annex 18: Demand controlled ventilation systems**
- **Annex 20: Air flow patterns in buildings**
- **Annex 23: Multizone air flow modelling**
- **Annex 26: Energy efficient ventilation for large enclosures**
- **Annex 27: Evaluation and demonstration of domestic ventilation systems**
- **Annex 35: Control strategies for hybrid ventilation**
- **Annex 44: Integrating environmentally responsive elements in buildings**
- **Annex 62: Ventilative cooling**



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The IEA Information Centre on Energy Efficient Ventilation

1979: Creation of Air Infiltration Centre (AIC)

1986: Air Infiltration and Ventilation Centre (AIVC)

...1990.... Ventilation and summer comfort

...

2011: 12 member countries

2012: 15 member countries

2013: 17 member countries

2014-2016: new 3-years working period

AIVC projects...

Envelope air leakage databases

Philosophy on airtightness requirements

Quality of airtightness assessment

How tight and insulated ducts should be?

Durability aspects of airtightness

Quality management of airtightness

TAAC (TightVent Airtightness Associations Committee)

Ventilative cooling

Ventilation needs and health

Steps to improve the quality of residential ventilation systems



**Brussels, Belgium
BBRI offices**

28-29 March 2012

International workshop

**Achieving relevant and
durable airtightness levels:
status, options and progress needed**





Washington DC area - USA

18-19 April 2013

AIVC Airtightness Workshop

**3rd TightVent Workshop on Building
and Ductwork Airtightness**

**Design, Implementation, Control and Durability:
Feedback from Practice and Perspectives**

This event is organized with the technical and/or financial support of the following organizations:



Steps to improve the quality of residential ventilation systems



Brussels, Belgium

18-19 March 2013

International Workshop

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



Webinar details



November 14, 2014: Webinar – Airtightness testing part 1: status and trends in competent tester schemes in the UK, Denmark and Belgium

11/14/2013 - 10:00

Over the past few years, there has been an increasing number of airtightness tests performed in Europe either for specific high performance buildings programmes or for a wide range of buildings in regulatory contexts. This has led to the development of competent tester schemes to contain potential legal and competition issues.

The objective of this webinar is to give information on the status and trends in airtightness testing in the UK, Denmark and Belgium including the details and feedback on competent tester schemes.

This webinar is organized with the support of TightVent Europe (www.tightvent.eu) and AIVC. Both initiatives are facilitated by INIVE (www.inive.org).

Free registration: Participation to the webinar is FREE but requires registration. Click [here](#) to register



Brussels, Belgium

18-19 March 2014

AIVC Workshop

**Quality of Methods for Measuring Ventilation and
Air Infiltration in Buildings**

35th AIVC Conference

24-25 September 2014

Poznań, Poland

Ventilation and airtightness in transforming the building stock to high performance

4th TightVent Conference

2nd venticool Conference

Receipt of abstracts: 15 March 2014

Confirmation of acceptance: 1 May 2014

Submission of papers: 30 June 2014



TightVent Webinar 20131008 Building Airtightness Solutions: System approach and characterisation of air barrier and moisture management s...

2 weken geleden

TightVent Webinar 20130810 System approach 1 Rémi Carrié

4:56

TightVent Webinar 20130810 System approach 2 Staff Roels

21:39

Volledige afspeellijst weergeven (6 video's)



TightVent Webinar 20130604 Building Airtightness Solutions: Recent Research and Characterisation of Sealants and Tapes

1 maand geleden

TightVent Webinar 2013 Sealants and Tapes - 1 Remi Carrié, Introduction

6:02

TightVent Webinar 2013 Sealants and Tapes - 2 Nathan Van den Bossche, Window-wall...

20:04

Volledige afspeellijst weergeven (8 video's)



AIVC-TightVent Individual Presentations

1 maand geleden

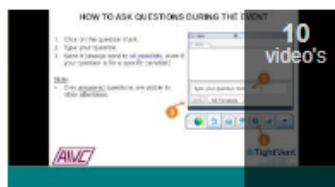
AIVC-TightVent Web Presentation 01 Peter G. Schild: Demonstration of the Spreadsh...

15:45

AIVC-TightVent Web Presentation 02 Mireille Rahmeh: Supply-only Ventilation Effectiveness...

9:16

Volledige afspeellijst weergeven (3 video's)



AIVC-TightVent Webinar 20120525 The need for structured air leakage databases in energy conservation in buildings policies

1 maand geleden

AIVC TightVent Webinar 2012 Databases - 01 Peter Wouters, Intro & Context

4:46

AIVC TightVent Webinar 2012 Databases - 02 Chris Knights and Dave Stephens, UK Air...

12:48

Volledige afspeellijst weergeven (10 video's)



TightVent Webinar 20111109 Norway | Achieving better envelope in practice: Recent Norwegian training and dissemination schemes

1 maand geleden

TightVent Webinar Norway 2011 - 1 Remi Carrié, Introduction

8:17

TightVent Webinar Norway 2011 - 2 Guro Hauge, The Hold Tight Campaign

17:40

Volledige afspeellijst weergeven (5 video's)



TightVent Webinar 20110621 Romania | Airtightness and ventilation perspectives: European context, regulation changes and progress needed

1 maand geleden

TightVent Webinar Romania 2011 - 1a Rémi Carrié, Introduction

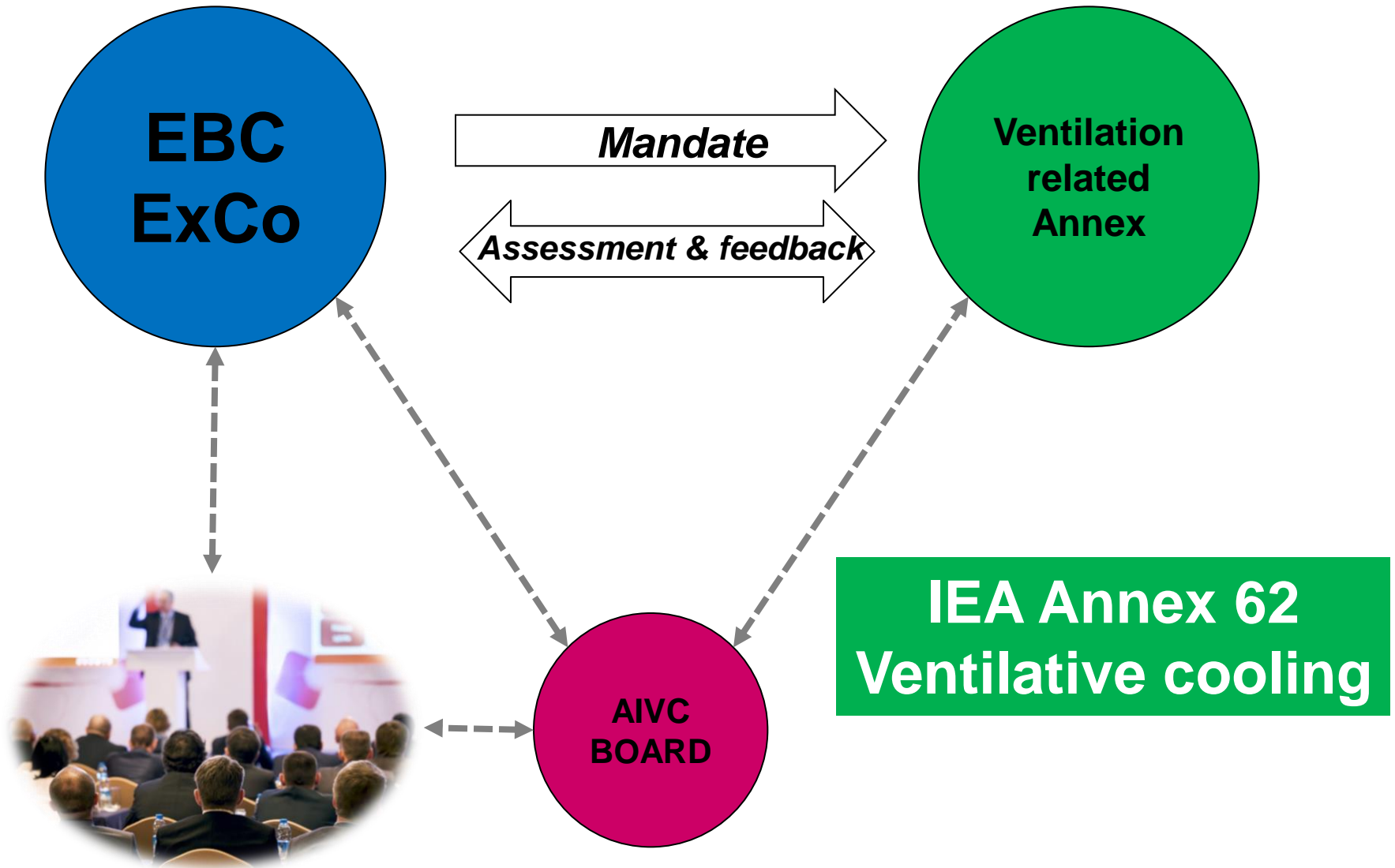
5:42


TightVent Webinar Romania 2011 - 1b Peter Wouters, Global context


13:21


Volledige afspeellijst weergeven (5 video's)


Stimulating new IEA annexes





 Recent News


 Airbase | AIVC Newsletters | AIVC Publications | AIVC Events

 Did you know?

 Top events

 Highlighted News


 Key Publications



September 24-25, 2014: 35th AIVC conference in Poznan, Poland

The 35th AIVC conference : 'Ventilation and airtightness in transforming the building stock to high performance' will be held in Poznan, Poland together with the 4th TightVent and the 2nd venticool


[MORE](#)



March 18-19, 2014: AIVC workshop on Quality of Methods for Measuring Ventilation and Air Infiltration in...

There is a trend to perform more ventilation and air infiltration measurements in buildings, either to strengthen commissioning procedures or to learn from field data.

[MORE](#)



November 14, 2014: Webinar – Airtightness testing part 1: status and trends in competent tester schemes in...

Over the last few years, the number of competent testers has increased significantly in Europe. This webinar will provide an overview of the current situation in Europe and discuss the challenges faced by competent testers.

[MORE](#)



New AIVC website on-line!

We are pleased to present you the new AIVC website!

> 05 November 2013

[MORE](#)



AIVC, TightVent and venticool networks

Close collaboration between AIVC, TightVent and venticool!

> 20 September 2013

[MORE](#)




IEA EBC Annex 62 on ventilative cooling!

2nd IEA EBC Annex 62 preparation meeting!

> 20 September 2013


[MORE](#)



TN 67: Building airtightness: a...

This report gives a critical review of steps taken in 10 countries (Belgium,...)

[MORE](#)



BUILDUP Overview Article: Ventilative...

Ventilative cooling refers to the use of natural or mechanical ventilation...

[MORE](#)



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Combining forces: TightVent

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Combining forces: QualiCheck

Conclusions

The future

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

Objectives of TightVent

1

- Awareness raising about the importance

2

- Awareness raising about the existing approaches

3

- Identifying and supporting a long term action plan

*More focusing on knowledge
generation aspects*



*More focusing on
market implementation*



*...Building and ductwork
airtightness...*



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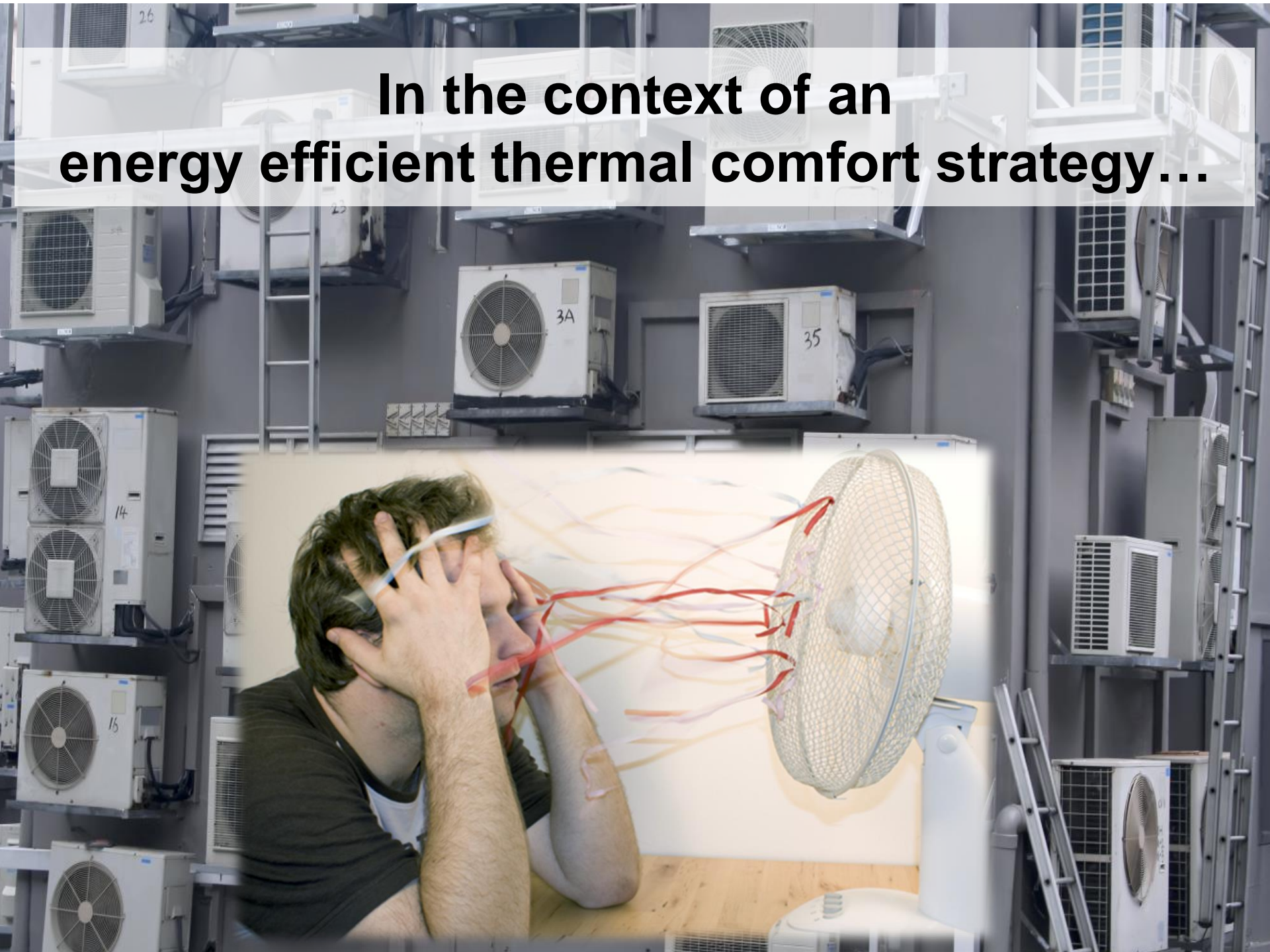
Combining forces: TightVent

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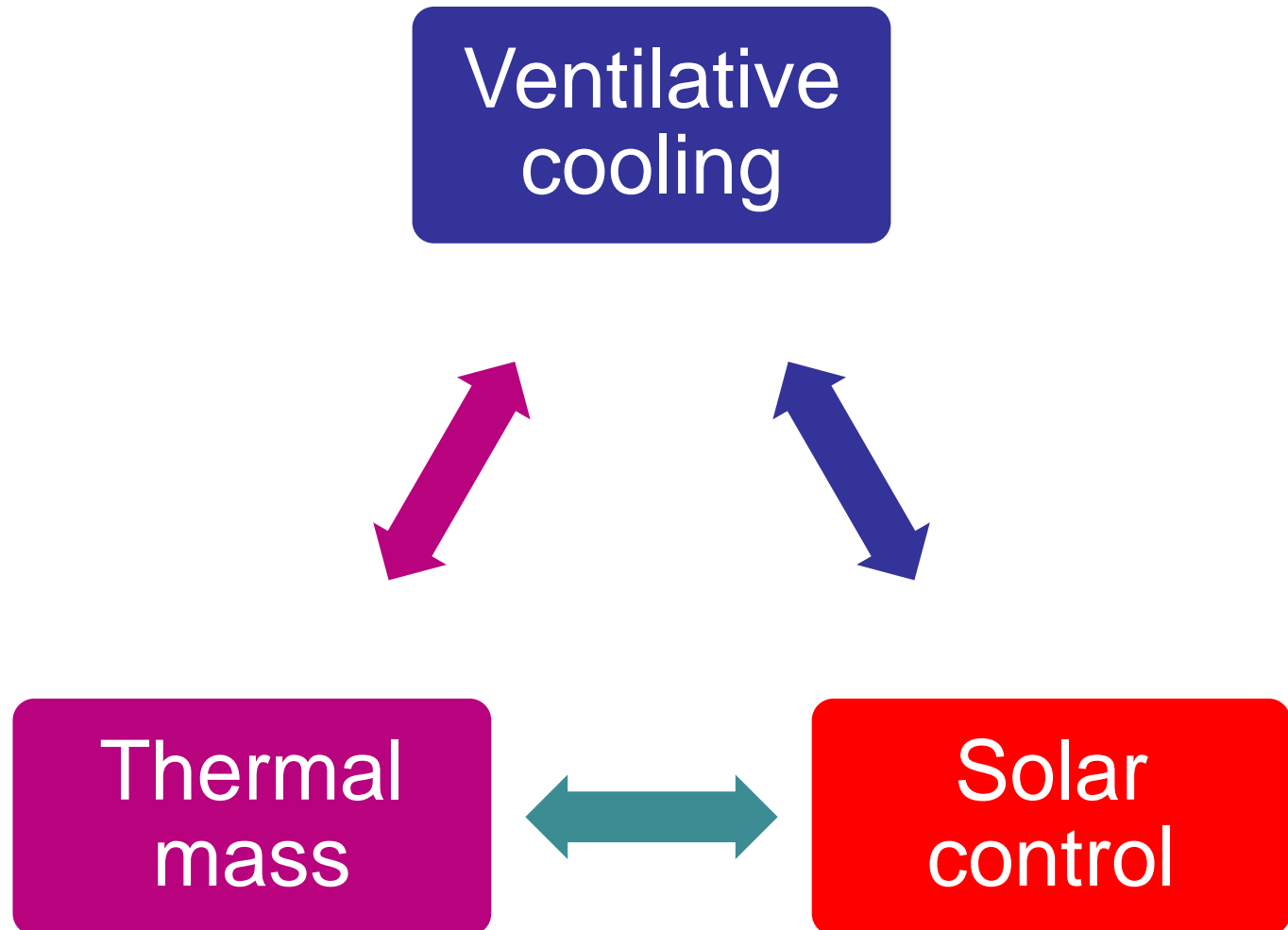
Combining forces: QualiCheck

Conclusions

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



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



venticool



Raise awareness about the potential of ventilative cooling

Raise awareness about existing bottlenecks

Raise awareness about interesting approaches

(Support to) Planning of priority actions

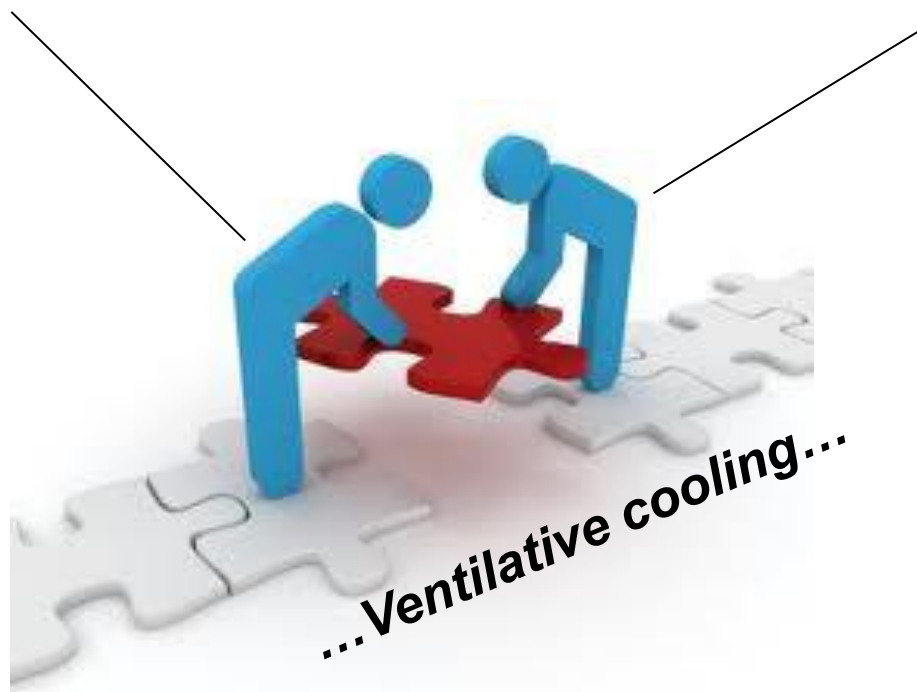


*More focusing on knowledge
generation aspects*

**IEA EBC Annex 62
'Ventilative cooling'**

*More focusing on
market implementation*

venticool



venticool

the international platform for ventilative cooling



IEA EBC
Annex 62

The IEA project
on ventilative cooling

EBC 

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WELCOME [FAQs](#)

INFORMATION ON EBC ANNEX 62

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Dear visitor,

Welcome to this new and combined website of the **venticool platform** and of **IEA EBC annex 62 'ventilative cooling'**:

The **venticool platform** was launched in October 2012 and aims to increase communication, networking and awareness raising about ventilative cooling to mobilize the untapped potential in terms of energy savings and improved comfort. Information can be found in the left part of the menu.

The **Annex 62 'ventilative cooling'** of the 'Energy in Buildings and Communities Programme (EBC)' of the International Energy Agency (IEA) was approved in November 2012 for a 1 year preparation phase. Information can be found in the right part of the menu.

As the venticool platform will act as a key partner for dissemination of annex 62 and in order to



Recent updates

- 35th AIVC – 4th TightVent – 2nd venticool Conference – Poznan, Poland – 24-25 September 2014!
- 34th AIVC- 1st venticool: 170 participants and more than 40 presentations on ventilative cooling!
- BUILD UP paper on ventilative cooling!
- 1st venticool conference: a total of more than 160 presentations!
- 2nd meeting of IEA EBC Annex 62 in Athens September 23-24,

Foreword

14 countries have expressed interest to participate in IEA ECBCS Annex 62 on "ventilative cooling"; 11 are very likely to participate and are already active in the preparation phase of the Annex.

Why? Maybe simply because these countries have identified the potential of ventilative cooling, but also barriers to field applications which call for international collaboration?

Anyways, as you will learn through this newsletter, the March Brussels workshop on "ventilative cooling—need challenges and solution examples" followed by the Annex 62 meeting have been two major milestones to answer their concerns.

This is just a start, the 34th AIVC and 1st venticool conference in Athens will be a major discussion place on ventilative cooling for researchers, professionals and policy makers as well as the 2nd project meeting. So please mark September 25-26 on your calendar for this key event.

Peter Wouters, Manager of INIVE EEIG

IEA ECBCS Annex 62 Ventilative Cooling

The Executive Committee of the IEA Energy Conservation in Buildings and Community Systems programme (IEA ECBCS) accepted the formation of a new IEA ECBCS Annex on Ventilative Cooling at their last meeting in November 2012. This new Annex 62 is given a one year preparation phase which, if successful, will continue in a four year working and reporting phase from 2014 – 2017. During the preparation phase two workshops will be arranged to define and focus the Annex's objectives, feasibility, methodology, and deliverables in detail. The 1st Annex 62 Preparation Meeting was held March 21 - 22 in the BBRI offices, Brussels, Belgium and the 2nd Preparation meeting will be held in Athens, September 23-24, 2013.

In order to address the cooling challenges of buildings the research focus of the annex will be on development of design methods and compliance tools related to predicting, evaluating and eliminating the cooling need and the risk of overheating in buildings and to develop new attractive energy efficient ventilative cooling solutions.

Annex 62 will be divided in three subtasks. **Subtask A "Methods and Tools"** will analyse, develop and evaluate suitable design methods and tools for prediction of cooling need, ventilative cooling performance and risk of overheating in buildings. The subtask will also give guidelines for integration of ventilative cooling in energy performance calculation

What is ventilative cooling?

Ventilative cooling refers to the use of natural or mechanical ventilation strategies to cool indoor spaces. This effective use of outside air reduces the energy consumption of cooling systems while maintaining thermal comfort. The most common technique is the use of increased ventilation airflow rates and night ventilation, but other technologies may be considered as well. Ventilative cooling is relevant in a wide range of buildings and may even be critical to realize renovated or new NZEB.



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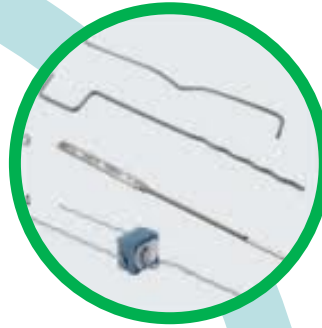




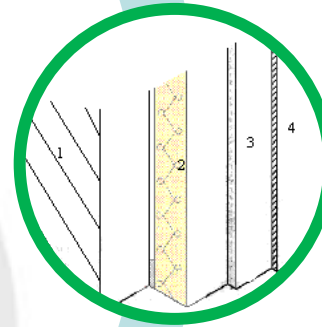
**Important that
the market follows
the requirements!**



Market of air distribution systems heavily depends on societal view on awareness on quality and compliance



**Energetic
quality**

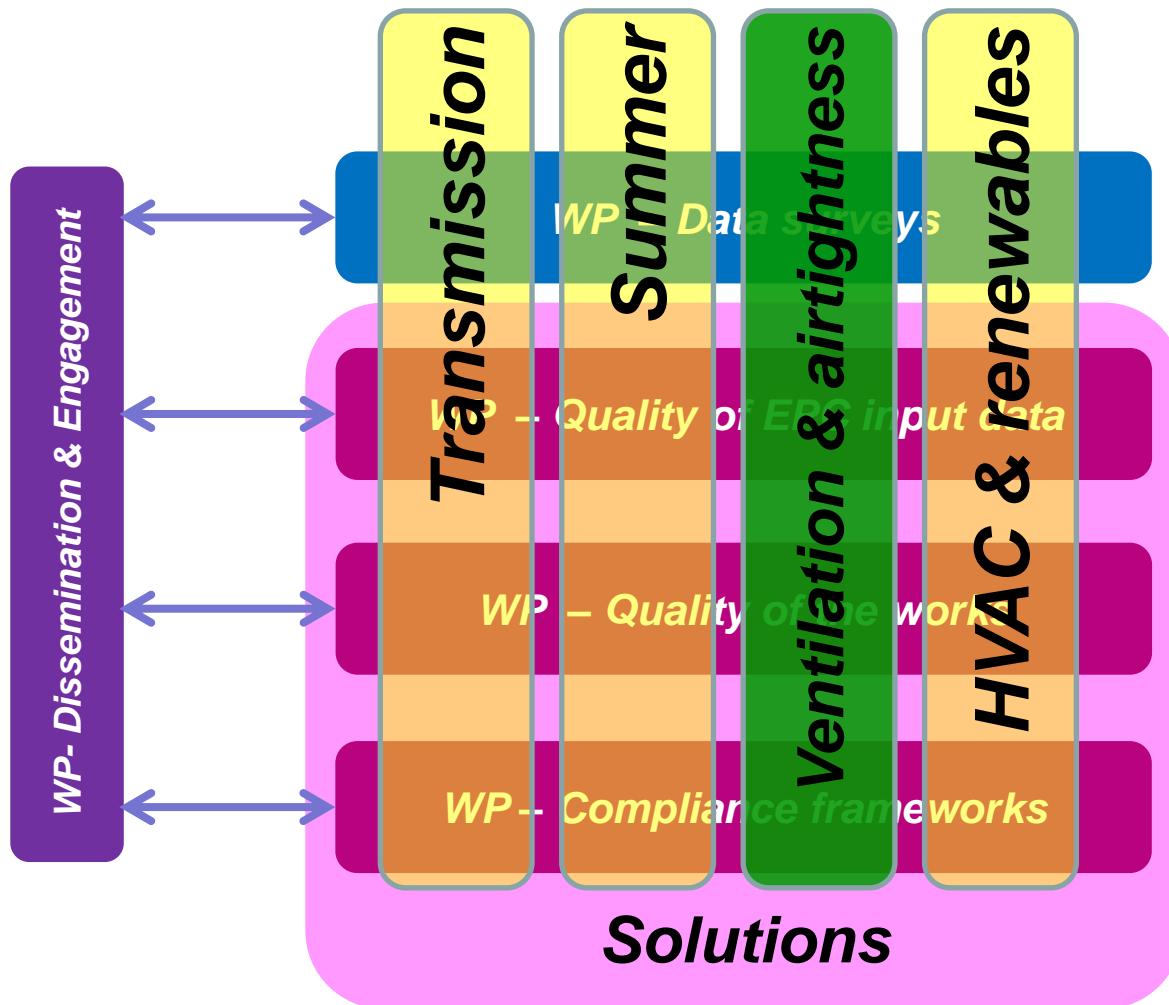


**Quality of
the
system**



**Quality
of
execution**

IEE QualiCheck project (March 2014 - February 2017)





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Conclusions

- **Ventilation is a key aspect of concern**
 - ▶ in terms of good indoor air quality
 - ▶ In terms of energy efficiency
- **The role of energy legislation becomes more and more dominant for ventilation, airtightness and ventilative cooling**
- **It is important to create appropriate boundary conditions for a good quality of ventilation systems and reliable airtightness performances**
- **AIVC focuses on identifying priority activities and areas for international collaboration**

THANK YOU

