Voluntary and Regulatory Frameworks to Improve Quality and Compliance

Welcome on behalf of QUALICheck

Objectives of this workshop

QUALICheck’s approach to quality and compliance

Peter Wouters
Manager INIVE EEIG - Coordinator QUALICheck
You expect a reliable label

...and you expect a good quality
... and you expect a good quality
• Better energy performance increases value of buildings
• Important that certificates are reliable
• Important that the overall quality of the buildings is OK

Source: G. Sutherland

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### Energy certificates with respect to ventilation and airtightness...

<table>
<thead>
<tr>
<th>Ventilation</th>
<th>Building Airtightness</th>
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<tbody>
<tr>
<td>• Efficiency of heat exchanger</td>
<td>• Is the declared value correct?</td>
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<td>• Fan consumption</td>
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<td>• Ductwork airtightness</td>
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<td>• Demand controlled ventilation</td>
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<td>• ...</td>
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**Observation:** In many country no or nearly no control regarding compliance of EPC
Poor design and execution

• Energy performances critical
• IAQ problematic
• Acoustics
• Maintenance
• …
Which problems are often observed?

- Air flow rates (→ IAQ)
- Acoustics: from system or from outside
- Draught problems
- Maintenance
- ...
- Problems are found in all kind of systems
- Good execution exists and also not extremely difficult
Netherlands

2014:
"Ventilation Improvement plan has failed”
Statement by Dutch minister

50% of new residential ventilation systems don’t work well

All stakeholders’ organisations signed in 2012 a declaration that in 2015 all systems should function correctly

Reasons for failure:
• ...
  lack of interest by clients
  economic pressure

Solutions
Easy access of compliant EPC input data
Towards more quality of the works
Towards better compliance and effective penalties

QualiCheck project (2014-2017)

Status of compliance and quality on the ground

Solutions
4 focus areas in QUALICHeCK

- Transmission characteristics
- Ventilation and airtightness
- Sustainable summer comfort techniques
- Renewables in multi-energy systems

= National consortium
1st QUALICheck International Conference

Brussels, 30 September 2014
KBC auditorium: Havenlaan 2, 1080 Brussels, Belgium
Voluntary and Regulatory Frameworks to Improve Quality and Compliance

In collaboration with AIVC
In collaboration with TightVent Europe
Over a period of 3.5 years:
Number of tests multiplied by 6!

How to guarantee that the declared airtightness levels are compliant?
**PRODUCTS**

- Efficiency of a heat exchanger
- Airtightness of a building

**... THE WORKS**

- Possibility to have efficient maintenance

<table>
<thead>
<tr>
<th>Procedures to obtain and prove compliant data</th>
<th>Procedures to obtain and prove quality of the works</th>
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<tr>
<td>There should be clear procedures what must be done</td>
<td>There should be an effective control and sanctions if non-compliance</td>
</tr>
<tr>
<td>Formal procedures if non-compliance</td>
<td>Handling of non-compliance in practice</td>
</tr>
<tr>
<td>There should be clear procedures how to decide on non-compliance and related actions</td>
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**PRODUCTS**

- Procedures to obtain and prove compliant data
- Formal procedures if non-compliance
- Handling of non-compliance in practice

- There should be an effective control and sanctions if non-compliance
Compliance is needed: What ambition level to be reached?

• In theory:
  – Effective framework resulting in good compliance

• In practice:
  – Not always evident to achieve
  – Countries have a different starting point, quality/compliance is a subjective concept
  – There might be different (political and societal) views of compliance and sanctioning
Overview of existing surveys on energy performance related quality and compliance

Mika Mäenpää, Jari Kivisto, Jarmo Soininen, Janne Kinnunen, Jarkko Kihlström
(Tallinn University of Technology, Estonia)

With contributions from:
Francois Durin (CETEInd, France), Theodor Kalloniatis, Oikonomou Daphne Eleftheriou (PAOL, Greece), Saurabh Rastogi (IITB, India), Camilo Paredes, Simon Hall, David Lafford (BBVA, Belgium), Anna Avraamidou (CSEM, Belgium), J. J. Molina (IETE, Spain), Hana Pekrunová (UNIVERZITA, Prague), Christian Hyldahl Christiansen, Hans Christiansen, Paula Wohlgemuth, Jan Old Lichtenfeldt (Umeå University, Sweden)
09:00-10:30 Introduction

- Welcome on behalf of Boverket
  - Anders Sjelvgren and Wanda Rydholm, Boverket, Sweden
- **BUILD UP Skills**: European collaboration on improving competence of building workforce - Ventilation and airtightness aspects.
  - Horia Petran, URBAN-INCERC, Romania
- **Compliance and quality in CEN/ISO standards**
  - Jaap Hogeling, Chair of CEN TC 371, ISSO, Netherlands

11:00-11:30 Present outcomes of QUALICHeCK

Approaches to improve compliance and accessibility of energy performance certificate **input data**
  - François Durier, CETIAT - France

Overview of selected approaches to improve the **quality of the works**
  - Heike Erhorn-Kluttig, IBP Fraunhofer - DE
11:30-12:45 Building ventilation: Industry initiatives - opportunities and challenges for manufacturers

- About the role certification can play to improve reliability of input data: Eurovent certification example
  — Sylvain Courtney, Eurovent Certita Certification, France
- Opportunities and challenges for natural ventilation systems & ventilative cooling solutions in compliance frameworks
  — Karsten Duer, Velux, Denmark
- Assessment of demand-controlled ventilation in various countries and compliance frameworks: practical experience and difficulties encountered by a manufacturer
  — Yves Lambert, Renson, Belgium
- Market drivers for ventilation industry in Sweden: the role of AMA/OVK procedures, standardization, and certification
  — Lars-Åke Mattsson, Lindab, Sweden

13:45-15:15 Selected approaches addressing quality and compliance in various countries – Concerns for innovation

- Quality and compliance on building ventilation and airtightness in the Dutch context
  — Wouter Borsboom, TNO, The Netherlands
- Air-Permeability Testing of New Dwellings & Buildings in the UK: Challenges to Maintaining Standards
  — Barry Cope, ATTMA, UK
- Overview of competent tester schemes for building airtightness testers
  — François Rémi Carrié, INIVE, Belgium
- BUILD UP Skills Sweden: Quality assurance of the works and training activities
  — Per-Johan Wik, Lund University, Sweden
15:45-17:15

**Swedish approach to quality and compliance**

- Background on Swedish regulation BBR - Ventilation and airtightness
  - *Wanda Rydholm, Boverket, Sweden*
- OVK Compliance (regulatory) and energy efficiency measures, as well as guidance to municipal supervisors on the Board’s Web (Boverkets), OVK experience and supervision
  - *Wanda Rydholm, Boverket, Sweden*
- The Swedish National energy declaration record
  - *Anders Sjelvgren, Boverket, Sweden*
- Certification of persons issuing OVK and energy performance certificates
  - *Magnus Jerlmark, Kiwa, Sweden*
- Qualification of airtightness testers
  - *Paula Wahlgren, Chalmers, Sweden* and *Magnus Hansén, SP, Sweden.*
- The AMA framework: ductwork according, practical implementation and presentation of digital training for ventilation installers
  - *Johnny Andersson, Ramboll, Sweden*

17:15-18:15

**Step-by-step demonstration of the inspection of ventilation systems (OVK procedure) supported by video**

*Organisers:*
- *Wanda Rydholm, Boverket, Sweden*
- *Olle Nevenius, FunkiS, Sweden*
Day 2 – Tuesday 17 March 2015

09:00-10:30
Steps to improve the reliability of EPC input data and quality of the works in the Belgian context

• Energy Performance of buildings regulations in Belgium - The key puzzle pieces for an effective regulation  
  – Xavier Loncour, BBRI, Belgium

• Building airtightness: Towards improved and reliable declared performances  
  – Clarisse Mees, BBRI, Belgium

• Ventilation: steps towards framework for reliable EPC input data and improved quality/compliance  
  – Samuel Caillou, BBRI, Belgium
11:00-12:30 Status on the ground and industry-driven initiatives in the French regulatory context

• Lessons learnt from regulatory compliance checks on ventilation and airtightness: regulatory context, control procedures, results
  — Sandrine Charrier and Adeline Bailly, CEREMA, France.
• Building regulations can foster quality management: the French example on building airtightness
  — Sandrine Charrier, CEREMA, France
• French voluntary scheme for homogeneous announcement of ventilation product performance
  — François Durier, CETIAT, France

13:30-15:00 Interactive session – Developing effective compliance frameworks

Objective of this session?
To identify key questions to address to develop an effective compliance framework

Introductory presentation:
Legal issues when developing compliance frameworks
— Eric Winnepenninckx, UBAtc, Belgium

Structured discussion
Sources of problems regarding input data, quality of the works, and innovation
15:15-16:00 Conclusions and Perspectives

- **Summary of country presentations**
  - Arnold Janssens, University of Ghent, Belgium

- **Perspectives for effective compliance checks**
  including feedback from interactive sessions
  - Xavier Loncour, BBRI, Belgium

- **Future steps for QUALICHeCK**
  - Peter Wouters, BBRI, Belgium
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