TightVent® Belgium

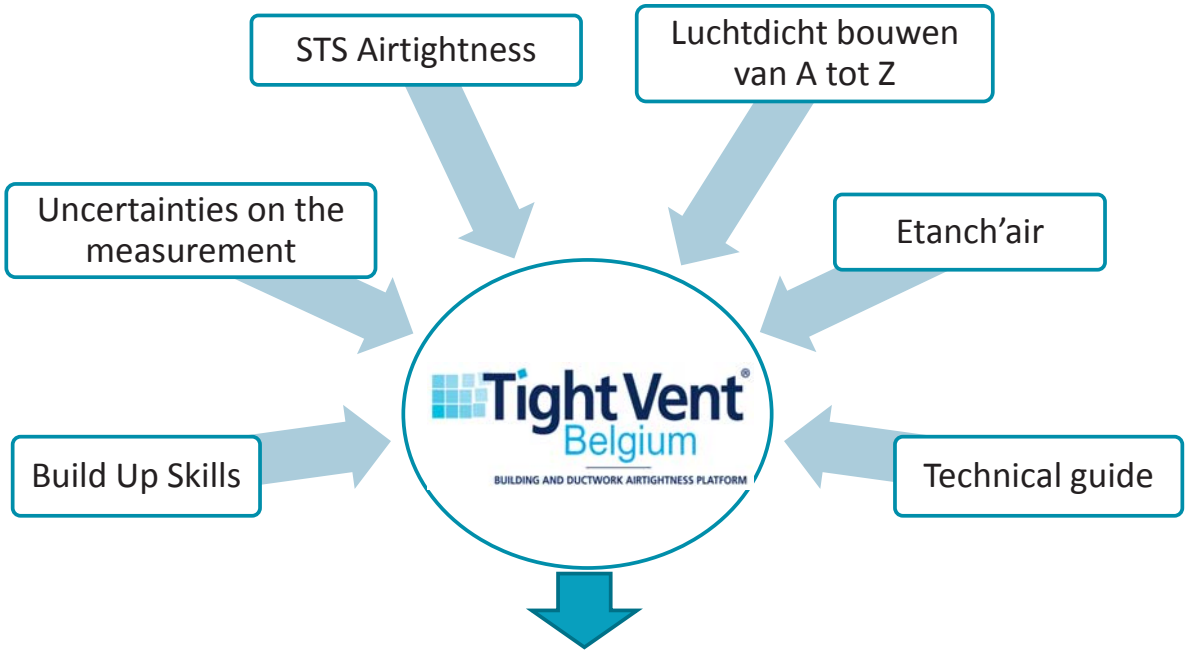
BUILDING AND DUCTWORK AIRTIGHTNESS PLATFORM

TightVent Belgium

A new local network of airtightness is starting up…

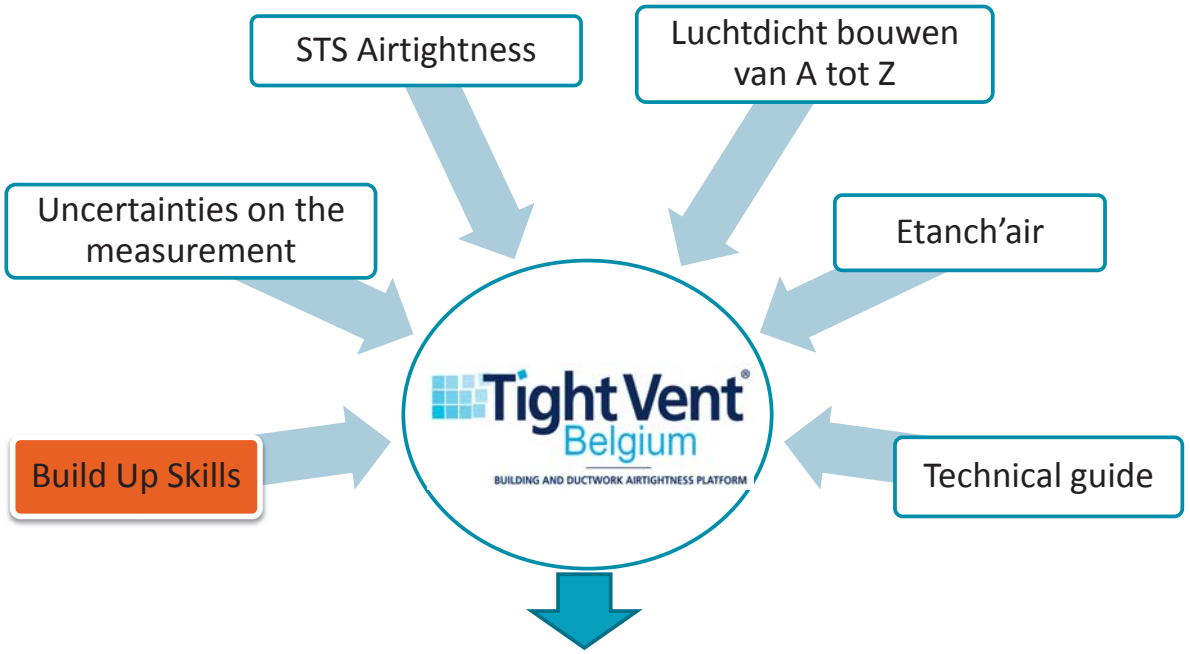
Clarisse Mees - BBRI

Webinar 14/11/2013



First step: Platform of airtightness testers to achieve a relevant quality framework and to follow up it day-to-day.

Second step: Wide range of activities related to building airtightness, ranging from good specifications, design issues, construction details and testing aspects, …



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Build Up Skills

BUILD UP SKILLS
ENERGY TRAINING FOR BUILDERS

- An European project declined at the national level
- Partners:
- **Objective : improve skills of builders**
- 9 topics
  - Airtightness
  - Replacement of exterior windows and doors
  - Ventilation
  - Coordination between workers
  - Heat pumps
  - PV and thermal solar collecors
  - Post-isolation of cavity wall
  - Isolation of roof
  - Sunscreen curtains

Build Up Skills: Conclusions

- Required pressurization test:
  - With or without leakages detection
  - Advisable: Architect and building contractor would be present during the test in order to make improvements on the envelope but also for training aspect and quality improvement
  - All building could be tested
  - The test could be required, but there could be no minimal performance required

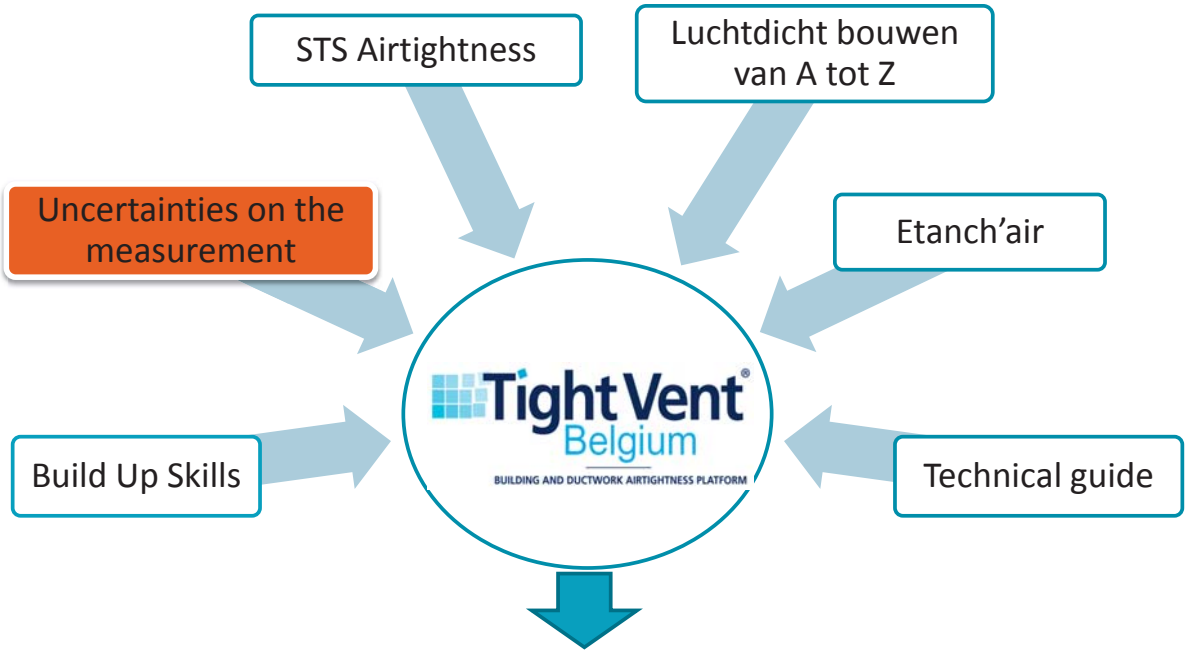
Build Up Skills: Conclusions

- Quality framework for the pressurization test:
  - If the test is required, it must be reliable
  - Good basic training for the testers
    - with exam
  - Good quality framework
    - Reliable measurements (method, equipment, operator, reporting)
    - Inventory of leakages by category
    - Control on site

Build Up Skills: Conclusions

- Realization of an airtight building:
  - Technical details available voor architects and building contractors (via on-line database)
  - Integration of airtightness issue in the cursus of architects and building contractors (also craftsmen)

- Manufacturers involvement
  - Performance of their products available
  - Reliable solutions
  - Durability of the performance: Ageing effect on their products



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Uncertainties on the measurement

- *Interlaboratory Tests for the Determination of Repeatability and Reproducibility of Buildings Airtightness Measurements*

  C. Delmotte

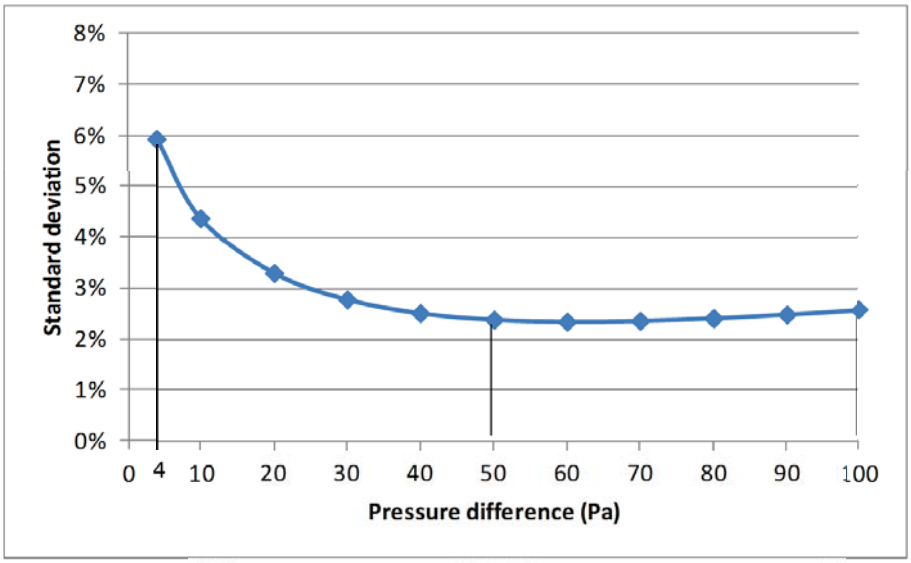
- *Let's imagine*
  - *the same technician with the same blower door in the same building*
  - *How different can be 2 measurements of the airtightness?*

  - *…two technicians with their own blower door in the same building*
  - *How different can be 2 measurements of the airtightness?*

Uncertainties on the measurement

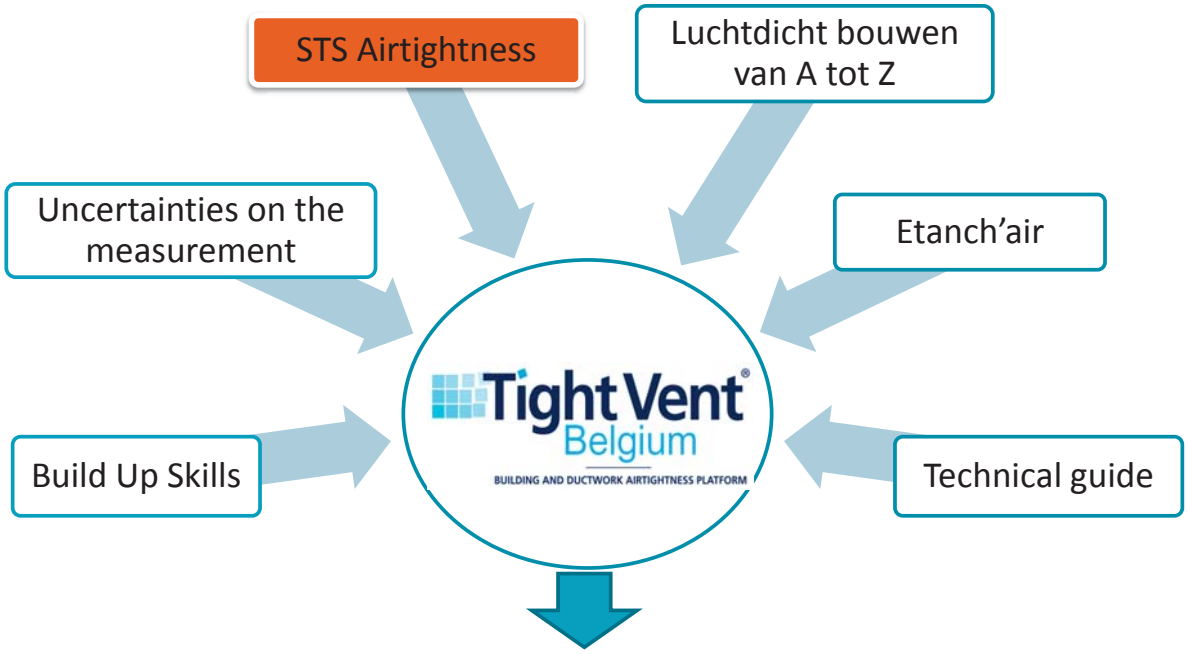
Uncertainties on the measurement

- *Variability of the average value*



16.6% 6.7% 7.2%

Reproducibility limit



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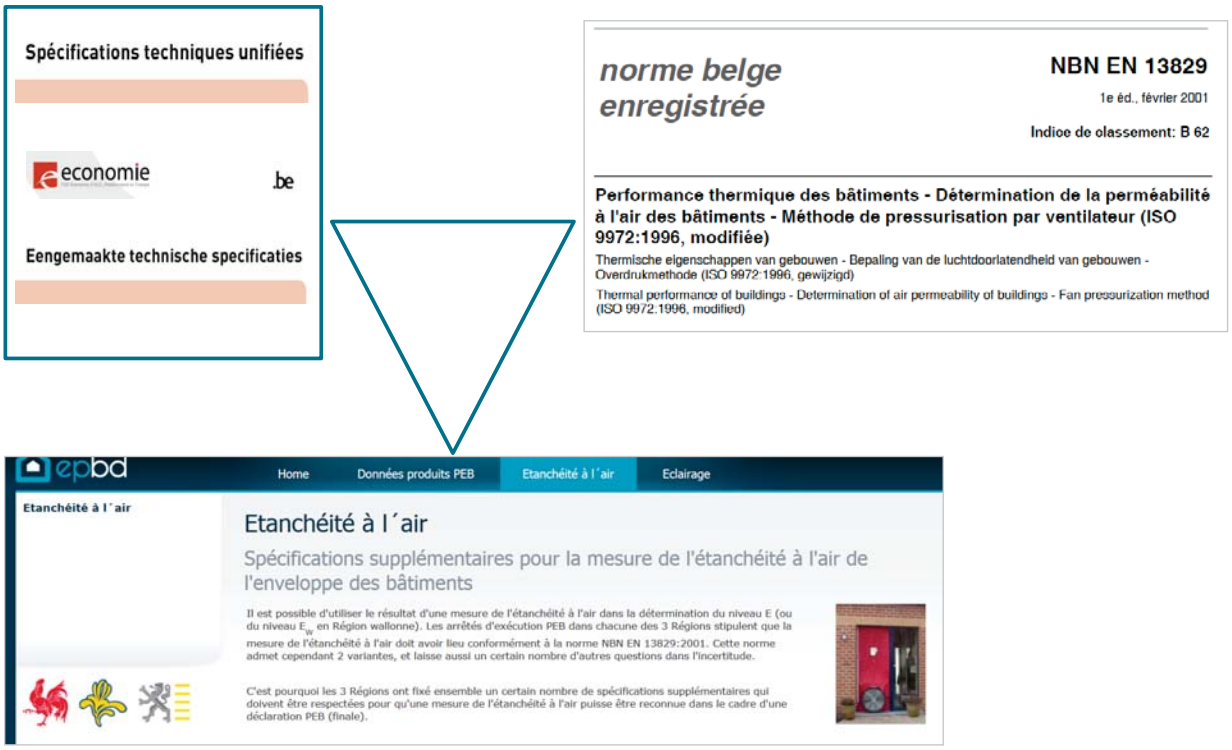
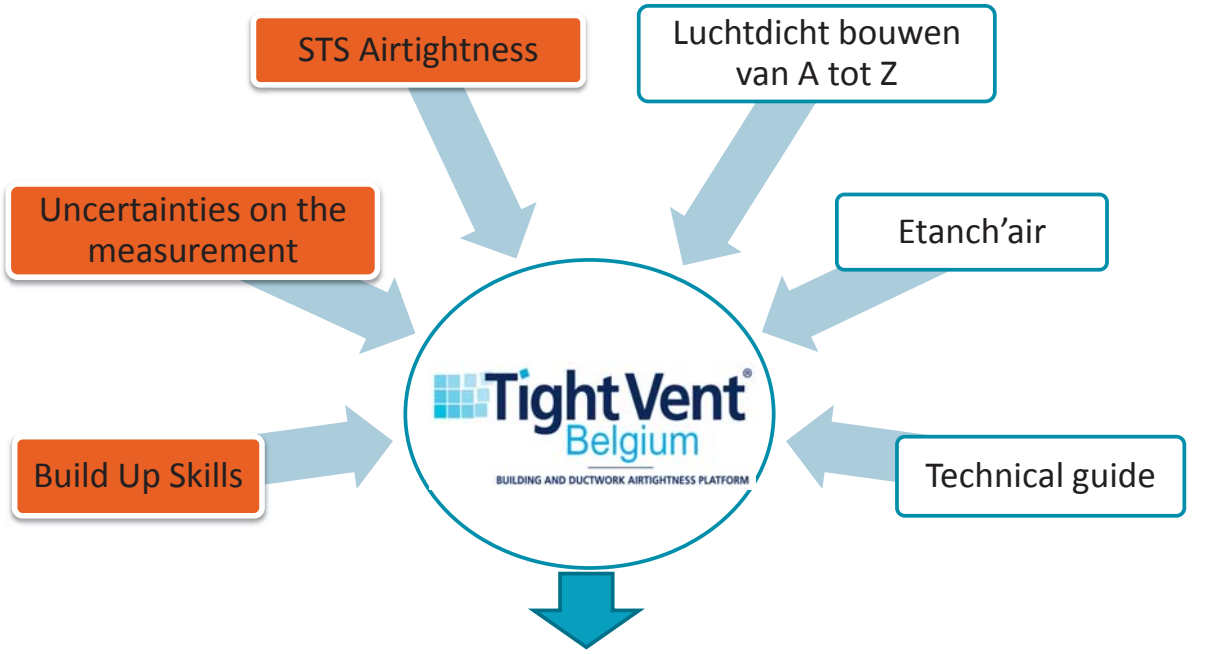
STS Airtightness





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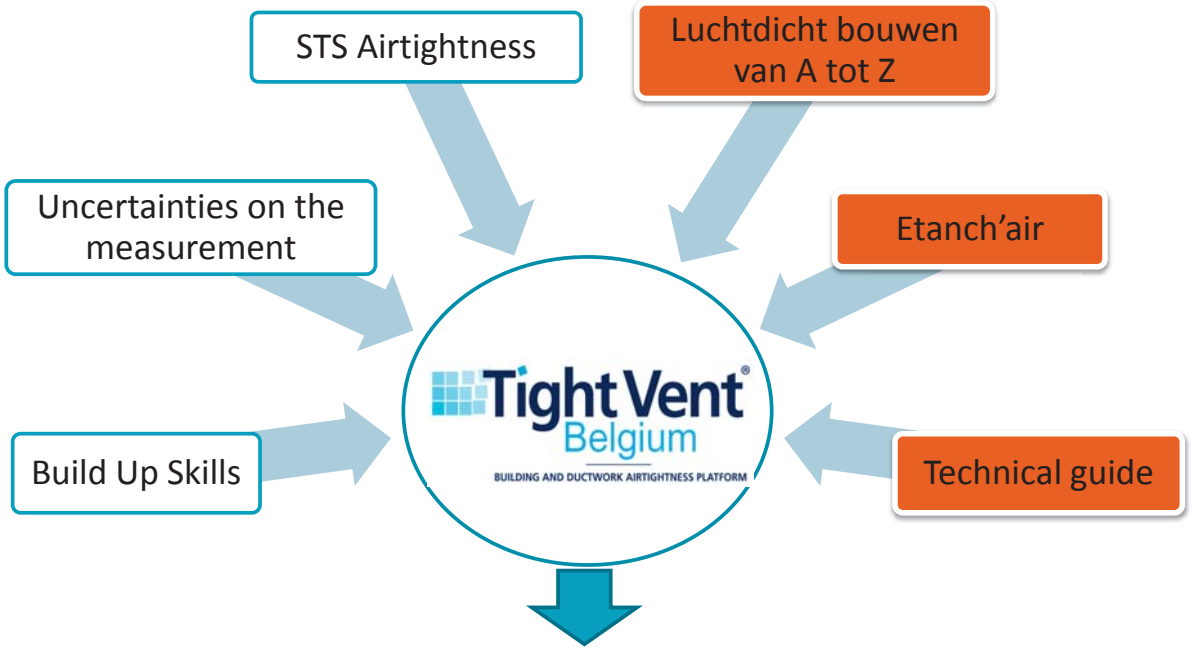
A new local network of airtightness testers

- BBRI and TightVent Europe have organized an information day on airtightness issues in the Belgium context.
- 52 persons exchanged points of views

→ Given the positive feedback of the participants on the relevance of such meetings, it is likely to lead to the inauguration of a Belgian network named "TightVent Belgium"

→ ***There is a wide support for a quality framework for airtightness testing***



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Etanch'air

- Research project subsidized by Wallonia
- Collaboration with 3 building contractors

- **Objectives:**
  - **Measure the leakages in-situ**
  - **Develop the airtightness measurement for large buildings**
  - **Elaborate a guide with technical solutions**
  - **…**

Luchtdicht bouwen van A tot Z

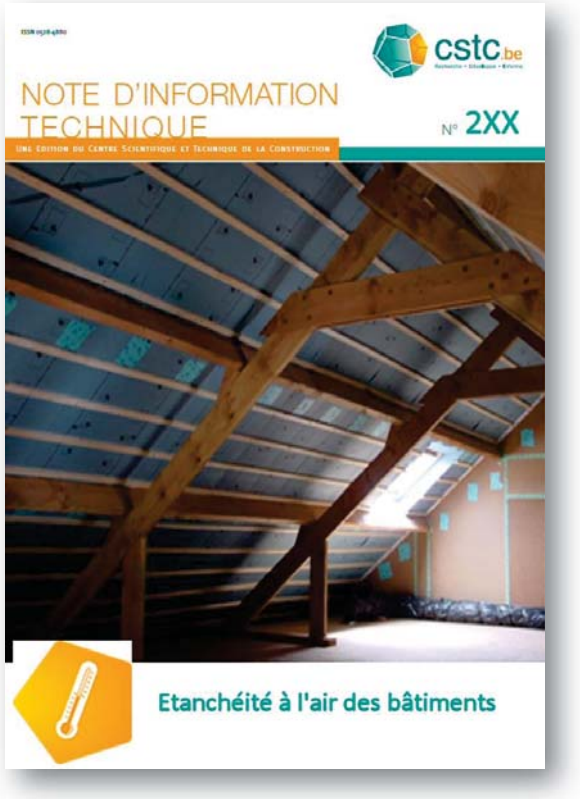
- Research project subsidized by Flanders
- Collaboration between:

wtcb.be Vlaamse Confederatie Bouw Bouw, energie & milieu BOUWUNIE nav. de vlaamse architectenorganisatie

- **Objectives: a close follow up of twenty companies**
  - Technical advises on site
  - Trainings
  - Several measurement to check the efficiency of different solutions
  - …

Technical guide

- Publication foreseen in 2014
- On-line details



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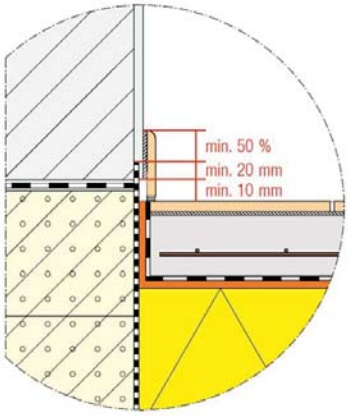
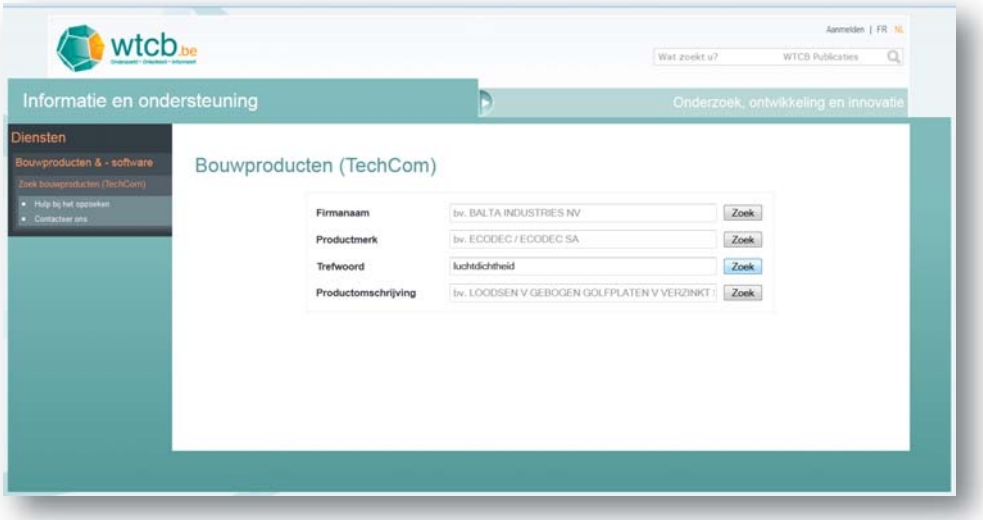


- **Nature de la barrière à l'air :**
  - Enduit
  - Membrane d'étanchéité
    - → Type de jonction : Sec-humide
  - Dalle béton
    - → Type de jonction : Sec-humide
- **Principaux corps de métier concernés :**
  - Maçon
  - Plafonneur
- **Points d'attention :**
  - La membrane est collée à la dalle de béton. Afin d'assurer une bonne adhérence, la dalle doit être suffisamment propre.
  - La jonction entre la membrane et l'enduit est assurée avec un élément intermédiaire (scotch, ...), une juxtaposition de 2 cm minimum doit être prévue.
  - Sur la durée de chantier, le risque d'endommagement de cette membrane est important. L'entrepreneur-carreleur doit être extrêmement soigneux lors du découpage de la bande périphérique afin de ne pas endommager celle-ci. Une mesure de précaution peut être d'insérer temporairement entre le matériau sensible et la bande périphérique un plat métallique assurant la butée contre laquelle l'extrémité de l'outil de découpe s'appuie.
  - Le passage des techniques au niveau de la membrane doivent être traités.

Techcom Database



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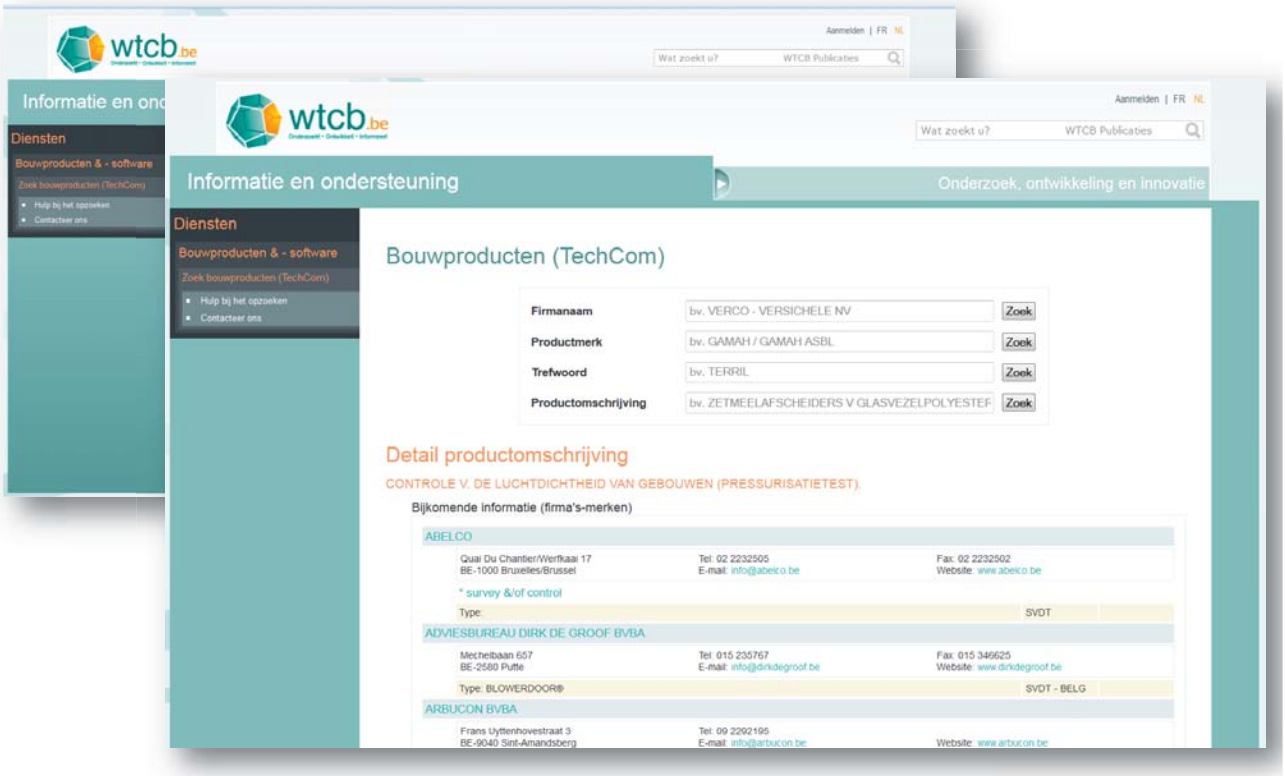

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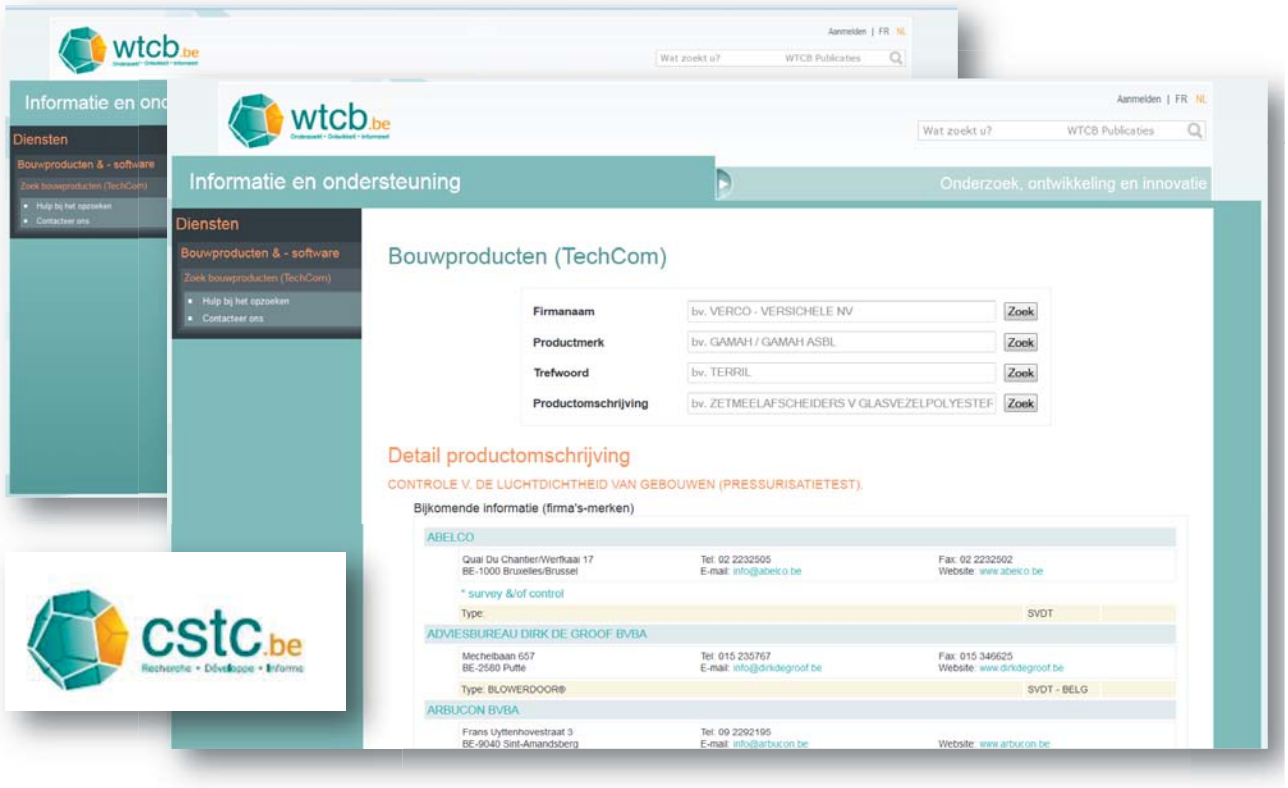

Conclusions

- There is a wide range of activities related to building airtightness, ranging from good specifications, design issues, construction details and testing aspects, …
- Awareness raising and stakeholders concertation is crucial
- From the various activities, it is clear that there is a wide support for a quality framework for airtightness testing
- It is within this context that TightVent Belgium is conceived

Thank you for your attention

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