

**Increasing political awareness on indoor air
quality & thermal comfort**



Moderator

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Journalist – Energypost.eu



Bjarne Olesen

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1. People are more expensive than energy

- ✓ Energy costs in an office are only 1% of salary costs
- ✓ Indoor environment has a significant influence on occupants productivity

2. Holistic approach to Indoor Environmental Quality

- ✓ Thermal comfort, indoor Air Quality, Lighting and Acoustic are important and interact.

3. People spend most of their time at home

- ✓ Indoor Environment is important for your sleep quality.
- ✓ People bring many pollutant emitting products in their home.

4. Need for an energy certification including Indoor Environment



Dirk Müller

University Professor

Department of Buildings and Indoor Climate

Aachen University



- Europeans spend **90 % of their lifetime indoors**
- The occupant will not accept discomforting temperatures or bad indoor air quality
- **Nearly zero-energy** and **PlusEnergy** buildings can be designed with different technical measures
- Good design concepts allow local temperature adjustments and provide sufficient fresh air
- The **energy performance of bad design** concepts are considerably reduced by the user behavior



Claus Haendel

Technical Secretary

EVIA



- **Energy Performance of Buildings Directive**
 - ✓ No negative effects on indoor air quality
 - ✓ No information for the user on the certificate
- **Ecodesign and Energy Labelling**
 - ✓ No minimum requirements
 - ✓ No information on the label
- **Construction products directive**
 - ✓ No minimum requirements and no classification



Mihai Scumpieru

Manager

Mitsubishi Electric Europe



- **Innovative technological solutions** are available to cope with the challenges related to IAQ & thermal comfort in buildings
 - ✓ **Energy recovery ventilation** recouping waste energy
 - ✓ **Demand control options** for air-conditioning (AC) and heat pumps
 - ✓ **Building automation systems**
 - ✓ **Ventilation (AHU and AC)** equipped with **special filters**
- **Regular inspections** of the AC & ventilation systems
- **Encourage/incentivise through legislation** (e.g. EPBD) the uptake of these innovative technologies



Marco Hofman

Project Manager

ISSO (Dutch Building Services Knowledge)



- Ventilation is getting more important to provide a **minimum required indoor air quality**
- Current Dutch regulation, standards/guidelines don't guarantee **fault free installed quality**
- New regulation can probably boost built quality and certification schemes?



Atze Boerstra

Vice-President
REHVA



- **The danger of OVERHEATING**

- ✓ Over-focusing on energy efficiency
- ✓ Issue not well addressed (yet) in EU building codes

- **The importance of HYGIENE**

- ✓ Dirty ventilation system can cause health problems
- ✓ Dust-free' installation should become standard practice.

- **The need for USER CONTROL**

- ✓ Consumers want adjustable indoor climate
- ✓ Need for occupant-environment interaction



Q&A



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