

# ***EPBD IMPLEMENTATION: REHVA Strategies and Policies***

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Vice-president of REHVA

**REHVA** is a professional organisation  
representing more than 100 000  
**building services engineers**

(heating, ventilating and air-conditioning for  
energy efficient, healthy buildings)

**from 28 European countries**

**Dissemination of Knowledge and Research are  
Focus Areas of Rehva**

# Aspects of implementation and impacts of EPBD in member states: Legislation, Guidelines and Knowledge

- Country-specific legislation vs. harmonized standards
  - Delays in execution of CEN- standards
  - Different acts in member states exacerbate trading (consulters/industry generally)
  - Consolidation of EuP and EBPD
  - Lack of technical guidelines and knowledge of best practices
  - Building physicists have insufficient knowledge of HVAC systems
  - HVAC engineers have insufficient knowledge of building physics
- Importance of knowledge of standards and best practices

# Let's build better buildings for Europe

## Presentation of the BUILD UP initiative



- Inform and update public authorities, building professionals and building occupants about **the energy legislation for buildings**
- Transfer and **promote best practices of energy savings measures** in buildings

# Target groups



Public authorities



Building professionals



Building occupants

## Energy Legislation

## Energy Efficiency

### Web Portal

EU & National info  
EPBD Database  
Links

National info  
Practical info  
Links

Context  
Simplified info

Database of  
Cases  
&  
Tools

Your guide to  
energy efficiency

# We give you the opportunity to create or to be part of your community of interest

## Advantages :

- Select and share the right information for your target group
- Identify relevant conferences
- Get known by others with similar interests
- Create your own newsletter with focused information
- Have a place for discussion

## REHVA is response of communities:

- Energy Efficient Ventilation for Healthy Buildings
- Leading examples for public buildings



# REHVA Congress and Publications

9 - 12 May, Antalya - Türkiye  
WOW Hotels - Topkapı Palace

**10<sup>th</sup> REHVA WORLD CONGRESS**  
“Sustainable Energy Use in Buildings”

ISSN 1307-3730  
rehva  
3E  
Federation of European Heating and Air-conditioning Associations

**rehva journal**  
European Journal of Heating, Ventilation and Air-conditioning Technology  
Volume 40 - Issue 6 - June 2010 - www.rehvajournal.eu

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[www.rehvajournal.com](http://www.rehvajournal.com)

**REHVA 53<sup>rd</sup> General Assembly**  
held in Amsterdam

**IEE programme support for better efficiency of buildings**  
An Interview with Dr. Vincent Beruete

**BUILD UP - The European portal for energy efficiency in buildings**

and Air Conditioning Association



- ▶ INVITATION
- ▶ TTMD
- ▶ COMMITTEES
- ▶ INVITED LECTURERS
- ▶ TECHNICAL PROGRAM

We have the pleasure to welcome you to **Clima 2010**, the leading international scientific congress in the knowledge domain of HVAC in year **2010...**

▶ [more](#)

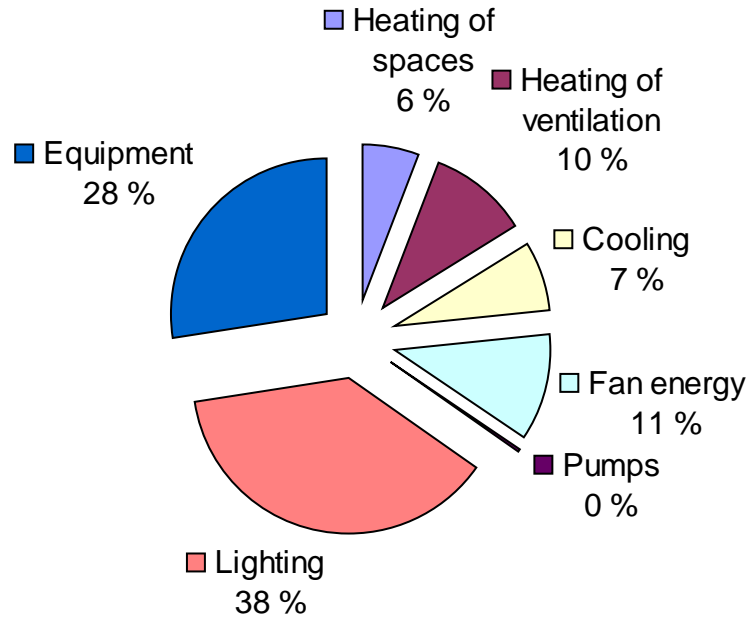


# Aspects of implementation and impacts of EPBD in member states:

## Energy Efficiency

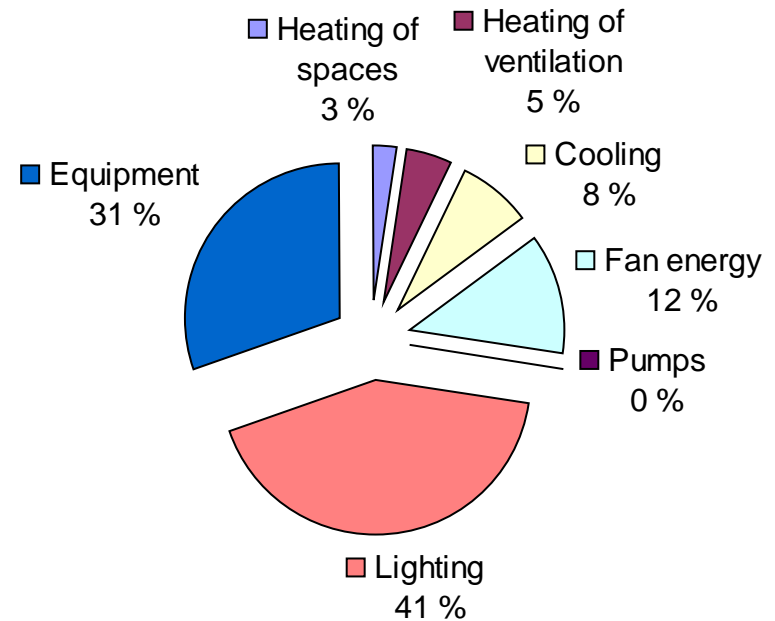
- Different methods and input values in energy calculation
  - Energy statistics are not comparable in member states
  - Understatement of the meaning of mechanical systems in energy saving
  - The role of mechanical systems in primary energy consumption
- The focus should be on electricity and energy saving measures of mechanical systems

# Delivered and Primary Energy Consumption



Delivered energy 77,7 kWh/m<sup>2</sup>,a

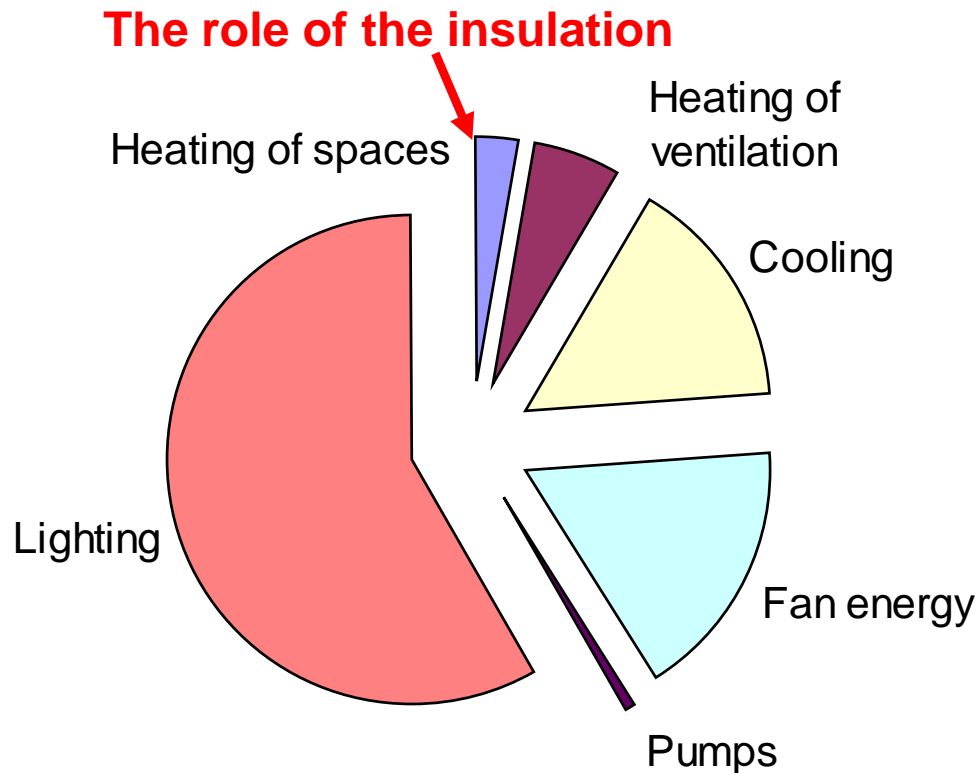
HVAC + lights: 48,9 kWh/m<sup>2</sup>,a



Primary energy 175,4 kWh/m<sup>2</sup>,a  
(Primary energy factors: Gas 1 , Electricity 2,5)

HVAC + lights: 125,9 kWh/m<sup>2</sup>,a

# Improvement in Primary Energy Efficiency: Focus should be on Building Services



# Aspects of implementation and impacts of EPBD in member states:

## The meaning of Ventilation

- Underestimation the meaning of ventilation in energy consumption
  - Ignorance of possible productivity effect of indoor air quality
  - Health effects of indoor air quality is not really realized
- **Healthy, productive, comfortable indoor environment should be the main focus: buildings are for people**

# Sustainable Living Environment

Energy	
Manufacturer Model	Fridge-Freezer
<p><b>More efficient</b></p> <p><b>Less efficient</b></p>	<b>A</b>
Energy consumption kWh/year <small>(Based on standard test results for 24h)</small>	<b>325</b>
<small>Actual consumption will depend on how the appliance is used and where it is located</small>	
Fresh food volume l	190
Frozen food volume l	126
Noise <small>(dB(A) re 1 pW)</small>	<b>***</b>
<small>Further information is contained in product brochures</small>	
<small>Norm EN 153 May 1999 Refrigerator Label Directive 94/2/EC</small>	

**ENVIRONMENT:**  
Use of energy  
and other  
resources

VS.

**WELLBEING:**  
Healthy,  
productive,  
comfortable  
indoor  
environment



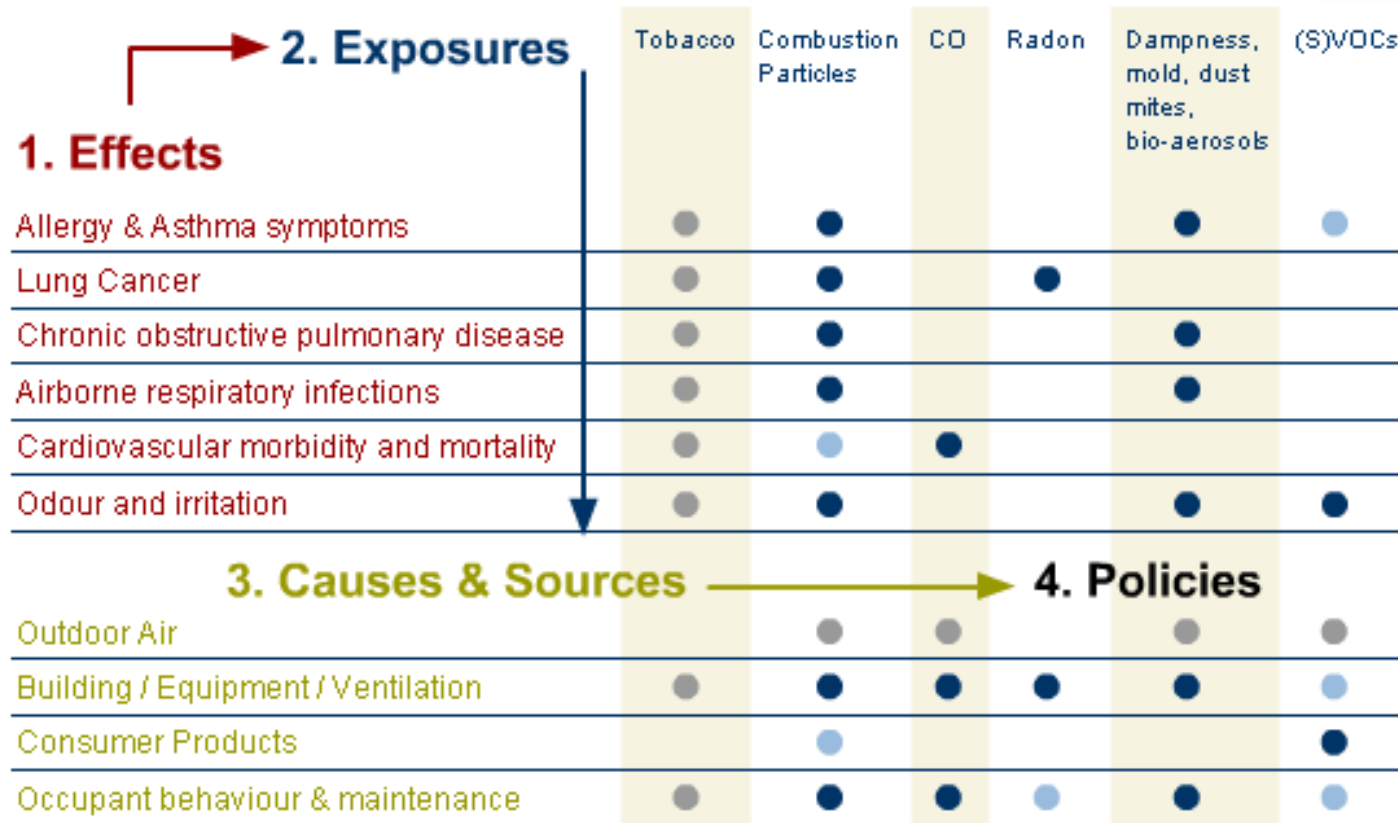
# Care for Your People

- Improvements in work satisfaction and working environment have a significant impact on work performance and productivity.
- Sick leaves diminish and the risk of accidents and early retirements are better managed.



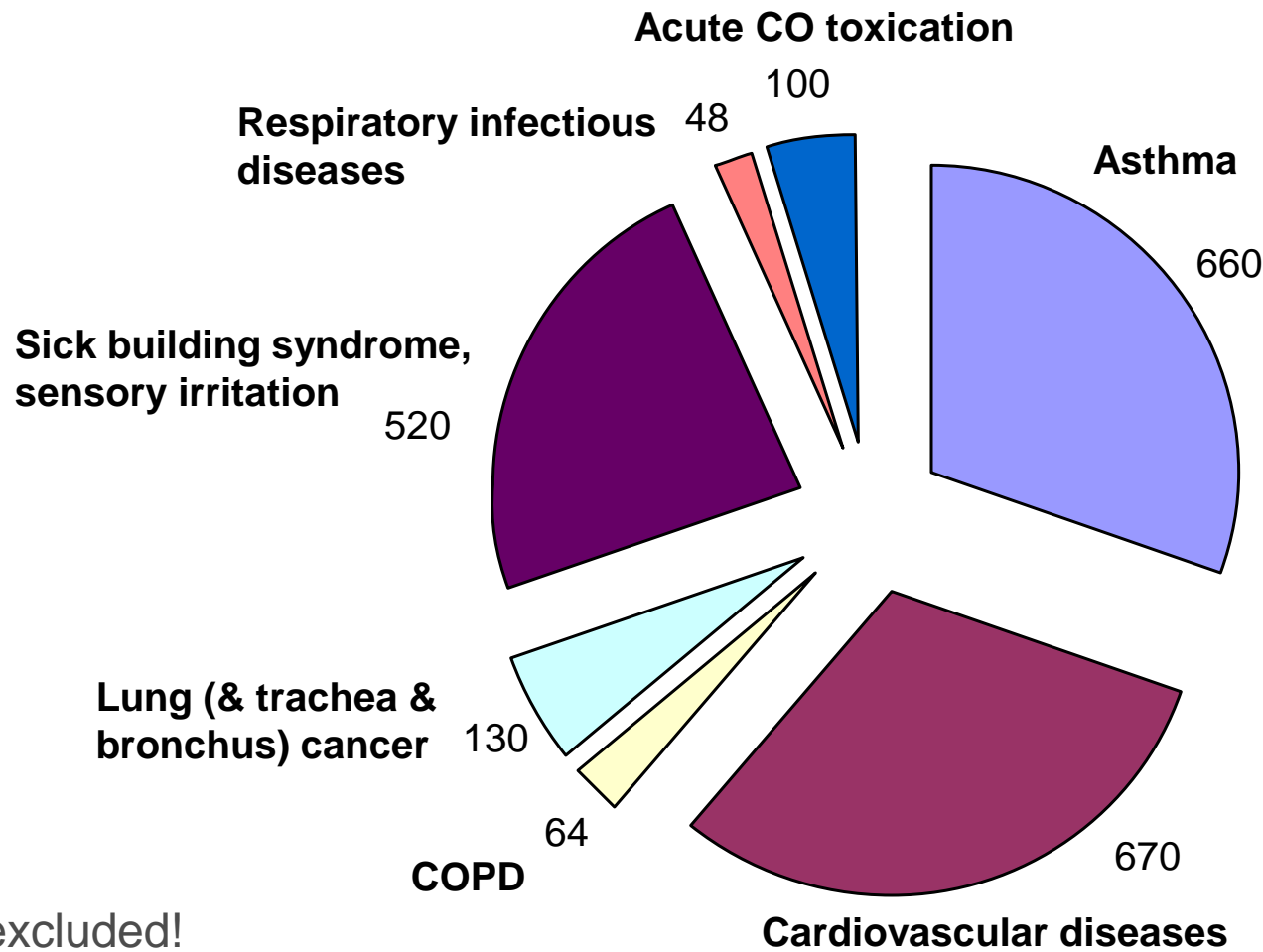


# EnVIE approach



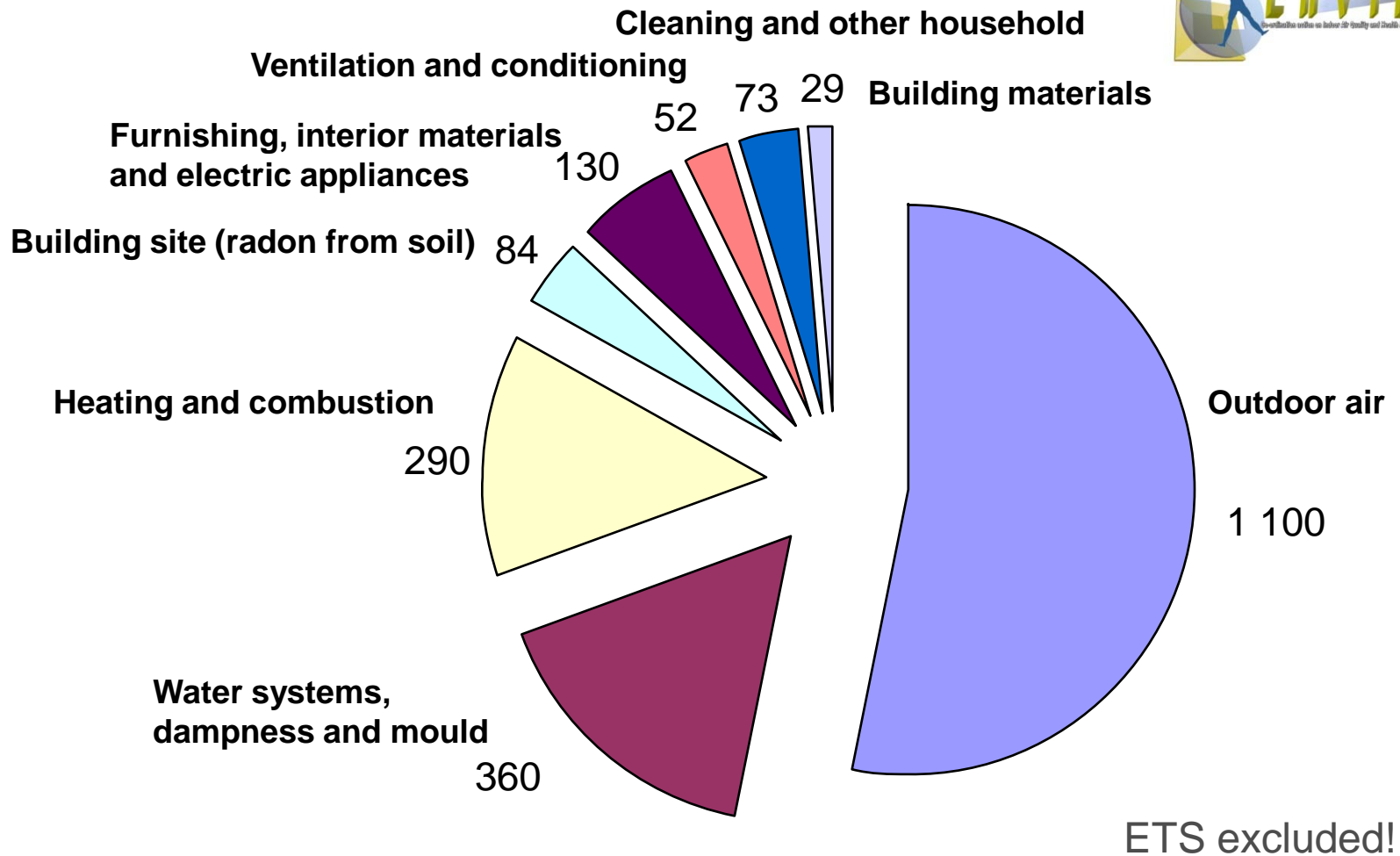
EnVIE is fully oriented to **public health**. Exposures, sources and policies are assessed against burden of disease (BoD) impacts.

# Disease caused by indoor air contaminants in EU-27



ETS excluded!

# Source of indoor air contaminants in EU-27



# *Conclusions*

- Country-specific legislation, acts and practices should be better harmonized to create opportunities in energy saving conservation and consulting business
- The focus of energy saving measures should be on primary energy consumption where HVAC systems and specially ventilation are playing the key-role
- Energy efficiency and Indoor Environment Quality should be always considered simultaneously

