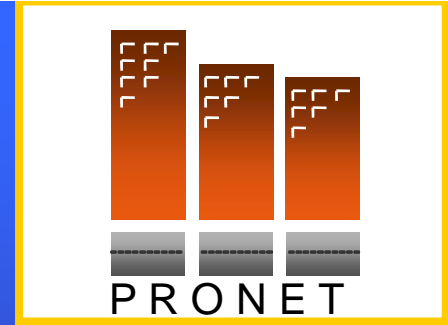


PRONET

Pollution **R**eduction **O**ptions **NET**work

Peter van den Hazel

Introduction



Aims:

- Facilitate exchange and systematic analysis of practical experiences in Europe
- Promote implementation of successful initiatives throughout Europe
- Focused on two areas:
 - Indoor Environment (=IE) (WP1)
 - Transport (WP2)
- Approach:
 - Build network among stakeholders (authorities, public health officers, science)
 - Identify, collect, and assess 'Pollution Reduction Options' (practices)
 - Disseminate 'good practices': meetings, searchable online database

Areas

- Improvement of indoor air quality
- The reduction of traffic-related health hazards



Objectives

- 1) Development of an information base on useful practices
- 2) Organisation of a platform for relevant stakeholders
- 3) Contribution to policy development
- 4) Dissemination of the results to stakeholders

Partners

- 1) Public Health Services Gelderland Midden (Arnhem)
- 2) Ministry of the Environment (Düsseldorf)
- 3) Ministry VROM (The Hague)
- 4) Stockholm County Council (Stockholm)
- 5) RIVM (Bilthoven)
- 6) National Environmental Research Institute (Kopenhagen)
- 7) Medical University (Vienna)
- 8) Agència de Salut Pública (Barcelona)

Timespan

- Project started at January 1, 2007
- Duration of 3 years
 - 2 years, collecting studies and contacts
 - 1 year, dissemination



Topics Indoor Air

- Ventilation
- Noise
- Passive smoking
- Radon

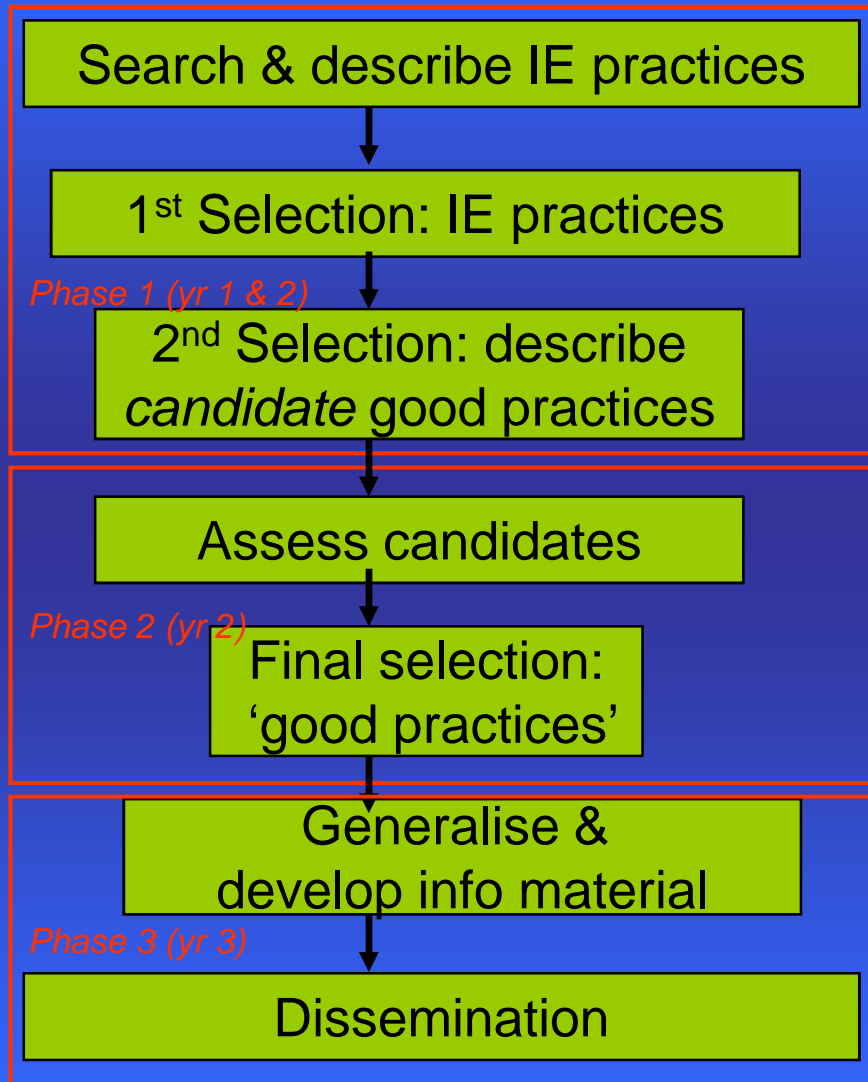


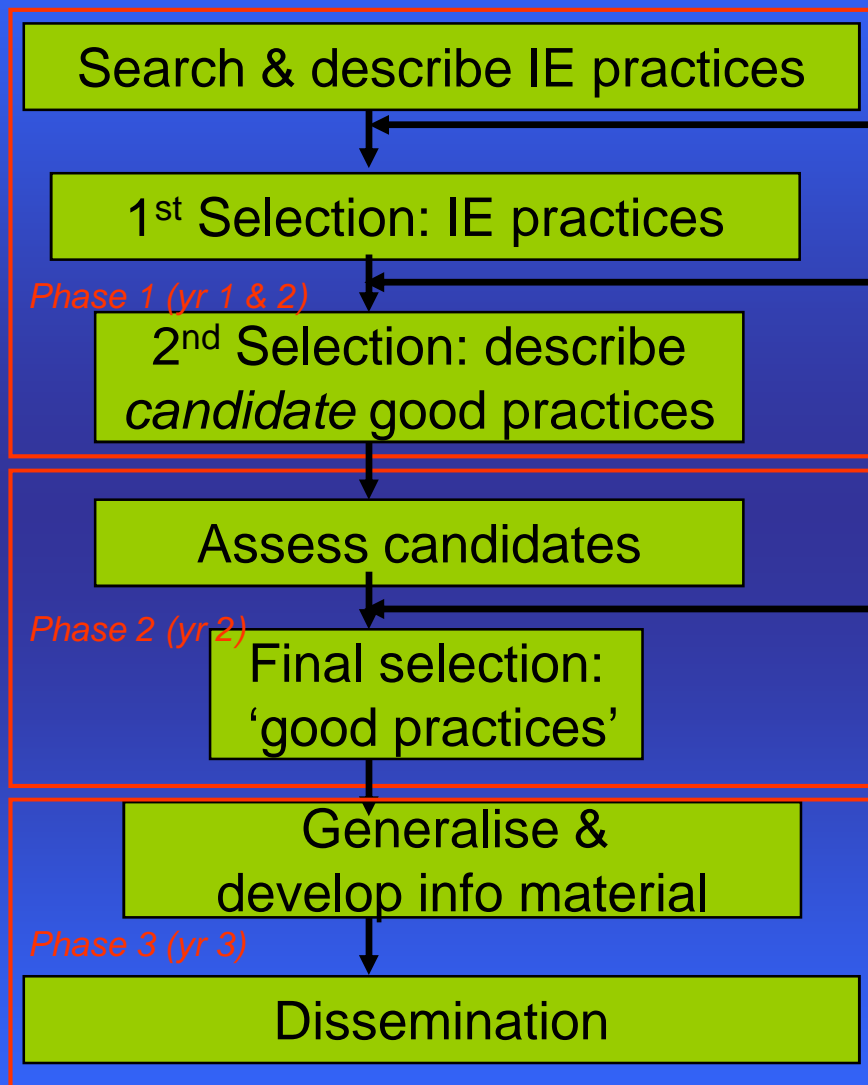
Vision on ultimate result:

- Online database (“shop”) with fact sheets of “good practices”
- Search engine (key words) for different stakeholders & objectives

→ <i>Intervention:</i> ↓ <i>IE</i> <i>Problem</i>	Technological	Policy	Education Awareness	Source elimination	Exposure reduction
Physical	X	X			XX
Chemical		XX		X	X
Biological			X	X	X
General			XX	X	XX

Planned activities (WP1)





In-& exclusion criteria:

- “Indoor Environment”
- Measure aimed at Pollution↓, health↑
- Time: last decade

Selection criteria:

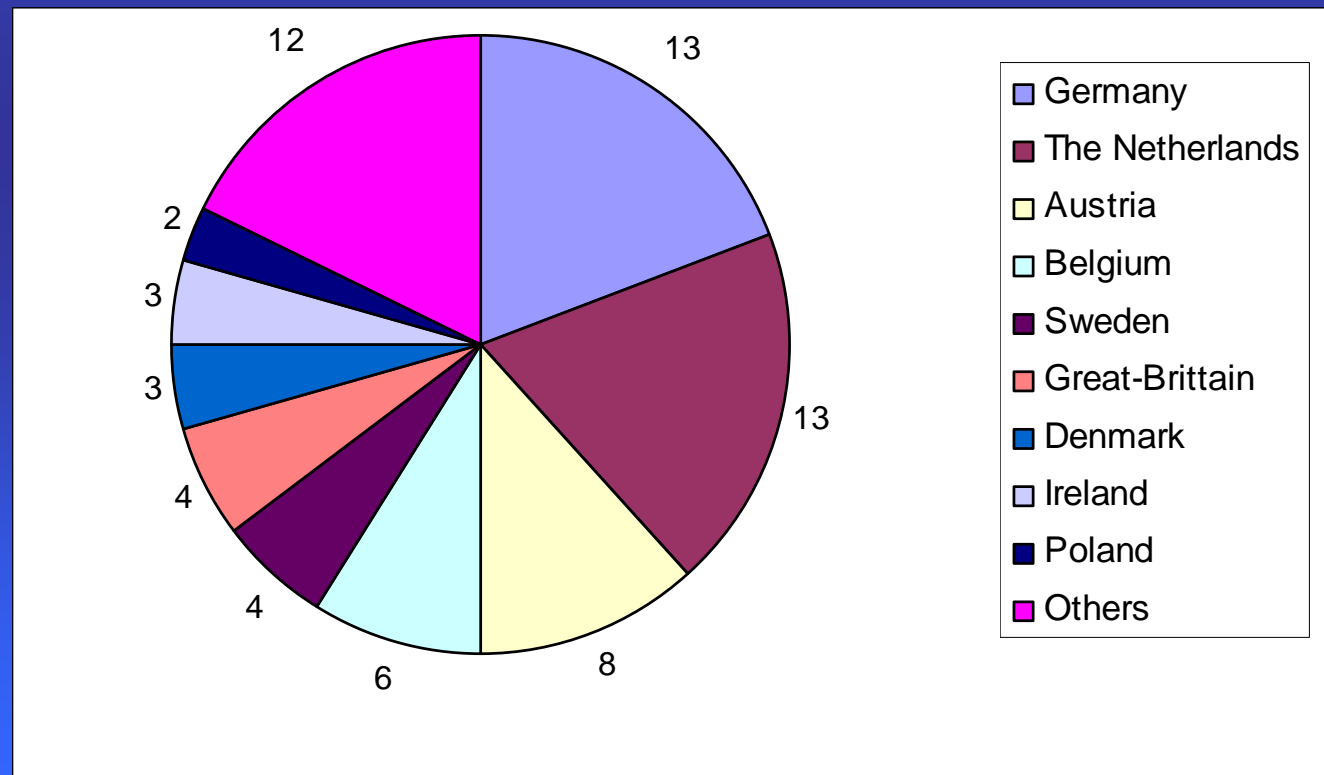
- Clear description (aim, method, results)
- Applied in practice (EU)
- Transferability

Analysis criteria:

- (Cost-)effectiveness
- Methodological quality
- Social Impact
- Implementation issues

Preliminary Results: calls for case studies

- **68 Case studies**
- **Across Europe:**



Preliminary Results: calls for case studies

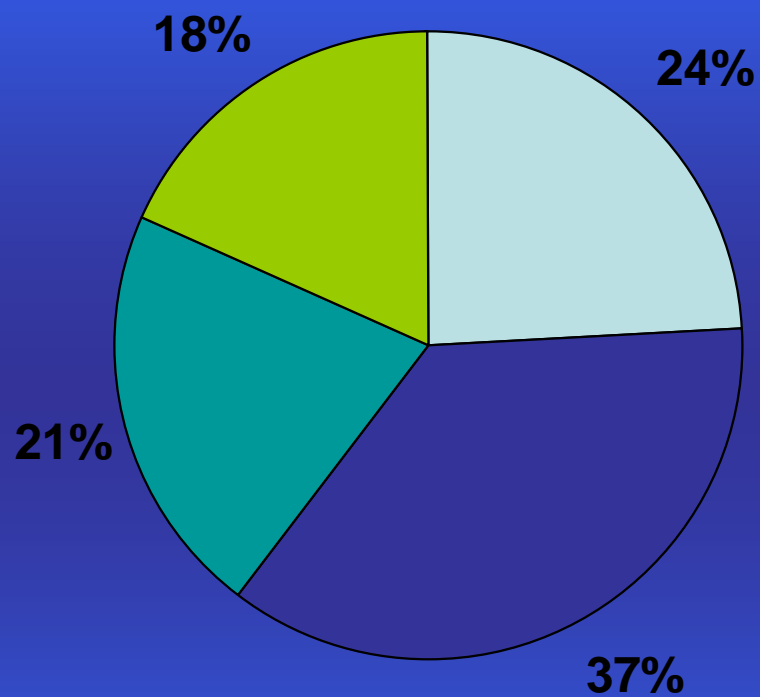
68 Case studies:

- Various interventions, *e.g.*:
 - Technical
 - Policy
 - Education/tools
 - Ventilation
- Health outcomes/change, *e.g.*:
 - Majority: not reported/measured
 - Behavioural change
 - Allergy, asthma
 - Mortality
 - Health complaints, QoL
- Various topics, *e.g.*:
 - Building material
 - Radon
 - Moisture
 - Consumer products
 - Temperature
- Settings, *e.g.*:
 - Homes/ residential
 - School
 - General (e.g. building material label)
 - Day care centre

Preliminary Results: scientific literature

- **Scopus (=database, incl. Pubmed) over the past decade**
- **Combination of 'search terms'**
 - Indoor Environment (synonyms)
 - Pollution Reduction (interventions, measures)
 - Specific agents within categories:
 - Biological (e.g. molds, fungi, dust mites);
 - Physical (e.g. temperature, moisture)
 - Chemical (e.g. Air Quality & CO, CO₂, NO₂, combustion)
 - Ventilation or air conditioning
- **Check search results on potential relevance for PRONET**

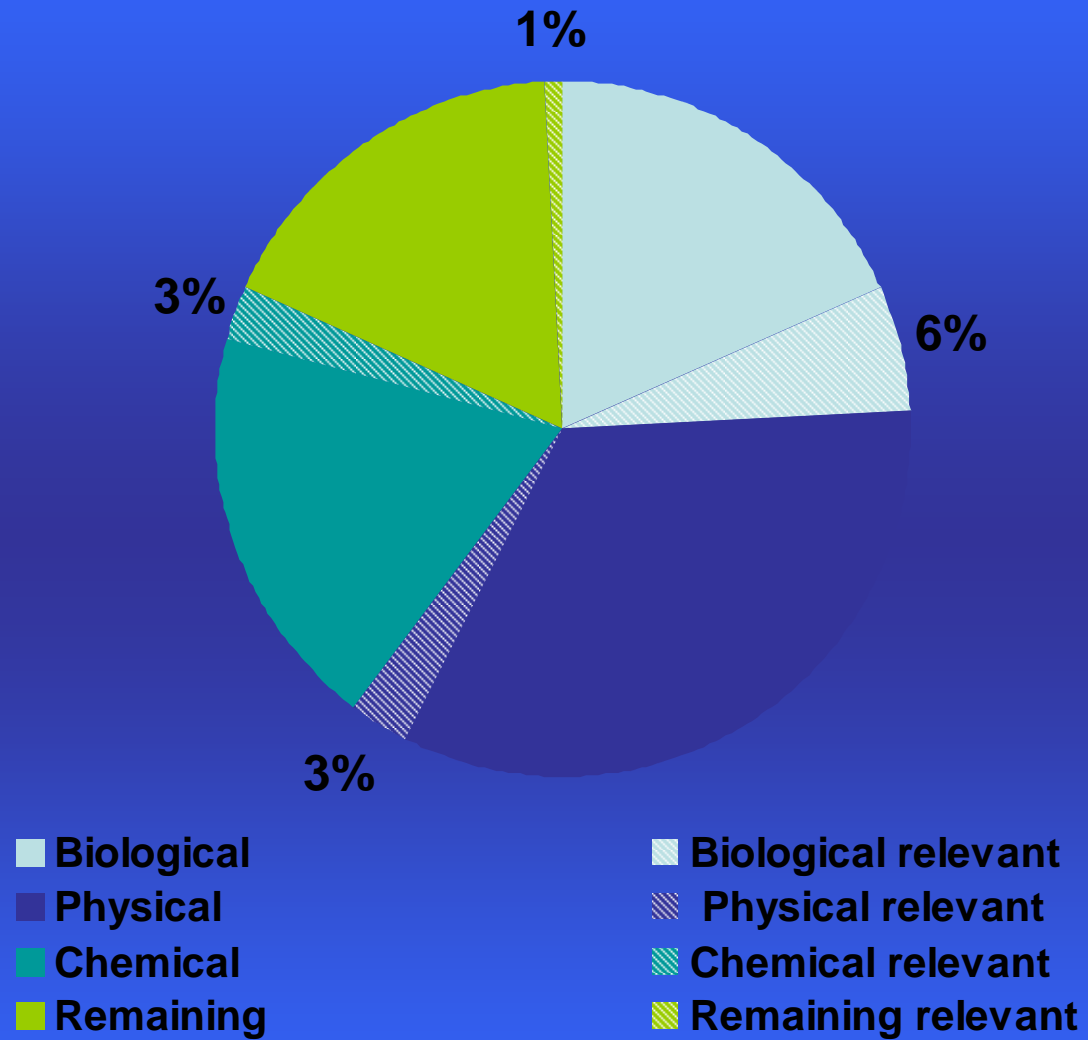
Total hits: 5329 (!)



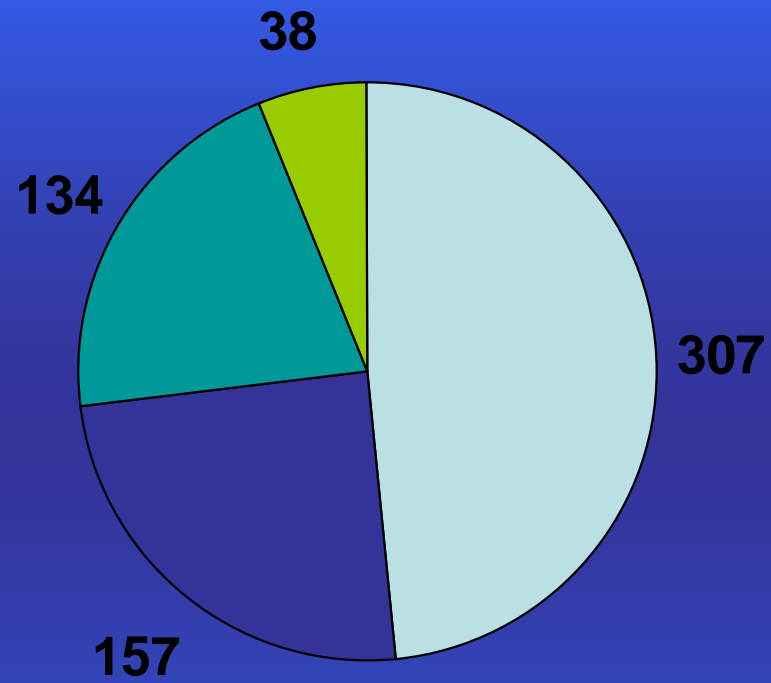
■ Biological ■ Physical ■ Chemical ■ Remaining

- Not all hits are relevant
- Exclusion of cases not related to:
 - Indoor environment
 - Exposure reduction or health improvement after intervention

Relevant cases from total search

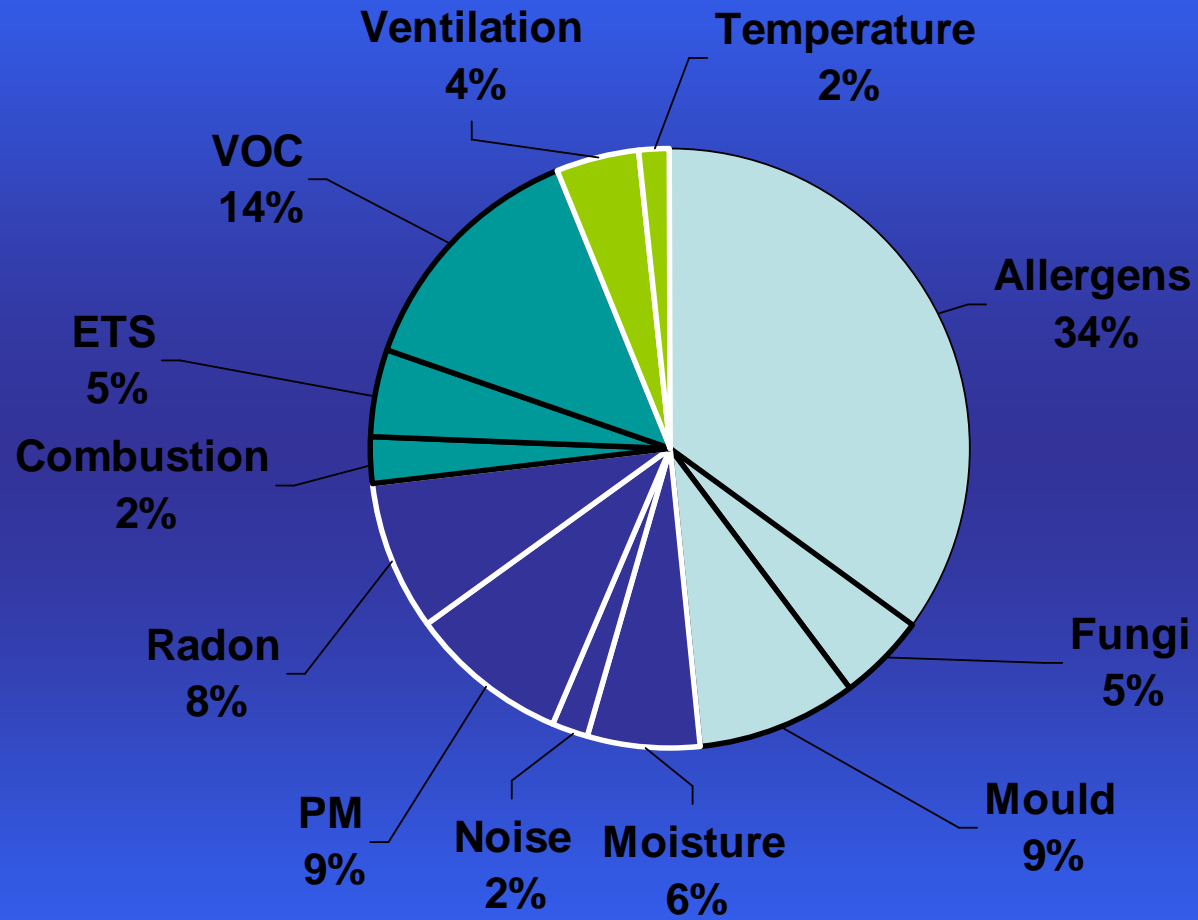


Relevant cases (n=636)



■ Biological ■ Physical ■ Chemical ■ Remaining

Relevant cases (n=636)



Observations

1) Diversity, multi-dimensionality of IE problems

- Need for integrated approach
- Need for individualised (situation-specific) approach (diagnosis, solution)
- Risk of conflicting policies (e.g. ventilation vs energy /outdoor exposures)
- Not solve one problem by creating a new one

2) More focus on primary prevention (targeted at the source)

- Knowledge on building products
- Urban planning ('prone areas', 'orientation of houses/bedroom to source')

3) Process of stakeholder involvement

- Usually not described in detail or signalled as essential step
- Commitment of local authorities

Reflections or suggestions

4) More attention on drivers:

- Cost-Effectiveness and Risk Perception are important policy drivers
- Measurements, action levels, dynamic limit values (moving targets) are important drivers to stimulate action

5) Work on bottlenecks:

- Enforcement
- Uncertainty about causality (proxy of exposure)
- Lack of toxicological data (speed of development new materials vs testing/approval)

6) Effectiveness evaluation

- Interventions targeted at exposure reduction: measurements
- Health problem-driven, education/tools/awareness campaigns

More reflections/suggestions

7) (Effectiveness of) awareness raising/ education:

- **Information needs different stakeholders**
 - Architects, designers,
 - Users, owners (residents, teachers, sensitive groups (asthmatics))
 - Intermediates