

# THE SWESIAQ MODEL

## – A SYSTEMATIC METHOD FOR INDOOR ENVIRONMENT INVESTIGATIONS

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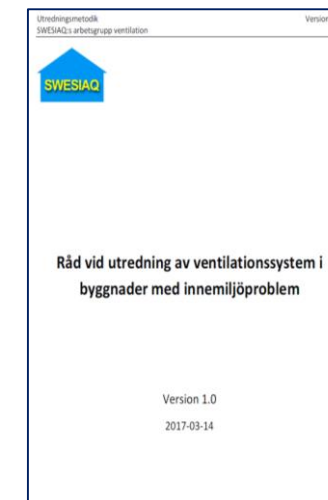
# SWESIAQ - The Swedish Chapter of ISIAQ

## Activities:

- Conferences, seminars
- Homepage [www.swesiq.se](http://www.swesiq.se)
- Free electronic newsletter
- Student grants
- Working groups
- Documents to download



Seminar in Lund, May 2015



# Introduction

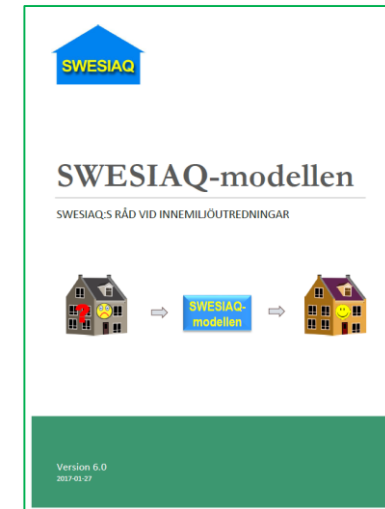
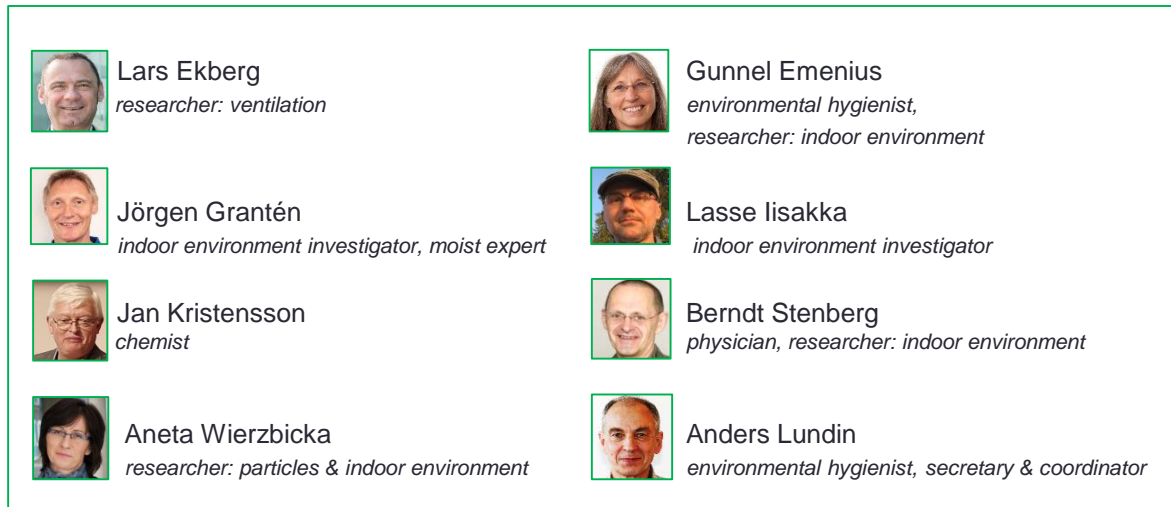
- 20% of occupants in Swedish buildings are bothered by health problems or discomfort indoors – at home, at the workplace or at school
- Often difficult to find out the reasons for these indoor environment problems
- Investigations and measurements are often performed by various parties with different ideas of how to do it and without a clear strategy
- No authorization of indoor environment investigators

# Aims of the project

- To create a systematic method for indoor environment investigations
- The method should be applicable for all kinds of indoor environment problems in all kinds of non-industrial buildings.
- The method should be based on science and proven experience

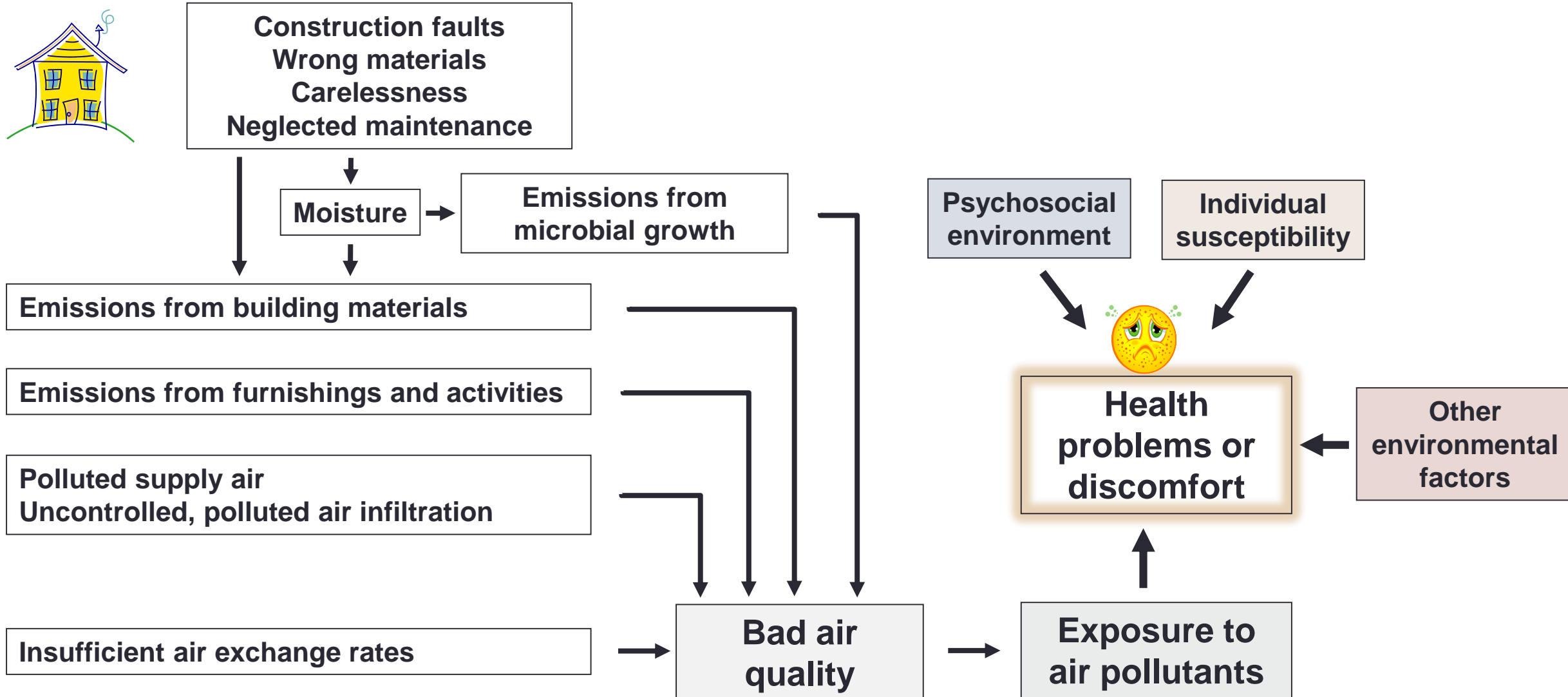
# Methods & Result

- In 2015 a multidisciplinary working group was formed within SWESIAQ



- Regular telephone conferences, input from other SWESIAQ members
- The document “SWESIAQ-modellen” (40 pages) was approved by the SWESIAQ board in January 2017 (download at [www.swesiaq.se](http://www.swesiaq.se))

# Indoor factors that might contribute to health problems or discomfort



*Standardized step-by-step procedure:*

## 1. Formation of the steering group:

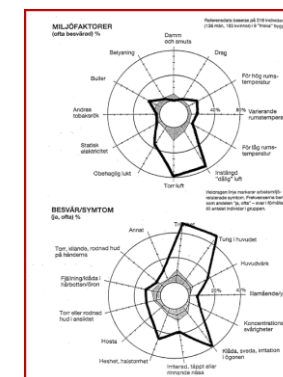
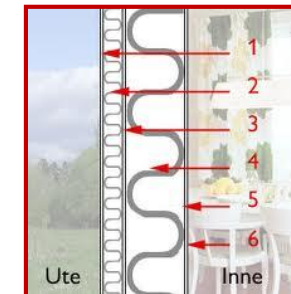
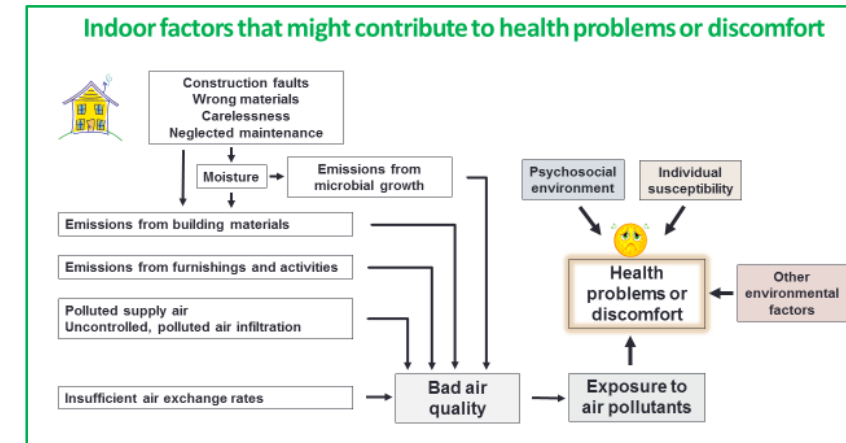
- Property owner
- Indoor environment investigator
- Occupants' representatives
- *Various experts and stakeholders*



Standardized step-by-step procedure:

## 2. Quick, general, documented survey:

- First visit in the building
- **Quick** survey over **all** possible contributing factors
- First glance at technical documentation
- Description of the building and its history (*preliminary*)
- Description and history of complaints (*preliminary*)
- The survey is documented in a standardized form:
- The survey is discussed in the steering group:
  - Decision on more thorough investigations and immediate actions



### Allmänna uppgifter

Objektets/Byggnadens namn och adress  
Uppdragsgivarens namn och kontakuppgifter  
Ansvarig inom miljöutredarens namn och kontakuppgifter

### Uppdraget

Kort beskrivning av problemen  
Uppdragsformulering (ordagrant)  
Kontaktgrupp (namn, funktion inom gruppen)

### Allmänna data

Besvärbeskrivning och besvärshistorik  
Byggnadsbeskrivning och byggnadshistorik  
Eventuella tidigare utredningar som gäller objektet

### Noteringar vid ett första besök

Besiktningens datum  
Lukter  
Okulära iakttagelser  
Verksamheter som bedrivs i objektet

### Systematisk genomgång av tekniska orsaksfaktorer:

Fukt i byggnadsmaterial  
Emissioner från mikrobiell påväxt  
Emissioner från byggnadsmaterial  
Emissioner från verksamhet och inredning  
Föroreningar via tilluften  
Föroreningar via okontrollerat inläckage  
Otillräcklig luftväxling  
Andra miljöfaktorer

### Sammanfattning av data och inomhusmiljöutredarens bedömning

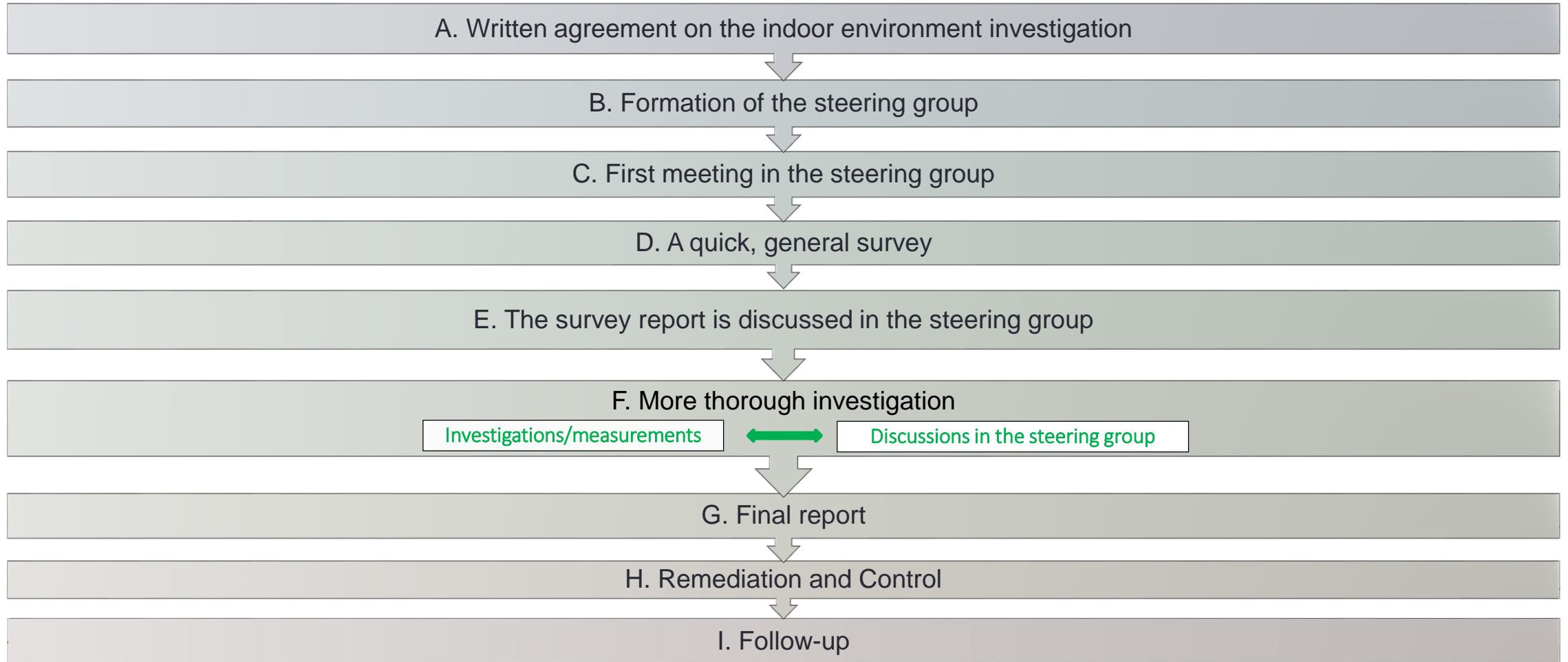
### Förslag till vidare utredning och/eller åtgärder

### Daterad underskrift

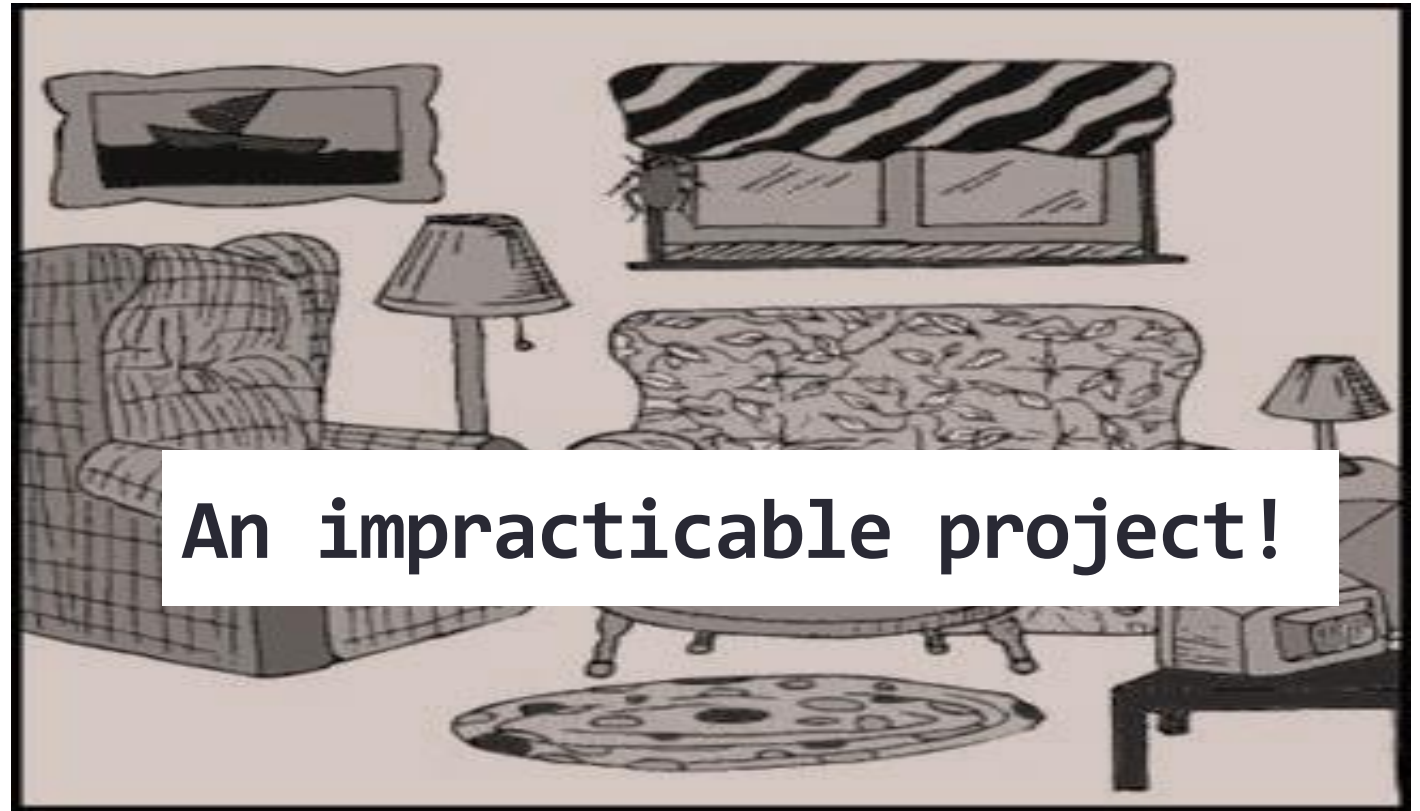


*Standardized step-by-step procedure:*

### 3. More thorough investigation and final steps



# Air measurements



- **Air quality cannot be measured!**
- We don't know much about the impact of relevant indoor air pollutants on health
- But we are familiar with many types of construction faults and other indoor pollution sources that are associated with illness and discomfort.

# Conclusions

- Important for a successful indoor environment investigation:
  - Do not start with air measurements – Start with a quick, general survey!
  - A well-educated, experienced investigator is crucial for a good result
- In the long run, a systematic investigation is more effective:
  - You should always check a wide range of possible contributing factors
  - Use a standardized step-by-step procedure
  - Documentation should be in a standardized form
- An inclusive and democratic procedure is important:
  - Indoor environment investigations are often not easily performed
  - Need for the *collective knowledge* of the steering group and input from all stakeholders
  - A trustful relation between occupants and property owner is important