

# Mould Damages - the German Connection

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NORDISKA VATTENSKADESEMINARIET

*Reykjavík, ágúst 2019*



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# Who?

- Kristján Guðlaugsson
- Civil Engineer (Dipl. Bauingenieur)
- Studied in Darmstadt Germany
- Works at Mannvit hf
- Consultant on moisture damages - with a German connection



# Why?

In Iceland we are far behind our neighbours in detecting and remediating mould and moisture damages.

- Foreign material helps straighten the path into the present
- Important to use knowledge from other countries and try not to do their mistakes

- **Schimmelleitfaden Dec. 2017**

Umweltbundesamt, UBA, [www.uba.de](http://www.uba.de)  
= German Environmental Agency

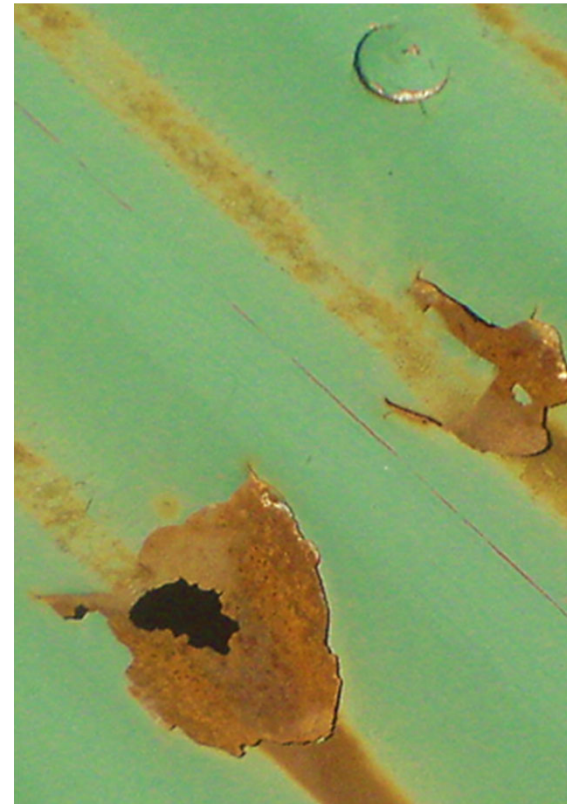


# UBA Schimmelleitfaden 2017

## Mould Guideline

Main chapters of the guideline:

- 1) Mould and mould damages
- 2) Effects on humans
- 3) Reasons for mould in buildings
- 4) Preventive measures
- 5) Identifying and assessing damage
- 6) Actions, remediation



# UBA Schimmelleitfaden 2017

## Preventive Measures

Main principle: **Avoid moisture!**

- Building measures
  - Beware of building moisture
  - Beware of moist building materials
  - Build and renovate correctly
  - **Inspection of buildings in use**
- Appropriate ventilation
- Appropriate heating



(Schimmelleitfaden, p. 71)



# Inspection of buildings in use

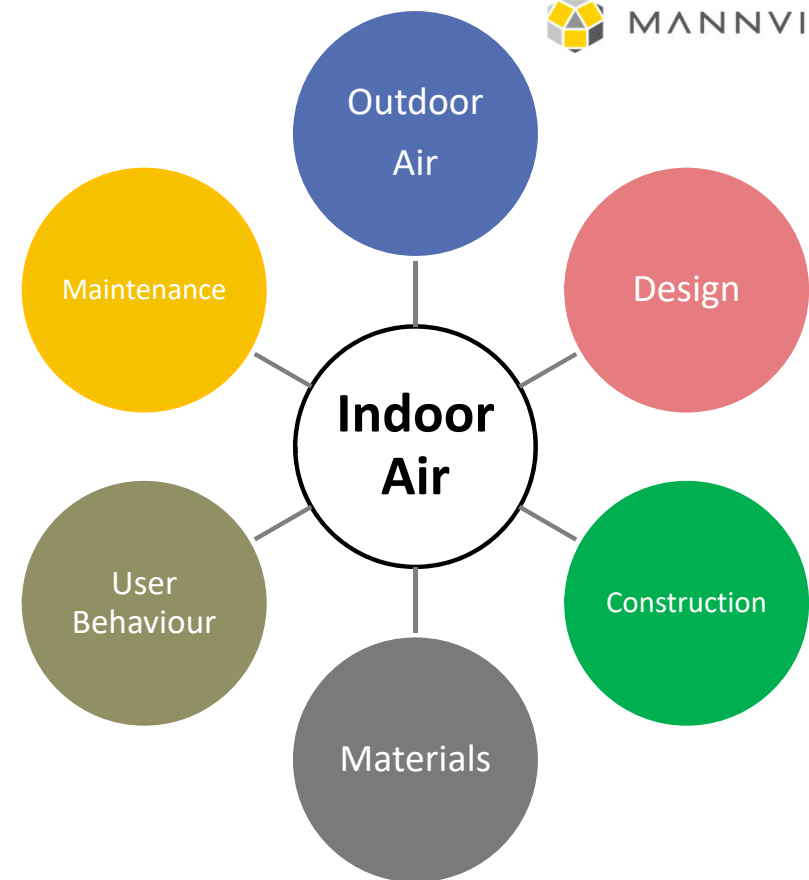
- Outdoors
  - Weather envelope; roof, walls, etc
  - Rainwater system
  - Groundwater drainage
- Indoors
  - Freshwater and heating systems
  - Sewage system
  - Ventilation system
  - Wet rooms, silicone joints, etc
  - Indoor Air Quality



# Inspecting Indoor Air

Indoor air is a cocktail containing:

- Outdoor air and all its contents
- Something from almost everything inside the building - dead, or alive
- Gases;  $\text{CO}_2$ , VOC,  $\text{O}_3$ , CO, CHCO,  $\text{H}_2\text{O}$ ,  $\text{H}_2\text{S}$ , ...
- Smell of all kinds
- Microscopic particles - dead, or alive



# Indoor Air Quality - The Indicator

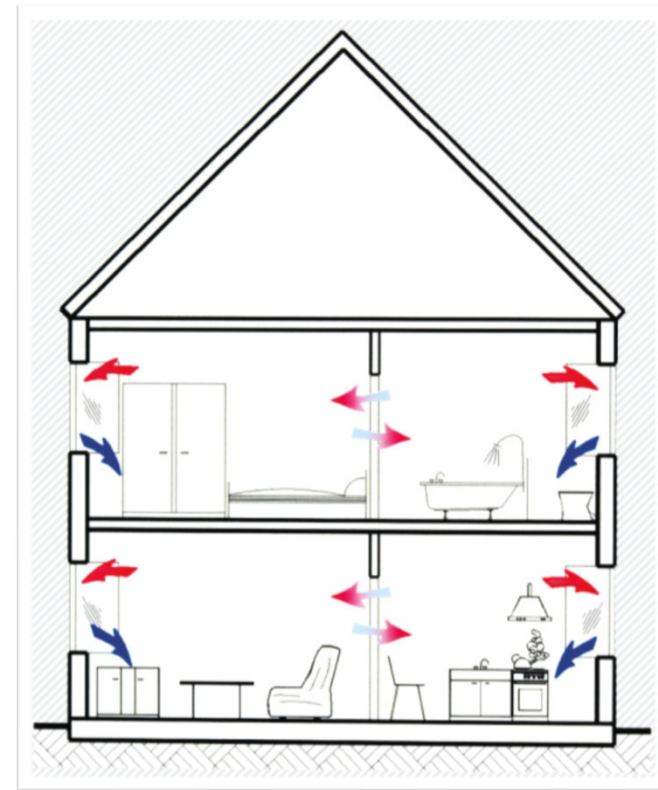
Indoor air can be used as an Indicator

- for ventilation quality
- for emission of gases
- for hidden moisture damages
- and more ...

We inhale the indoor air, along with everything in it!

- Affects individuals living quality
- May affect individuals health

**Good indoor air quality is essential!**



(Schimmelleitfaden, p. 78)



# Regular Building Inspection

Cars are delivered with a maintenance plan

- Why not buildings?

Cars shall be inspected regularly

- Why not buildings?

Regular building inspections help us:

- Preserve good indoor air quality
- Detect moisture damages
- Preserve good building quality
- Preserve individuals health!

... and to appreciate Water!





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**Thank you!**

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