

ByggaF

**A Method to Include Moisture Safety
in the Construction Process**

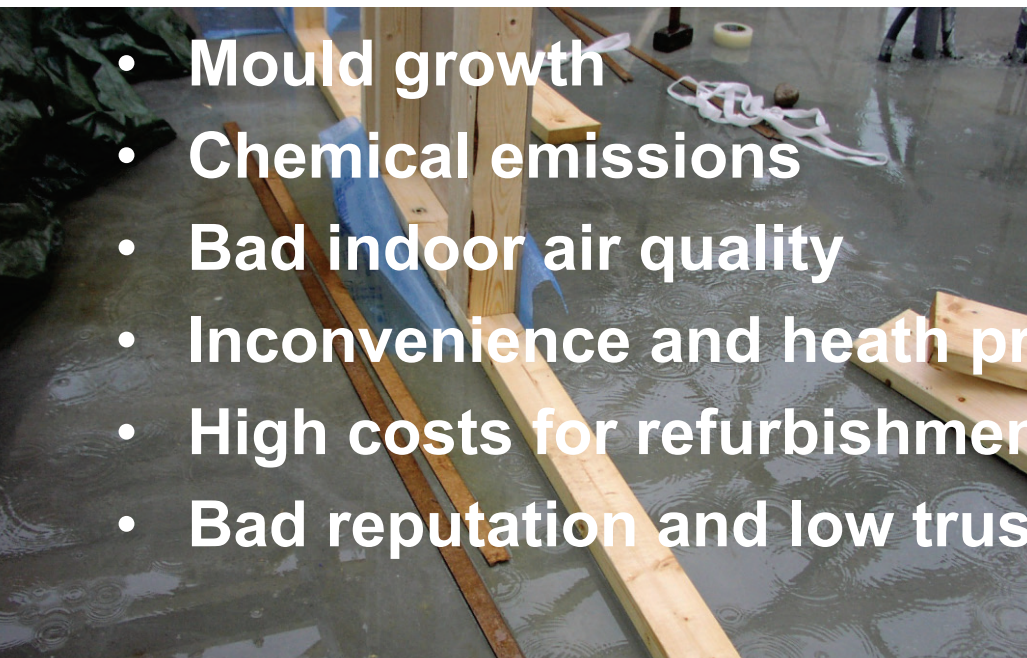
Jesper Arfvidsson & Kristina Mjörnell





Moisture can cause damage

- Mould growth
- Chemical emissions
- Bad indoor air quality
- Inconvenience and health problems
- High costs for refurbishment
- Bad reputation and low trust



The reasons for moisture damage

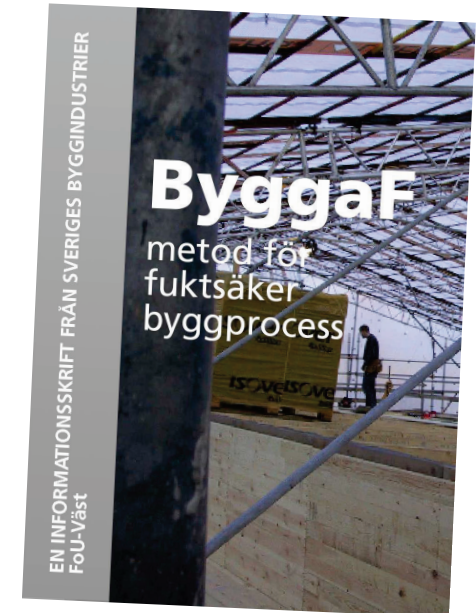
Unclear allocation of responsibilities

- **No follow-up and monitoring**
- **Unrealistic time plans**
- **Lack of communication between stages**
- **Inadequate skills and insufficient routines**
- **Use of new constructions and materials without proper verification**

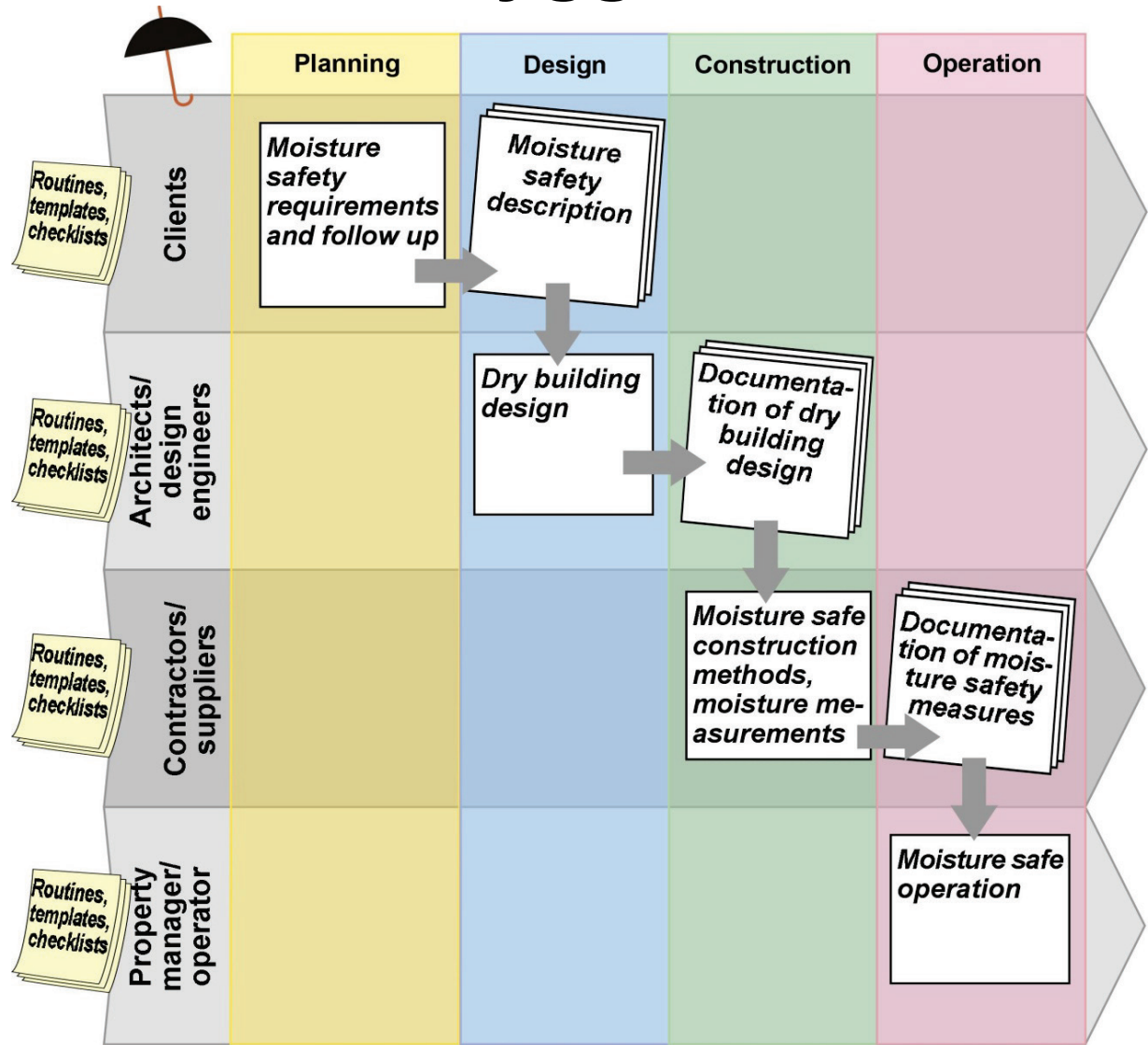


Background

- 2002-2005 Discussions with building sector
- 2005-2007 Development of the method ByggaF
- 2007 ByggaF was described in a research report
- 2008 ByggaF was launched to the building sector
- 2012-2013 ByggaF was developed into an industry standard
- Accessible at: www.fuktcentrum.se



ByggaF

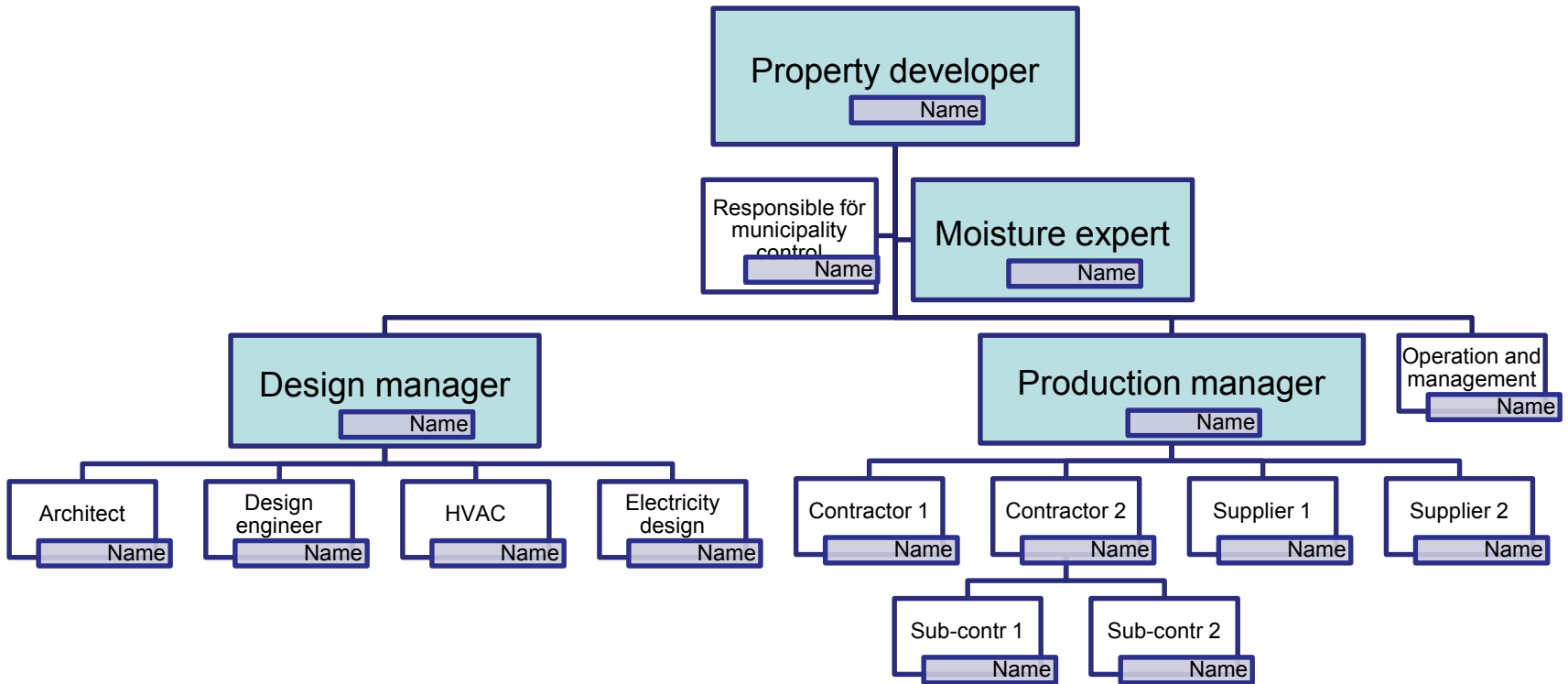


Who is responsible?

- **The property developer should**
 - carry out planning, design, construction or renovation work in accordance with the laws and regulations and
 - hire the appropriate qualifications for the tasks
 - appoint a moisture expert



Organisation of moisture safety work



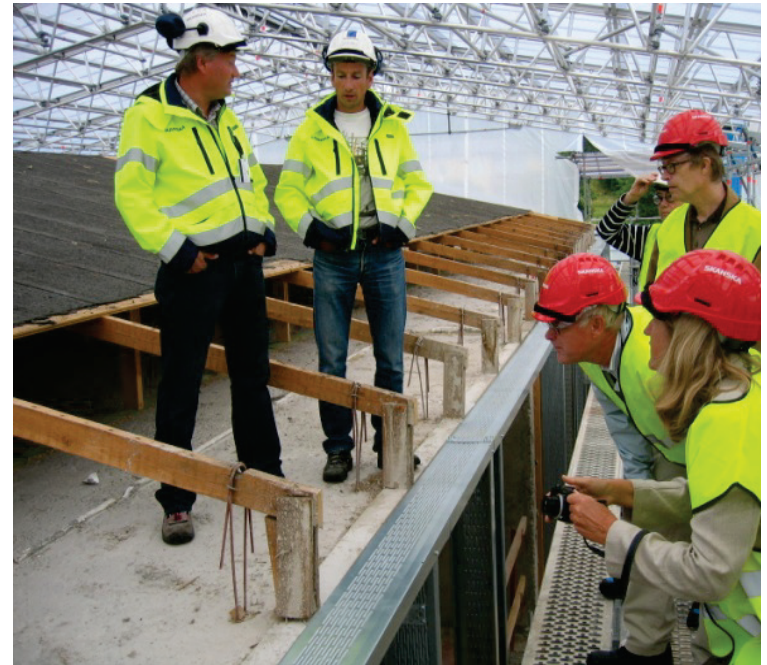
Early risk assessment

The developer is responsible for performing an early risk assessment.

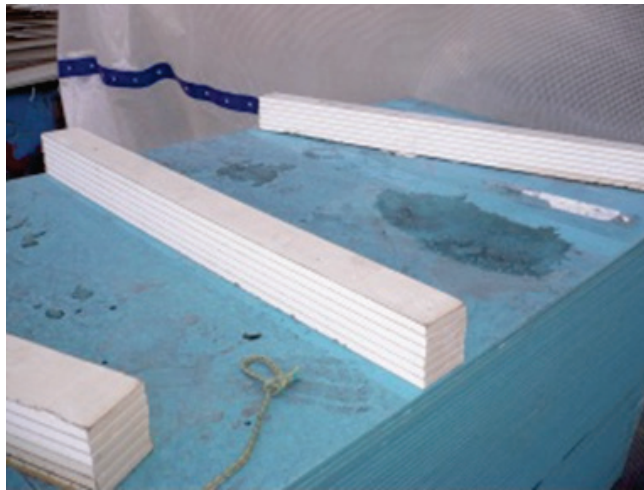


Decide on the developer's requirements

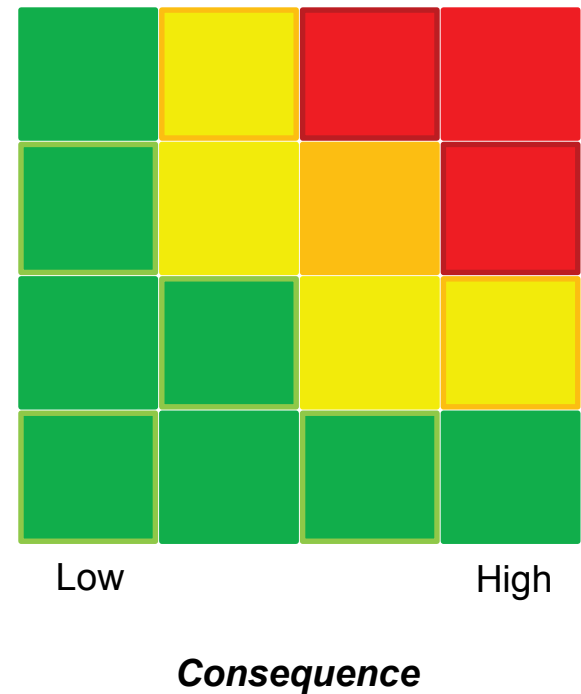
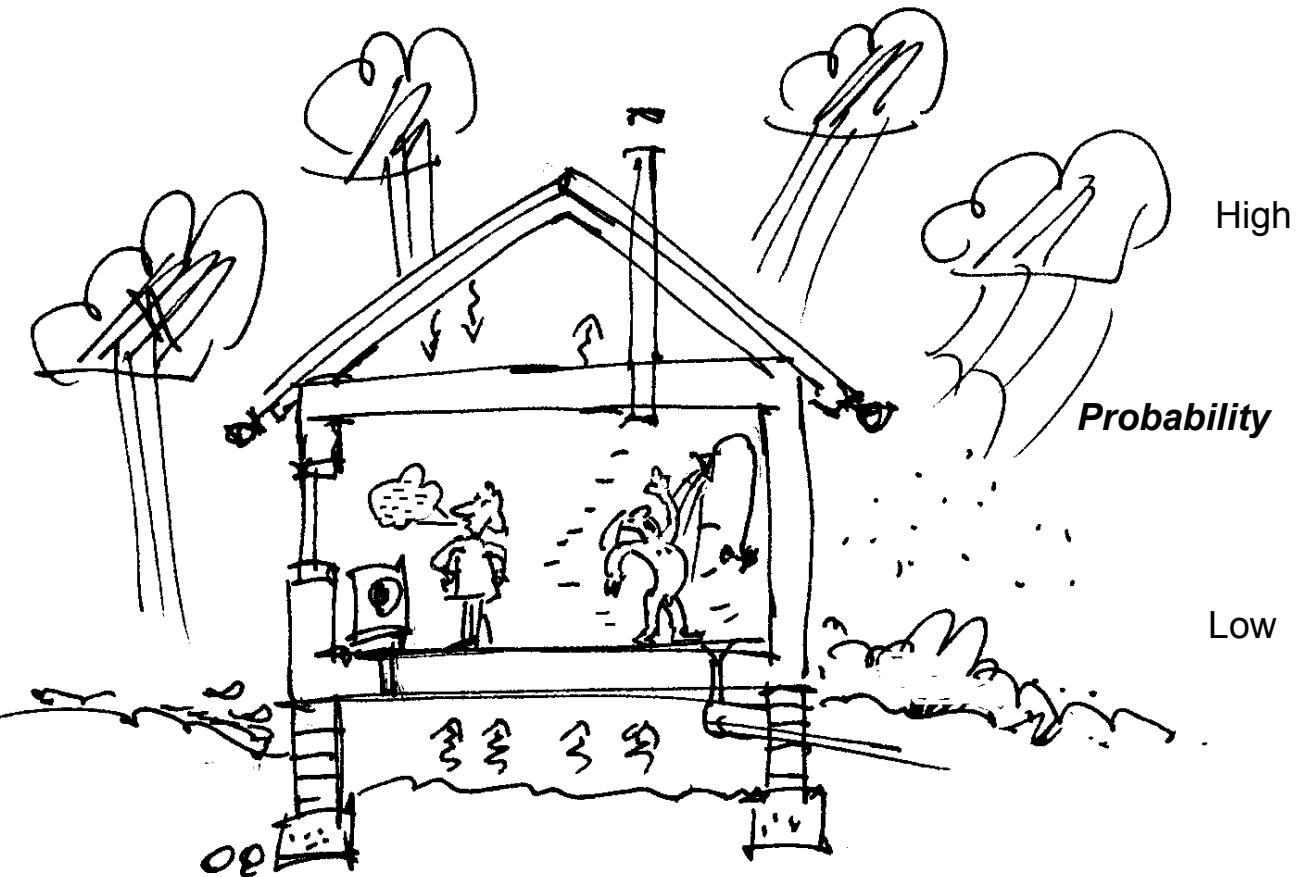
- Technical requirements
- Competence of the personnel involved in the project
- Certain activities such as meetings, moisture rounds etc.



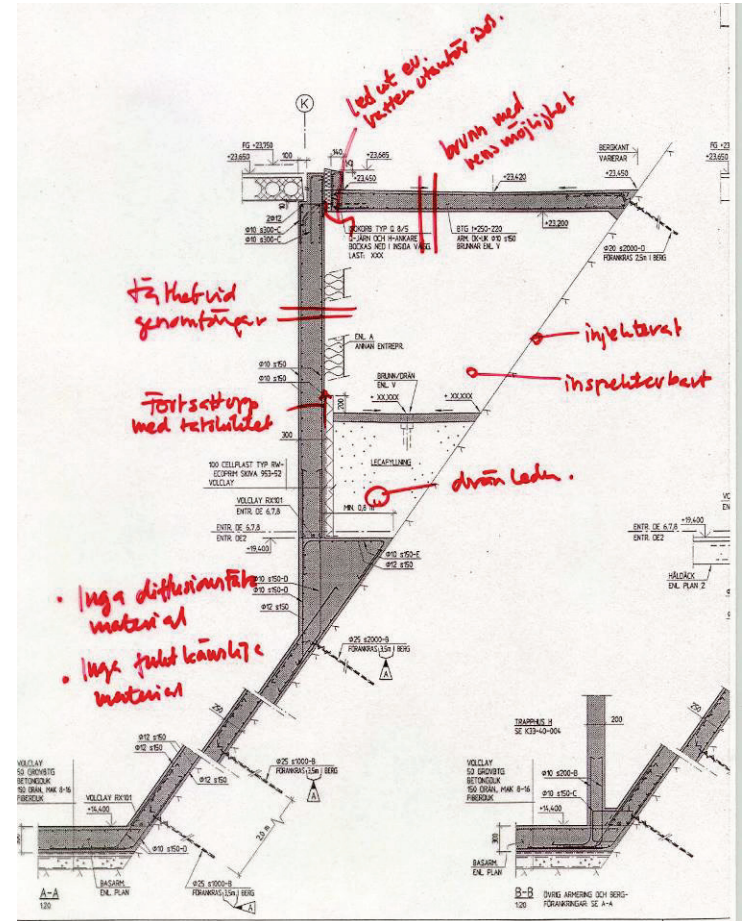
Decide on actions to take in case of deviations or damage



The design team work with moisture safety design and moisture risk assessment



Internal review of moisture safety design



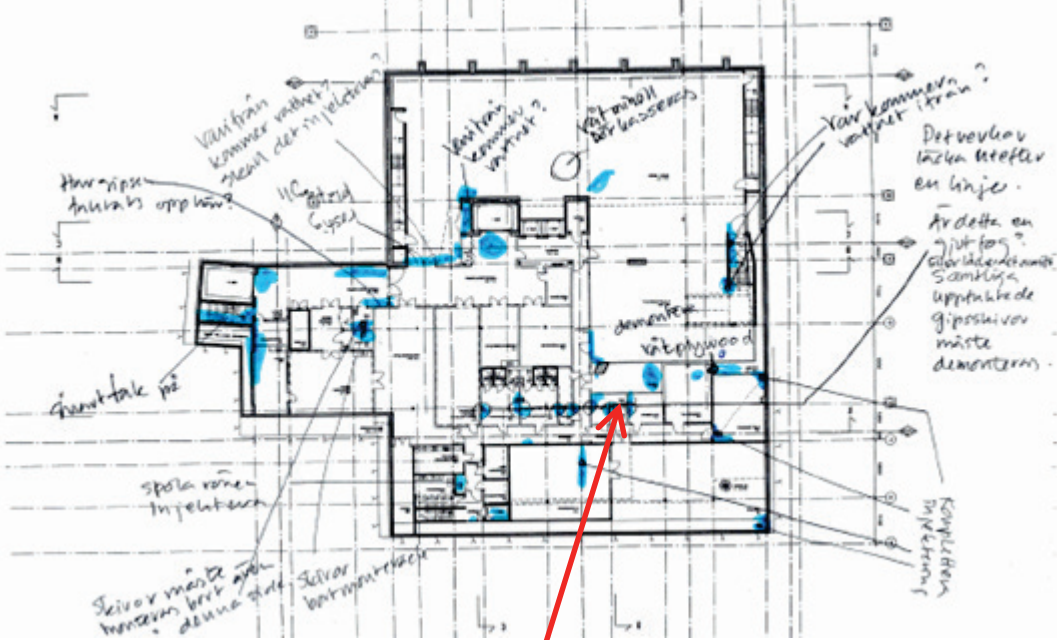
The result of the moisture safety design is communicated to the production team



Identify constructions and activities critical to moisture

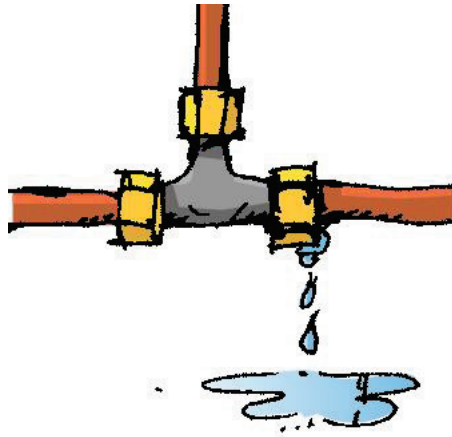


Moisture rounds at the building site



WBC16, Tampere

Measurements and controls



Routines and tools

1. ByggaF industry standard
2. Risk identification and evaluation at early stage
3. Moisture Inventory of existing building
4. The developer's moisture safety requirements and activities
5. Job description for moisture expert
6. Moisture Safety Description (template)
7. Moisture Safety Planning and Risk Management (template)
8. Moisture Plan (template)
9. Moisture Round Protocol (template)
10. Deviation Report (template)
11. Content for moisture safety documentation (template)

Swedish Moisture Centre is responsible for administration and training in ByggaF.

All material can be downloaded from: www.fuktcentrum.se

Experience from using ByggaF

- Master students did 22 deep interviews with
 - 18 moisture experts with a diploma from Swedish Moisture Centre
 - 4 property developer who have used ByggaF in projects to receive “gold level” in Miljöbyggnad



Moisture experts are concerned about

- The paper work and ask for shorter documents summarizing the most important issues to be communicated
- Insufficient knowledge and engagement from the actors
- Building owners unwillingness to spend money on moisture safety expertize in the beginning of the project
- Too much time is spent on meetings, rather than on constructive work



Moisture experts are concerned about

- Lack of practice among design teams to document the moisture safety design and an uncertainty how to perform risk analyses
- Lack of competence among the contractors and insufficient information and communication between managers and workers





THANK YOU!



LUNDS TEKNISKA HÖGSKOLA

Lunds universitet