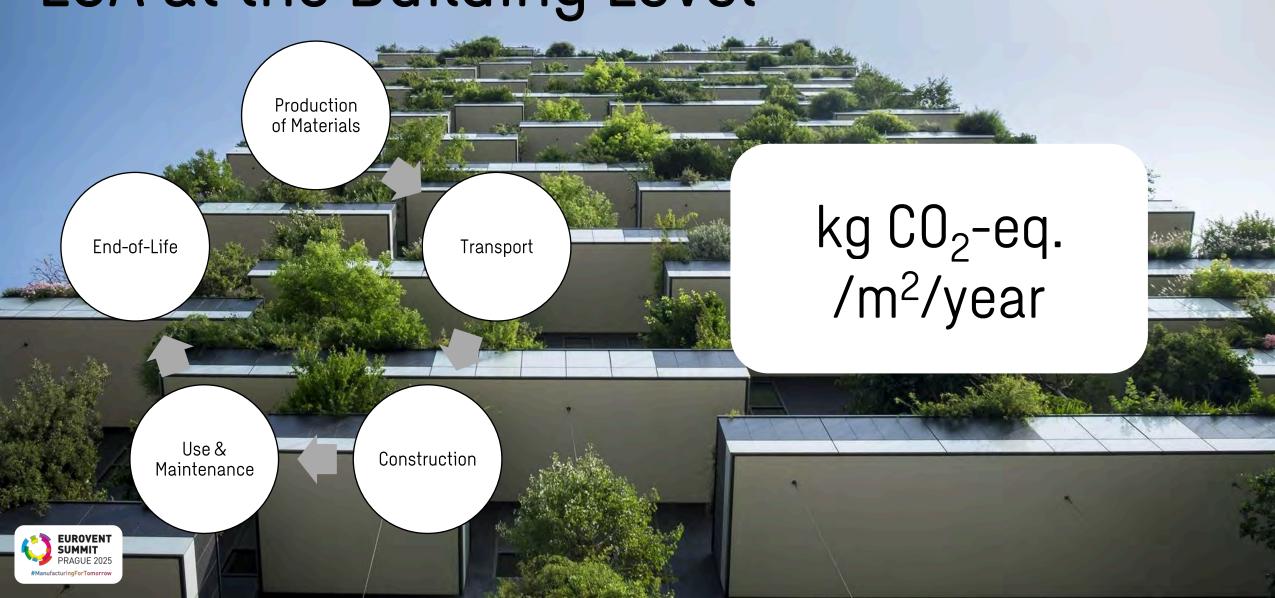
Preserving the complexity of EPD's in a building-LCA context

Asger Wendt Karl
Senior Sustainability Specialist
Sweco



## LCA at the Building Level



# EPD's and Building-level-LCA relationship

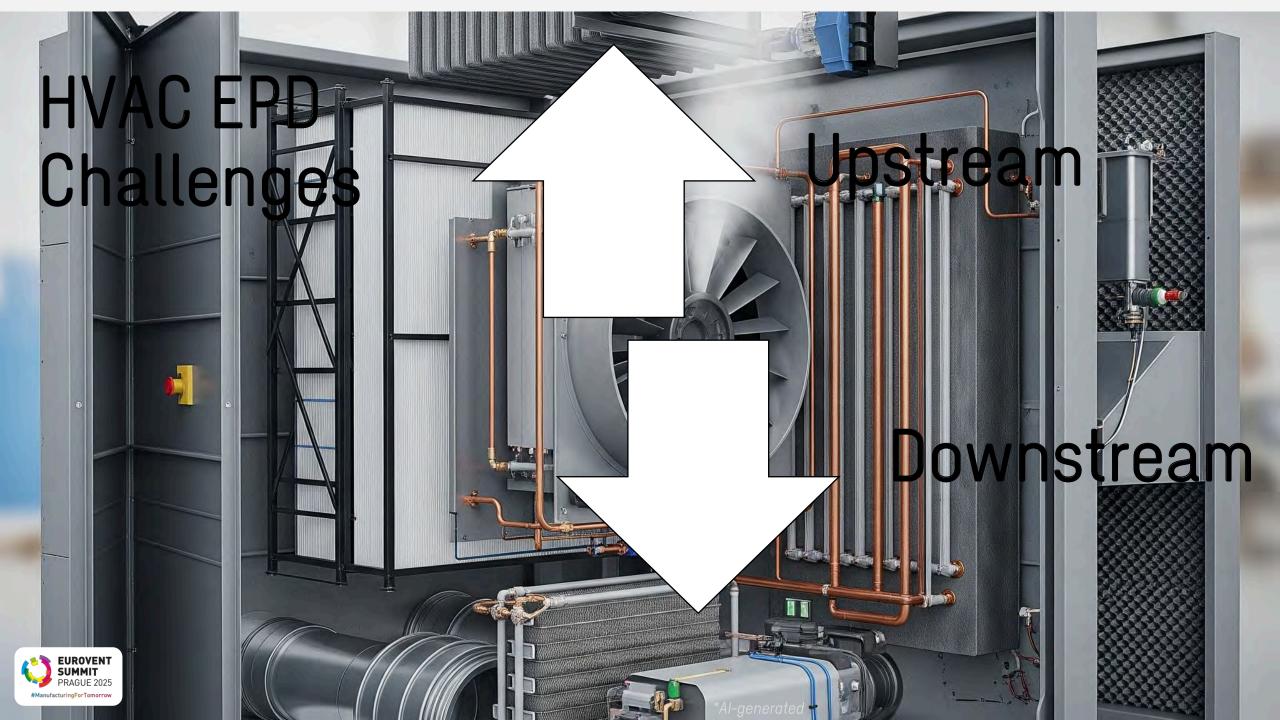
Specific EPD's

Industry data

Generic data

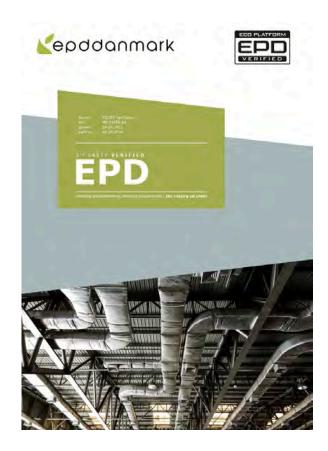






## Current practice on HVAC in building LCA: How much air?









### From Generic to Specific – Data and Procedures

#### Generic data

- Probably Inaccurate
- Not representative of actual scenario

#### Industry Averages

- Represents the actual industry
- Limited design choices
- Nuances not included

#### Specific data

- Competitive performance
- Improved accuracy
- Design and optimization matters

#### Generic Procedures

- Potentially Inaccurate
- Quickly performed
- Low requirements

#### Rules of Thumb

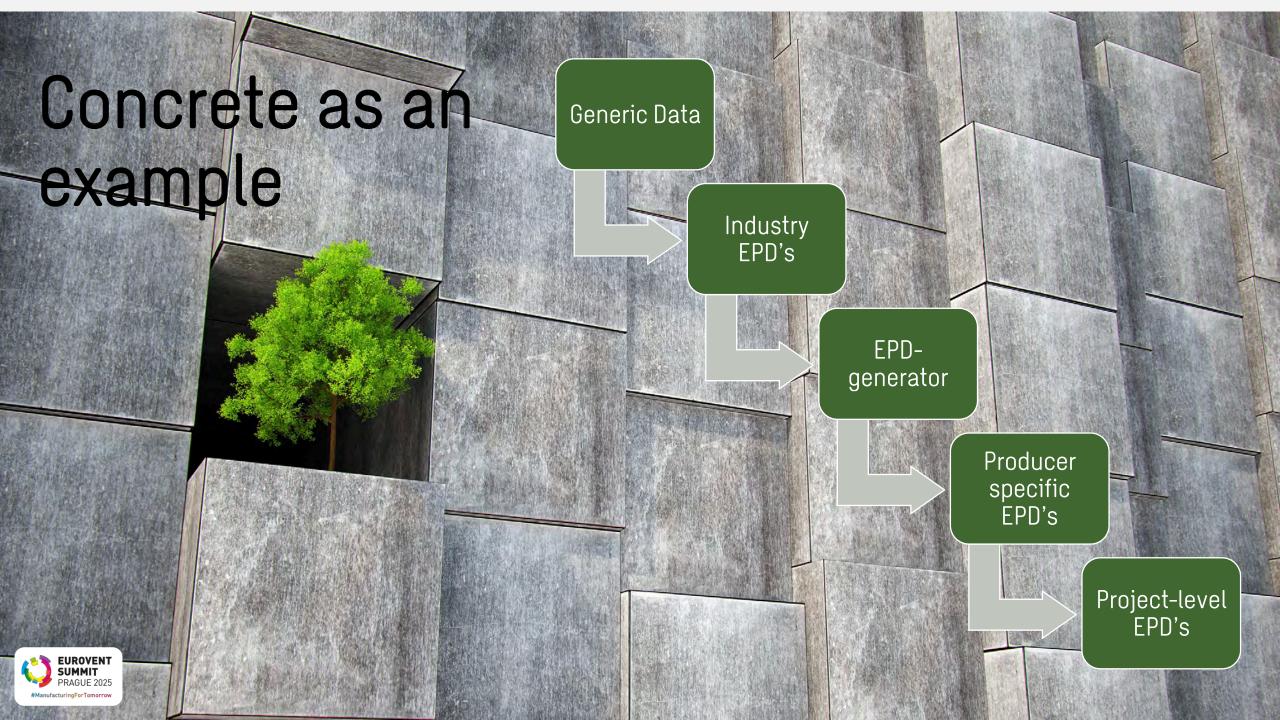
- Based on previous knowledge
- Best estimate
- Useful when precise data is missing

#### Specific calculations

- Best representation of actual scenario
- High degree of accuracy
- Complex and time consuming







#### Estimates

- Suggestions
- Experience from previous projects

Early design stage

## Qualified calculations

- Aggregate calculations
- Project proposal

- Energy requirements
- LCA calculation
- Close to as-built

Final design

## Measured values

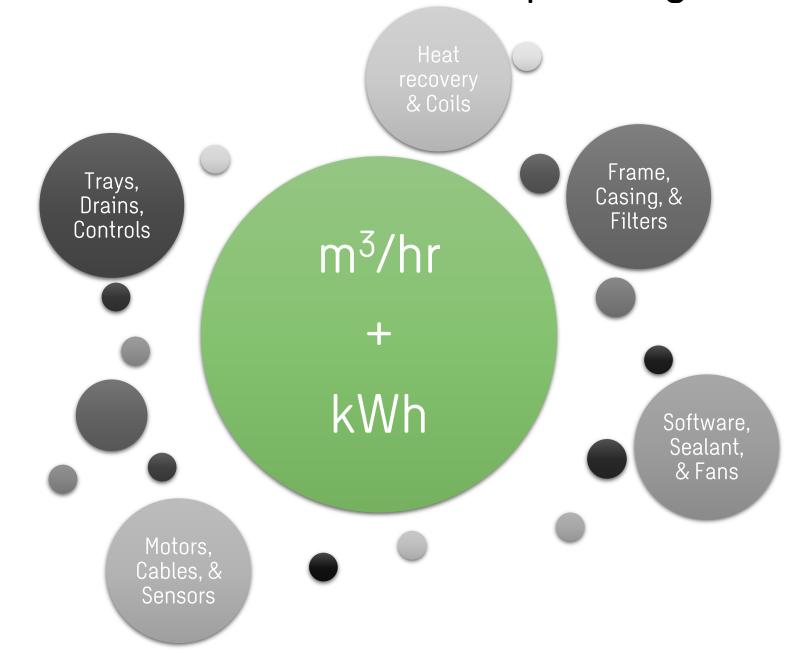
- Regulation reports
- Energy marking
- Final documentation
- Approval

Early LCA

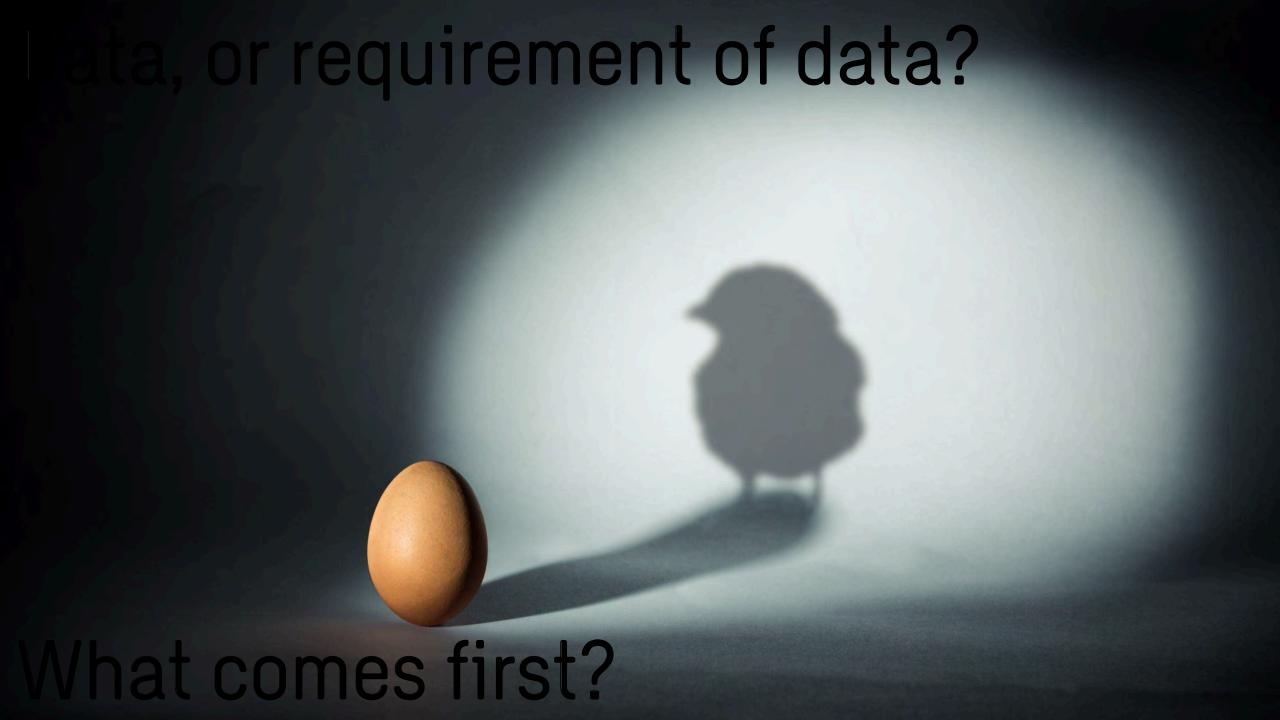
Final LCA



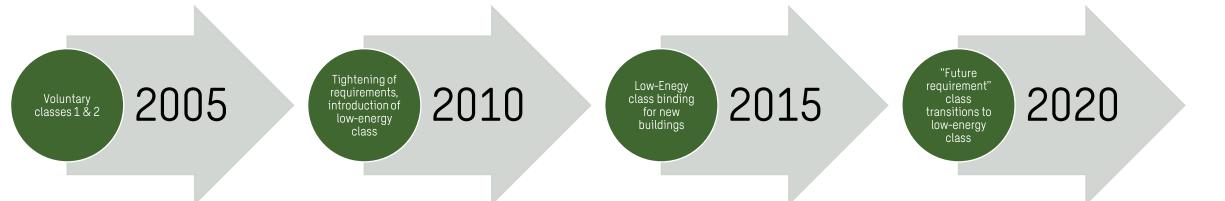
### EPD choices made that are not impacting building-LCA







## Energy design



### Climate change design







