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# Measuring & benchmarking workplace comfort



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Nederlands Français Deutsch Español Italiano Čeština Norsk Dansk

comfortmeter  
Building Performance

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[www.comfortmeter.eu](http://www.comfortmeter.eu)

**Fact:** people want to have the feeling that they can control their work situation.

**Parameters:** ability to regulate temperature, ability to open windows, management of light level, flexible furniture etc.

comfortmeter.eu/es/hiarte/#individualcontrol/

- Comfort (“IEQ”) *by definition* subjective concept
- (Cost)efficient: wide range of comfort parameters, present in the entire building, during extended periods of time.
- Most *direct* method of measuring.  
Alternative would be to calculate theoretical comfort impact based on correlations in laboratory conditions (Dr Fanger, 70’s)





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HELLENIC REPUBLIC  
National and Kapodistrian  
University of Athens



**NTNU**

Norwegian University of  
Science and Technology

Range of scientific domains:  
construction physics <> environmental psychology



## e-mail with link to 59 questions:

- Comfort
  - Temperature
  - Air quality
  - Light
  - Acoustics
  - Personal control
  - Layout of office, appearance of building
  - Cleanliness
- Information about surveyed person:  
Gender, age, stress level, ...

**Comfortmeter**

Step 4 of 11

**Comfort: air**

The air is never too dry in my workspace

Completely disagree



Completely agree

The air is never stuffy or with an odour in my workspace

Completely disagree



Completely agree

How satisfied are you with the general air quality in your workspace, i.e. dry/stuffy air, air with an odour, cleanliness?

Very dissatisfied



Very satisfied

Additional remarks related to air quality:

Some days ago, I was working in the office around 23:00 and the ventilation was still working: is this necessary?

 Previous step: temperatureNext step: light 

- Open input field
- Less than 10 minutes to respond
- High response rate: 57%
- Survey available in 10 languages

**comfort**meter  
Measuring Performance

**REPORT OF COMFORT SURVEY**

Building Name  
Building Code

Client Name  
Address

Survey Date

CD-T03E

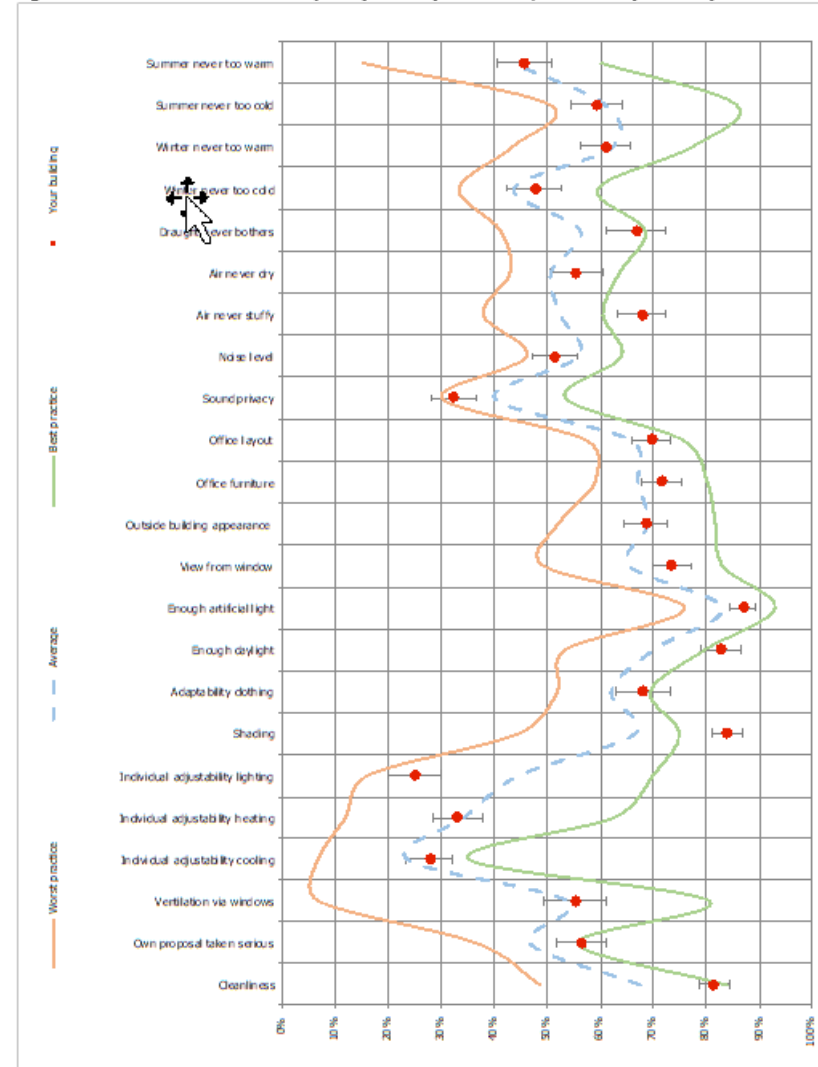
18-11-2016

How  
does your  
building  
perform  
?

## 4 DETAILED COMFORT ASPECTS

Figure 4 presents for the detailed comfort aspects the score in your building (including error) as well as the worst, average and best practice values.

**Figure 4: Scores of detailed comfort aspects (0%=very dissatisfied, 100%= very satisfied)**



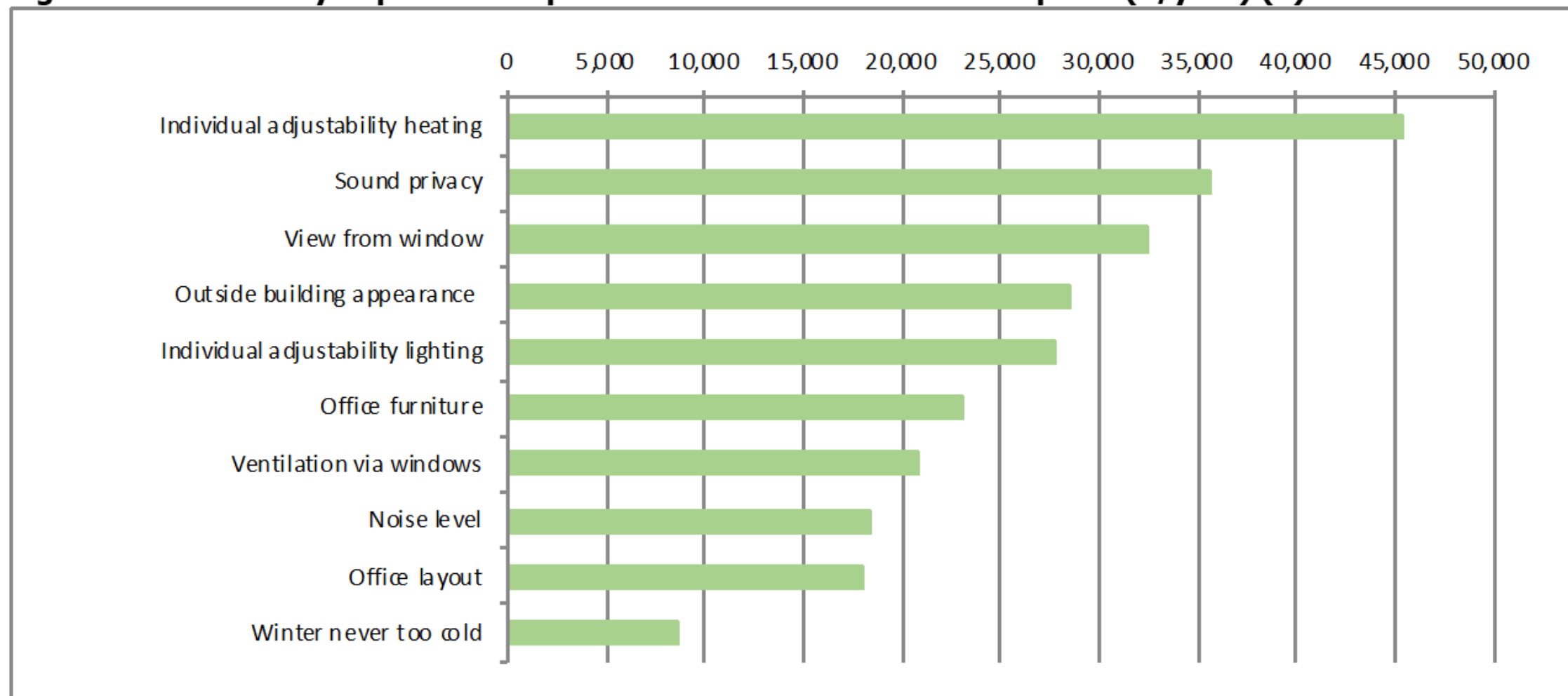


Decision to invest in comfort?

How to handle this process in a **rational** way?

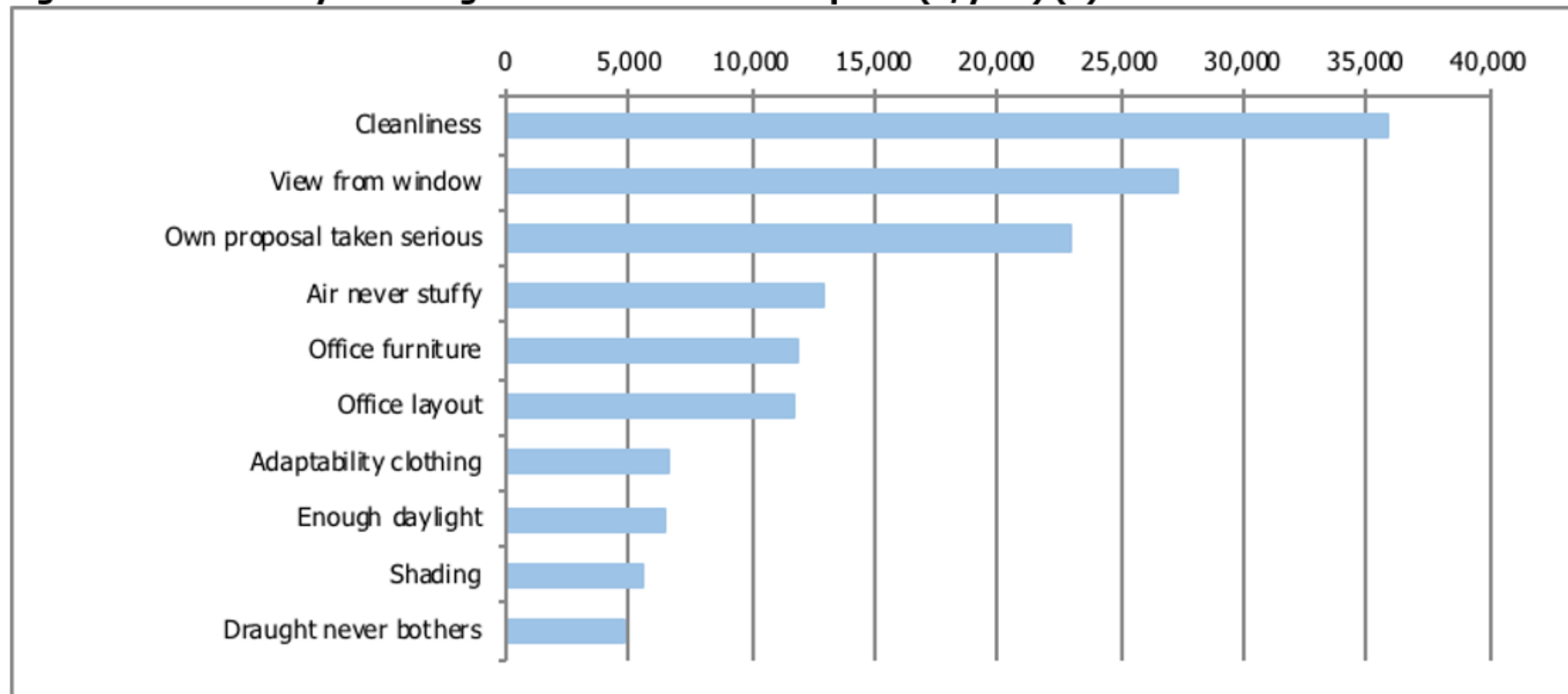
- Which measures?
- How to rank measures?
- Financial impact?
- Impact on the productivity of the building occupants?

**Figure 2: Productivity improvement potential of the worst comfort aspects (€/year) (\*)**



(\*) Rough estimate for your building

**Figure 1: Productivity advantage of the best comfort aspects (€/year) (\*)**



(\*) Rough estimate for your building

- **Cost-efficient**, compared to classical technical measurements (temperature, humidity, ...)
- **Rational ranking** possible of comfort enhancing measures (based on financial 'translation' of correlation comfort-productivity).
- Compliant with ***BREEAM-in-use*** ('Post Occupancy Survey' HEA 25)
- Compliant ***WELL Building Standard*** ('Post Occupancy Survey' feature 86)
- Useful in **NEN 8021**







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