

ASIEPI

Web-Event, 24-02-2010

Comparing Energy Performance requirement levels across Europe

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TNO | Knowledge for business



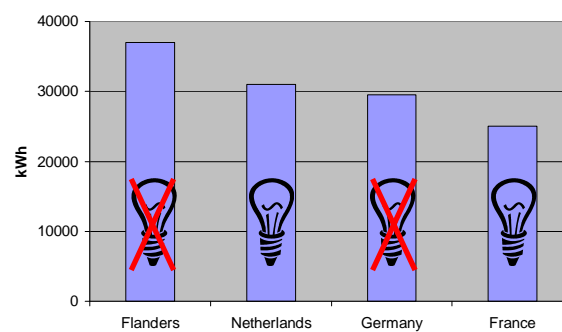
Comparing Energy Performance requirement levels across Europe



: 0,8



: E100



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EU Project ASIEPI

- Aim: Develop comparison method
- Various lessons learned
- Resulting in recommendations



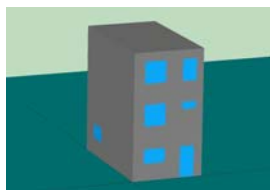
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Pilot studies ASIEPI



Heating system



Hot Water system



Cooling system



Ventilation system

MS	U_{average} (W/m ² K)
DK	0,36
PL	0,38
CZ	0,50
ES	0,80
DE	0,47
BE	0,54
FR	0,56
IT	0,70
FI	0,25
NO	0,23

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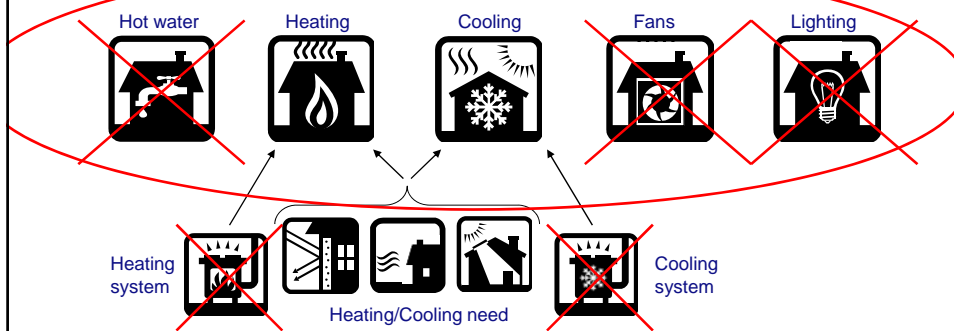
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Lesson 1

- National Energy Performances contain different energy uses:



- Comparison of EP requirement levels is NOT possible at this stage → EBPD recasting

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Lesson 2

- There is not 1 'tightness' of EP requirement level per country
- E.g. Effect of loss area compensation

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Pilot: Different heat loss areas



U_{opaque} : Floor + Roof + Façade ($\text{W/m}^2\text{K}$)



MS	U_{opaque}
ES	0,55
DE	0,33
BE	0,30
FR	0,34
FI	0,17
NO	0,11

MS	U_{opaque}
ES	0,52
DE	0,35
BE	0,33
FR	0,32
FI	0,15
NO	0,13

MS	U_{opaque}
ES	0,47
DE	0,38
BE	0,39
FR	0,29
FI	0,13
NO	0,16

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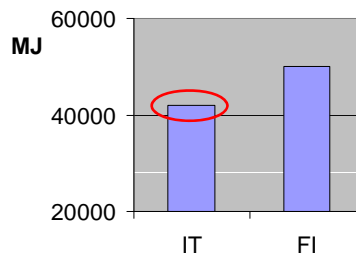


Lesson 3

- Climate complicates comparison
- Possible results comparison methods:



MS	U_{average}
IT	0,70
FI	0,25



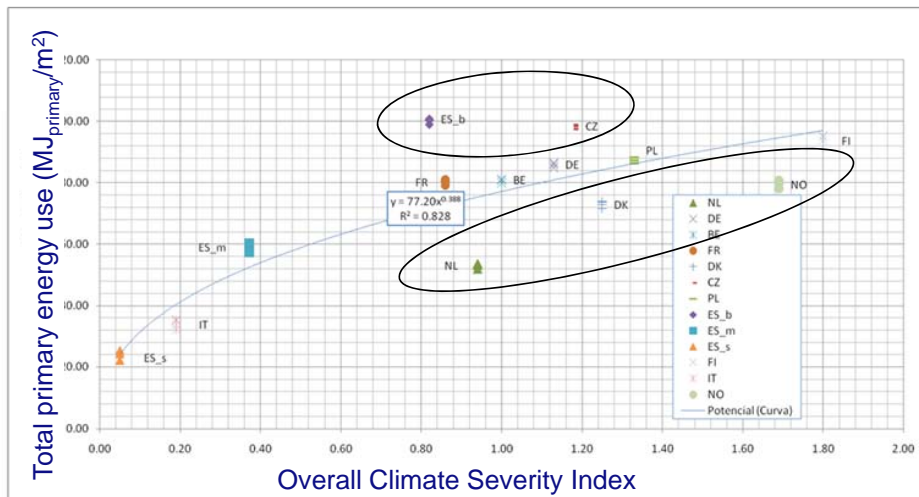
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Climate Severity Index



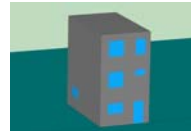
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Lesson 4



- House typologies & energy saving measures are country/region dependent
- Ideally: comparison based on:
 - Free choice of house typology per country/region, e.g.:

Uniform method: European CEN Standards

- Free choice of energy saving measures, e.g.:



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Conclusions

- Making a comparison is easy; making a fair and robust comparison is not
- No robust comparison possible at this stage:
 - Due to variety in type of energy uses taken into account in the various national methods
 - Due to lack of harmonised way of assessing building components and systems (& national values)
- 'Tightness' differs within countries over building types, shapes, system choices, etc
 - 'The order' among countries does not exist
 - Makes comparison prone to unfair comparisons or manipulation
- Developed method is rough, but is designed to suite expected future developments (CEN/ISO)

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Recommendations

- Be careful when interpreting comparison studies: what is on paper seems true, but it not automatically is!
- Development of high quality/harmonised CEN Standards is crucial for proper intercomparison
- Relevant measures should be (a variable) part of the national EP-method (e.g. not only energy needs)
- CEN Standards should address all these relevant national measures as well, so a uniform assessment is possible. For this it is important that all countries support the methods (an EU method cannot be a 'one man job'!)
- Need for European/Global comparison of energy use will expand: Further develop climate severity index within CEN/ISO

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More info

ASIEPI.EU



Benchmarking

→papers

→voice recordings of presentations

Disclaimer

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