

**March 31, 2010 - CENSE special web event
addressing the EPBD Concerted Action-II members**

**Towards a 2nd generation of energy performance
calculation procedures in Europe**
*to increase the accessibility and efficiency of the energy performance
calculation procedures in Europe*

**Set of recommendations for
2nd generation of CEN standards
on energy performance**

Dick van Dijk, TNO (NL)



Main recommendations



- Presented briefly on the next slides



→ Recommendation 1: Separation and balance



- Clear *separation* and *balance* between common procedures and national/regional elements



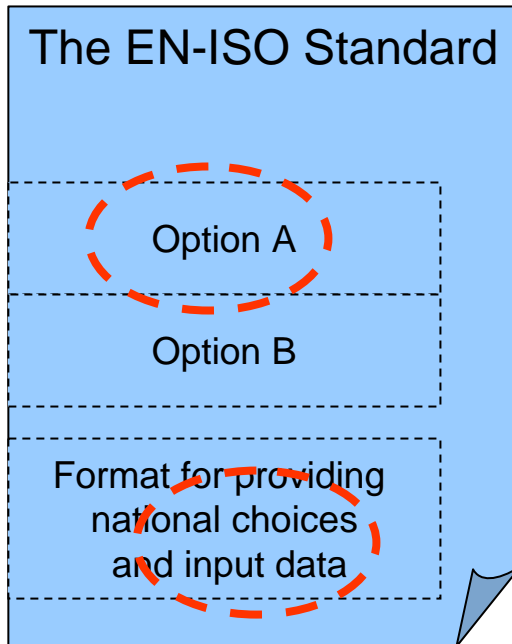
Why national/regional elements?:

- Climate
- Culture
- Policy
- Legal context

How this could be achieved... for each of the CEN standards



Common procedures
Following a common format



→ National choices and data can be given in a short and transparent **National Annex** to the EN-ISO standard

National choices, boundary conditions and input data

The National Annex to the EN-ISO standard

Example:

Country X:

Option A: Mandatory

Option B: Optional

Climate data: in Nat. standard X

Table input data:

...

Illustration: for country or region X



Common procedures + National Annex

→ At national/regional level, “country X”:

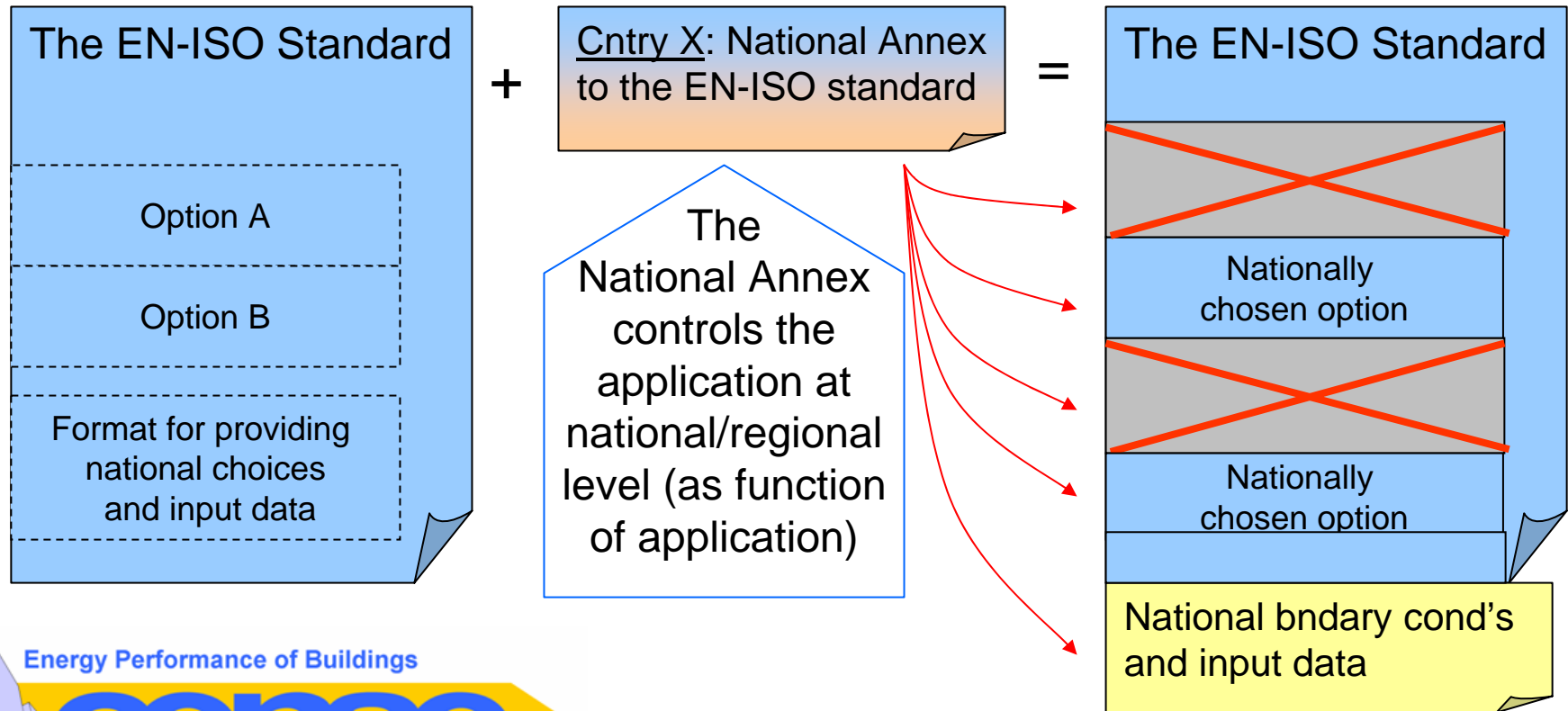
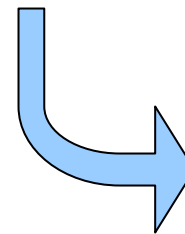
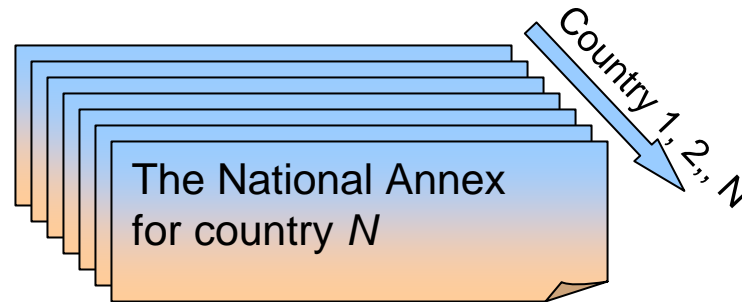
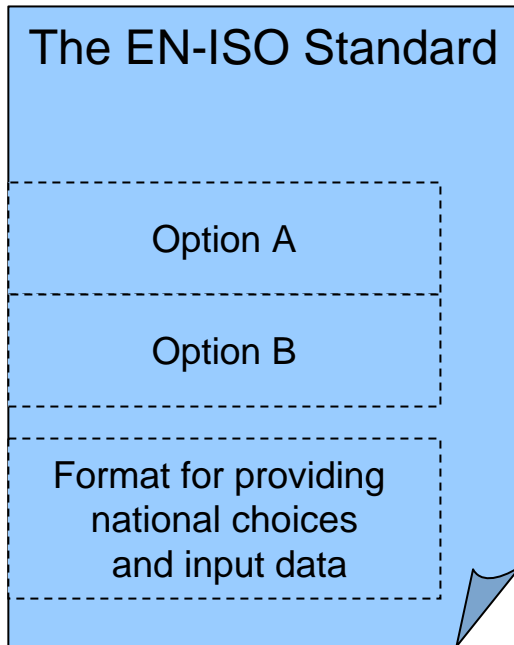


Illustration: at EN-ISO level



For a given EN-ISO standard

Collection of National Annexes



Enables transparent (tabulated) overview of similarities and differences between countries

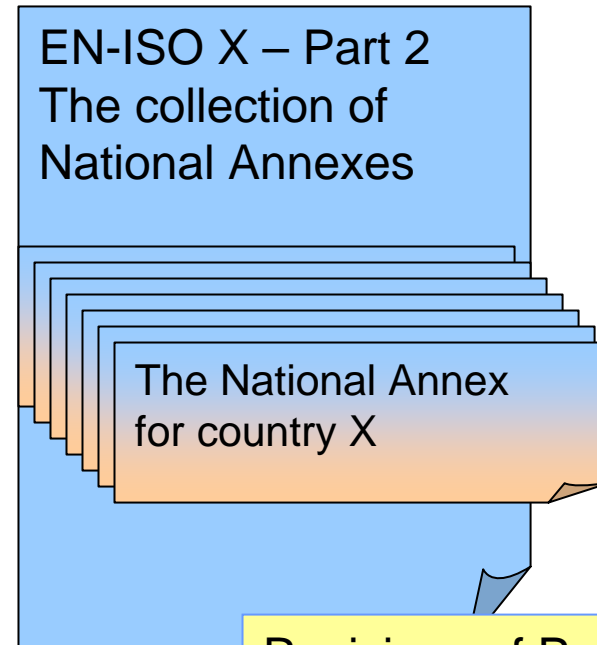
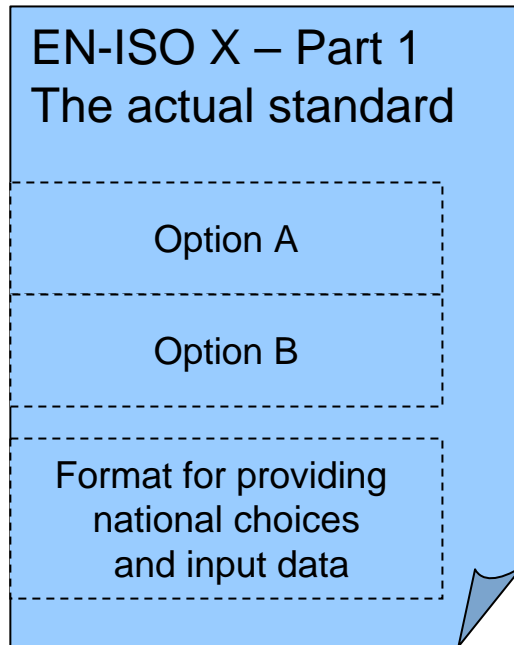
...Cntry 1:	Grey	Purple	Green	Grey
...Cntry 3:	Grey	Green	Red	Blue
...Cntry 5:	Red	Blue	Red	Blue
...Cntry N:	Blue	Purple	Red	Green

To avoid problems due to phase differences: split (1)



“EN-ISO X - Part 1”
= the EN-ISO standard itself

“EN-ISO X - Part 2”
= the collection of National Annexes

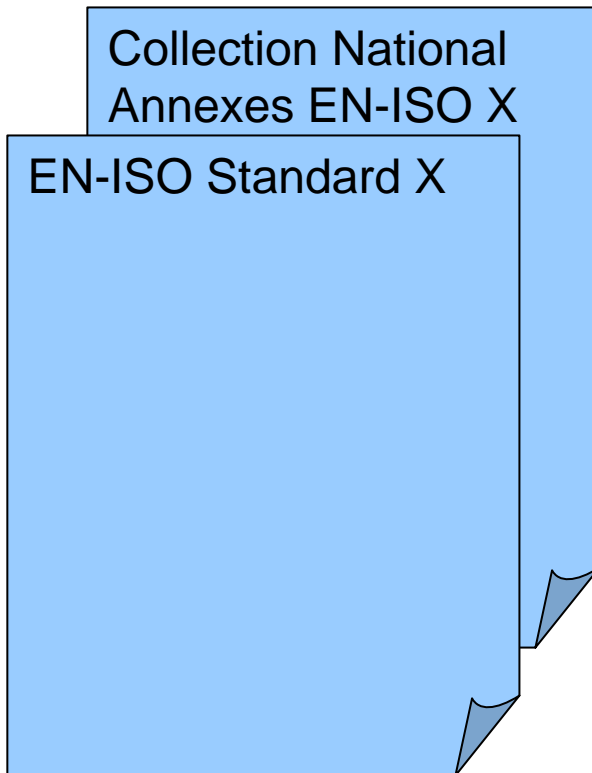


Revisions of Part 2 can be published with shorter intervals, if individual National Annexes are changed or added

To minimize threshold for implementation at national level: split (2)!



“Normative”



“Informative”

Technical Report to EN-ISO Standard

providing all informative parts, such as:

- *Validation results*
- *Worked examples*
- *Background information*
- *Informative procedures*
- *Bibliography*

All informative parts moved to a separate Technical Report accompanying the EN-ISO standard

→ This strongly reduces the volume & less confusion on status

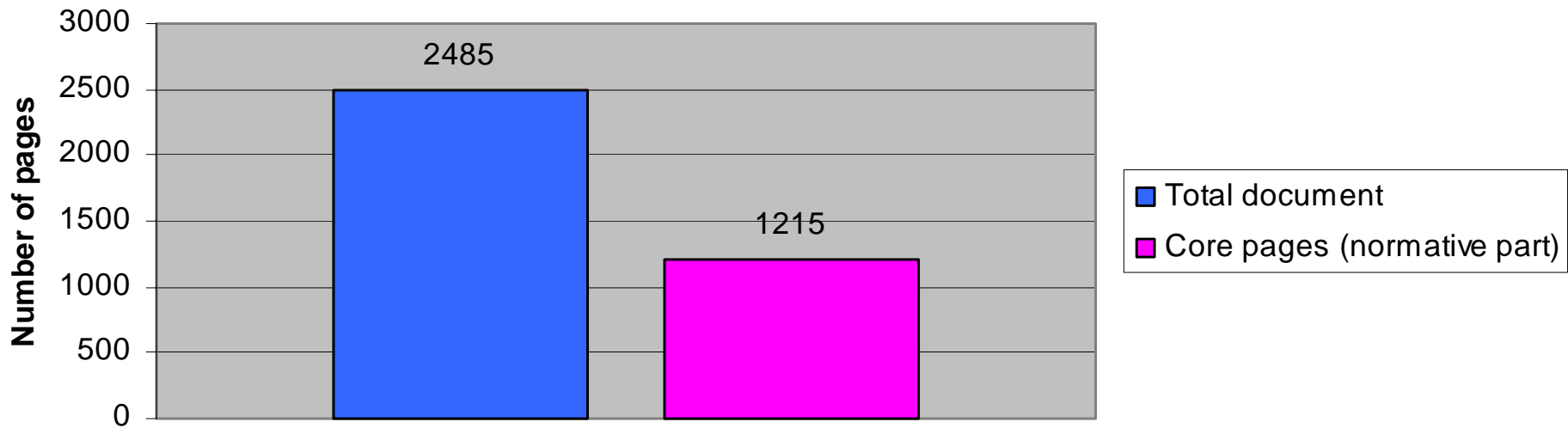
Can be ignored in formal national conversion/translation & implementation

Current set of CEN standards and their typical use



Rough indication:

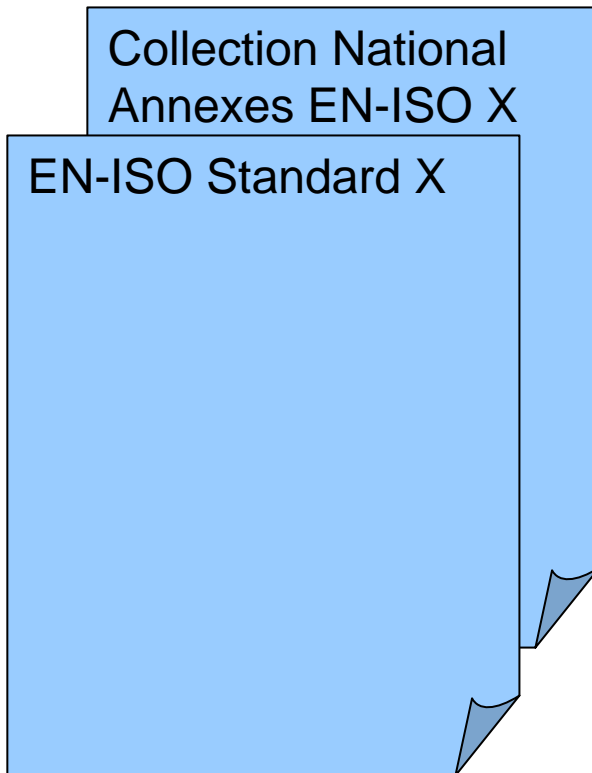
Set of CEN-EPBD standards (indicative)



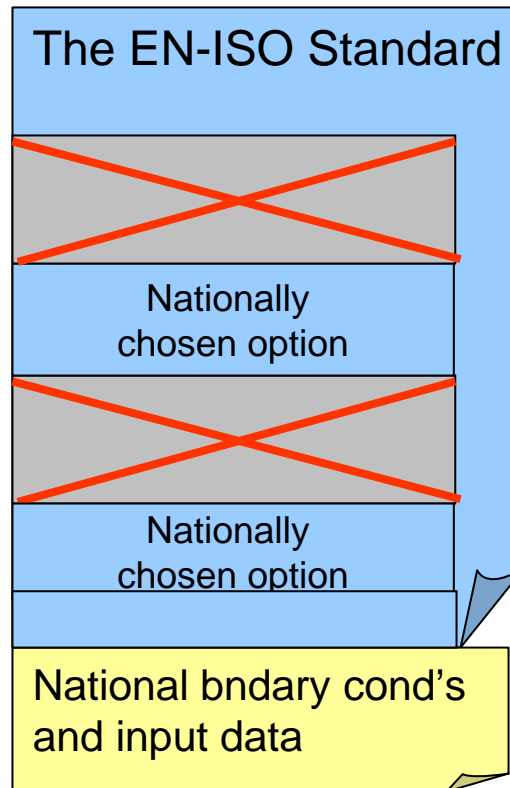
What about need for national “all-in-one” documents?



Formal legal documents



This means for cntry X



For daily practice:

National (informative) Application Document on (set of) EN-ISO standard(s)

Same content (!)
*but re-edited:
only national options
and data*

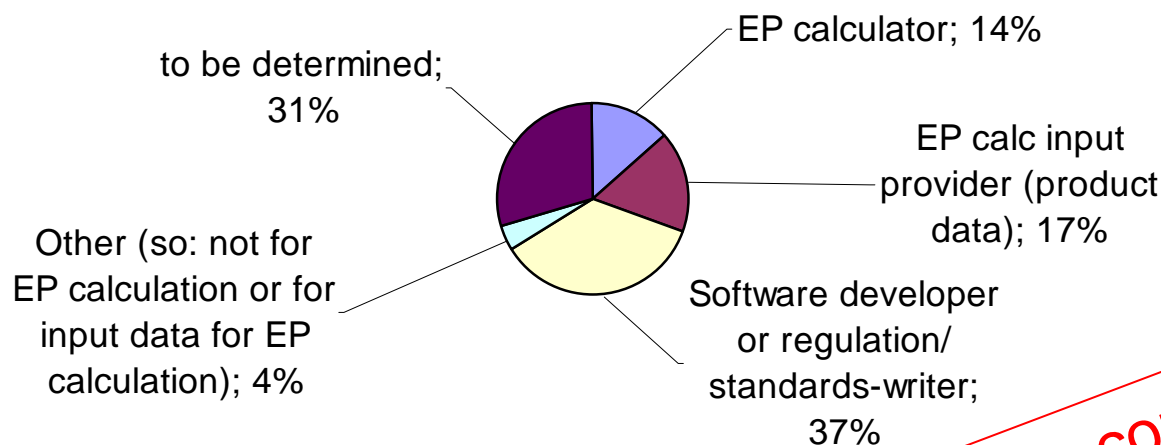
For one or more EN-ISO standards combined

Current set of CEN standards and their typical use



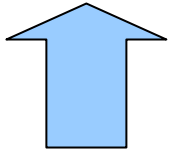
Rough indication:

Distribution of core pages over typical users
(rough indication)



Draft, to be completed

Recommendation 2: Software proof & unambiguous



- Full equations
 - and 100 % consistency in I/O relations
- Add a spreadsheet
 - for validation and software calibration
- → Less ambiguity and more uniformity in interpretation

Recommendation 3: Common format for all standards



- Use set common terms, definitions and symbols
 - (already available from “Umbrella Document, CEN TR 15615)
- Include overview input/output variables
- Include flow charts
- Common format in preparation, including worked example
 - For each CEN Standard
 - For each accompanying CEN Technical Report

Recommendation 4: EPBD-Recast ready



- Stronger role of CEN standards
- Wider application of calculation framework
 - Near zero energy buildings by more renewables, energy producing buildings
 - A must: include cooling, conversion to primary energy and CO₂, ..
 - Consideration of alternative systems
- More attention to (link with) inspection and to component requirements (certified product data!)
- Link to comparative methodology for calculating cost-optimum levels of minimum requirements
- Closer links to related Directives



Recommendation 5: More harmony in the level of detail of the procedures



- Bring in more **harmony** in the level of detail of the procedures
 - What is optimum balance between harmonized detailed (e.g. hourly) procedures and simplified procedures (with expert knowledge built **options** in)
 - What are the M.S. **expectations** on the **accuracy** of model and on the availability of **reliable input data**
- To **reconcile** differences; e.g. to avoid large discrepancies between simplified and detailed procedures
- Keywords:
 - Transparent structure
 - Simplified input is more important than simplified methods
 - Unambiguous but flexible (innovations!)



Recommendation 6: Technical improvements



- Various technical improvements will be recommended
- In CENSE technical reports, in preparation

Recommendation 7: Momentum



- Now is time to start to upgrade the European standards for EPBD and Recast
- Coincides well with start in ISO, using the CEN experience
 - Unique opportunity for Europe to retain the lead in the global arena
- See “impact” presented by Jaap Hogeling:

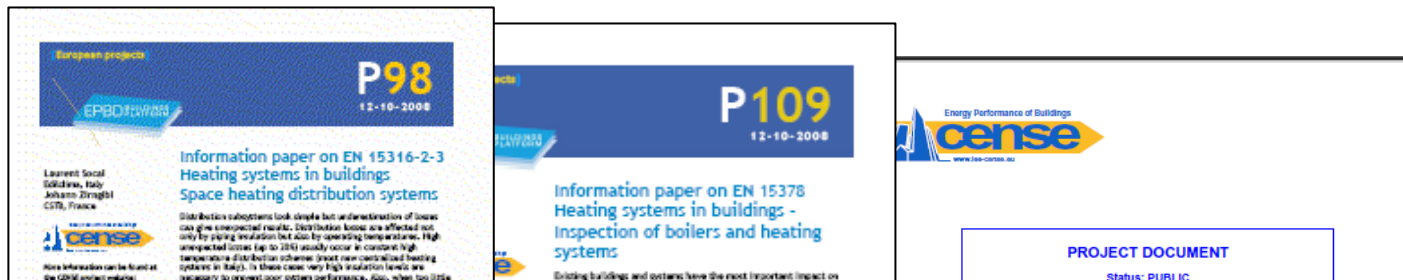
Now is the moment(um)!



More information



More information and downloads: www.iee-cense.eu



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Moreover, because this is an interim result of the project: any conclusions are only preliminary and may change in the course of the project based on further feedback from the contributors, additional collected information and/or increased insight.