



# ALDREN







ALliance for  
Deep energy  
REnovation in buildings

## A step forward to the European Voluntary Certification Scheme (EVCS)

 **ALDREN** Alliance for Deep Energy Renovation in buildings

WARSAW, 1. July 2019  
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**8 European partners are working together to increase the building energy renovation rate and quality**

 le futur en construction		 POLITECNICO MILANO 1863	<b>(research)</b>
	 Instituto Valenciano de la Edificación		
 Environment & Building Energy Efficiency		 Federation of European Heating, Ventilation and Air-conditioning Associations	<b>(application)</b>

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## Why ALDREN ?

ALDREN (ALliance for Deep RENovation in Buildings) is the **extended development and implementation of the**

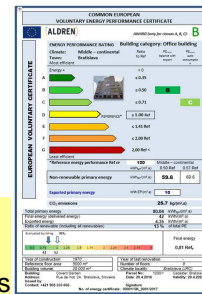
### Common European Voluntary Certification Scheme (EVCS)

based on the EPBD Art. 11 (9) and on CEN/ISO standards.

Building professionals are asking for:

- ✓ **comparability,**
- ✓ **transparency,**
- ✓ **reliability,**
- ✓ **quality.**

- **ALDREN objective** is to create a **European quality benchmark** based on the Energy Performance Certificate (EPC) and CEN standards

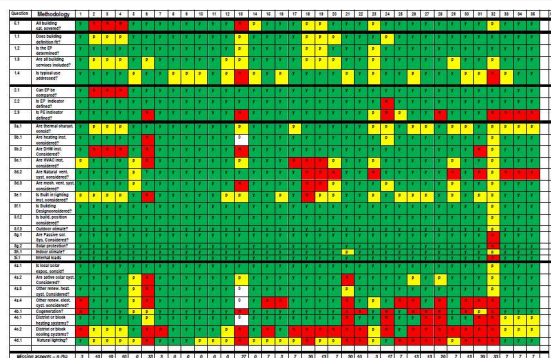


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## « European » transposition is key for the building professionals



Analysis of **conformity** to Annex 1 of EPBD (calculation methodology) of the **34 !!! national and regional transpositions** (Study for DG ENER in 2014)



**Only an European transposition will allow**

- the possibility to work on the "other side of the border",
- the "level playing field" (fair competition) for products,
- to get common databases, common information.

Source: J.Zirngibl, J.Bendžalová, „Technical assessment of national/regional calculation methodologies for the energy performance of buildings“, DG ENER 2015



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## Why ALDREN ?

### ➤ Policy support for EPBD implementation

Help Member State to fulfil **revised** Directive on Energy Performance in Buildings (2010/31/EU) (amended by 2018/844)

- **improvement of calculation methodology**
- **improvement of certificates – link to subsidies**
- **building stock observatory,**
- **cost effective approaches,**
- **building passport,**
- **evidence based of expected energy savings,**
- **wider benefits, Health +Wellbeing**



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### An example: the contribution of the ALDREN project to the transposition of EPBD amended by Directive 2018/844

	T2.1 Overall integration	T2.2 Certificate EVCS	T2.3 Measured energy	T2.4 Health Wellbeing	T2.5 Financial evaluation	T2.6 Building passport	T3.2 Training
<b>Art 1 Amendments Directive 2010/31/EU</b>							
<b>(2) Article 2a Long-term renov. Strategy</b>							
(g) evidence of expected energy savings and related to health, and air quality.							
<b>3. mobilisation of investments</b>							
(b) the reduction of the perceived risk							
<b>(4) Article 7 existing buildings</b>							
high-efficiency alternative systems and shall address healthy indoor climate'.							
<b>(6) Article 10</b>							
'6. link their financial measures to the targeted or achieved energy savings							

**ALDREN outcomes are related to 17 paragraphs of EPBD amendments**



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## Why ALDREN ?

- only about **1-2%** of the building stock is **renovated each year**,
- only around **15%** of building refurbishments **incorporate** significant **energy efficiency improvements** (energy savings are not the trigger)

one of the **major barriers** to improve building renovation numbers is the **absence, of a holistic strategy** to:

- ✓ design,
- ✓ finance,
- ✓ implement renovation protocols,
- ✓ the lack of a strong relationship between the different stakeholders.

- ALDREN work out a **common language** describing the **holistic approach** in renovation (how a thermal bridge can talk to a banker)?

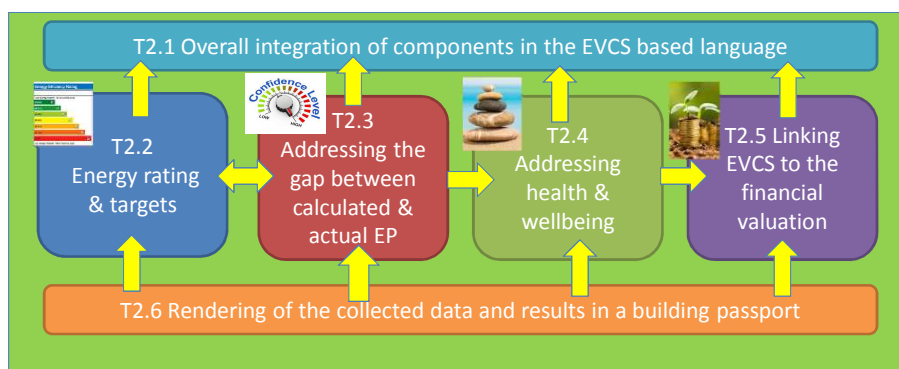


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## The ALDREN outcomes / results

**6 tasks for consolidation and adaptation of an EVCS**  
(European Voluntary Certification Scheme)  
**based on the ALDREN common language**



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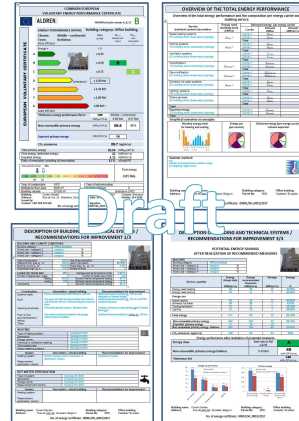
## VOLUNTARY COMMON EU CERTIFICATE (EVC)

[ALDREN]

- ✓ Common template, scale
- ✓ Common EP indicators and energy class
  - non-renewable primary energy balance (export)
  - non-renewable primary energy (auto-consumption)

### Additional indicators (EPBD)

- ✓ The entire building's overall energy use
- ✓ Total PE, delivered energy, CO<sub>2</sub>,
- ✓ energy production, share of renewable energy
- ✓ Measured energy (optional)
- ✓ Wellbeing indicators (optional)
- ✓ Energy class after recommended improvements,
- ✓ Potential energy savings
- ✓ **Recommendations for improvement** → link with the building renovation passport



**EVC** - can stand alone or can be included in other existing scheme



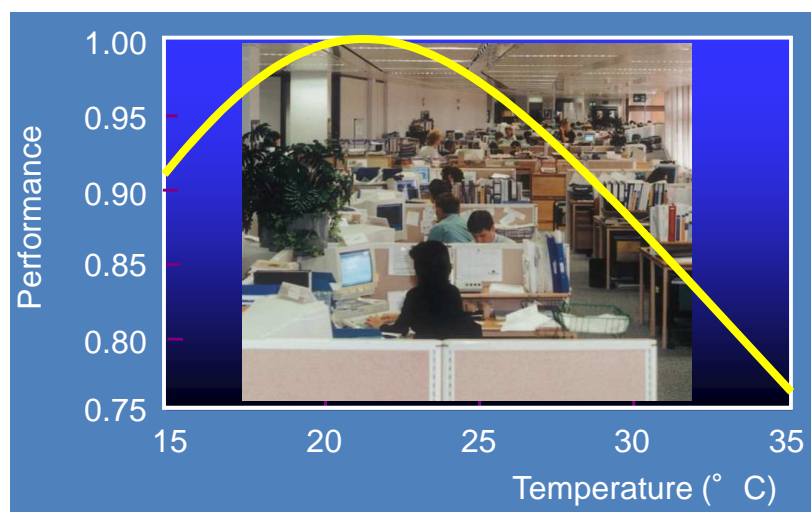
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## Focus on ALDREN T2.4 Addressing health & wellbeing

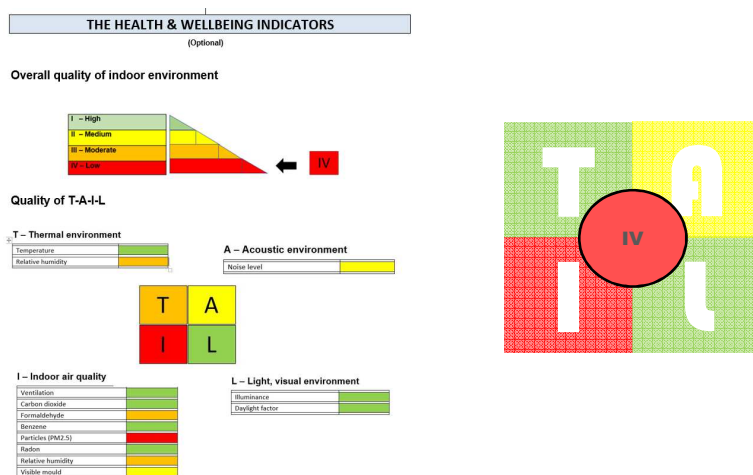
### TEMPERATURE AND PERFORMANCE OF OFFICE WORK



Source: Seppanen et al. (2005)

## T2.4 Addressing health & wellbeing

### ➤ ALDREN Classification: TAIL-score (under development)

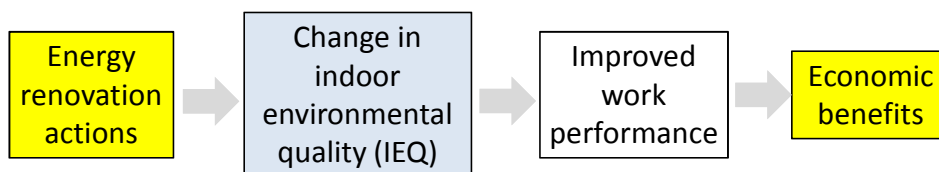


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### ➤ ALDREN Framework:

Link between energy renovation actions to economic benefits  
via  
**ALDREN health + Well-being indicator**



IEQ: Parameters describing indoor air quality, thermal, acoustic and visual environment



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## Conclusion

One **common** holistic  
European Voluntary Certification Scheme  
is **better** than  
34 national / regional **different** Certification Schemes.

The ALDREN outcomes are a step forward in this  
direction towards  
**the European Voluntary Certification Scheme (EVCS)**



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Join  
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[www.aldren.eu](http://www.aldren.eu)

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 754159.

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