
The Smart Readiness Indicator (for buildings) is facilitating the digital transformation of buildings

U-CERT session during the 12th edition of the Romanian Conference on Energy Performance of Buildings, June 11th 2021



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REHVA is The Federation of European Heating, Ventilation and Air Conditioning associations founded in 1963. We are an umbrella organization that represent over 120,000 HVAC designers, building services engineers, technicians and experts across 26 European Countries. www.rehva.eu

Where do we stand today?

“Science is converging on an all encompassing dogma, which says that **organism are algorithms and life is data processing.**”

“Intelligence is **decoupling** from consciousness.”

“Non-conscious, but **highly intelligent algorithms** may soon know us better than we know ourselves.”

Homo Deus by Yuval Noah Harari

[The Guardian's review](#)



Amended EPBD: BACS requirements & SRI

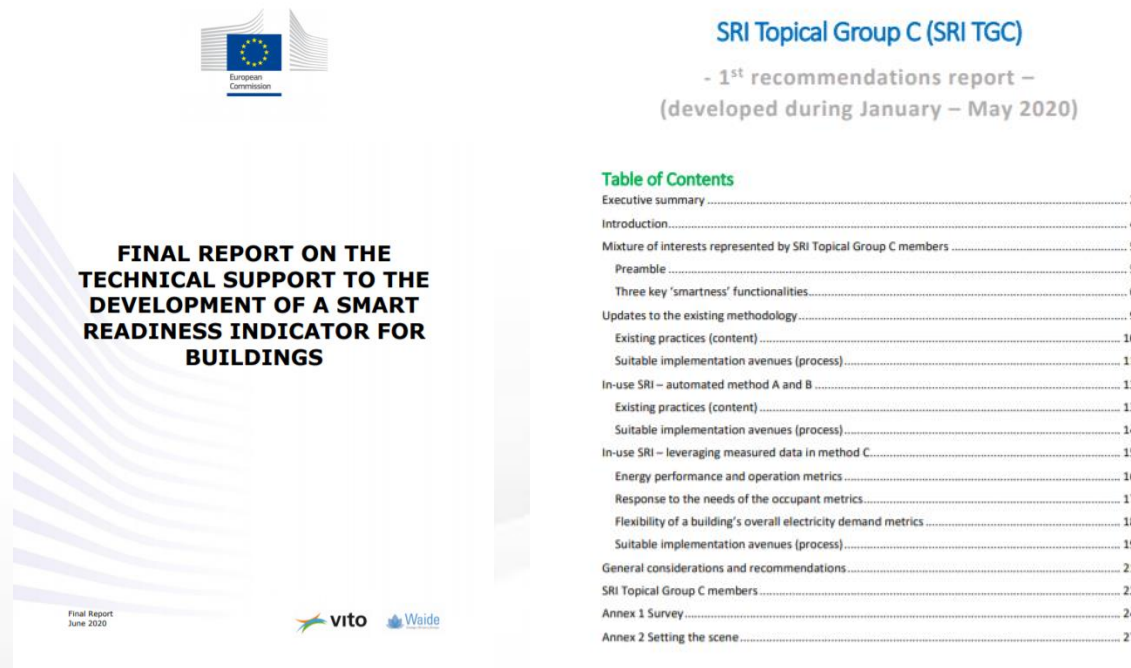


Figure 1: Synergetic effect Ecodesign and energy labelling

Check out the new tool prepared by the European Building Automation and Controls Association for ensuring compliance with the requirements introduced by Article 14 and Article 15, paragraph 4: “Member States shall lay down requirements to ensure that, where technically and economically feasible, non-residential buildings with an effective rated output for heating (Art.14)/air-conditioning (Art.15) systems or systems for combined space heating/airconditioning and ventilation of over 290kW are equipped with building automation and control systems (BACS) by 2025.”

Smart Readiness Indicator current status

The Smart Readiness Indicator (SRI) for buildings was introduced in 2018 by the [Directive amending the Energy Performance of Buildings Directive \(2018/844/EU\)](#). Since Autumn 2020, following the intensive development and extensive stakeholder consultation activities of the two SRI technical support studies contracted by the European Commission's (EC) Directorate General for Energy (DG ENER), **the first Smart Readiness Indicator version is ready**. Furthermore, the so-called **SRI legal acts (EU regulations) have entered into force across the EU's Member States on January 10th, 2021**. By design the SRI is a voluntary scheme so it is now up to the Member States of the European Union to decide how to implement the SRI at national level and as desired only after undergoing a no commitment national testing exercise.

Smart Readiness Indicator some details

MEASURE THE TECHNOLOGICAL READINESS OF YOUR BUILDING

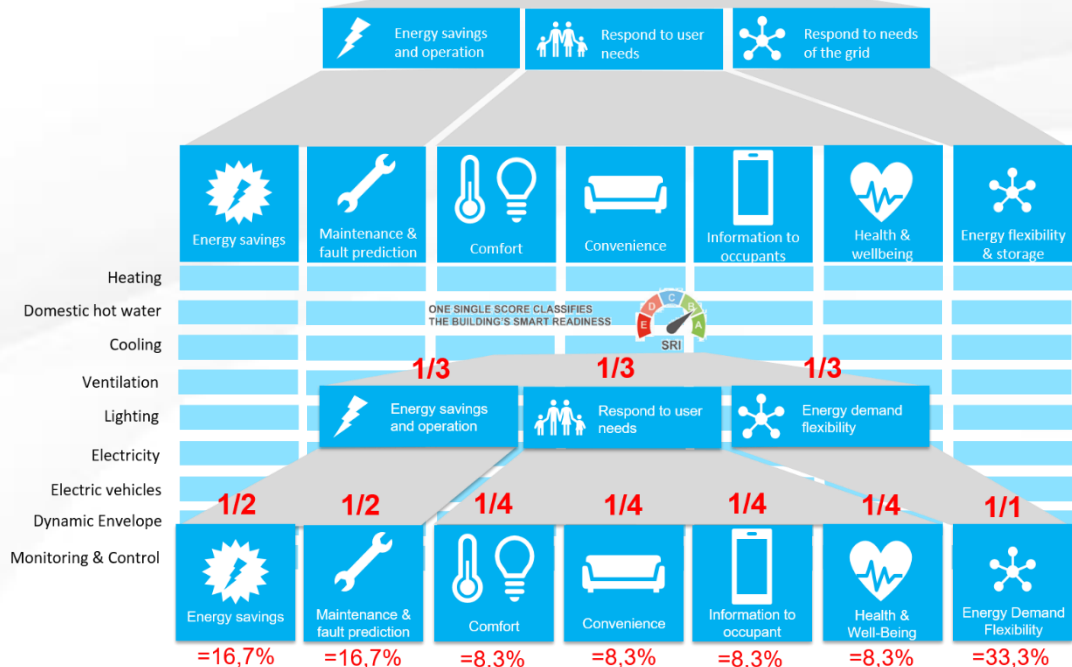


1 Readiness to adapt in response to the needs of the occupant

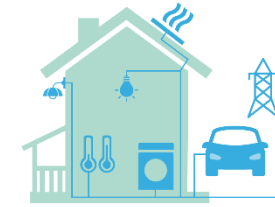
2 Readiness to facilitate maintenance and efficient operation

3 Readiness to adapt in response to the situation of the energy grid

ONE SINGLE SCORE CLASSIFIES THE BUILDING'S SMART READINESS



SMART BUILDING



- EXPECTED ADVANTAGES**
- optimised energy use as a function of (local) production
 - optimised local (green) energy storage
 - automatic diagnosis and maintenance prediction
 - improved comfort for residents via automation



IMPACTS

	Energy efficiency	Maintenance and fault protection	Comfort	Convenience	Health and well-being	Information to occupants	Energy flexibility & storage	SRI
Total	39%	18%	60%	71%	48%	59%	0%	42%
Heating	32%	18%	62%	55%	24%	74%	0%	
Sanitary hot water	17%	0%	45%	70%	67%	83%	0%	
Cooling	65%	51%	78%	72%	61%	55%	0%	
Controlled ventilation	41%	0%	55%	60%	34%	44%	0%	
Lighting	85%	14%	90%	100%	83%	15%	0%	
Dynamic building envelope	10%	0%	31%	56%	22%	46%	0%	
Electricity	10%	0%	-	-	-	68%	0%	
Electric vehicle charging	-	38%	-	82%	-	84%	0%	
Monitoring and control	52%	43%	62%	72%	45%	64%	0%	



U-CERT
User-Centred Energy Performance
Assessment and Certification

U-CERT IN A NUTSHELL

Horizon 2020 project, September 2019 – August 2022

- Introduce a next generation of **user-centred Energy Performance Assessment and Certification Scheme** to value buildings in a holistic and cost-effective manner supported by an **EU-wide training and certification process for building professionals**
- Facilitate convergence of quality and reliability, using the **EPB standards** developed under the **M/480 mandate**, presenting the national and regional choices on a comparable basis
- Encourage the development and application of holistic user-centred innovative solutions, including the **Smart Readiness of Buildings (SRI)**
- **Encourage and support end-users in decision making** (e.g. on deep renovation), nudge for better purchasing and instil trust by making visible added (building) value, using EPC's
- **Strengthening actual implementation of the EPBD** by providing and applying insights from the perspective of all involved stakeholders, facilitated and empowered by the **EPB Center**

3 TRANSITION PATHS ENVISIONED BY U-CERT



A full and smooth implementation of the EPBD and EPB standards under mandate M/480

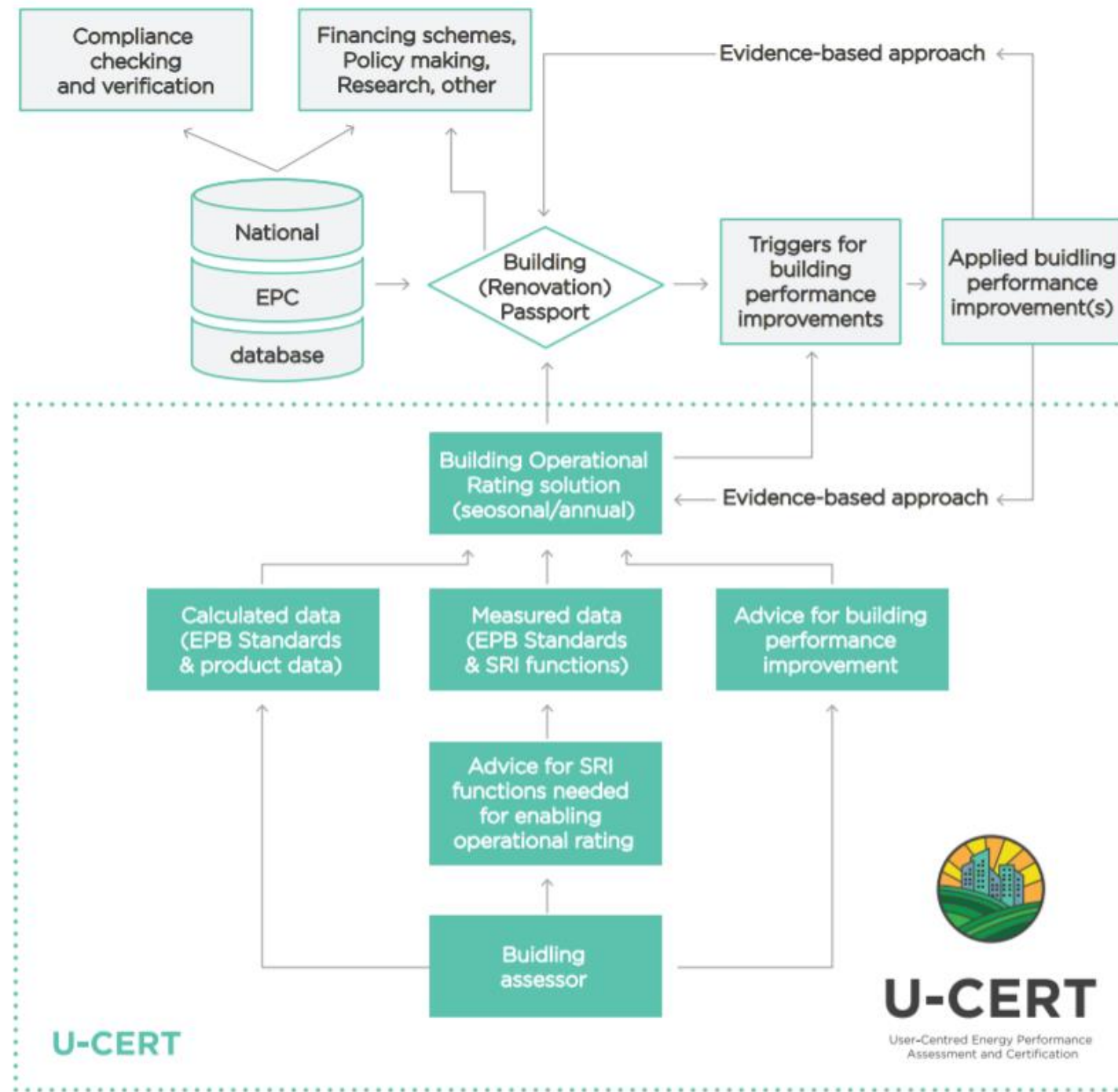


User centred design for facilitating and accelerating building performance improvements (ranging from behaviour change all the way to deep renovation)



Leveraging synergies between the Smart Readiness Indicator for buildings and the set of EPB standards for shifting the current EPC paradigm to an evidence-based approach e.g. building operational rating

Visualising U-CERT's endeavour



The ongoing digital transformation of buildings

“The smartness of buildings should be a means to an end and not a goal in its own right. Smartness should serve the purpose of providing with a better building in terms of energy performance, health, convenience, etc. There are some examples of buildings where technology enthusiasts have gone so far in automation that the technologies become gimmicks or are so experimental only the person who installed it knows how to operate it.” stated **Stijn Verbeke, senior researcher at EnergyVille/VITO and University of Antwerp**, in a recent [expert interview on BUILD UP \(The European Portal for Energy Efficiency in Buildings\)](#). Stijn was the principal investigator in the first SRI technical support study and the coordinator of the consortium of the second technical support study commissioned by the European Commission’s DG ENER.

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Where are we heading?

“Are **organism** really **just algorithms** and is **life** really just **data processing**?”

“What’s **more valuable** intelligence or consciousness?”

“**What will happen** to society, politics and daily life when non-conscious, but **highly intelligent algorithms** know us better than we know ourselves?”

Homo Deus by Yuval Noah Harari

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