Smart Readiness Indicator

2nd SMARTEN CONTRIBUTION TO VITO CONSORTIUM (29 June 2018)

The present document outlines the position and key recommendations of smartEn to the Second Progress Report by the VITO consortium on the Smart Readiness Indicator (SRI) for buildings.
smartEn appreciates the efforts that are being made to deliver a comprehensive methodology to implement the provisions established in the revised Energy Performance of Buildings Directive (EPBD).
However, smartEn would like to highlight **4 additional recommendations[1] to improve the current version of the 1st SRI technical study**:

1. The contribution of non-standardised solutions should be equally recognized in the SRI methodology

The SRI should raise awareness about the benefits of smart technologies and ICT in buildings and drive the uptake of these solutions. The value of each installed smart solution, whether standardised or not, should be equally recognised and a methodology to score their contribution should be shaped accordingly.
Standards can support the uptake of smart solutions and their use should be fostered in all building types.
If certain specific flexibility solutions are not properly accounted in the SRI assessment at its launch date, due only to a lack of available standardization, this will be a strong disadvantage to the companies which create innovative solutions and are at the cutting edge of market development.
In this light, smartEn look forward to supporting the expert process to ensure the full range of key solutions are integrated for the launch of the SRI.

2. The evolution towards a quantitative assessment, where it makes sense, should be further explored for future SRI developments

The SRI methodology proposed by VITO consortium is a checklist-based score derived using manual on-site assessment. smartEn welcomes the VITO consortium's recognition in the Second Progress Report (lines 1074-1125; 2649-2844) that the use of digital calculation models or other technologies can reduce the time and efforts needed for the SRI assessment.
As soon as technological progress allows, smartEn encourages the future evolution of the SRI from a qualitative score to a measured, calculated, quantitative SRI assessment for smart services (compared to a reference value setting minimum requirements, specific for each building type).
Already now, existing technologies enable to 1) measure the capacity available to charge EV and the actual energy consumption of all EV chargers connected to a building and 2) measure the energy consumption and supply across the domains.

3. The differences in building types should be reflected in the methodology

smartEn believes that the starting point for a correct indicator should be the recognition of the complexity of the EU building stock and the definition of specific SRI requirements for each building type, including industrial, commercial and residential ones (both public and private). A second level of vertical details should also be contemplated to identify the peculiarities of some building types.[2]
smartEn recommends that the SRI follows the approach adopted for the Energy Performance Certificate which uses a number of building types as baseline buildings.

In particular, smartEn believes that different weighting for each domain and service should be introduced, depending on building type. This is due to the different use of each building type: a domain/service might be

[1] smartEn already formulated 7 recommendations in its written contribution submitted on 2 May 2018: www.smarten.eu/wp-content/uploads/2018/05/20180502_Final-smartEn-contribution-SRI.pdf
[2] Office (commercial/government), education, healthcare, lodging and catering (hospitality), retail, residential, data centre, industrial, transport hubs (station, airport) and public assembly (stadium).

Smart Energy Europe
Rue d'Arlon 69-71,
BE-1040 Brussels
+32 (0) 2 58 88 992
www.smarten.eu
@smartEnEU

crucial, hence it should have a greater weight. For example, domestic hot water is very important in hospitals and hotels whereas it is marginal in offices[3].

In addition, a weighting mechanism should be set to give more relevance to the impact criteria that can attribute a significant value to a building's demand-side flexibility as the key driver of the building's role in the clean energy transition. Demand-side flexibility is the central precondition for dynamic energy efficiency and for demand response to support energy network management, the market and system integration of renewable energy sources and the optimal management of on-site generation.

4. The absence of solutions which are crucial for the smartness of a building should be penalised

In the methodology proposed by the VITO consortium, the first step of the on-site assessment, the "triage process", has crucial importance: the assessor needs to identify which domains/services are present in the building under assessment. If a domain/service is not installed, according to the proposed methodology there is no need to inspect how this is controlled (i.e. define its functionality level, and its impact score) and its absence is not penalised.

smartEn recommends the introduction of a penalisation system, i.e. a degrading of the SRI, for the absence of domains/services which can be considered crucial for the smartness of the building under assessment, in particular if their deployment is supported by EU/national legislations.
For example, the EPBD review foresees the requirement for non-residential buildings above certain thresholds to be equipped with BACS by 2025. If a building under SRI assessment falls under this obligation, but does not have BACS installed, it should be penalised through a degrading of its SRI score.

Another criteria for the SRI penalisation should be related to the lack of connection/integration of some assets in the overall control system. This aims at reducing the number of stand alone systems while supporting a full integration in the building system. For example, in several buildings windows units are not connected to the heating system which result in a missed optimization of the system efficiency.

Such a new penalisation rule should be specific to the building type and local conditions, such as climate zones.

smartEn remains at your disposal to discuss these proposals in further detail.

[3] There is a standard to define this specific weighting in EN 15232:2017