
SMART READINESS INDICATOR: DRIVING THE UPTAKE OF SMART SOLUTIONS IN BUILDINGS

ECI's position on the development of a Smart Readiness Indicator for buildings and related impact assessment¹

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RECOMMENDATION 1

The pre-installation of basic infrastructure should be positively reflected in the scoring

RECOMMENDATION 2

Let SRI lay the groundwork for non-standardized smart services impact attribution

RECOMMENDATION 3

Avoid that tailoring the methodology to the building's context acts against the very purpose of the SRI

RECOMMENDATION 4

Implement SRI in a way it creates market confidence in energy performance certificates (EPCs)

¹ This report summarizes the highlights from ECI's inputs to the Interim Report and the Second Progress Report by the consortium. All documents are available from www.smartreadinessindicator.eu

RECOMMENDATION 1: THE PRE-INSTALLATION OF BASIC INFRASTRUCTURE SHOULD BE POSITIVELY REFLECTED IN THE SCORING

Pre-installed adequate basic infrastructure, such as wiring and connectors, is a prerequisite for the cost-effective implementation of smart technologies at later stage.

As an example: a new building that has adequate wiring and connectors for electric vehicle charging present, should be considered more "ready" than a building without. The functionality levels as proposed in the catalogue categorizes the two buildings on the same level (level=0) of readiness, which is not reflecting the reality of cost-effective implementation of Smart Ready Services. Our recommendation is in line with the basic principle that is described in the definition used in the report (line 146), stating that "ready" indicates that *"the option to take action exists, but is not necessarily realized"*. Intrusive construction works to install basic infrastructure when the building is occupied are an investment and convenience barrier to actually realizing the Smart Service.

We recommend that the "readiness" reflects the extent to which the basis infrastructure is present - following the layer hierarchy as referred to in relevant standardization documents². Absence of required infrastructure on the first (physical) layer should result in functionality=0, presence of required basic infrastructure (apart from the application layer), should give functionality=1 (and intermediate levels where appropriate). In the concrete example of the EV charging infrastructure: functionality level=0 when no pre-cabling present; functionality level=1 when the building is pre-cabled (acc. to relevant standards), and level=2 when dumb charging is possible.

RECOMMENDATION 2: LET SRI LAY THE GROUNDWORK FOR NON-STANDARDIZED SMART SERVICES IMPACT ATTRIBUTION

The report by the consortium states that (line 1835): *"services whose attribution of impacts is not yet fully developed or confirmed could also be omitted. As this streamlined methodology is intended to be actionable at the present time then any service that is currently too poorly defined and too difficult to be assessed should be omitted until it is sufficiently mature to be included."*

If the SRI were to really drive the adoption of smart technologies in buildings, the methodology cannot depend on the (slow) process of standardization alone - on the contrary, the methodology should lay the groundwork for standardization.

Omitting services from the methodology based on the mere absence of clear standards defining their attribution of impacts would significantly hamper innovation and create additional barriers for innovative (yet very effective) technologies to enter the markets. We recommend the SRI methodology to include a proper methodology to score those technologies' contributions to the smart readiness on an equal basis as more mature and standardized services.

² Such as Cenelec' standards mapping (SGAM) - retrieved from: <ftp://ftp.cenelec.eu/EN/EuropeanStandardization/Fields/EnergySustainability/SmartGrid/SmartGridSetOfStandards.pdf>

RECOMMENDATION 3: AVOID THAT TAILORING THE METHODOLOGY TO THE BUILDING'S CONTEXT ACTS AGAINST THE VERY PURPOSE OF THE SRI

On tailoring the methodology to the buildings needs and context, we are concerned that the proposed wording opens up for too flexible an interpretation even in such a way that it could work against at least 2 of the 3 pillars of the SRI.

As stated, "*depending on the climate, internal loads, building function and overall building energy performance a building may not need*" certain smart readiness services. Apart from "climate" those are not fixed lifetime building characteristics but they are subject to (sometimes even frequent) changes. The simple fact that a building can adequately respond to those changes is the very purpose of the SRI.

Therefore we at least recommend rephrasing this paragraph in a way that tailoring is limited to intrinsic building characteristics (that cannot be changed without invasive construction works or even deconstruction of the building).

Moreover, the weighting of impacts by domain, intended to better reflect the contribution smart functionalities make to the overall impacts as a function of the domain they apply to, should not be applied arbitrarily. More work is required to establish agreed recommended weightings, avoiding arbitrary decisions of the inspector. To avoid contestable judgement and resulting arbitrariness, it is recommended that the second technical study addresses a procedure and clear guidance of this renormalisation process avoiding loopholes resulting in an SRI that works against its own purpose. Clear guidelines should be developed, in order to minimize the assessor's margin of appreciation and avoiding that the same building would receive diverging SRI scores depending on the expert who made the assessment.

RECOMMENDATION 4: IMPLEMENT SRI IN A WAY IT CREATES MARKET CONFIDENCE IN ENERGY PERFORMANCE CERTIFICATES (EPCs)

As the consortium rightly states, it is recommended that further work be done to identify the degree of overlap between the energy savings captured in the EPC methodology implemented at Member State and/or regional level, and those addressed in the draft SRI methodology presented in their report.

It is well-known that too often energy efficiency renovations fail to achieve predicted savings in practice and also very low energy buildings seem to be vulnerable to have higher real than calculated consumption. This gap becomes obvious in a world where both asset based (i.e. calculated) energy performance certificates (EPC) and consumption based EPC are allowed.

A major question to be addressed is, to what extent the Smart Readiness Indicator (SRI) may have on reducing that gap and what secondary benefits this may have.

ECI advises to focus future investigation on prospective interaction between EPC and SRI at the user side, including (1) how to decrease the diversion between asset based and actual energy performance of the building (using SRI to include occupant behaviour in EPC); (2) how to increase the confidence level of energy efficiency renovations and



de-risk energy efficiency investments, and (3) how to increase the probability of the building to fit into the energy system of the future. We would suggest to refer to a recent study commissioned by ECI (Ecofys - Navigant, 2018)³.

About European Copper Institute

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³ Ecofys-Navigant (May 2018). The Smart Readiness Indicator: A potential, forward-looking Energy Performance Certificate complement? Retrieved from: <http://www.leonardo-energy.org/resources/1445/>