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APPLiA position on the Smart Readiness Indicator (SRI)

Summary

The present paper seeks to provide a brief feedback following the stakeholder meeting of 26 March 2019 as well as the workflow of the two topical groups APPLiA is active in. APPLiA follows the development of the Smart Readiness Indicator (SRI) with great interest and appreciates the work that has been done by the study team up to date. We also appreciate that stakeholders are actively involved in the whole process and are closely consulted. If established correctly, this could unlock the potential flexibility in smart buildings, and to further enhance uptake of smart technologies, including smart appliances. In order to be successfully implemented, the indicator should be clear, simple and easy-to-understand but at the same time, also provide additional value to building owners and occupants.

1. Introduction

Today's smart and connected buildings should be seen as a key part to enable demand side flexibility (DSF). APPLiA therefore noted with a special interest the idea to develop the SRI as proposed in the revised Energy Performance for Buildings Directive (EPBD). More details on what exactly the Indicator would cover and how it would be implemented through the accompanying Delegated Act are needed. It would be crucial to clearly state the practical implementation and which appliances would be included when measuring the smart readiness of the building. We would like to reiterate that the efforts on the SRI developments should duly consider the ongoing work on Smart Appliances currently developed under Lot33, including the developments achieved on interoperability.

2. Format and added value

APPLiA appreciates the initiative of setting up a European voluntary scheme that could enhance a greater uptake of smart technologies resulting in significant energy savings in a cost-effective way, while improving comfort of building occupants. This would enable buildings and occupants to play a key role in smart energy systems. Since the implementation of SRI is voluntary for members states, it is important to ensure that the SRI should be simple and easy to use. It should also balance efforts and added value:

the more detailed the SRI is, the more costly it becomes. On the other hand, it should be ensured that the indicator provides valuable insights and, in the end, an added value to building owners and occupants. The study team presented three different methods (A being a simplified online quick scan, B standing for an expert SRI assessment, and finally C measuring an in-use smart building performance). It was suggested that A and B are feasible for the first version of the SRI, since the option C would require an in-depth methodology and might be proposed and developed once the indicator is reviewed. APPLiA in principle supports the distinction between a simplified quick-scan for residential buildings and an expert assessment for non-residential buildings. It should be duly considered how to ensure that a simplified self-scan will be of added value. The expert assessment, on the other hand includes an intervention of a third-party and an on-site inspection. Also, the link to Energy Performance Certificates should be clearly established, ideally both assessments should be done at the same time. Although the simplified method A should be streamlined, it should be ensured that all 3 functionalities set out in the EPBD are represented. Demand side flexibility represents an added-value of the indicator and should not be omitted from the method.

It should be also considered what is the expected impact: a comparison of different buildings, information for occupant, etc. To assess the DSF potential of a building, the indicator will provide a qualitative score. This will not express any information or flexibility potential of a building. To provide more accurate overview and to quantify the flexibility potential, it is recommended that a complex methodology is developed in the future. This could be done via estimation of flexibility potential based on installed capacity or on historical flexibility performance of a building.

3. Impact criteria

In the first technical report the study team proposed to use eight impact criteria whereas the total SRI score would be based on an average of total scores of these criteria. To streamline the assessment, we would suggest a re-grouping based on functionalities and similar characteristics into following 4 categories:

- Comfort + convenience + well-being & health
- Energy + flexibility for the grid + self-generation
- Maintenance & fault prediction
- Information to occupants

This would apply for both calculation and displaying the final scores but should not in any case impact the weighing scores of any of the eight impact criteria (i.e. leading to lower weighting factor of certain criteria). When it comes to an output score, it is important to consider if this should be a single value or a score per category. We believe it is relevant to have not only a single overall score, but also a score per each impact criteria. It is believed that different impact criteria are not of same importance for different buildings and occupants.

4. Weighting

When it comes to the weighting of domain services, we would recommend that technologies than can be uninstalled from the buildings have the same weighting as other technologies, and not lower weighting as suggested during the first topical group meeting of early May. It is in the interest of consumers, building owners and also solutions providers that the SRI scoring results remain always an objective and are not lowered only based on the criteria that they can be uninstalled from the building.

5. Transparency of the SRI

To ensure the credibility and integrity of the SRI scoring, the transparency on the assessed domains is crucial. The trust in the SRI scoring will be affected by the integrity of the assessment process. Therefore, the SRI result should clearly state which domains are assessed and not eliminate certain domains from the triage process based on the assessor's subjective decisions.

3. Interoperability

The mere presence of smart devices and technologies is not sufficient to materialize the potential of flexibility. Interoperability needs to be ensured. Members of APPLiA have been intensively working towards ensuring this goal, together with the European Commission and standardisation associations. In 2015, the Smart Appliances REFerence ontology (SAREF) was launched. SAREF provides a common language that can be used by different home appliances to communicate with a home energy manager. To demonstrate how interoperability can be achieved, APPLiA, together with EEBUS Initiative and Energy@home, that is represented by leading European manufacturers, prepared a practical demo including various connected home appliances of different brands interacting with a home energy manager. This was possible via Smart Premises Interoperable Neutral-message Exchange (SPINE), a neutral language based on SAREF. An extension of SAREF was made to cover energy (SAREF4ENER). The added value of SAREF4ENER was also recognized in the preparatory study for smart appliances (Lot33) and the Study on ensuring interoperability for enabling Demand Side Flexibility[1] prepared for the DG Connect.
SAREF has been also published as an ETSI Technical Specification and include several extensions to specific domains, such as SAREF4ENER (TS 103 410-1). SAREF as ontology is modular and has potential to be extended to new domains, such as buildings, environment and smart cities. SPINE for White Goods has been standardized as European Standard (EN50631, CENELEC).

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[1] Study on ensuring interoperability for enabling Demand Side Flexibility. Prepared by DNV GL, TNO and ESMIG. 2018.

4. Conclusion

APPLiA believes that if is designed correctly, the SRI has a great potential to further enhance the uptake of smart technologies and contribute to unlocking of demand side flexibility potential. It should be duly considered what should be the output value and also its granularity. Also, it should be distinguished among different impact criteria since the value they bring differs among buildings and end-users. Last but not least, a fair compromise should be found among different formats in order to ensure that the SRI has an added value but also stays cost-efficient, balancing efforts and potential benefits. Finally, we believe that interoperability is key and therefore, the existing solutions should be taken into consideration. APPLiA is ready to further elaborate on these possibilities and is ready to work closely with the study team and the Commission towards the successful development of the SRI.

APPLiA - Home Appliance Europe represents home appliance manufacturers from across Europe. By promoting innovative, sustainable policies and solutions for EU homes, APPLiA has helped build the sector into an economic powerhouse, with an annual turnover of EUR 50 billion, investing over EUR 1.4 billion in R&D activities and creating nearly 1 million jobs.