

## Guide to SmartBuilt4EU technical sheet structure

### Objective and principles of the factsheets:

The objective of the SmartBuilt4EU factsheets is to summarize the impact of implementing smart solutions on the performance of the building and the value of the Smart Readiness Indicator (SRI).

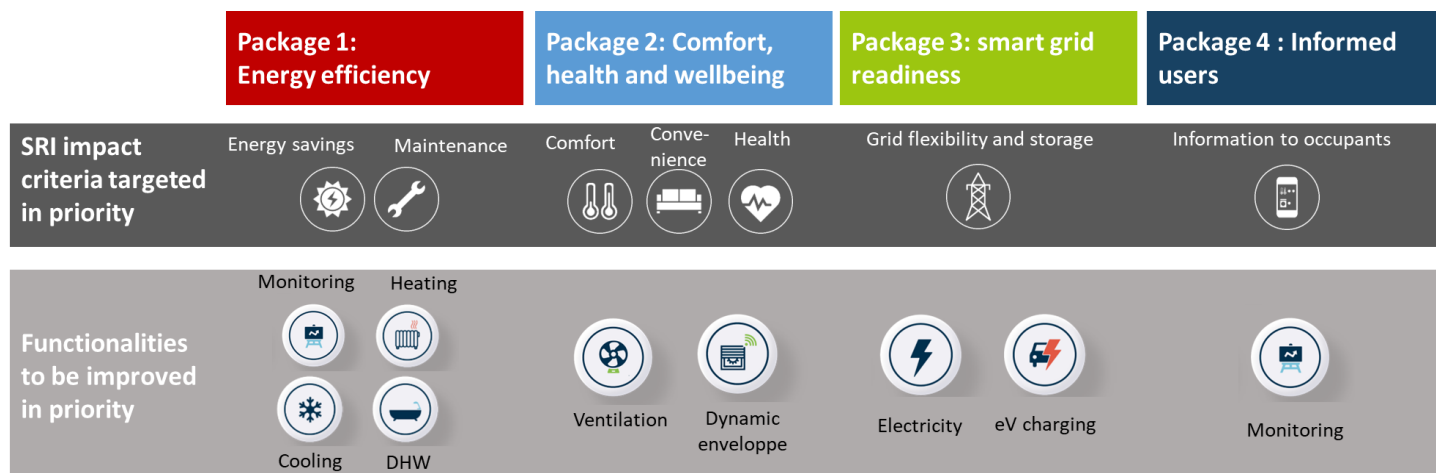
To that end, solution packages are defined, allowing to improve certain impact criteria of the SRI, and two different building typologies are considered (residential and office buildings).

Then, the impact of each solution package is evaluated, in terms of how it influences the impact criteria defined in the SRI methodology.


### The four solutions packages considered are:

1. Energy efficiency: the selected functionalities aim at maximizing energy efficiency by reducing energy waste or other sources of energy consumption.
2. Comfort, health and well-being: in this case the scope is to enhance thermal and visual comfort of the occupants. Furthermore, indoor air quality (IAQ) levels are also considered that are linked to occupant health and well-being.
3. Smart grid readiness: this package focuses on the building-grid interaction and on those functionalities that make building operation flexible towards the smart grid needs.
4. Informed users: this package contains all those functionalities which provide information, such operational data, benchmarking, fault and failures detection to the building users, both occupants and facility managers.

### *Synthesis of the solution packages proposed, SRI impact criteria and functionality improvements targeted*



## How to read a factsheet? – Example with Technical sheet 2









**Technical sheet #2**

Technology solution package		
Energy efficiency	X	Comfort, health and well-being
Smart grid readiness		Informed users

Building typology		
🏠 Residential	X	🏢 Office

**Short description**  
Solution package focused on thermal and visual comfort and indoor environmental quality, in order to improve the physical and emotional health of office users by better controlling ventilation and shading systems.

Solution package specific services		
Domain	Standard configuration	Proposed configuration
 Ventilation	Supply air flow clock control	 Variable air flow control based on air quality sensors (CO <sub>2</sub> ) Supply air temperature control with variable setpoint
	Supply air temperature control with constant setpoint	
 Dynamic Envelope	Manual shading control	Shading control on room sensor data (illuminance levels)

SRI Score <sup>1</sup>		
 Comfort	+10-20%	
 Health, well-being and accessibility	+20-30%	
 Convenience	+10-20%	

**Main impacts and added values**

- An advanced control of ventilation system contributes to an improved Indoor Environmental Quality (IEQ), which is linked with higher occupant satisfaction or with employee health and increased productivity, reduced sick leaves, reduced turnover.
- Another perspective is relating the benefits of an improved IEQ to containing negative effects such as direct medical costs or indirect costs related to poor employee performance, which could either cause higher absenteeism, reduce work effectiveness and employee recruiting and retention.
- Improving the control level of a shading system can not only reduce heating and/or cooling needs but also improve thermal and visual comfort of employees, enhancing the office experience.
- Visual contact to nature has proven to have positive effects on concentration, stress, and cognitive performance.

<sup>1</sup> Calculated using SRI assessment package v4.4.  
[https://energy.ec.europa.eu/topics/energy-efficiency/energy-efficient-buildings/smart-readiness-indicator\\_en](https://energy.ec.europa.eu/topics/energy-efficiency/energy-efficient-buildings/smart-readiness-indicator_en)

- First the typology of technical sheet is indicated. In this case the technical sheet is focused on those smart technologies and functionalities which target comfort, health and well-being.
- Is it a residential or an office building?
- A short description provides the most relevant information to understand the aim of the selected smart technologies.
- This table displays, on the left, a standard configuration representing reference building services for the selected building typology. Then, on the right, a proposed configuration is indicated. This one contains the smart technologies and functionalities selected for the solution package.
- An SRI score increase is reported for the SRI impact categories affected by the smart technologies selected. It refers to the score increase which the proposed configuration could achieve in comparison with the standard one. The value was calculated using the SRI assessment package v4.4.
- Finally the main impacts and added values resulting from the improvements in the above-mentioned impact categories are highlighted.

These factsheets have been developed by EURAC within the SmartBuilt4EU project.

More information on [www.smartbuilt4eu.eu](http://www.smartbuilt4eu.eu)