



SMART READINESS INDICATOR (SRI)

A FOCUS ON MONITORING & CONTROL SYSTEMS

SRI is a common EU scheme for rating the smart readiness of buildings.

Monitoring and control is one of the **nine technical domains** addressed by the SRI.

Building automation involving automatic controls for heating, ventilation and air conditioning (HVAC) systems, lighting, access control, energy management, fire alarms and other controls allow building occupants to better control the building's systems. For HVAC systems for instance, run time management and control can deliver critical information on the operational performance of a building, enhance the comfort and safety of the occupant, while increasing energy efficiency.

Furthermore, the EPBD (Energy Performance of Buildings Directive) considers electronic control and monitoring systems as a possible alternative to inspections. These technical systems provide cost-effective and significant energy savings for residential and commercial building owners.

In certain retrofit case studies, the installation of high-performance BACS (Building Automation and Control Systems) implemented to steer the HVAC system via non-invasive installation, resulted in energy savings up to 45% of the whole building, with no consequence on the indoor environmental quality levels (source: [REHVA](#)).

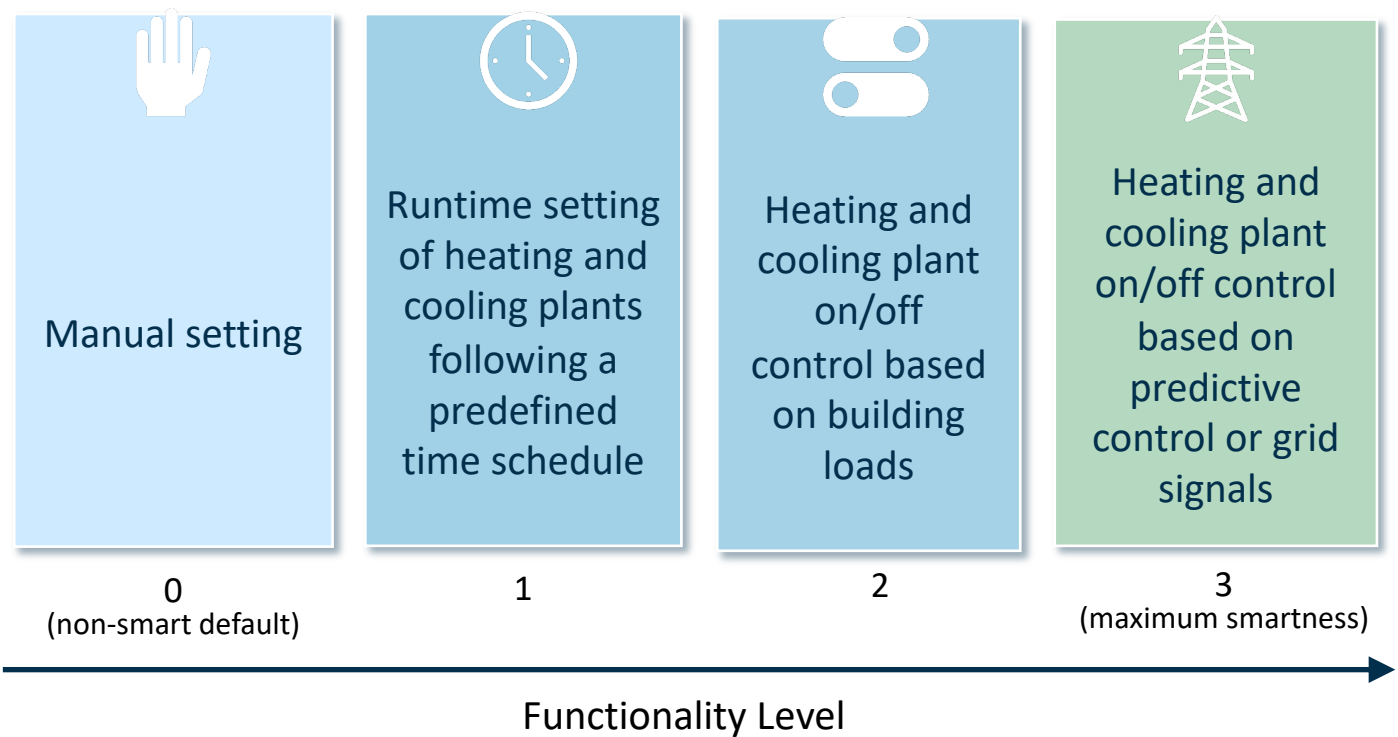
AN EXAMPLE OF SMART-READY SERVICE

The SRI implements a catalogue of smart-ready services. The next page provides one example of smart-ready service categorised under the Monitoring and Control technical domain. An example of a full Smart-ready-services catalogue can be obtained by requesting the SRI assessment package at:

<https://ec.europa.eu/eusurvey/runner/SRI-assessment-package>








Service group: HVAC Interaction Control

Smart-ready-service: Run-time Management of HVAC Systems



FUNCTIONALITY LEVELS CORRELATION WITH SRI IMPACT CRITERIA

Each functionality level of a given smart-ready service has corresponding individual scores for each of the **seven impact criteria** addressed by the SRI, as illustrated below.

	 Energy efficiency	 Maintenance and fault prediction	 Comfort	 Convenience	 Health, well-being and accessibility	 Information to occupants	 Energy flexibility and storage
Level 0	0	0	0	0	0	0	0
Level 1	1	0	1	1	0	0	1
Level 2	2	0	2	2	1	0	1
Level 3	3	0	2	3	1	0	2

- **Level 1** | Runtime setting of heating and cooling plants following a predefined time schedule - offers improved comfort, convenience and a mild increase in energy efficiency, energy flexibility and storage for building occupants.
- **Level 2** | Heating and cooling plant on/off control based on building loads - offers a moderate increase in comfort, convenience, and energy efficiency, maintained level of energy flexibility and storage, with improved health, well-being and accessibility for building occupants.
- **Level 3** | Heating and cooling plant on/off control based on predictive control or grid signals - offers maximum level of energy efficiency and convenience, with maintained moderate increases in comfort, health, well-being and accessibility, along with energy flexibility and storage for building occupants.

According to the SRI delegated regulation, Member States shall make available at least one smart-ready catalogue to be used by experts as the basis for identifying and assessing smart-ready services. Smart-ready service catalogue includes the list of smart-ready services to be considered for calculating the smart readiness score, related functionality levels, and corresponding individual scores for the impact criteria. Member States may decide to make available several smart-ready catalogues, for instance for different building types.

FURTHER READING

Examples of European and International associations to learn further about monitoring and control systems include: eu.bac (European Building Automation and Controls Association) and CABA (Continental Automated Buildings Association).



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- SRI website, newsletter, FAQ and resources: <https://ec.europa.eu/smart-readiness-indicator>
- European Commission Contact: Brigitte Jacquemont: ENER-BUILDINGS@ec.europa.eu
- Twitter: @Energy4Europe #SmartReadinessIndicator

Several projects are developing Research & Innovation activities around the SRI. Stay updated by joining the European Smart Buildings Innovation Community at: <https://smartbuilt4eu.eu/join-our-community>