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# Application of SRI Advanced Evaluation on Auto-DAN Case Study

**Paolo Finocchi, Diego Rattazzi, Celina Solari, Clemente Fuggini, Fabrizio Tavaroli**

*RINA Consulting, Italy*

## Abstract

Building Automation represents one of the key leverage points for speeding up the decarbonization of the building sector. In this framework, two schemes exist: the BACS (Building Automation and Control Systems) classification, regulated by the EN ISO 521201:2022 standard and the SRI (Smart Readiness Indicator), introduced by the European Commission. Although these two methodologies for assessing building automation levels are similar, they remain so far still disconnected. This paper presents an innovative tool that combines these two approaches, allowing the user to automatically assess the BACS class of a building starting from a completed SRI assessment. This tool was initially developed in MS Excel and then converted into a Matlab app. It also allows the user to highlight possible automation bottlenecks and to estimate the potential energy savings linked to the suggested renovation actions, based on the BACS factor method. The tool has been validated within the Auto-DAN project (GA number 101000169), using a historically protected building (Palazzo Terragni in Lissone) as a case study. The analysis has shown how, although the planned renovation actions will lead to a substantial increase in the SRI score, the presence of automation bottlenecks in some services is limiting the improvement of the BACS classes, highlighting the need for an integrated vision for automation. This tool is intended as operational support for both designers and energy managers to use the SRI framework as the basis for techno-economic assessment and regulatory compliance checks through a userfriendly interface, enabling even a non-technical user to compare the results of both assessment frameworks.

**Keywords:** Auto-DAN; Building Automation; Energy Saving; SRI; tool