

# MAKING BUILDINGS RESPONSIVE TO THE USERS' NEEDS WITH THE SMART READINESS INDICATOR AND THE EXCEED DATABASE

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ExcEED is an EU-funded project, standing for “European Energy Efficient building district Database”, that aims at establishing a robust and durable return of knowledge mechanism collecting actual buildings’ energy performance data and providing information to designers, energy managers and policy-makers. ExcEED will reach this aim with the establishment of a data management platform, available from May 2019.

The platform comes at the right time, because this data support the development of the Smart Readiness Indicator (SRI), introduced by the European Commission (EC) in the amended Energy Performance of Buildings Directive: the EC should establish a voluntary rating system for the smart-readiness of buildings across the EU by 31st December 2019. This includes the definition of the indicator, its calculation methodology and the technical modalities for its implementation. The SRI should assess the capacity of a building to adapt its operation to the needs of the occupant and the grid, and to improve its energy efficiency and overall performance to foster the energy transition to smarter buildings.

The SRI can be also considered as a policy driver aiming at facilitating and supporting the transformation of Europe’s building stock towards a new role of the buildings as partners of the energy system, especially in local energy communities. The related evaluation methodology shall take into account several building features: smart meters, building automation and control systems, adaptive envelope, flexible HVAC and lighting system, energy storage capacity, etc.

## WHY THE SRI?

The SRI aims at **improving the quality of life of building occupants** and continuously **ensure the effective operation of buildings and their interactions with the energy grids**. It should enable the end-user (building owner, occupant or investor) to understand which services the building can deliver and should contribute to the integration of the building sector into energy systems and markets. The smartness concept should also integrate aspects of **indoor environmental quality** to ensure a building can adapt to its occupants by recognising and reacting to their needs and optimising comfort, indoor air quality, wellbeing and

operational requirements.

## EXCEED CONTRIBUTION TO THE SRI DEVELOPMENT

ExcEED can contribute to the SRI development by **collecting and processing in its platform available data regarding state-of-the-art buildings and their features**. Having a huge set of operational data enables to choose the most important building functioning parameters and indicators that should be considered in the SRI calculation.

As a voluntary scheme, the SRI needs to be attractive enough for Member States. Having available an accessible and easy-to-use database on smart buildings operational indicators can be a good incentive for the SRI implementation.



In particular, the database behind the platform will gather information about the buildings uploaded by the users, like the construction year, the consumed energy, temperature. This data will feed into the different tools, that will be also part of the platform, to get aggregated or more specific information. Of particular interest to the SRI development are the environmental quality tool and the geocustering one. The **environmental quality tool**, a web-based survey, integrate measured data related to indoor air quality with information and perceptions gathered from the occupants. With the **geocustering tool**, the user will be able to select, cluster and display geo-clustered information highlighting common spatial patterns and region. Policy makers and legislative bodies can use the tool to compare technical and legislative frameworks in similar contexts and to identify ad-hoc solutions for regions with similar conditions.

The ExcEED platform also contains a set of **Key Performance Indicators (KPIs)**, that help the users understand how far the building is from being smart. Thanks to the platform, it will be easy to continuously verify the building performance.

## IS THE 2050 VISION UTOPIAN?

The EU recently approved a 2050 vision of a prosperous, modern, competitive and climate-neutral economy by 2050, in line with the Paris Agreement objective to keep temperature increase to well below 2°C, and pursue efforts to keep it to 1.5°C.

Unfortunately, this vision seems utopian, given the Eurostat analysis, according to which energy consumption in the European Union continued to increase for the third consecutive year in 2017. Compared with last year, **both levels of primary and final energy consumption increased by around 1%**, thus moving away from the energy efficiency targets and a decarbonised building stock by 2050. If the EU wants to make sure that the gap between the energy consumption and the energy efficiency targets does not get bigger, it **needs to act urgently and efficiently**: the **SRI ambitious implementation and the contribution the ExcEED platform** can enable to turn such an utopian vision in actual results.

[www.exceed-project.eu](http://www.exceed-project.eu)



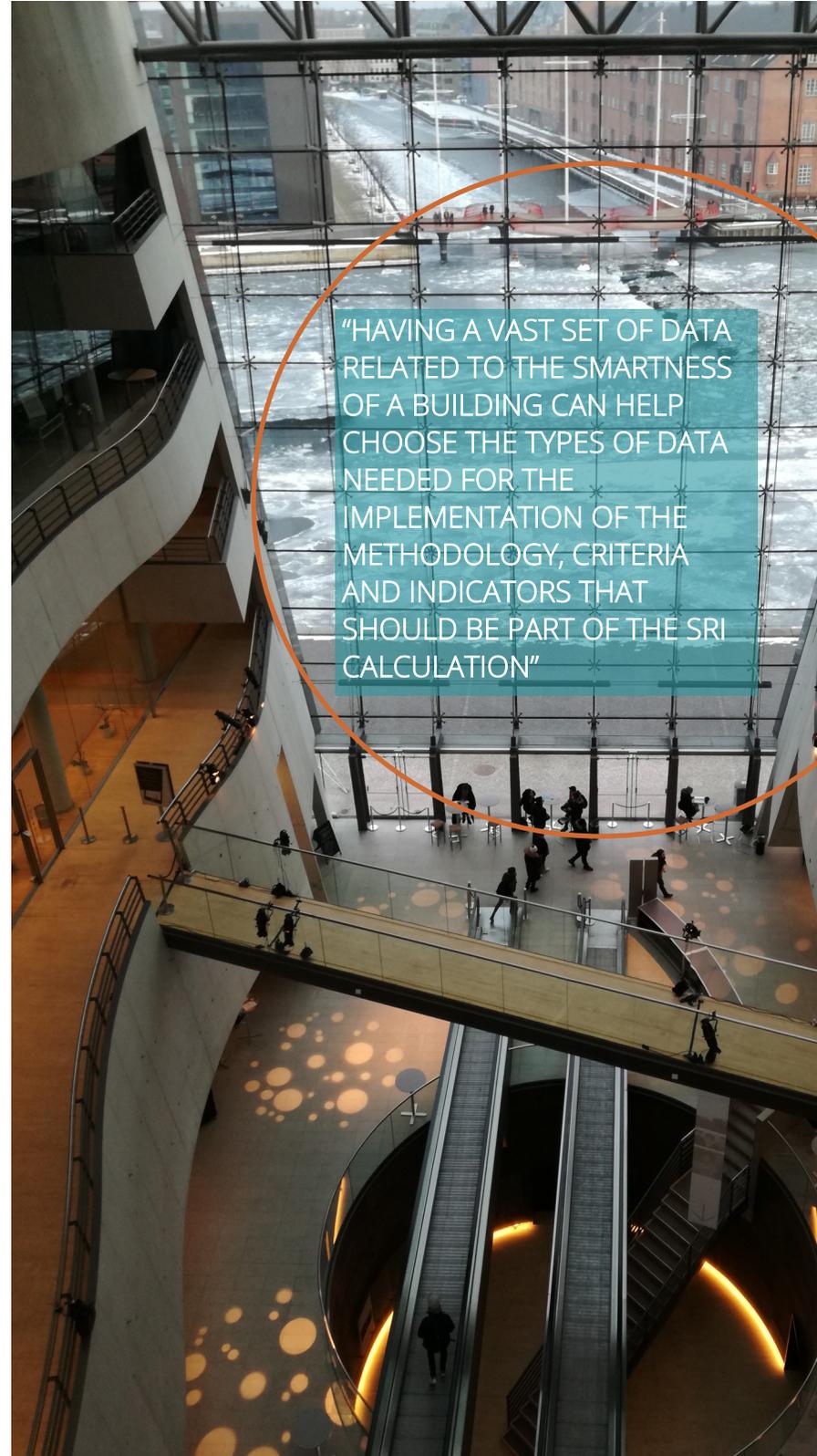
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group: **ExcEED - Knowledge sharing  
on buildings data**



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"HAVING A VAST SET OF DATA RELATED TO THE SMARTNESS OF A BUILDING CAN HELP CHOOSE THE TYPES OF DATA NEEDED FOR THE IMPLEMENTATION OF THE METHODOLOGY, CRITERIA AND INDICATORS THAT SHOULD BE PART OF THE SRI CALCULATION"