There is a wide range of systems for assessing and communicating the sustainability of buildings, but the variation can be confusing. Recent research has analysed the elements needed for effective assessment and examined the needs of stakeholders to inform the presentation and communication of assessment results.

The variety of existing methods and systems to assess building sustainability means they are difficult to compare and there is a need for standardisation. The ‘first generation’ assessments used a bottom-up approach, with a focus on measuring resource conservation and environmental protection. However, a more complex approach is needed that extends beyond this to consider the interactions between environmental, social and economic issues. In addition, more attention is needed on the actual use of the building in terms of durability, resistance and adaptability.

The study suggests that a new generation of assessments should take a top-down approach that identifies objectives for sustainability before measuring their achievement, and encompasses the concept of sustainability in its fullest extent. These assessments would have the following elements:

- A clear definition of the object of assessment, whether that be the location, the site, the building (and its entire life-cycle) or the process of planning, constructing and operating the building, or a combination of these elements.

- A top-down approach that defines the dimensions of sustainability and assigns various goals to these. For example, on the environmental dimension, goals are protecting ecosystems and biodiversity; on the social dimension, goals are protecting cultural values and safeguarding health; and on the economic dimension, goals are optimising life-cycle costs and protecting capital.

- Indicators that assess achievement of the goals and are based on quantitative values. For example, preservation of resources is measured by consumption of energy, water and land use.

Using survey data from the EU SuPerBuildings1 project, the study also provided insights on what stakeholders need from assessments. This indicated that different stakeholders require different types of information. Architects and designers would like a simple self-assessment tool, whilst third party certification is most appropriate for authorities, grant providers, planning authorities and professional associations. Community representatives and planning authorities prefer a short checklist. This further supports the use of a top-down approach, which allows goals to be defined by stakeholders and feedback to be integrated into the process to produce the most user-appropriate assessment.

In conclusion, the study provides several recommendations for future development of sustainability assessment systems. These include producing a more precise definition of sustainability and specifying its overarching goals. Alongside this, these principles should be adapted to the specific object under consideration, such as the building and its site. This can be achieved using weighting methods where criteria are prioritised according to the specific context. When weighting is used, it is crucial that it is transparent and understandable to the stakeholders to allow optimal use in decision-making processes. By applying these recommendations it is hoped that assessment systems can become more alike in content and easier to compare.