

SUSTAINABILITY AND PERFORMANCE ASSESSMENT AND BENCHMARKING OF BUILDINGS

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Summary

The paper briefly describes the main objectives of the European Commission Seventh Framework Programme project SuPerBuildings - Sustainability and Performance assessment and Benchmarking of Buildings. The coordinator of the project is VTT – Technical Research Centre of Finland. Special stress is put on questions on relevant stakeholders of complex assessment of buildings sustainability.

Keywords: sustainability, performance of buildings, assessment

1 SuPerBuildings main objectives

1.1 The main project objectives

The main goal of the SuPerB project is to develop 1) sustainability indicators for buildings, 2) understanding about the needed performance levels considering new and existing buildings, different building types and local requirements, 3) methods for the benchmarking of sustainable buildings (SB) and 4) recommendations for the effective use of benchmarking systems as instruments of steering and in building processes. The work will make use of the existing knowledge of SB assessment and rating systems.

1.2 Issues to be worked out

However, the project recognizes that there are still unsolved issues and areas with no common understanding. These include:

- a) the integration of social and economic issues with SB assessment,
- b) consideration of certain environmental aspects as land use,
- c) defining appropriate performance levels considering both minimal levels and advanced targets,
- d) consideration of local conditions, different building types, and both new and existing buildings when selecting performance levels,
- e) selection of benchmarking criteria to be easily adopted in different parts of Europe,
- f) effective mobilization of the benchmarking system,
- g) effective making use of the system in building processes and in building regulation and steering.

2 Project structure

2.1 Project framework and work packages

The SuPerBuildings project started in January 2010 and the work is scheduled for 36 months. The consortium consists of fifteen partners from whole Europe, the coordinator is VTT Technical Research Centre of Finland.

The work is divided into eight work packages: WP1 ensures the effective work progress and the good communication between project members and between the project and the Commission; WP2 establishes the common standing point for the project; WP3 analyses the potential of SB benchmarking systems as an instrument of steering and when used in different phases of building projects; WP4 develops and selects sustainability indicators that describe the environmental, social and economic performance of buildings. WP4 will focus on the development of data validity and reliability for each key indicator. WP5 defines performance levels and benchmarking criteria, WP 6 makes recommendations for effective exploitation, WP7 pilots the system, and WP8 disseminates the outcomes with help of the project NETWORK GROUP and with help of powerful organizations of building professionals.

3 Conclusions

The main goal of the SuPerBuildings FP7 project is to develop sustainability indicators for buildings, methods for the benchmarking of sustainable buildings and recommendations for the effective use of benchmarking systems as instruments of steering and in building processes.

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References

- [1] SuPerBuildings - Sustainability and Performance assessment and Benchmarking of Buildings – Description of Work FP7 244087, 2009