

EFFICACY

Final News

The **EFFICACY** (Energy eFFiciency building and CirculAr eConomY for thermal insulation solutions) project, promoted by Instituto Superior Técnico (**IST**) - Universidade de Lisboa (**UL**) and Faculty of Engineering – Norwegian University of Science and Technology (**NTNU**), through the Bilateral Funds program financed by **EEA Grants**, was developed from September 1, 2021, and September 30, 2023. The PIs of the project were Professor Inês Flores-Colen from the Department of Civil Engineering, Architecture and Environment from IST- UL, member of the research unit CERIS (Civil Engineering Research and Innovation for Sustainability) and Professor Chiara Bertolin from the Department of Mechanical and Industrial Engineering (MTP) from NTNU.

The primary goal of this project was to create a unified database and a manual containing guidelines. These resources systematize the essential criteria for selecting thermal insulation solutions, applicable to both the retrofitting of existing buildings and new constructions. Consequently, the project encompasses four main activities:

- Collection of national and international data - discussion among experts, stakeholders and final users about the available data concerning technical, environmental and economic performance for thermal insulation solutions in buildings (conventional or innovative solutions).
- Development of a database (DB) through a survey on Google Forms ([portuguese](#), [english](#)), comprising a dataset of criteria adopted in Norway and Portugal on the use of thermal insulation solutions in building facades, considering relevant performance parameters and climate-related requirements. This [open-access database](#) can be fed and extended in the future by other stakeholders and is fully available at the following link: <https://data.mendeley.com/datasets/z8sphs8vvv/2>

EFFICACY

Final News

· Communication and dissemination of project results, including social news, online and in person meetings, participation in 4 conferences (SyMBoL 2021, CEES 2021, CIBW070 2023, ESICC 2023) and the CHePiCC Summer School in Trondheim, a technical visit in Røros, the organization of [EFFICACY Final Workshop](#), with the presence of various target-groups (as researchers, manufacturers, public and private institutions), as well as the joint publication of 4 articles (with 2 more accepted for publication) and the supervision of a master's dissertation (with another one currently in progress).

The [EFFICACY HANDBOOK](#) (ISBN 978-989-95625-4-7) is a comprehensive guide that addresses essential aspects of energy efficiency and sustainable building practices. It includes understanding energy requirements, tackling energy poverty, and making informed decisions about thermal insulation materials and retrofit solutions. The handbook also considers the implications of climate change and prepares for future scenarios. Moreover, it provides effective strategies for engaging stakeholders. The [GUIDELINES](#), incorporated within the handbook, are informative and useful for designing energy-efficient buildings, thereby contributing to a more sustainable built environment.

In this context, the Instituto Superior Técnico (IST) has collaborated actively with the Norwegian University of Science and Technology (NTNU). Collectively, we have accomplished the set objectives and forged new opportunities in energy efficiency, resilience to climate change, and the circular economy. The EFFICACY Team expresses its gratitude for the funding and the opportunity to tackle new challenges that have emerged from this Bilateral Cooperation.