Energy Performance, Indoor environment Quality, Retrofit: a cost predictive European retrofitting evaluation method for improving the energy performance and the indoor environment of existing apartment buildings

Fact Sheet

Project Information

EPIQR

Grant agreement ID: JOR3960044

Start date: 1 June 1996
End date: 31 May 1998

Funded under
FP4-NNE-JOULE C

Overall budget € 0
EU contribution € 0

Coordinated by
Building Research Establishment (BRE)
United Kingdom

Objective

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The main objective of this project is the development of an evaluation tool to assess retrofitting needs, and the costs and the planning of activities to meet these needs.
with respect to the optimisation of energy consumption, the use of renewable (solar) energy and the improvement of the indoor environment. The evaluation tool (called EPIQR method) will be a computer based multi-media programme applicable to existing apartment buildings to be used by architects and engineers and others at the outset of a potential project in order to help in decision making.

Technical Approach

The essence of the EPIQR project is the extension and application of the MERIP method developed in Switzerland to a wider field and to other countries in Europe. The MERIP method is a condition survey of the physical and functional state of a building and gives an evaluation of refurbishment costs. The method is based on 50 criteria or items on a category basis, from a) very good to d) very poor. Examples of the items e.g. roof, cladding, in the various states will be contained in pictures on a portable computer. Costings will be obtained from a statistical cost database. Decisions about refurbishment are difficult to make without cost estimates, but detailed costing is expensive and usually will not be undertaken until the decision in principle to refurbish has already been taken. The EPIQR method offers a way out of this impasse.

New building where standards of energy conservation are now generally very high, represents only a very small and declining proportion of the housing stock, so more attention must be devoted to refurbishment. The benefits are considerable, for example up to 1 billion ECU in the UK and of the order of 6% of total domestic energy consumption as well as the wider social benefits.

The development of the methodology includes the extension to energy and indoor environment quality and to other countries. These require extensive additions to the software. Each country requires its own database.

Task 1 involves the extension of the database structure to the participating countries. Task 2 will develop the EPIQR software including the extension to energy and IEQ. Task 3 is the collection of data from a representative sample of apartment buildings in each country.

Task 4 deals with the dissemination to architects, engineers, owners, maintenance staff and other building professionals.

Expected Achievements and Exploitation

The product of the project will be a user friendly computer package mounted on a portable laptop computer so that surveyors can carry it with them when carrying out their EPIQR survey. Considerable effort is likely to be needed in demonstrating and selling the package to potential users.
Topic(s)

Funding Scheme

CSC - Cost-sharing contracts

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