

press release at start of EU 6th Framework project BRITA in PuBs:

EU 6th Framework project „BRITA in PuBs“, with the goal of presenting energy-efficient retrofit of public buildings as shining examples, is started

By far the biggest part of the energy consumption for heating, domestic hot water, cooling, lighting and ventilation of European buildings is with 95 % in the field of existing buildings built before 1980. In order to meet the objectives of the Kyoto Protocoll, we have to concentrate on improving the energetically poor building stock. Public buildings shall act as shining examples to society, so that the project will help to increase the market penetration of energy-efficient retrofit. The Fraunhofer Institute of Building Physics with 22 European partners from public administration, research, design and consultancies has submitted a project proposal „Bringing Retrofit Innovation to Application in Public Buildings – BRITA in PuBs“ for the 6th Framework Programme of the European Union, that was approved in the middle of last year as one of the few Integrated Projects in the field of Eco-buildings. After contract negotiations the project could be started as the first by the 1st May 2004. The planned project duration is 4 years.

The BRITA in PuBs project aims to increase the market penetration of innovative and effective retrofit solutions to improve energy efficiency and implement renewables, with moderate additional costs. In the first place, this will be realised by the exemplary retrofit of 9 demonstration public buildings in the four participating European regions (North, Central, South, East). By choosing public buildings of different types such as colleges, cultural centres, nursery homes, student houses, churches etc. for implementing the measures it will be easier to reach groups of differing age and social origin. Public buildings can be used as engines to heighten awareness and sensitise society on energy conservation. The energy-efficient retrofit measures are funded by 35 % by the EU.

Project structure and activities

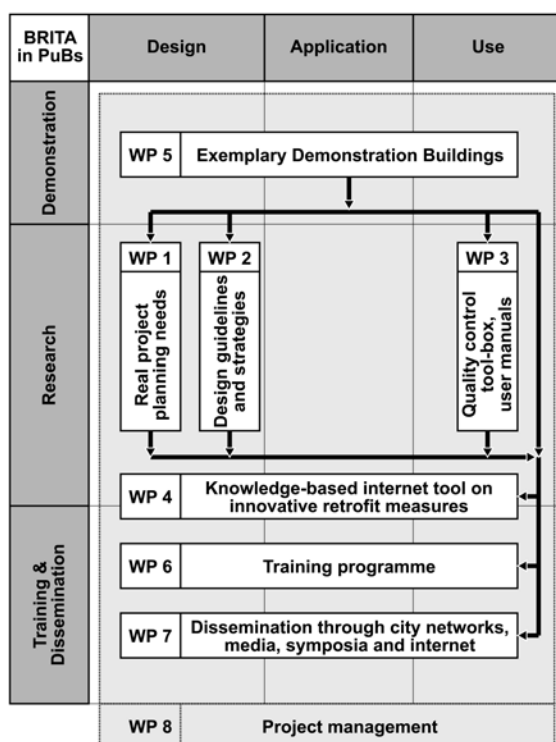


Figure 1: Project structure und activities in the BRITA in PuBs project.

Secondly, the research work packages will include the socio-economic research such as the identification of real project-planning needs and financing strategies, the assessment of design guidelines, the development of an internet-based knowledge tool on retrofit measures and case studies and a quality control tool-box to secure a good long-term performance of the building and the systems.

The third main pillar of the BRITA in PuBs project is dissemination. This is divided into a minor part, the training of users and maintenance personnel, and a larger section on publishing the research and demonstration work to different target groups. This will be done in a combination of targeted PR-campaigns and using local, national and international networks such as Energie Cités, the internet and other media, and arrangement and participation in symposia and conferences.

The project will be organised geographically by region and vertically by incorporating the owners of the public buildings, the research team of architects and engineers and the

project dissemination networks. The Fraunhofer Institute of Building Physics in Germany coordinates the project. Figure 1 shows the project structure and the planned activities.

The technology applications include measures at the building envelope like improved insulation and high-efficient windows, advanced ventilation concepts like hybrid systems, integrated supply technologies like combined heat and power units, energy-efficient lighting and integrated solar application.

The overall goal of the 9 different demonstration buildings is the decrease of the primary energy demand for heating, cooling, ventilation, domestic hot water and lighting by at least 50 %, partly far higher reductions are planned. Additionally the comfort in the buildings shall be improved, so that the percentage of the dissatisfied users (investigated by questionnaires before and after the retrofit) shall be halved. The retrofit concepts of all buildings will be evaluated through monitoring of at least a one-year period.



Figure 2: Photo of the German demonstration building nursery home Filderhof in Stuttgart

As German demonstration building the city of Stuttgart introduced the nursery home Filderhof to the project. The demonstration partner Department of Environmental Protection of the city of Stuttgart plans to realise there high-efficient windows, a ventilation system with heat recovery, energy-efficient lighting, the use of renewable energies for daylight, solar domestic hot water and the production of electricity as well as the application of a combined heat and power unit with a condensing boiler for peak loads. Additionally advanced control and monitoring systems like single-room control, demand controlled artificial lighting and the long-term monitoring with Stuttgart's energy control system (SEKS) shall be used. The synergy effects of concurrent retrofits

of the building and the systems promise an economic retrofit approach. It is planned to reduce the final energy demand for heating and domestic hot water from about 650 MWh to less than 250 MWh and the cumulated electrical energy demand of the grid from 117 MWh to zero.

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