SQUARE

A System for Quality Assurance when Retrofitting Existing Buildings to Energy Efficient Buildings

Project duration: Nov 2007 – April 2010

Project co-ordinator: SP Technical Research Institute of Sweden

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Project website: http://www.iee-square.eu

Project summary

Intelligent Energy Europe

A quality assurance (QA) system for energy use and indoor environment have been adopted to suit the process of retrofitting multifamily housing.

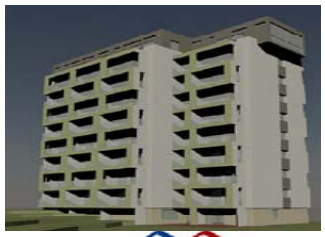
The QA system has been implemented and used in pilot projects in Spain, Austria, Sweden and in Finland.

Experiences from the from using the QA system have been followed up.







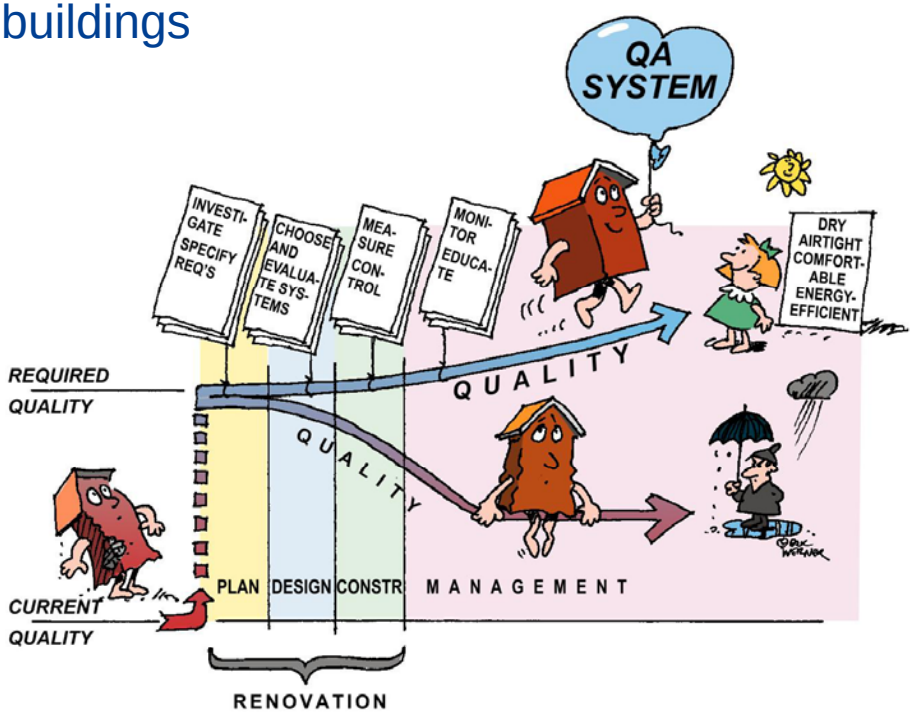
Participating partners:

Sweden Austria Finland Spain

Sweden Spain The Netherlands Bulgaria

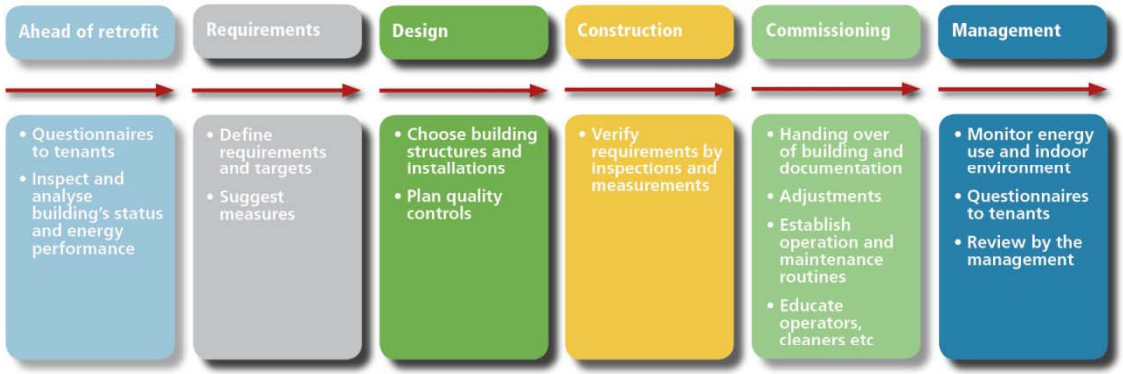
Background

- Several million residential buildings in the EU
- Many were built before the oil crises and have high energy use
- Neglected maintenance of building envelope and building services
- Retrofit provides an opportunity for cost-effective energy measures
- By using a quality assurance system, a good indoor environment is ensured when efficient energy saving measures are implemented in renovation and maintenance of buildings



Objectives and main steps

1. To contribute to improved energy performance and indoor environment of multifamily housing
2. To adopt an existing quality assurance system for indoor environment and energy use to suit the process of retrofitting and operation of multifamily housing in different European conditions
3. To apply the quality assurance system in retrofitting projects in different European countries
4. To provide up to date knowledge and good examples of successful energy-intelligent solutions tailored to the multifamily housing sector
5. To prepare rules for a future European standard on quality assurance system for energy use and indoor environment



A schematic picture of the QA system

Results

1. A number of multifamily housing blocks in Finland, Spain, Austria and Sweden have been retrofitted to a higher standard of energy and indoor environmental performance
2. A quality assurance system has been used to ensure that the most efficient measures were chosen and that the energy and indoor environmental performance is maintained throughout operation of the buildings
3. Information on the quality assurance system and experiences from using it in pilot projects have been developed for all target groups in the multifamily housing sector
4. Up-to-date knowledge and good examples of successful energy-intelligent solutions with a positive effect on the indoor environment, tailored to the multifamily housing sector are presented
5. Rules have been prepared for a future European standardisation of QA systems for energy use and indoor environment

Partners and Contact

Part	Participant name	Short name	Country
1	SP Technical Research Institute of Sweden	SP	Sweden
2	Trama Tecno Ambiental S.L.	TTA	Spain
3	Aalto University/Helsinki University of Technology	Aalto/TKK	Finland
4	AEE - Institute for Sustainable Technologies	AEE INTEC	Austria
5	Trecodome	Trecodome	NL
6	Energy Agency of Plovdiv	EAP	Bulgaria
7	AB Alingsåshem	Alingsåshem	Sweden
8	POMAA S.L.	POMAA	Spain

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