



# CO-ORDINATION ACTION on Indoor Air Quality and health effects

**EnVIE**

**AICIA – Universidad de Sevilla**

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## AICIA in brief



- AICIA is a non profit – private organisation in close connection with the Engineering School of Seville University
- Its goals are: to encourage, guide, and promote industrial research, with emphasis on publication and dissemination of results, to promote technological progress in Andalusia, and to help improve the professional training of andalusian engineers
- AICIA is in close connection with the School of Engineering of the University of Seville. It groups the University Departments integrated in the School of Engineering, in total more than 250 Engineers and Scientists. It has been working in all the engineering fields in the last 20 years



## AICIA: Grupo de Termotecnia



- The group of Termotecnia of AICIA, is specialized in the simulation of thermal processes
- The main line of activity is the thermal behaviour of buildings, including both the envelope and the HVAC Systems
- The key persons to be involved in this project will be:
  - *Prof. Dr. Ramón Velazquez*: Long term experienced designer of thermal systems, with great knowledge of the energy and IAQ concerns in the thermal installations of the buildings
  - *Prof. Dr. José L. Molina*: long term experience in the simulation of thermal systems, with particular emphasis in the buildings and building components, including the sorption/desorption of pollutants through building materials



## Main activities in the field of indoor air quality



- **National projects:**
  - Works for the Andalusian Government:
  - Study for IAQ problems in several Office buildings
  - Recommendations for the design of HVAC systems in Hospitals, for avoiding nosocomial diseases
- **EDBIPS**
  - Responsible of the development of the database structure
  - Design and programming of all of the data base management system
  - Programming of a rudimentary sensory, chemical and toxicological model based on the information stored in the database.



## Main activities in the field of indoor air quality



- **MATHIS + AIRLESS**
  - Continuation of the works done in EDBIPS producing the application SOPHIE
  - Population of the data base
  - Participation in the design of the quality control mechanisms for the information to be stored in the database
  - Modelling the interaction of pollutants and building materials
  - Development of a zonal model for the thermal behaviour of unizone buildings, taking into account the interaction of pollutants with the building materials
  - Study of the Energy Efficient Ventilation Strategies, and their impact on the energy requirements of residential and office buildings



## Our contribution to EnVIE



- **WP n° 3: Spaces Characterisation and Sources**  
AICIA will participate in all of the tasks of the workpackage, focused on the study of the existing building stock:
  - Task 1: construction materials;
  - Task 2: HVAC Systems: sinks and sources of pollution;
  - Task 3: Survey of existing databases
  - Task 4: framework of databases as an operational tool

**And participation in and organisation of the three workshops corresponding to the workpackage**