

## RENAISSANCE Concerto Project Minutes from technical session

### **Working Group 3: Simulation exchanges & methodology** ***Exchanges on a common frame for reporting / comparison between simulation/monitored results & on ventilation experiences & calculation methodologies***

Chair: UdZ (Jose Antonio Tunégano)

Reporter : INSA-CETHIL (Christophe Ménézo)

Start by two presentations before exchanges (see two \*.ppt files)

#### **UdZ :**

Not the same time schedule between Lyon and Zaragoza.

However it should have a **joint effort in order to highlight a global monitoring perspective**. For example, even if there is no PV installation in Zaragoza, the analyse led in Lyon on this topic might be extended to Zaragoza (through local irradiation knowledge, ...).

It is time to think about **common benefit of the project on this topic**. Try to highlight positioning between each other. **What are we measuring? How do we measure?**

Another important aspect is **to relate the studies led on the Renaissance project to European standards** in order to compare and identify what rule are satisfying and what rule is not sufficient.

Necessary to keep in mind the answer to the following questions: why? For who? and how do we have to proceed the analysis?

=> Has to be used **to stimulate correct behaviour and use of inhabitants**.

Our experience has to be disseminated if results are positive.

=> Has to be carried out by European Commission (via Concerto+). The dissemination impact might be huge.

=> We have to transmit to EU some recommendations.

That is why regarding these stakes we have to **identify joint target** (Lyon and Zaragoza) and to have **more frequent exchange** between Lyon and Zaragoza (Lombardia objectives are quite different).

It is indeed necessary to be sure to be able to obtain the data which were planed since the beginning of the project (example: Ecodes is going out of the project whereas its work was on sociological aspects. May be on this topic, if Lyon can compensate the lack of this part from the work made in Lyon in order to maintain coherence of Renaissance project, it should be done... Other example can be provided on monitoring ...).

#### *Technical aspects:*

**-Certification tools** are not complete enough and have to be reinforced (ex. gallery energy gains, ...) and as a consequence, developers/builders don't choose unknown (non standard) devises or systems.

There is nothing for dynamic façade of building in the standards (in order to predict the impact of a PV façade versus a conventional or ventilated façade, etc ....)

A bioclimatic building can't be actually conceived with existing codes. Innovative solutions are then more stopped than encouraged.

**- Use of the operation in Zaragoza and in Lyon as a permanent existing reference and experience return.**

In the first stage of the project there was not joint procedure but it was fully normal because the two cities were not in phase. Now it is necessary to joint our own experience, approach and data base. Like this, extrapolation can be done on different aspects between Lyon and Zaragoza.

Perspectives of both sides have to be unique and coherent.

For this we should start to exchange on the **energy standards** in each country (France, Spain) and financial supports and from the identification of lack or limits we should be able to inform EU (i.e payback on bad solar thermal installations can appear to be very long whereas for PV payback time is around 5-7 years, like in France too). That should be clearly highlighted for EU.

Another point is also fuzzy in practice: the **link Ventilation/Thermal standards** in Spain.

To conclude it should have a **common approach** on this work package **from now to the end of Renaissance:**

- Phase 1: analyse the different alternative solutions and identify them as better, equal or worth
- Phase 2: monitoring of buildings. Analyse of technical codes. Analyse of thermal building standards
- Phase 3: to push up these results at national and EU level

**INSA-CETHIL:**

Agree on the approach and have **similar preoccupation on solar thermal/solar PV context** in France and also ventilation/energy performance standards and consideration.

NB : See the presentation (ppt) to complete the previous speech on technical aspects.

In order to improve technical codes or thermal standard consideration of innovative systems, we've got to think about the **comparison between numerical prediction and experimental and monitoring data.**

For different aspect it might be difficult to verify some hypothesis and quantify some variables.

As an illustration for the prediction of **thermal comfort requirements** inertia and night over ventilation are for Lyon the key solutions on all blocks. The over ventilation during the night is grounded on natural ventilation. For some buildings the considered level of natural ventilation free cooling is quite important (3-4 volume/hour). It will be necessary to find a way of quantifying that.

For energy consumption during winter, hypotheses made the developers/builders on air tightness and of course thermal bridges are key points for the predicted energy level. These points will have to be checked.

In strong relation with this last point and to reinforce the previous remark made on ventilation. Indoors air quality/high energy efficiency (air tightness) is not reliability linked at the moment (selection, position of ventilation components). If we consider as suggested previously that the Renaissance Project remains a permanent reference in the future it should be kept in mind.

These aspects and data on (unknown) innovative approaches could be reached and useful for existing construction or standard codes.

### **Concerto Plus : Simona Costa**

In the same way of pushing up the experience feedback, Ms. Simona Costa suggests to send us questions, information required by EU. That might be useful to prepare the procedure concerning the new EU Building Efficiency Directive. She will ask the same to the 46 others Concerto projects. She hopes that formulated answers, remarks by the whole Concerto community will have an impact on the future directives.

The return made at this first stage should be helpful to prepare the new directive call for offer that might be done by EU in November 2008.

On their side, Participants also wish to have a feedback about these aspects when results will be transmitted to EU (down -> up and then up-> down)

**End.**