eLivingLabs in a Cross Border Environment with the Austrian eSchwechat Initiative as an Example

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Just recently the concept of LivingLabs has received major attention from the EU. On November 20th, 2006, the Finnish EU presidency launched the 'European Network of LivingLabs', which is a first step towards a new European Innovation Infrastructure that will be backed by the upcoming 7th Framework Program.

Why are the LivingLabs so important for the European Innovation System and what role can be played in this context by regional initiatives?

P. Makopoulos and G.W.M. Rauterberg (Technical University of Eindhoven, Netherlands) published a white paper in 2000 ("LivingLab: A White Paper", IPO Annual Progress Report 35) in which they defined a LivingLab as "a planned infrastructure that will provide an experimental platform for future home-related technologies". It is very important to stress that a LivingLab is NOT a showcase environment where new technologies are being demonstrated. Instead it is a real life (or at least close to real life) situation where real people in their respective roles (citizens, employees, customers, patients and so on) can make use of new technologies and applications within their "natural environment" while being closely observed by a professional scientific community.

It is obvious that the best results can be achieved if the participants in such a LivingLab can stay within their "usual" environment (homes, hospitals, offices, leisure clubs, etc.) with the new technologies and applications being introduced into their daily lives. If people are transferred to completely artificial environments (such as conventional labs, Focus Groups, etc.) the results are clearly less significant in comparison to the seamless introduction of new technologies and applications into daily lives.

It is also obvious that this type of experimenting and observation creates new challenges for the scientific community. Privacy and Data Security, for instance, are key issues for LivingLabs, especially in public infrastructures such as schools, hospitals or residential homes for elderly people.

It is also evident that LivingLabs are not limited to technological aspects. The human interaction, user acceptance and personal attitudes of the real-life participants

suggest the possible additional involvement of social and cultural sciences. Cooperation between technical and 'Soft' Science therefore becomes more and more important as well.

The setting up of LivingLabs in a near-to-real-life environment will definitely be a substantial competitive advantage in the building of the 'systems of the future'.

As an example for possible cross border co-operation in the setup of a LivingLab we want to focus on one recently announced initiative in Austria (though it is definitely not the only one).

In August 2006, the city of Schwechat committed itself to become part of the international LivingLab community. The whole initiative is based on the concept of a "knowledge city" (Francisco Javier Carillo (Ed.): Knowledge Cities: Approaches, Experiences and Perspectives, Elsevier 2005) and considers the citizens of Schwechat as "research citizens"!

Schwechat, a town of some 16,000 inhabitants, is situated directly east of Vienna, adjoining the Austrian capital and within its conurbation.

Vienna International Airport, the hub for Central and Eastern Europe, is located on Schwechat's territory. The community also hosts a large logistic station for the Austrian ÖBB railway company, as well as the most modern section of Austria's motorways. The impressively large Danube harbour of Vienna is also very close by, though not actually in its territory. Further on is Austria's main production centre of the OMV oil and gasoline refraction company, a large Borealis chemical plant and the Brau Union brewery, all of which form Schwechat's major economic facilities. Due to this strong industrial and logistic infrastructure, the community offers more working places (~18.000) than it has inhabitants, which represents a unique profile in Austria.

As long as privacy issues are being appropriately handled and the citizens involved are authorizing the city Schwechat is ready to offer its public institutions (public offices, schools, residential homes, etc.) as partners for LivingLab situations.

The integration of the Schwechat airport is also of

major interest. Airports are definitely the most important for technological progress. The combination of logistics, modern technology, speed, security, information, various languages, large number of people and so on, make airports a specific microcosm of their own with thousands of possibilities for specific LivingLab situations. An airport is possibly the best place for observing the impact of new technologies on millions of people (although the special security restrictions may distinctly reduce the scope of such LivingLabs).

The "CEIT Central European Institute of Technology" (www.ceit.at) is the institutional cornerstone of the Schwechat initiative and it is ready to partner with regional initiatives in neighbouring countries, specifically in the fields of:

- e-health (medical and rehabilitation technologies of major use for "assisted living")
- e-infrastructure (research in conceptualisation, planning and designing, mainly of infrastructures and technological (sub)systems for transport and traffic).

The core idea of Schwechat's cross border initiative is that several cities/regions/communities, each with a competence in some domain, would aim to jointly find and develop more complete solutions than any one city could manage on its own. The way to manage this would either be

- with each partner contributing one part and then the various parts are integrated towards a complete solution or
- where one partner develops a prototype for all the others, which is then implemented for each participant, adapted to its specific needs.

The important aspect of this idea is that each city or region retains its own typical profile and also maintains its specific culture, but nevertheless it is willing to openly share its own ideas with other partners. In a way, this approach can be regarded as an adaptation of the so called "Open Source" approach to regional cooperation, which has become popular in recent years in Information Technology and bio sciences.