



Low Resource Information Technology for Africa and Europe

The use of ICTs in developmental contexts is a growing phenomenon since it has a great potential of fostering social and economic growth. At the same time, it presents relevant technical and social challenges, which can be properly addressed only through a multi-disciplinary approach and by mixing experiences and challenges coming from diverse environments, such as those found in Living Labs in Europe and Africa.

LRIT4AE (Low Resource IT for Africa and Europe) aims at establishing a transnational cooperation to define a set of guidelines, tools, technologies and standard artefacts to facilitate the implementation of ICT solutions to address social inequalities through a Living Lab approach. Through the exchange of experiences and the exchange of researchers among the participating partners (Fondazione Bruno Kessler, Italy; Fraunhofer FOKUS, Germany; Rhodes University, South Africa; Fort Hare University, South Africa) we aim at becoming more systematic in deploying successful ICT4D solutions and in promoting cross-innovation between Africa and Europe.

The project was organised in three phases, starting in November 2012 and ending in December 2014.

During the first phase, the European and South African researchers have collaborated on analysing the methodology applied at Siyakhula Living Lab (SLL) and conceptualising processes and best practices for ICT for Development, with particular interest on mobile and connectivity services. The goal has been achieved through an exchange of researchers. European researchers visiting the area of Dwesa and the facilities supporting the SLL (Rhodes and Fort Hare University) have gained a better understanding of the context. Visits of South African researchers to the European Institutions contributed to a mutual understanding of the context and opportunities.

In the second phase, opportunities for improvement and for the experimentation of new solutions were elaborated together. This was achieved by visits of South African researchers to the participating institutions in Europe. The visitors held seminars and



Researchers from Fraunhofer FOKUS assisting in the setup of a WiMax CPE to provide Internet access to Lurwaizo SS school in Dwesa.



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European researchers and South African researchers during their visit to Nqabara school (Dwesa) with the local teachers being trained at Siyakhula Living Lab.

workshops to present their work to wide audiences, providing a multi-disciplinary perspective on the issues of ICT for Development. The topics covered included interaction with marginalised communities, localisation in under-represented languages and media creation. The visitors were also embedded in the respective host research groups where they were able to participate to the regular activities of the group.

During this phase, all the partners evaluated the possibility to trial their technologies in Dwesa, experiencing first-hand the issues of deploying ICTs in rural communities.

In the third phase of the project, the partners used their experience to produce three outputs:

- Four workshops on Agile Web Development with particular attention to the needs of underserved communities. This allowed the researchers to reach out to young entrepreneurs in technology incubators of the Eastern Cape (the least developed province of South Africa) and aspirant technology entrepreneurs from townships (i.e., predominantly black suburbs, formerly designated as such during apartheid time).
- Various new and strengthened collaborations with local entities in Italy and in South Africa as well as new collaborations with international partners with whom a proposal for an Innovative Training Network for PhD students was submitted in January 2015. Another proposal for a training project sponsored by the Italian Ministry of Foreign Affairs and the South African NRF has entered the second round of evaluation at the time of writing.
- A workshop open to the public on the role of ICT in International Cooperation held in Trento.

A PhD thesis largely covering the topics of this project was completed and successfully defended at the University of Trento by an Early Stage Researcher from FBK in April 2014. The project was an important boost for the PhD research of three other Early Stage Researchers from South Africa.

All in all, the partners gained a deeper understanding of ICT for rural communities through the project and were able to establish valuable connections for further collaborations.



Researchers from FBK meeting aspiring technology entrepreneurs in Jozi township (Grahamstown, Eastern Cape, South Africa)



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