

## Chapter 3.11

# The Siyakhula Living Lab: A Holistic Approach to Rural Development through ICT in Rural South Africa

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### ABSTRACT

*Rural development and poverty alleviation are a priority for development in South Africa. Information and knowledge are key strategic resources for social and economic development, as they empower rural communities with the ability to expand their choices through knowing what works best in their communities. Information Communication Technologies (ICTs) act as tools which enable existing rural development activities. The Siyakhula living lab (SLL) aims to develop and field-test a distributed, multifunctional community communication platform, using localization through innovation, to deploy in marginalized communities in South Africa. The project exists as research collaboration between the Telkom Centres of Excellence at the University of Fort Hare and Rhodes University. Its current pilot operates in the Mbashe municipal area, which is a deep rural area located along the wild coast of the Eastern Cape province of South Africa. The Dwesa-Cweba Nature Reserve acts as a chief asset in the community, which contributes to tourism development. However, the community is currently not actively involved in tourism development; but potential exists in local arts, crafts, and authentic heritage tourism. Therefore, the SLL aspires to empower the community with appropriate communication technology skills to actively support tourism development and other complementary development activities, such as, education. The lessons learned and applied in the project's current pilot stage identify techniques and approaches that aim to promote the effectiveness and sustainability of the ICT project in a rural context. These approaches and techniques are viewed and described from social-cultural, institutional, economic, and technological perspectives.*

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## INTRODUCTION

Upliftment of rural areas and poverty alleviation are a priority for development in South Africa. Information and knowledge are key strategic resources for social and economic development. Rural communities in South Africa can be empowered by participating in the knowledge society through the use of Information Communication Technologies (ICTs). ICTs act as tools to support existing efforts towards rural development and to enable innovative approaches. In this chapter we describe a holistic ICT-for-development project, which involves developing and field-testing a distributed, multifunctional community communication platform. Such a platform is specifically designed for marginalised communities in South Africa and its distinctive feature is localization through innovation.

A pilot of the project (known as the Siyakhula Living Lab or SSL) is currently running in the Mbashe municipality, a deep rural area located along the wild coast of the Eastern Cape province of South Africa. Like many African rural areas, the Mbashe municipality is characterised by endemic poverty and a lack of infrastructure and services. The Dwesa Nature Reserve (which is adjacent to the five villages in which this project is being piloted) attracts seasonal tourism, although this does not benefit the community directly. The area is also characterised by a rich cultural life and by the production of local music, arts, and crafts. Supporting ecological, heritage and cultural tourism is an example of how the project described in this chapter seeks to empower the local community. The lessons learned and applied in the project's current pilot stage identify techniques and approaches that aim to promote the effectiveness and sustainability of ICT in a rural context. These approaches and techniques are viewed and described from a social-cultural (political), institutional, economic, and technological perspective.

The chapter is broken down into three broad areas. Firstly, the background to the study intro-

duces the community into which the living lab was field-tested, introduces the concept of a living lab and specifically the SSL together with a description of the purpose of the project and the project's phases. Finally we discuss the theoretical paradigm of the living lab case study. The second part of the chapter describes the Siyakhula project within each of the four perspectives discussed earlier, namely, social-cultural (political), institutional, economic, and technological. The third and final part provides a discussion which relates the work that has been done in the project to the theoretical framework which underpins it and discusses the future directions of the Siyakhula living lab.

## BACKGROUND

ICTs can generally be defined as tools that aid in communication between people through electronic means of capturing, processing, storing, and communicating information (Gerster and Zimmermann, 2003; Heeks, 1999). The widespread enthusiasm associated with the use of ICTs in rural development has consequently brought about the misconception in development communities that ICTs are the panacea for all rural development challenges (McNamara, 2003; UNICT Task Force, 2003). In this sense, the focus has been on increasing the amount of ICTs (specifically infrastructure) in rural areas, without really considering the needs of rural communities, and their capabilities to harness and sustain these technologies. In addressing this misconception, it is important to understand that ICTs are *tools* in rural development, and not necessarily the only solution to combating the challenges of poverty (Gerster & Zimmermann, 2003; Mansell & Wehn, 1998; McNamara, 2003). They are meant to complement ongoing development projects and investments; hence ICTs do not *create* change, but instead *enable* change. The key to understanding the potential of ICTs is to begin an analysis, not considering the absence or presence of ICTs in rural areas, but instead iden-

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