

ZENZELENI COMMUNITY WIFI NETWORK SOLUTION

Zenzeleni is a solar-powered, community-owned, Wifi telecommunications network model which provides affordable communications to remote rural areas in South Africa. Zenzeleni, which means “do it yourselves” in isiXhosa, creates solutions to enable the unconnected to connect themselves.

The Zenzeleni model utilizes wireless mesh networking, a low cost and low energy networking arrangement. This networking uses scattered node devices which communicate with each other to spread the data throughout the network.

All of the software and hardware are open source. There is also a gateway to the Internet. The model allows users to make free internal voice over IP (VoIP) calls, and significantly reduces the cost of 'breakout' mobile calls and data.

The nodes are powered through easy-to-install, modular solar systems, which allow the communities to charge mobile devices and provide lighting for those units housing the nodes.

The technology has been designed to be affordable and accessible with and for marginalised communities and is available as a starter kit.



ZENZELENI • MANKOSI





The Zenzeleni model has been running in the Mankosi community in the Eastern Cape, South Africa since 2012. **Zenzeleni Networks Mankosi** is South Africa's first legal community-owned ISP, with their own appointed manager who oversees the maintenance of the network and ensures the community's continued access to telecommunications. With this model as a guide, similar networks can be established in remote areas of South Africa and other African countries. A Section 21 company, **Zenzeleni Networks**, has been set up to facilitate the transfer of the Zenzeleni model to other communities.

The Zenzeleni project involves researchers from UWC departments of Computer Science, Economics, Statistics, Social Development and Gender Studies, as well as a number of external partners (Right2Know, University of Namibia, ISOC, AFRINIC, APC and others).

Zenzeleni Community WiFi Network Solution is a social innovation seeking impact investment. Zenzeleni Networks is seeking opex. Zenzeleni Networks Mankosi and other community-based ISPs based on the model are seeking capex. Both are seeking like-minded partners to transfer the technology to many more rural communities.



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