

# *Zenzeleni Community Networks – a social innovation*

*An intervention towards addressing the rural digital divide in South Africa*



**Zenzeleni Non Profit Company**

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# The Zenzeleni model – addressing the digital divide

## **Current national scenario – Telco companies**

- Prohibitive cost pre-paid users,
- Low/ no service provision,
- Dis-functioning parachute connections,
- Digital apps & services focused on urban, serviced, high skilled, high economic power users,
- Low digital devices availability and skill for usage,
- Language, age, gender - user applicability barriers

## **Community networks alternative**

- Affordable connectivity
- Ownership is intrinsic to model, bottom-up, responsive solutions and decisions.
- Own provision of high quality connectivity,
- Demystifying technology through direct management of it - usage ownership too.
- Holistic approach – deliberate creation of digital ecosystem + meaningful connectivity.



# **We are Zenzeleni Community Networks**

**South Africa's First Cooperative-owned  
Internet Service Provider (ISP)  
Telecommunications Network**





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**PHATEKA SIYA**  
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**ROLF BLOM**  
ELLIPIS REGULATORY SOLUTIONS



**NOSAMKELO KHEFU**  
DIRECTOR ZENZELENI ZITHULUKE INITIATIVE



**SOLEDAD LUCA DE TENA**  
ACTING CEO ZENZELENI NETWORKS NPC



**YUMNA PANDAY**  
PROJECTS SUPPORT COORDINATOR



Dr Carlos Rey Moreno visits Mankosi and meets Jay Siya - alliance and forces of local knowledge and technical expertise that shaped Zenzeleni Community Networks

2012

2012  
2013

- Training and network deployment
- Mesh Potatoe intranet allows for first Zenzeleni business phone charging

- Zenzeleni Networks Mankosi officially registered as a Cooperative
- ICASA licence exemption granted
- Commencement of breakout calls

2014

2015

- 12 Local Students registers for Tertiary Education
- Zenzeleni Website goes live

- Local schools request internet
- Zenzeleni becomes grant recipient of the Internet Society (ISOC)
- Own backbone built
- 1<sup>st</sup> ISOC Summit Kenya: Zenzeleni Networks internationally recognized

2016

2017

- Zenzeleni Networks Non-Profit Company (NPC) registered
- Tower installation
- Connection to Fiber
- Plug & Play Solar Router ready

- Innovation Bridge: Zenzeleni Project Wins Social Innovation Award
- 2<sup>nd</sup> Runner-up in Mozilla's Equal Rating Innovation Challenge

Department of Telecommunications and Postal Services (DTPS): notes intention to collaborate/support Zenzeleni in annual budget speech in Parliament

2018

2019

Zenzeleni Networks Zithulele Cooperative formally registered



## Rural Eastern Cape, South Africa

### Context

100,000 people  
93% unemployed,  
90% not  
completed school

Non/poor basic  
infrastructure and  
services

Most people live  
on 1USD daily  
threshold, up to  
25% of monthly  
income spent on  
Telecoms



### Backbone and CPE delivery

2.5 / 5 Ghz (unlicensed  
frequency)

Fiber capacity to burst 1 Gig

Wireless can carry max  
capacity 300 Mbps

Uncontended (1:1)

(bandwidth dynamically  
allocated across network)

### Standardised equipment:

Mikrotik/ Ubiquity

### Services speeds (as required)

Minimum 2/4 Mbps – 10/  
10Mbps



## Zenzeleni cooperatives services

- ❖ Hotspot vouchers (pre-paid)
- ❖ Dedicated access costs (contract)

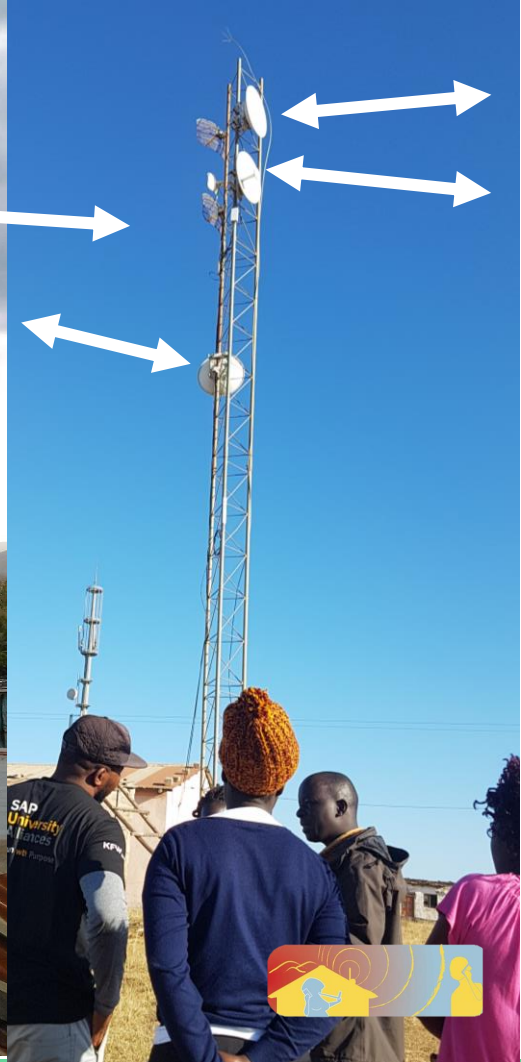
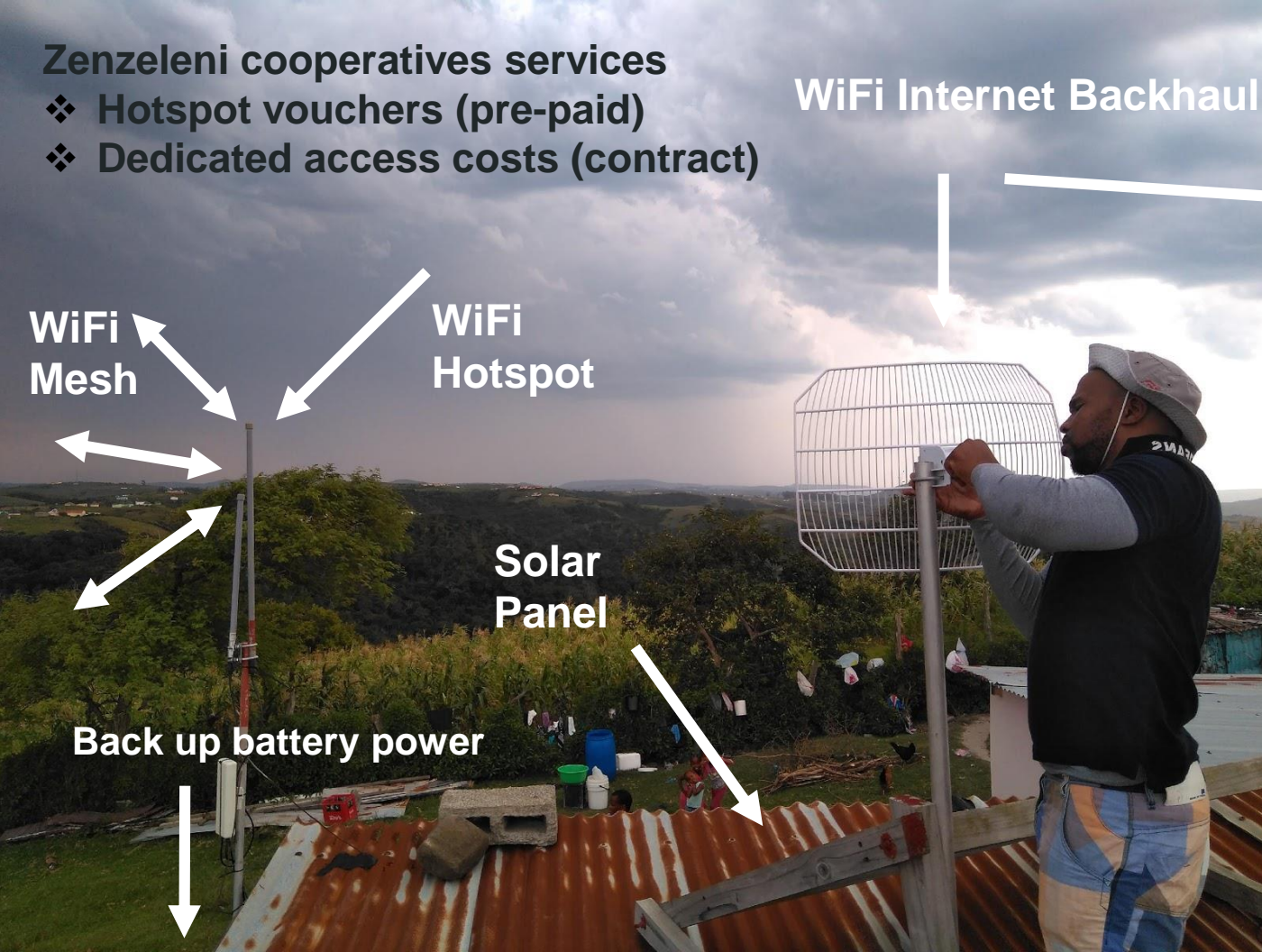
WiFi  
Mesh

WiFi  
Hotspot

Solar  
Panel

Back up  
battery power

WiFi Internet Backhaul





# COVID-19 response – based on challenges

- ❖ Information on the virus received in rural areas unreliable;
  - ❖ High amounts of fake news.
  - ❖ Interfacing with power structures and/ or belief systems.
- ❖ Safety guidelines not applicable to rural context;
  - ❖ Focus of guidelines on urban middle to upper economic context.
  - ❖ No running water, shared transport, limited supplies.
  - ❖ Non relatable to contexts/ scenarios.
- ❖ Language barrier, all information in English, most people speak isiXhosa.
- ❖ Heightened economic strain (to already on poverty line).



# COVID-19 response – Digital Community Notice Board

- ❖ Health and behavior guidelines on COVID-19 in isiXhosa – written and videos.
- ❖ Applied official guidelines - *How to Safely Use Zenzeleni Community Networks.*
- ❖ How to filter or test news sources
- ❖ Zero-rated sites on health and education.
- ❖ Know your Rights during COVID-19.
- ❖ Tips on How to Cope with COVID-19 Anxiety

<https://zenzeleni.net/noticeboard/>



# COVID-19 response – Local content development

## ***Amabali Wethu, Intanethi Yethu Challenge/ Our stories, Our Internet Challenge***

- ❖ Challenge to submit visual, audio or written content in isiXhosa, about resilience during COVID-19 in the communities of Mankosi and Zithulele.
- ❖ Promoting local ideas, skills, crafts and services.
- ❖ Getting the youth involved in the network (“the old people’s initiative”) & the greater community in an internet space relevant to them.
- ❖ Appropriation/participation in the internet space for rural, isiXhosa culture.
- ❖ Cash and network voucher prizes, aimed at targeting the dire economic strain of the time.
- ❖ Pilot for a digital market and communications place.

Supported by DFID through APC

<https://zenzeleni.net/2020/07/10/zenzeleni-community-networks-covid-19-response-amabali-wethu-intanethi-yethu-challenge/>



A photograph of a weathered wall with a shadow of a person holding a stick. The wall is painted in two colors: a light beige upper section and a dark brown lower section. The shadow is cast on the beige section, showing a person in a hat holding a long stick. The text 'Thank you!' is overlaid in the upper center. At the bottom, there are two lines of red text with underlines: 'info@zenzeleni.net' and 'https://zenzeleni.net/'.

**Thank you!**

**info@zenzeleni.net**

**https://zenzeleni.net/**



