Understanding Community Networks in Africa

Carlos Rey-Moreno  
carlos.reymoreno@gmail.com  
University of the Western Cape  
Zenzeleni Networks

2nd Summit on Community Networks  
25th May 2017, Nairobi
Introduction

- Sustainable Development Goals and role of ICTs
- Growing gap
- Connecting the next billion and similar
- Community networks as an alternative
- Evidence from everywhere, what about Africa?
Methodology

- Map of CNs in Africa:
  - Contacting people involved in CNs for their own CNs and for others they knew
  - Google searches of the terms and derivatives in English and French
    - Including Wikipedia which seriously outdated
  - Contacted 60+ people

- Barriers:
  - 30+ experts

- Understanding CNs in Africa
  - 1st Summit on community networks
  - Interviews with CN representatives (8 hours)
  - Panel on CNs in Africa at AfriCHI
  - Discussion at the Global IGF and at the GAIA meeting
  - Great feedback from ISOC and others
Community Networks in Africa
Published on the IGF DC3 report

- 37 initiatives
- 12 African countries
- 30 are currently at least partially active
- 60% in South Africa
- Only 1 (and not active anymore) in northern Africa
Factors behind establishing CNs

Reasons

• Provide access where
  - there is none
  - it is unaffordable

• Self-determination
  - Local prices
  - Local services and content
  - Local governance

Local Economy
Factors behind establishing CNs

People

- Informed community members
- External people
  - Collaboration with local structures
  - Build local skills
Factors behind establishing CNs

Location & funding

- Started with seed funding
- Funds vs vision
- Make communities a better place
Socio cultural aspects & dynamics

Community

- Spatially specific meaning vs practice
- Sharing the space -> Sharing for survival
- Biggest asset: “only” network missing
- Hardest part: suspicion, criticism, scrutiny
Socio cultural aspects & dynamics

- Measures for social cohesion
  - Plant a good seed
    - Follow local protocol / traditional authorities (TA)
    - Clarity on contribution / expectations
  - Sharing responsibilities
  - Transparent and accountable
    - Availability of books
    - Collective authorization for payments
  - Consistent with initial goals
  - Relation with powerhouses
    - TA, church and government
Socio cultural aspects & dynamics

• Social inclusion
  – Participation & Analogies
  – Training of vulnerable groups

• Gender dynamics & tackling inequality
  – Role models (training and grants)
  – Spaces for participation and recognition
Technical Aspects & Service Offered

Infrastructure

- Public facilities: Internet cafe/kiosk & Hotspot
- Use of WiFi: Access & backbone
- Lack of Electricity
Technical Aspects & Service Offered
Internet and Intranet

- Internet gateway
  - ISP on site
  - Backhaul
  - No Internet
- Internet services
- Intranet services
  - Local news
  - Educational content
  - VoIP
  - e-government
Technical Aspects & Service Offered
Training and other services

• Strong emphasis on training
  – Computer literacy
  – Hardware maintenance
  – Web development
  – Human rights

• Non-IT related services
  – From community development to ICT
  – From ICT to community development
Strategies for sustainability

• Funding mechanisms
  – Crowdfunding
  – Donations
  – Matching funds
  – USAF

• Local Economy
  – Communication services as part of the local economy
Strategies for sustainability

• In-kind contributions
  – Time (maintenance / decision making)
  – Access to and construction of buildings
  – Tools & meals

• Affordable access
  – VoIP and voucher Internet

• Local knowledge and local value

• Non-monetary incentives
Strategies for scale

• Fantsuam, Macha & Bosco
  – Push approach
  – Accompanied by the chief
  – Training in situ vs immersion
  – Independent operation
Way Forward

• Repository of knowledge and experts
  – Technical & Regulatory issues
  – Online training & videos

• Exchange programs
  – Peer learning

• School of community networks
  – Theoretical & practical
Community Networks in Africa
Social Barriers

- Lack of awareness (benefits & possibility)
  - Lack of relevant content

- From awareness to action
  - Historical process
  - Systemic mindset
  - Incentives

- Gatekeeping
Economic Barriers

Communicate or eat?

• Infrastructure (CAPEX)
  – Lack of electricity
  – Local markets (shipment costs)
  – Import taxes

• Operational (OPEX)
  – Cost of backhaul on site
  – Services (lack of user-devices)
  – Stipends
Technical barriers

- Lack of technical competencies
- Wi-Fi and NLOS
- Devices not working well
  - Heat
  - Dust
  - Fake products
Regulatory Barriers

• Lack of government support
  - Awareness
  - Private interest (regulatory capture)

• Particular barriers
  - Small parts of spectrum unlicensed
  - Big parts of NLOS spectrum nationally assigned (GSM, TV)
  - Lack of open access backbones
  - High import duties and regulatory fees
  - Inefficient Universal Access and Service Funds

• CNs not well versed in regulatory frameworks
  - Dangerous & not conducive
Considerations for developing CNs in Africa

“In Africa, a community network is not simply telecommunications infrastructure deployed and operated by citizens to meet their own communication needs; it is a tool to improve what a community is already doing in terms of their growth and development, by contributing to a local ecosystem that enhances the daily lives of those staying in the community.”
Considerations for developing CNs in Africa

• This is only the beginning
  – Communications vs Building / Repairing car
  – Awareness on CN is raising

• Technologies reducing cost & complexity
  – VillageTelco, LibreMesh, LibreRouter, etc
Considerations for developing CNs in Africa

- Stakeholders and Strategic partnerships
  - Traditional authorities
    - Enabling this to happen
  - Churches
  - Governments
    - Recognition, public dissemination channels, vocational training.
  - Local media houses
    - Community radios, local newspapers
Considerations for developing CNs in Africa

• Local Community Network Champions
Considerations for developing CNs in Africa

- Community Networks Observatory
  - Systematic evidence gathering to facilitate engagement:
    - Governments
    - Businesses
    - Donors
    - Researchers
    - Potential implementers
Considerations for developing CNs in Africa

• Funding and sustainability
  – External seed capital
  – Local seed capital?
  – Pull vs Push
  – Loans and matching funds?
  – Business and marketing training
Considerations for developing CNs in Africa

- Developing capacities
  - Community Networks Volunteers
    - Technical, regulatory, economic...
  - University Engagement
  - Travel and exchange scholarships
  - School of Community Networks
  - Teaching videos by Africans for Africans
Considerations for developing CNs in Africa

• Policy and regulatory engagements
  – Easier fitting of CNs in the regulatory framework
  – Access to spectrum
    • Nationally allocated and unused
    • Allow communities to operate it
  – Open access and fairly priced backhaul
Recommendations

- To communities (and their representatives)
  - Continue engaging
- To governments
  - Find ways of supporting self-provision
- To development organizations
  - Support the creation of national and international structures
- To the technical community
  - Keep on removing barriers
- To researcher institutions
  - Keep on generating evidence
- To private media
  - Tell these stories, they are way more valuable than those of the big telcos
Recommendations

To all of you

Thanks for being here, for showing interest on the topic and contributing to the establishment and growth of the CN movement in Africa
Understanding Community Networks in Africa

Carlos Rey-Moreno
carlos.reymoreno@gmail.com
University of the Western Cape
Zenzeleni Networks

2nd Summit on Community Networks
25th May 2017, Nairobi