

NATIONAL STRATEGY FOR COMMUNITY NETWORKS IN SOUTH AFRICA



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Document objective

This document consolidates three foundational analyses into a unified national strategy as a comprehensive framework designed for strengthening and expanding community-centred connectivity initiatives (CCCIIs), including community networks, across South Africa over the next three years.

Purpose

To serve as a guide for stakeholders on strategic direction, implementation priorities and collaborative approaches, facilitating collective efforts towards digital inclusion and advancing community-centred connectivity in South Africa.

Content sources

This strategy integrates insights from four foundational sources:

- Synthesis document for the development of the national strategy for community networks in South Africa (November 2024) – Comprehensive analysis of connectivity challenges, policy barriers and strategic recommendations.
- National Convening of Community Networks (18-19 November 2024) – Stakeholder feedback and consensus from representatives across community networks, government bodies, academia and civil society.
- Three-year implementation framework (2025-2027) – Detailed roadmap with concrete activities, timelines and responsibilities developed through collaborative stakeholder input.
- National online consultative meeting (22 July 2025) and in-person validation workshop (30-31 July 2025).

Executive summary

While South Africa hosts advanced telecommunications infrastructure and 4G coverage reaching 98.8% of the population, deep inequalities persist. Only 1.6% of rural households have internet access at home compared to 13% of urban households. For communities living at or below the poverty line, a 20-gigabyte data bundle consuming 38.4% of monthly income represents an insurmountable barrier to meaningful digital participation.

Community networks offer a proven alternative.

Operating across South Africa, from a rural cooperative in Eastern Cape to urban services in Khayelitsha, community-centred connectivity initiatives demonstrate how local accountability and collaboration can deliver affordable connectivity while building local technical capacity and supporting broader community development.

The November 2024 National Convening of Community Networks successfully brought together community network practitioners, government agencies, other network operators, development organisations and funding entities to chart a coordinated path forward. Participants committed to specific actions across policy reform, sustainable funding, capacity building and social inclusion initiatives.

The adoption and implementation of this national strategy present a timely opportunity to unlock the potential of community-centred connectivity solutions in South Africa. By addressing digital exclusion challenges through a holistic and sustainable approach, this strategy aims to diversify the economic opportunities for South Africans living in unserved and underserved areas. The national strategy aims to pave the way for a digitally inclusive South Africa.

1. Background: South Africa's digital paradox

South Africa's position as host to 80% of Africa's internet infrastructure as recently as 2013 stands in stark contrast to persistent digital inequalities affecting millions of citizens. Despite being an upper-middle-income country and Africa's second-largest economy, approximately two-thirds of the population lives below the national upper-bound poverty line, with unemployment at 33% and youth unemployment reaching 45.5%.

These inequalities are not coincidental, but reflect the legacy of apartheid's systematic underdevelopment of areas not designated for the white minority population. Today's digital divide mirrors these historical patterns, with urban affluent areas enjoying reliable connectivity and stable power, while rural and urban underserved communities face significant barriers in availability, quality and affordability.

Recent data shows internet usage increased from 62.4% in 2018 to 74.7% in 2022, with the largest growth occurring during COVID-19 as governments recognised the crucial need for widespread available and affordable broadband. However, this growth masks persistent disparities. Metropolitan households achieve 21.4% home internet access compared to significantly lower rural access rates.

Mobile device usage has become the primary means of internet access, with 69.6% of households using mobile devices to access the internet. This heavy reliance on mobile data underscores the need for affordable data packages and alternative low-cost WiFi-based networks. However, mobile data costs remain prohibitive. The lowest-priced 20-gigabyte bundle costs R599.00, representing 38.4% or more of monthly income for someone living at the poverty line of R1,558.00.

Gender disparities add additional complexity. While overall female smartphone ownership now exceeds men's, rural women have significantly lower smartphone ownership rates than rural men. Analysis of community network operations indicates these structural inequalities manifest in technical participation rates and leadership roles, with persistent gaps in women's representation in technical positions.

2. Understanding community networks

Community networks represent a fundamentally different approach to solely connectivity provision. Rather than prioritising profit extraction, community networks ask, “How can we enable underserved communities to access digital services affordably and participate meaningfully in digital opportunities?” This shifts the focus from profit making to serving community needs.

Community networks are community-centred connectivity initiatives or local internet service providers (ISPs) with a social purpose, focused on bringing affordable and reliable internet access to areas often deemed “unviable” by commercial operators. In South Africa, these are typically registered as NGOs, non-profit companies or similar public benefit organisations. They aspire to follow community-centred connectivity principles. For example, they are locally built and managed by people within communities, often facilitating value-added services, including access to educational content in local languages, digital skills training and local economic development support.

The development process within community networks is inherently participatory, involving approaches such as workshops where community members actively shape systems according to their needs. Through this inclusive approach, local champions emerge to lead establishment and maintenance efforts, ensuring networks remain rooted in a community’s vision for meaningful connectivity.

Current diverse approaches within the community network movement: Six examples

- In rural Eastern Cape, Zenzeleni Networks NPC operates as a community-based ISP, demonstrating how community accountability can bring connectivity to remote areas through pay-for-access models using vouchers and anchor tenant relationships.
- V-NET serves Khayelitsha, Cape Town's largest township, as an NGO structure and part of the larger Violence Prevention through Urban Upgrading (VPUU) initiative, offering both free and pay-for-access options in urban informal settlements.
- SOWUG (Soweto User Group) provides services in Soweto through an NGO structure, focusing on pay-for-access models with anchor tenant support in urban formal areas.
- Ocean View, a peri-urban area in the Western Cape, is serviced by Black Equations, which operates as a private company structure with a social mission, offering mixed free and pay-for-access options using voucher systems while serving as both community network and social enterprise.
- Mamaila Community Network operates in Limpopo province and serves six villages in the Greater Letaba Municipality with over 20,000 people, providing affordable WiFi access as the first community-owned ISP in Limpopo.
- Amadiba Community Network is a project that has been strengthening the community's efforts to defend their land, the coast of their country and their people, through access to the internet.

These networks collectively serve communities ranging from rural villages with smaller and geographically dispersed populations facing high unemployment to urban townships, with some networks serving upwards of 30,000 users monthly. Despite diverse organisational structures and service models, all networks share commitment to community engagement that will lead to ownership, affordable access and local capacity building.

Despite their proven impact and diverse approaches, these networks face significant structural challenges that limit their growth and sustainability across South Africa.

3. Current challenges faced by community networks

Community networks in South Africa face interconnected challenges that span multiple dimensions of development and operations. Through comprehensive analysis and stakeholder consultation, these challenges have been organised into five strategic priority areas that form the foundation of this national strategy: Priority 1 (Policy and regulatory environment) addresses spectrum access and licensing barriers and the need for policy awareness; Priority 2 (Funding and partnerships) focuses on sustainable financing and collaborative partnering models; Priority 3 (Capacity building) targets technical skills development and training and mentorship; Priority 4 (Financial sustainability) involves developing viable business models; and Priority 5 (Social and economic inclusion) seeks to ensure that networks serve broader community development goals through appropriate neighbouring community infrastructure expansion and local services.

The following sections detail the specific challenges within each area and demonstrate how they connect to these strategic priority areas that are addressed comprehensively later in this document.

Challenge 1: Policy and regulatory environment

The current regulatory framework presents significant barriers to community network development and expansion. Spectrum allocation heavily favours large commercial operators, as demonstrated in the March 2022 spectrum auction where Vodacom paid R5.38 billion for 110 MHz of spectrum, approximately R49 million per MHz, effectively pricing out smaller operators and community initiatives. The exorbitant cost means small operators would not be able to afford this and thereby not have access to spectrum. Current community networks operate primarily using licence-exempt spectrum access, particularly in the 2.4 GHz and 5 GHz bands. This option comes with significant limitations, including limited range compared to licensed cellular technologies, line-of-sight challenges where signal obstruction occurs from physical objects, environmental sensitivity where weather conditions and interference can degrade service quality and lower capacity allowing only a limited number of simultaneous connections.

Beyond spectrum access, licensing requirements under the Electronic Communications Act create substantial administrative and financial barriers. Community networks are lumped together with operators in licence categories. Specifically, community networks apply for combined class electronic communications network services (CECNS) and class electronic communications services (CECS) licences, with a total cost of R26,566.00. This sharply contrasts with countries like Kenya, where a special dispensation was created for community networks in 2022. The community network licence costs approximately R140.00 for application and R690.00 for annual renewal. The current South African licence regime does not cater administratively to community networks and the licence rates remain unaffordable for community-driven initiatives.

The extensive administrative requirements from the Independent Communications Authority of South Africa (ICASA), including technical plans, organisational documentation and financial projections, can overwhelm community-based initiatives lacking formal administrative capacity. Furthermore, infrastructure access policies, particularly those relating to leasing facilities and wayleaves, have proven inadequate in promoting equitable access.

Many grassroots communities remain unable to participate in multistakeholder spaces for policy changes that affect them, largely due to lack of visibility and understanding of the technical language in telecommunications policy and radio spectrum matters, as well as policy processes not being accessible in their indigenous language. Yet they would be ideally positioned to inform policy processes due to their on-the-ground experiences. Further, there is a need for

inclusive policy processes for communities. There is also a need to strengthen a collective voice or an alliance formation to speak strategically to the needs of communities in the above policy discussions and to government departments to advance an enabling environment for CCCIs. Ultimately, CCCIs need to find their alignment with the wider national development plan, SA Connect and others to achieve successful policy engagement.

Challenge 2: Funding and partnerships (external facing)

Community networks face complex funding challenges that stem from over-reliance on specific grant funding (in a current context of shrinking grant-funding sources), limited partnership options and lack of awareness of alternative financing mechanisms. Alternative funding options and partnership diversification could help to see grassroots communities advance their digital inclusion goals.

The challenge lies in access to initial capital expenditure (CAPEX), as start-up or expansion/scaling funding options for this remains limited, hindering network expansion. It is difficult to raise funding for this first cost, which has largely been financed with grant funding. Identifying partnerships would help with building symbolic physical centres for community networks. Relying on local revenue generation for this initial cost is not sufficient given socioeconomic conditions, high unemployment rates and constrained disposable income. Preparing “investment-ready” business plans or business-scenario building can be out of reach for grassroots communities and require committed capacity development. Such plans could be used towards engagement with the Universal Service and Access Agency of South Africa (USAASA), which has not been unlocked for use by community networks. Further lobbying for the evolution of the fund is needed in order for it to become more accessible to the community network movement.

Infrastructure access costs compound these funding challenges significantly. Wayleave costs can reach R6,000.00 per linear metre for trenching in cities like Cape Town, while backhaul pricing options in marginalised areas often cost five times more than retail fibre options available in middle-class suburbs. For example, Black Equations pays R3,100.00 monthly for a 10 Mbps uncontended line terminating at Ocean View High School. This is approximately five times the cost of a retail 50 Mbps fibre line from commercial providers in nearby middle-class areas. There are substantive gaps in finding backhaul partnerships driven by the wider social mission (and possibly bulk purchasing) and willing to negotiate for lower rates.

Power infrastructure presents particularly acute challenges in underserved areas. Many networks operate in locations with unreliable grid electricity, forcing reliance on expensive backup solutions including batteries, generators and renewable energy systems such as solar power installations. The initial costs and technical expertise required for implementing solar and other renewable energy solutions create additional barriers for community networks. In low-income households hosting hotspot installations, power conservation practices often lead to intermittent service availability as homeowners switch off equipment to reduce electricity costs, highlighting the need for sustainable, community-controlled energy solutions. Limited knowledge on cross-sector alternative energy collaborations further reduces impact potential and access to diverse funding sources.

Finally, public-private partnership models, while intended to drive infrastructure development, often prioritise profitable areas and commercial interests over public good, leaving marginalised communities frequently overlooked.

Challenge 3: Capacity building

A significant gap exists in community awareness and access to relevant training for the specific needs of CCCIs. Communities often lack understanding of CCCI potential and opportunities. Further, there are no clear certified courses or specific training modules that can specifically support CCCIs to complete technical feasibility design informed by communities, infrastructure builds and installation of local services. There are also limited knowledge-transfer mechanisms between networks, which create isolation and prevent shared or collective learning from successful implementations. Gender disparities in capacity building also place overarching constraints on ensuring enough representation and capacity in rural and underserved communities.

Significant knowledge gaps persist around the community networks sector. Awareness of community-centred connectivity would need to expand nationally, as well as to neighbouring rural communities, should the goal be to grow a collective of communities wanting meaningful connectivity.

In terms of training, the analysis shows limited exposure to or mentorship in formal skills – including but not limited to business skills – amongst community network operators. The School of Community Networks South Africa (SCN SA) demonstrated this challenge when participant engagement in community networks increased from 23.8% of participants who had been involved in community networks prior to

the programme to 80.9% by the end of the programme, with a recent audit showing that 52.3% of participants remained involved at some level in community networks. This data indicates the critical need for structured knowledge transfer. Further targeted and certified courses or capacity-building initiatives can address knowledge gaps that have historically limited community network development and sustainability. Learners want a certificate to show and build their experiences.

Technical-capacity limitations persist within grassroots communities, with significant challenges in network deployment, maintenance and troubleshooting expertise. This also includes technical capacity in alternative energy installation and maintenance. Beyond voucher systems, technical building of digital services such as captive portal capacities and appropriate applications within the server is limited. While some networks have explored community-based data centres and local hosting/caching services, there remain substantial limitations in developing comprehensive digital service platforms, including local content creation, e-commerce systems, educational platforms and digital entrepreneurship support tools. A mechanism for technical knowledge exchange or mentorship could help transfer knowledge between technicians and community network practitioners.

Analysis of community network operations indicates that structural inequalities manifest in technical participation rates and leadership roles. Data from existing networks shows persistent gaps in women's representation in technical positions, with barriers including limited access to training opportunities and operational constraints around infrastructure maintenance.

There is a strong contingent of women in the community network space in South Africa, including in leadership roles and participation in training, yet at the same time, some observations indicate a high female turnover and difficulties to retain women in the community network space over time.

These interconnected challenges – from technical capacity limitations and gender disparities to knowledge and skills-development gaps – directly connect to Priority 3 (Capacity building), which addresses technical-skills development, mentorship programmes, formal business-skills training and gender-responsive training approaches essential for sustainable network operations, and Priority 5 (Social and economic inclusion), which focuses on developing comprehensive digital services beyond basic connectivity.

Challenge 4: Financial sustainability (internal facing)

The financial sustainability over time challenge represents one of the most critical barriers faced by community networks. Currently, no community network in South Africa operates a fully break-even business model. Aside from wider policy and structure issues, internally there exists limited knowledge of broader social enterprise approaches. Specifically, there is insufficient development of robust or standard financial models of different types of community network structures or understanding of the economics involved in running a network that can balance affordability with sustainability while maintaining community ownership and social mission principles.

Some initial modelling sees community networks only using grants to fund their infrastructure and operations, while others have transitioned to a mix of grants and income generation. Income generation models vary based on local socioeconomic conditions – in at least one case, a community network facing 94% unemployment offers vouchers for uncapped connectivity for as little as R35.00 a month.

Current analysis shows significant constraints on thinking with a social enterprise approach. The idea of social enterprise would involve a mindshift change towards micro or small-business development with a social mission focus. CCCIs can develop their business models or scenarios around their vision and ultimately towards breaking even over time. Failure to conceptualise diverse revenue streams can create vulnerability to external funding availability and it limits long-term planning capacity for network development and community service expansion. For example, business models can be developed to match different types of community network structures. To cross-subsidise the network, community networks can explore business models based on other income streams, such as selling devices, or around local services development activities within existing networks, which serve the needs of grassroots communities and could improve revenue generation. Most community networks focus primarily on basic connectivity provision for revenue rather than including the development of value-added services with some local charges. Creating models or cases of these value-added local services could be useful and replicated by CCCI practitioners, helping them develop a diversified income stream.

Challenge 5: Social and economic inclusion

Community participation and social inclusion challenges require networks to understand and respond to social demands that may be inadequately addressed in some externally sourced implementations. There are demands for community

connectivity by neighbouring communities or through word-of-mouth that call for a community network. Networks must generate local services with broader community benefits that directly address their needs and which can ensure sustained community support for the network. Historical inequalities continue to exclude marginalised communities from digital opportunities, requiring deliberate efforts to address systemic barriers and create inclusive access pathways.

Social inclusion challenges can involve neighbouring communities who have seen the benefits of a community network and reach out for technical support and inclusion in the network. This expansion requires planning and technical feasibility studies to understand a community's commitment to local ownership and participation, as well as the technical infrastructure costs for implementing network expansion.

Besides social inclusion, communities demand specific local services to serve their needs and improve their way of life; however, these requests are not further developed in their local languages or according to their ideas. The summary analysis indicates that while some networks have explored community-based data centres and local hosting/caching services, there are still many community networks that need further understanding of these services. There also remain substantial limitations in developing the comprehensive digital service platforms that communities demand, including local content creation, e-commerce systems, educational platforms and digital entrepreneurship support tools.

These social and economic inclusion challenges are central to Priority 5 (Social and economic inclusion), which focuses on developing digital services, community governance structures and economic integration initiatives that ensure networks serve broader community development goals beyond basic connectivity.

4. Community Networks South Africa (CNSA)

During the 2024 National Convening pre-event, community network representatives, together with other stakeholders, agreed to join voices and efforts under a collective entity called Community Networks South Africa. The purpose was to better address the needs and vision of community networks, while coordinating and aligning collective efforts to foster and grow community networks across the country.

CNSA is officially registered as a non-profit company and its objectives include advocacy, capacity building, support services, partnership building and resource mobilisation. Zenzeleni Networks, one of the founding members of CNSA, has been selected as the national coordinator to operationalise the national strategy of community networks in South Africa. CNSA could serve as a unified voice for community networks in the policy engagement and opportunities mentioned above while providing coordination and support for capacity building and resource sharing amongst member networks.

CNSA's formation addresses the historical challenge of a limited/fragmented community network voice in South African policy processes. Previously, community networks lacked a united front for putting forward policy positions on new policy processes being discussed in parliament or responding to regulator calls for inputs. CNSA could provide this unified advocacy capacity while collectively supporting individual network development and sustainability.

5. Three national event outcomes and stakeholder commitments

The three national events (the November 2024 National Convening of Community Networks, a July 2025 online consultative meeting and the 2025 national validation workshop) successfully brought together a diverse ecosystem of stakeholders committed to advancing community-centred connectivity across South Africa. These strategic gatherings united community network representatives, government departments, regulatory bodies, technology partners and development organisations in co-creating actionable solutions for the challenges faced by community networks.

The three events addressed the real-world operational challenges that networks encounter daily – from spectrum allocation barriers and financing constraints to capacity-building needs and policy engagement opportunities. Through structured interactive workshops and collaborative discussions, participants moved beyond theoretical frameworks to identify concrete priority areas and develop practical foundations for coordinated implementation.

The outcomes of these discussions directly inform the development and evolution of this national strategy document, ensuring that with each event, the strategic framework is strengthened and refined, reflecting actual stakeholder capacity, willingness to implement and on-the-ground operational realities, rather than theoretical possibilities.

Approach to stakeholder commitments

While the three events successfully engaged diverse stakeholders across the community network ecosystem, this strategic framework presents commitment categories rather than specific organisational pledges. The events brought together community networks (Amadiba Community Network, Black Equations, Mamaila Community Network, SOWUG, V-NET, Zenzeleni Community Network, Seeding Community Network), public bodies (Northern Cape Department of Economic Development and Tourism, USAASA, Media, Information and Communication Technologies Sector Education and Training Authority (MICT SETA)), commercial operators (Ibanza Pty, Adnotes), connectivity initiatives (iNethi NPC, Tulia Community Network, Project Isizwe); development/impact organisations (Global Digital Inclusion Partnership, FURTHER, Internet Society SA Chapter, Right2Know, Yethu InfoTech Collective), education/training/research entities (Digify Africa, University of Cape Town, Girlhype, The Leap Institute & ICDL SA, Human Capital Learning Solutions (HCLS), CSIR, NCDev Ecosystem), funders, donors, grantors and financing organisations (Foreign, Commonwealth and Development Office (FCDO), Unconnected.Org) and technology solutions (Enexi Solutions Pty Ltd, MIRO).

The summary documents from the three events capture detailed organisational commitments and concrete next steps by these participating entities. However, this consolidated strategy is meant as an implementation guide. It will also require ongoing stakeholder consultation and in-person commitment confirmation in order to create a definitive operational roadmap. This approach ensures that when stakeholders formally approve this strategy, their commitments will be current, realistic and aligned with their actual capacity and institutional priorities. The framework below outlines the types of commitments needed across strategic priority areas, providing a foundation for detailed implementation planning with confirmed organisational participation and resource allocation.

Participating organisations made specific commitments across strategic priority areas:

a) Policy and regulatory environment

Spectrum allocation and licensing reform: There is commitment to support the strengthening of CNSA as an entity and its collective advocacy efforts for an enabling policy and regulatory environment. Specific next steps include finalising CNSA registration as a public benefit organisation, engaging stakeholders to raise awareness on policies by convening initial meetings with relevant stakeholders to align on spectrum advocacy goals, identifying challenges faced by community

networks in spectrum access and licensing, establishing key advocacy talking points for regulatory proposals, developing strategies for both grassroots and national-level advocacy efforts and drafting advocacy papers outlining socio-economic benefits of community network spectrum allocation and a special licence category for CCIs.

Licensing fee and wayleave cost reduction: There is commitment to form advocacy coalitions, develop detailed policy proposals and engage municipalities and regulators on supportive policies, towards providing more appropriate and affordable administrative costs charged to community networks.

Shared spectrum access framework development: There is commitment to explore comprehensive research on international best practices and develop technical, regulatory and operational structures.

b) Funding and partnership

Mixed funding/partnership model development: There is commitment to conduct alternative funding model workshops, grant and partnership mapping, engagement with USAASA on the fund and test pilots that utilise alternative funding or partnership projects.

Cross-subsidisation and reserve fund development: There is commitment to design investment-ready memos and financial models where grants or stable services subsidise costs for lower-income users while building reserve funds for equipment replacement and upgrades.

Bulk purchasing and equipment standardisation: There is commitment to form purchasing consortiums, assess hardware and software needs across networks and negotiate bulk purchase agreements to reduce equipment costs.

c) Capacity building

Mentorship and technical training: All participating organisations have committed to establish mentorship programmes pairing experienced operators with emerging leaders, develop standardised training modules for network deployment and maintenance and pursue national qualification framework (NQF) certification.

Gender integration and leadership development: There is commitment to gender-sensitivity training for network operators, developing gender-sensitive training and implementation approaches and implementing leadership development programmes specifically targeting women. Organisations are committed to

establishing partnerships with women's organisations for leadership development programmes and to creating support systems addressing work-life balance challenges, including childcare provision during network activities.

Governance and management strengthening: There is commitment to support governance structure reviews with community networks, as well as policy development, and provide training for board members and management teams.

d) Financial sustainability

Income-generation strategy development: CNSA has committed to conducting comprehensive analyses to identify potential and diversified income sources, including vouchers, anchor tenants, grants and value-added services, with pilot implementations in selected networks.

Business development and professionalisation: Organisations have committed to adopting a social enterprise approach, including supporting women-owned enterprises in communities, creating financial planning or readiness toolkits and supporting professionalisation of customer services and user engagement.

e) Social and economic inclusion

Digital services and community development: There is commitment to form partnerships with technology companies and educational content providers for value-added digital services, including community radio stations, educational platforms and digital marketplace development.

Community connectivity: There is commitment to expand infrastructure to neighbouring villages in response to requests and demands from the networks. Community-based data centres and renewable energy: CNSA has committed to conducting feasibility studies for community-based data centres and integration of renewable energy solutions that address power reliability challenges.

Community governance and cultural preservation: There is commitment to support community-led governance structures through stakeholder engagement and capacity building while facilitating cultural preservation initiatives through digital platforms documenting local languages, traditions and knowledge systems.

Local economic development integration: CNSA has committed to developing digital entrepreneurship training programmes, creating networking platforms for resource sharing and facilitating e-government service access and digital marketplace opportunities for local businesses.

6. Five strategic priority areas

Success in bridging the digital divide depends on coordinated action across five interconnected priority areas addressing the full spectrum of challenges faced by community-centred connectivity initiatives. These priorities emerged from extensive stakeholder consultations and they reflect the collective wisdom of organisations working directly with communities. This next section outlines a structured approach to achieving the strategic priority areas for community networks in South Africa.

Key Challenges	Implementation approach	Expected outcomes
1. Environment		
Current regulatory spectrum and licensing cost model. Backhaul connectivity costs five times more in underserved areas. Recent policy developments create opportunities requiring coordinated advocacy.	Formalise the CNSA and/or advocacy coalitions for a collective voice in policy processes. Create capacity and working groups to develop skills and evidence-based policy position papers or policy consultation responses to regulatory licence categories and spectrum. Incorporate gender-responsive regulatory framework recommendations. Submit formal proposals to ICASA consultations and implement spectrum-sharing pilot programmes. Negotiate licensing fee reductions and wayleave cost reforms through sustained engagement with regulatory bodies or the rapid deployment framework committee (Department of Communications and Digital Technologies). Draft an operational “basic knowledge” document for community networks to share knowledge/experiences around wayleaves. Explore wayleave training for municipalities to include discussions on community networks.	Unified voice to speak for CCCI policy needs; policy transformation creating an enabling regulatory environment for CCCIs; significant cost reduction making networks financially viable; improved spectrum access enabling scalability; reduced urban-rural cost disparities.
2. Funding and partnerships		
Over-reliance on grants creates sustainability challenges. Limited cross-sector partnerships/collaboration reduces impact potential. Access to capital expenditure (CAPEX) funding is limited and hinders expansion. Community networks operate with little knowledge about diverse revenue generation approaches and limited exposure to alternative financial mechanisms.	Map existing funding sources and partnership opportunities. This includes alternative renewable energy organisations, women’s organisations and cooperatives. Draft “investment-ready” memos and develop business cases for pitching to a diverse ecosystem of funders. This includes corporate social responsibility partnerships, interest-free loans and extended public works programme integration. Establish bulk-purchasing cooperatives and create cross-subsidisation models. Launch alternative financing mechanisms including social enterprise models, impact investment initiatives and innovative financing to reduce dependency on traditional grants.	Financial sustainability through diversified and alternative revenue streams; strategic alliances providing ongoing support; operational viability beyond initial funding; maintained community ownership despite diversified funding.
3. Capacity building		
Communities lack awareness of CCCIs and access to relevant training and certification. Limited knowledge-transfer mechanisms between networks. Need for women’s meaningful participation addressing structural barriers. Technical capacity limitations persist with significant challenges in network deployment, maintenance and troubleshooting expertise.	Conduct community awareness campaigns. Develop needs assessments leading to standardised curriculum development for accredited certification. Develop comprehensive training, covering network deployment, maintenance, troubleshooting, renewable energy systems installation and maintenance, regulatory compliance and local content creation. Cybersecurity training to build capacity and protect networks from vulnerabilities. Establish mentorship programmes and peer-to-peer network exchange for collective support. Implement gender-responsive training approaches addressing women’s participation and leadership barriers. Create comprehensive train-the-trainer programmes for long-term sustainability.	Nationally or regionally recognised training providing quality credentials; developed community-based technical expertise; established peer support systems; meaningful women’s participation with supportive structures.

4. Financial sustainability

Limited knowledge of social enterprise approaches and need for robust financial models balancing affordability with sustainability while maintaining community ownership. Managing ongoing costs including equipment replacement while keeping services affordable. Need for advancement in diversity of revenue-generation ideas and approaches.

Analyse current financial models of different types of community network structures. For example, build community network scenarios of models that implement voucher systems and anchor tenant contracts. Collectively explore and share ideas on reserve funds and equipment replacement schedules. Develop comprehensive social enterprise approaches to financial planning, such as toolkits and training. Explore other business models for internally diversified revenue streams, such as device selling and value-added services provision.

Diverse revenue streams reducing financial risk; operational efficiency through community-based centres; strong financial management ensuring accountability; sustainable financing enabling ongoing operations without external dependency.

5. Social and economic inclusion

CCCs need community participation to understand social demands that may not be contemplated in some networks. Networks must generate broader benefits for neighbouring communities, justifying development costs while ensuring community support. Addressing historical inequalities that exclude marginalised communities from opportunities.

Conduct community needs assessments for community connectivity requests. Expand infrastructure builds (CAPEX) in neighbouring communities to test financial viability/models. Develop and, in some cases, scale community-based data centres and diversified value-added services. Create stakeholder mapping to develop interest in local services platforms, including local server content and apps, community radio, education and marketplaces. Establish community governance councils and implement cultural preservation and documentation projects. Implement rights awareness training programmes, educating communities about their rights and how to leverage them. Scale community-based data centres and diversified value-added services, including women's cooperatives, as revenue streams for sustainable financing.

Wider community connectivity and community empowerment through strengthened governance and participation; economic opportunities through digital entrepreneurship and market access; cultural vitality preserving local traditions; enhanced social cohesion through locally relevant services; sustainable energy access supporting network reliability.

7. Implementation framework: 2025-2027

The three-year implementation strategy provides structured context for achieving the strategic vision through coordinated activities across all priority areas. This framework collates the various known activities and resources that multiple actors will be contributing to advance CCCIs in a coordinated fashion. The approach builds systematically from foundational activities in Year 1 through scaling initiatives in Year 2 to sustainability and consolidation in Year 3, with each year building on previous achievements while introducing new components that advance the overall strategy.

The systematic approach attempts to align and coordinate with multiple plans of partners allied with CCCIs. The three-year framework integrates gender considerations throughout all activities, ensuring that implementation contributes to both community connectivity and social inclusion objectives. Success depends on coordinated implementation across all strategic priority areas, with regular monitoring and adaptation based on emerging opportunities and challenges that arise during implementation.

Year 1 (2025): Foundation building

Year 1 operationalises the South African national strategy for CCCIs through specific activities, establishing the foundational steps for enabling stakeholders to have the knowledge, shared understanding and capacity to advance in developing an improved policy environment and having appropriate training for CCCIs. For example, resources have been set aside for a national coordinator to facilitate the processes to operationalise the strategy.

This foundational year focuses on the institutional strengthening of CNSA, policy capacity building and public consultation and framework contributions, standardisation of the curriculum of the School of Community Networks South Africa, community connectivity build requests and pilots, gender integration research and facilitating finance and sustainability case studies.

Year 2 (2026): Scaling and deepening

Regulatory evolution and implementation involve conducting spectrum-sharing pilot projects and introducing a new licence category for community networks, thus demonstrating the practical benefits of community network spectrum access and a special dispensation for community networks. Working with ICASA on transition from policy submissions to implementation of regulatory frameworks supporting community network operations becomes central to establishing permanent spectrum allocation mechanisms and reduced licensing fee structures under a new licence category.

Infrastructure development and standardisation focus on scaling infrastructure development through standardised models proven in Year 1 pilots. Implementation of renewable energy solutions addresses power reliability challenges common in underserved areas. Expanding technical support networks provides ongoing maintenance assistance while developing regional support hubs that offer localised technical assistance and build regulatory compliance expertise.

Financial sustainability and business model scaling involve implementing mixed funding models combining grants, earned income and innovative financing mechanisms tested during Year 1. Establishing cross-subsidisation structures ensures that stable revenue sources support services for lower-income users. Supporting professionalisation of customer service and user engagement improves service quality while building sustainable revenue streams.

Community engagement and leadership development strengthen community governance systems, ensuring local ownership and decision-making authority over network operations. Expanding women's leadership initiatives addresses participation gaps identified in Year 1 assessments.

Scaling capacity building through standardised School of Community Networks training programmes while launching entrepreneurship support programmes enables community members to develop digital businesses leveraging network infrastructure, supported by comprehensive mentorship focusing on technical and business skills development.

Year 3 (2027): Consolidation and sustainability

Policy integration and institutional permanence establish permanent regulatory frameworks supporting community networks as integral components of South Africa's telecommunications landscape. Creating sustainable policy engagement mechanisms via CNSA ensures community network voices remain heard in ongoing regulatory developments while building long-term advocacy structures that maintain momentum beyond the initial implementation period.

Operational sustainability and knowledge transfer achieve infrastructure standardisation enabling predictable deployment costs and maintenance procedures. Establishing regional support hubs provides ongoing technical assistance while training local technicians in standardised procedures. Creating sustainable maintenance models reduces dependency on external technical support while ensuring network reliability and service quality.

Economic sustainability and local ownership involve scaling successful business models proven during Year 2 implementation across expanding networks. Establishing long-term funding mechanisms includes impact investment opportunities, government infrastructure support programmes and community ownership models, enabling local investment in network expansion. Transferring operational responsibility to community structures maintains quality standards and regulatory compliance through governance training, financial management capacity building and leadership development, ensuring communities can sustain and expand networks independently.

Social impact and community development entail establishing local innovation hubs leveraging network infrastructure for broader geographical expansion and community development initiatives. These hubs provide spaces for digital skills training, entrepreneurship development and access to digital government services.

Creating sustainable training systems enables ongoing capacity building without external dependency, through train-the-trainer programmes, standardised curriculum materials and peer-to-peer learning networks connecting communities across different regions.

Strategic implementation plan

The table below provides a detailed breakdown of the 10 core activities that form the backbone of this three-year strategy. Each activity progresses systematically from foundational work in 2025 through scaling and development in 2026, culminating in sustainability and community ownership by 2027.

This implementation roadmap ensures coordinated action across all priority areas while maintaining clear accountability for deliverables and timelines.

Year 1 (May-Dec 2025): Foundation	Year 2 (2026): Development	Year 3 (2027): Sustainability
Activity 1: National coordinator (all priorities)		
COMPLETED: Zenzeleni Networks appointed. Coordinate implementation activities, establish working groups and identify funders and government actors.	Strengthen coordination mechanisms, expand stakeholder engagement and develop provincial liaison networks across nine provinces.	Transfer coordination to community-elected structures, establish sustainable mechanisms independent of external funding and create permanent CNSA secretariat.
Activity 2: Policy champion (Priority 1)		
Appoint a policy champion, who advises CNSA and supports formation of coalition/working group, develops community network awareness training activities, coordinates inputs to public consultations and liaises with USAASA/CSIR/DAP ZA.	Support the implementation of spectrum-sharing pilots/ community network licence framework with ICASA, expand advocacy using pilot results, strengthen coalition with additional partners and launch gender-responsive regulatory advocacy.	Establish permanent regulatory frameworks, create sustainable CNSA-ICASA collaboration, integrate gender-responsive policies and document advocacy model for replication.
Activity 3: Institutional strengthening (Priority 1)		
Support partnership/collective efforts, specifically CNSA governance including strategic planning/budgets, facilitate Kenya-South Africa exchange, integrate gender representation and conduct policy training for members.	Strengthen community governance systems, expand CNSA membership beyond initial organisations, refine frameworks based on Year 1 learning and develop permanent organisational structures.	Achieve full infrastructure standardisation, establish permanent regional support hubs, create sustainable maintenance models and implement comprehensive financial management.
Activity 4: Civil society training (Priority 1)		
Develop syllabus on community network policy for grassroots communities, using case studies and scenarios, such as AfriSIG methodology, to “role play” multistakeholder forum participation. Include gender sensitivity and bring CCCIs to ICASA consultations. Participants should feel comfortable in multistakeholder settings and speak confidently about their grounded experiences.	Implement comprehensive impact assessment tools on policy engagements, launch gender-responsive evaluation approaches and create standardised reporting mechanisms.	Transfer governance to community-led structures, establish sustainable training systems with local trainers and create local innovation hubs.
Activity 5: Advocacy/awareness (Priorities 2 & 3)		
Find national communications partners, prepare a policy brief, host CNSA webinars highlighting community network experiences. Draw attention to available awareness-raising materials and Africa ITU CCCI course for eligible participants. Highlight women in CCCIs through global campaigns including Routing for Communities podcasts and local productions. Establish partnerships for CNSA/ individual community networks	Build awareness of community networks to thereby access alternative financing mechanisms and establish relationships with funders and donors interested in community-centred connectivity. Scale sectorial partnerships in digital services including community radio, e-learning platforms and local marketplaces while strengthening women’s leadership through mentorship programmes. Expand social entrepreneurship support through micro-grants and diversified funding approaches that reduce dependency on traditional grant structures.	Achieve financial self-sufficiency, scale successful business models, establish long-term funding mechanisms and create sustainable service delivery systems.

Activity 6: School of Community Networks South Africa (SCN SA) (Priority 3)		
Standardise materials for MICT SETA certification, include governance/administration modules, integrate gender best practices and establish registration processes.	Scale post-certification training programmes, implement advanced digital services training, develop train-the-trainer programmes and create leadership pathways.	Create sustainable capacity-building delivery systems with local trainers, establish permanent training infrastructure, develop certification pathways and integrate with economic development.
Activity 7: Research: CCCIs and small, medium and micro-enterprises (SMMEs) (Priority 4)		
Conduct social return on investment models, social enterprise-SMME-CCCI linkage research, examine CCCI business models and requirements/licensing processes, evaluate ecosystem integration and focus on women's cooperatives.	Roll out standardised infrastructure models based on social enterprise approaches, implement solar power solutions, expand technical support networks, scale community data centres and establish regional hubs.	Create innovation hubs supporting entrepreneurship, launch women's leadership programmes, implement cultural preservation through digital platforms and establish innovation funds.
Activity 8: Community connectivity (Priority 4)		
Continue technical builds or expansions, prepare for 2026 techno-feasibility/sustainability model studies for neighbouring communities post-SCN SA implementation.	Establish diversified funding streams and partnerships for CAPEX, implement reserve fund strategies and develop corporate/government partnerships.	Create sustainable service delivery, document economic/social benefits, establish permanent expansion programmes and develop quality assurance mechanisms.
Activity 9: Local services: Technical builds (Priority 5)		
Respond to community socioeconomic needs that will create demands for specific local services and lead to local service build requests, provide micro-grants for local service build/maintenance/expansion and focus on community data centres and digital platforms.	Scale infrastructure builds and other local services such as hyper local data centres (and regional ones like TERACO) that reduce costs, launch value-added services, establish regional support hubs, implement standardised monitoring systems, develop automated reporting and create shared infrastructure.	Achieve technical standardisation, establish permanent maintenance systems, create automated monitoring, implement comprehensive documentation and develop technical mentorship.
Activity 10: Gender integration/capacity (Priority 3)		
Research women's participation barriers, especially in leadership and with respect to high turnover in community networks, investigate women cooperatives as a potential target group for CCCIs, develop technology needs assessments and establish women's circles.	Implement Year 1 research recommendations, scale leadership development, expand economic empowerment initiatives and strengthen governance participation.	Achieve sustainable gender integration, establish permanent women's leadership structures, create work-life balance programmes and integrate gender-responsive approaches.

Central to successful implementation across all these activities is ensuring that gender integration and social inclusion remain embedded throughout every aspect of community network development.

8. Gender integration and social inclusion

Gender integration remains fundamental to community network development, addressing both structural inequalities in technical participation and broader patterns of digital exclusion affecting women.

Current analysis shows persistent gaps in women's representation in technical positions within community networks, with barriers including limited access to training opportunities and operational constraints around infrastructure maintenance.

The strategic framework addresses these challenges through multiple approaches:

Leadership development includes programmes specifically targeting women for technical and governance roles within community networks. These programmes provide mentorship opportunities, skills development and networking support, enabling women to take leadership positions in network operations and community governance.

Training approaches integrate gender-sensitive methodologies addressing identified participation barriers. This includes flexible scheduling accommodating work-life balance considerations, childcare support during training sessions and training content addressing specific technological needs identified by women in community networks.

Women's circles provide dedicated spaces for informal sharing and trust building, which can provide documented insights and gather feedback on various inputs to community network and gender integration work. These circles facilitate knowledge exchange, mutual support and collective problem solving while building networks of women leaders across the community network ecosystem. Women's circles serve as ongoing feedback mechanisms ensuring gender integration efforts remain responsive to women's actual experiences and needs.

Local economic opportunities include business development support for women-owned enterprises in communities served by networks. This encompasses digital entrepreneurship training, access to digital platforms for local business development and integration of women's cooperatives into community network service provision.

Policy integration ensures that gender-responsive approaches are included in advocacy efforts around spectrum allocation, licensing reform and infrastructure access policies. This includes specific language providing for women's access to technical training and leadership opportunities within regulatory structures supporting community networks.

9. Monitoring and evaluation

Impact assessment framework

Digital inclusion metrics track increases in internet access, affordability improvements and usage patterns across the communities served. These metrics are tracked by gender, age and socioeconomic status to ensure benefits reach intended populations and identify areas requiring additional attention.

Economic impact indicators measure local economic development supported by network infrastructure, including small business creation, digital entrepreneurship development and employment opportunities created through network operations and maintenance.

Technical performance standards monitor network reliability, service quality and infrastructure maintenance effectiveness. These standards ensure community networks provide service quality comparable to commercial alternatives while maintaining cost advantages.

Social inclusion measurements track community engagement levels, governance participation and leadership development outcomes. Particular attention is focused on women's participation rates and retention in technical and leadership roles.

Sustainability metrics

Financial sustainability tracking monitors revenue diversification, cost recovery progress and reserve fund development, ensuring networks achieve long-term operational sustainability while maintaining affordability for the communities served.

Community ownership indicators measure transfer of operational responsibility to community structures, local technical capacity development and community governance effectiveness, ensuring networks remain community-controlled rather than externally dependent.

Policy impact assessment tracks regulatory framework development, community network representation in policy processes and reduction of regulatory barriers affecting network operations and expansion.

Risk management

Regulatory risks require continued active engagement with regulatory bodies, evidence-based advocacy supported by pilot programmes and maintaining community network voices in policy development processes.

Financial risks call for diverse funding streams to reduce single-source dependency, strong reserve policies ensuring equipment replacement and clear sustainability metrics to guide financial decisions.

Technical risks demand standardised infrastructure that reduces complexity, comprehensive training ensuring local capacity and strong support networks enabling troubleshooting and problem resolution.

Social risks require ongoing community engagement to maintain local ownership, transparent governance to build trust and regular feedback mechanisms to enable responsive service development.

10. Conclusion

This strategic plan represents the unified vision emerging from a comprehensive analysis of South Africa's community network landscape, extensive stakeholder engagement during the November 2024 National Convening of Community Networks and 2025 national validation processes and strategic planning for sustainable development over the next three years.

Community networks offer proven solutions for South Africa's digital divide, demonstrated through existing operations from rural Eastern Cape to urban Western Cape townships. However, realising their full potential requires coordinated action to address policy barriers, develop sustainable financing mechanisms, build comprehensive capacity and ensure social inclusion remains central to network development.

The framework provides both immediate actions and a long-term vision. Year 1 establishes the foundations through policy engagement, institutional strengthening and capacity building. Year 2 scales successful CCCI approaches while deepening community ownership. Year 3 consolidates achievements into sustainable systems capable of independent operation and continued growth.

Success depends on continued collaboration between CCCIs, government bodies, commercial partners, development organisations and funding entities. The

commitments made during the 2024 national convening and 2025 national validation processes provide the foundation for this collaboration, while CNSA provides the coordination mechanism ensuring unified action towards shared goals.

Through systematic implementation of this strategy, South African community networks can achieve their potential as community-owned infrastructure providing affordable access while supporting local economic development, skills building and social inclusion. The approach recognises that sustainable change requires both immediate action and long-term commitment, with flexibility for adaptation based on emerging opportunities while maintaining a clear direction towards community-controlled connectivity solutions.

This coordinated approach serves as the foundation for stakeholder review and refinement, ensuring all partners remain aligned on vision, objectives and implementation approaches while maintaining accountability for commitments made during the 2024 National Convening of Community Networks and 2025 national validation process. Stakeholders are invited to provide feedback and formal approval to enable immediate commencement of this three-year strategic plan, beginning with Year 1 foundation activities in 2025.

GLOSSARY OF TERMS

Anchor tenant – A reliable client (e.g. school, clinic) providing steady income to sustain community networks.

Backhaul – The internet connection linking local community networks to the broader internet, often very costly.

Class electronic communications network service (CECNS) licence – A licence required to operate network infrastructure under South African law.

Class electronic communications service (CECS) licence – A licence required to provide electronic communications services under South African law.

Community-centred connectivity initiatives (CCCIIs) – Locally driven, grassroots solutions that empower communities to design and manage their own affordable, sustainable internet access, thus addressing digital inequality.

Community networks – Community-run internet providers offering affordable and reliable access in underserved areas.

Community Networks South Africa (CNSA) – A unified non-profit body supporting and advocating for community networks nationally.

Cross-subsidisation – Using income or grants from one group or service to lower costs for underserved users.

Data affordability barrier – When data costs are too high relative to income, limiting internet access and use.

Digital divide – The gap between those with and those without reliable internet access, especially rural versus urban.

Cross-subsidisation – Using income or grants from one group or service to lower costs for underserved users.

Independent Communications Authority of South Africa (ICASA) – The regulator overseeing telecoms licensing and spectrum in South Africa.

Internet service provider (ISP) – A company or entity that provides internet access, including community-run models.

Licence-exempt spectrum – Free-to-use frequency bands (e.g. 2.4 GHz, 5 GHz) used by community networks with technical limitations.

Non-governmental organisations (NGOs) – Non-profit organisations supporting community development, including internet access.

Non-profit company (NPC) – A legal structure used by South African community networks to operate as public benefit entities.

Reserve funds – Savings set aside by networks for replacing equipment or future upgrades.

Spectrum auction – A 2022 event where major operators paid billions for spectrum, excluding small or community players.

Universal Service and Access Agency of South Africa (USAASA) – A government body promoting equitable access to ICT services.

Violence Prevention through Urban Upgrading (VPUU) – A Cape Town initiative supporting safe, inclusive development, including for community networks.

Voucher systems – Prepaid access models allowing flexible, affordable internet use for low-income communities.

Wayleave costs – High fees charged for laying cables or installing network infrastructure on public or private land.

NATIONAL STRATEGY FOR COMMUNITY NETWORKS IN SOUTH AFRICA

