



Namakwa
District Municipality

Namakwa District Municipality

Local Economic Development Strategy 2027-2031

(Draft V3)



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Acronyms and Abbreviations

Acronym	Full Name
DAFF	Department of Agriculture, Forestry and Fisheries
DBSA	Development Bank of Southern Africa
DEDAT	Department of Economic Development and Tourism (Northern Cape)
DHET	Department of Higher Education and Training
DMRE	Department of Mineral Resources and Energy
DSI	Department of Science and Innovation
DTPS	Department of Telecommunications and Postal Services
HILIC	High Impact Local Innovation Catalyst
HSRC	Human Sciences Research Council
IDC	Industrial Development Corporation
IDP	Integrated Development Plan
ILED	Innovation-oriented Local Economic Development
IPAP	Industrial Policy Action Plan
IPP	Independent Power Producer
IVC	Innovation Value Chain
LED	Local Economic Development
LIAT	Local Innovation Assessment Toolkit
MeerKAT	Multi-Element Radio Linked Interferometer Network
NDM	Namakwa District Municipality
NDP	National Development Plan
NGP	New Growth Path
PERL	Participatory Evaluative and Reflective Learning
REIPPPP	Renewable Energy Independent Power Producers Procurement Programme
SARAO	South African Radio Astronomy Observatory
SALT	Southern African Large Telescope
SEDA	Small Enterprise Development Agency
SLP	Social and Labour Plan
SMME	Small, Medium and Micro Enterprise
STR/RED	Small Town Regeneration / Regional Economic Development
TIA	Technology Innovation Agency

Executive Summary

The Namakwa District Municipality Local Economic Development (LED) Strategy 2027–2031 provides a strategic and evidence-based roadmap to transform the district into a sustainable, innovation-driven, inclusive, and resilient regional economy. Developed within the framework of national, provincial, and district development policies, the strategy seeks to reposition Namakwa from a predominantly resource-dependent and fragmented economy into a diversified green economy centred on innovation, local beneficiation, entrepreneurship, and sustainable livelihoods.

The strategy is informed by extensive stakeholder engagement, municipal workshops, socio-economic analysis, and the Innovation Champions for Local Economic Development (IC4LED) programme implemented in partnership with the Department of Science, Technology and Innovation, the Technology Innovation Agency, the HSRC, and Sol Plaatje University. Importantly, it is the first LED strategy in the district grounded in primary empirical evidence through the Local Innovation Assessment Toolkit (LIAT) and Innovation Value Chain (IVC) surveys. These studies identified 184 innovative enterprises across the six local municipalities, demonstrating that innovation already exists within the district’s rural economy despite significant developmental challenges.

Namakwa possesses substantial economic potential linked to mining, renewable energy, agriculture, tourism, marine resources, and astronomy infrastructure. Strategic assets such as the proposed Boegoebaai Green Hydrogen and Deep-Sea Port Development, the Namakwa Special Economic Zone (NamSEZ), the SALT and MeerKAT astronomy facilities, extensive renewable energy corridors, and the district’s globally recognised biodiversity and cultural heritage position Namakwa as an emerging development frontier within the Northern Cape. However, the strategy also recognises that the district faces deep structural constraints, including high unemployment, water insecurity, infrastructure deficits, digital exclusion, limited skills development, weak institutional coordination, and significant spatial inequality caused by vast inter-town distances and dispersed settlements.

The strategy therefore proposes a shift from traditional, fragmented LED approaches towards Innovation-Oriented Local Economic Development (ILED). This approach places science, technology, innovation, and partnerships at the centre of economic development. It seeks to strengthen local innovation systems, improve municipal capacity, support SMMEs and cooperatives, enhance local procurement, and ensure that communities benefit directly from large-scale investments in mining, renewable energy, tourism, and industrialisation.

To achieve this, the strategy identifies fifteen catalytic projects categorised according to the District Development Model framework. These include major catalytic initiatives such as the Boegoebaai Green Hydrogen and Port Development, District Broadband Expansion, Water Security Programme, Namakwa Innovation Hub, Agro-Processing Cluster, Astro-Tourism Corridor, Fish Processing and Marine Economy Development, and Green Energy Artisan Incubators. These projects are intended to stimulate local value chains, create jobs, reduce economic leakage, improve digital and physical connectivity, and position Namakwa as a leading green economy district.

The strategy is further structured around six economic pillars: mining and mineral beneficiation; agriculture and agro-processing; renewable energy and the green economy; manufacturing; services and the digital economy; and tourism. Cross-cutting priorities include youth employment, women’s economic participation, climate resilience, innovation support, digital inclusion, and community-led development.

Implementation will depend on strong partnerships between municipalities, government departments, the private sector, research institutions, civil society, and local communities. The strategy proposes strengthened

institutional coordination through the District LED Forum, Innovation Indaba, Innovator Directory, and a robust monitoring and evaluation framework linked to biennial innovation assessments.

Ultimately, the Namakwa LED Strategy recognises that the district's long-term prosperity will depend not only on its natural resources, but on its ability to harness local innovation, strengthen institutions, invest in infrastructure and skills, and build an inclusive economy that benefits all communities across the district.

1. INTRODUCTION AND BACKGROUND

1.1 Envisioning the Namakwa District's LED Strategy

1.1.1. Vision of the Namakwa District

“Reshaping the Namakwa District to be the benchmark for a sustainable green energy, diverse, integrated socio-economy to satisfy needs for future generations”.

1.1.2. Mission Statement

The vision of the district is realised through the following commitments as spelled out in the IDP:

- Stimulation of a green, diverse, integrated socio-economy.
- Fostering and strengthening partnerships with all role-players.
- Integrated support and capacitating local municipalities for sustainability.
- Transparent and accountable processes; and
- Providing strategic leadership.

1.1.3. Strategic Objectives

In developing the Namakwa LED strategy, we adopt the strategic objectives as set out in the National Framework for LED 2018 to 2028 referred to as the six core pillars of local economies. The framework encourages local governments and municipalities to incorporate and use these six pillars as the desired objectives for their IDPs, LED strategies and masterplans so as to align with national policy and the vision of the framework itself:

- Building diverse and innovation-driven local economies
- Developing inclusive local economies
- Enterprise development and support
- Developing learning and skilful economies
- Economic governance and infrastructure
- Strengthening local innovation systems

1.1.4. Introduction to Namakwa District Municipality

The Namakwa District Municipality is a Category C municipality located in the Northern Cape Province of South Africa. It is bordered by the Republic of Namibia to the north, the ZF Mgcawu District Municipality to the north-east, the Cape Winelands and West Coast District Municipalities to the south, the Pixley ka Seme District Municipality to the east, the Central Karoo District Municipality to the south-east, and the Atlantic Ocean to the west (Namakwa District Municipality, 2020). Geographically, it is the largest district in the Northern Cape and indeed in South Africa, covering approximately 126,836 km², yet paradoxically, it is the least populated district in the province (Namakwa District Municipality, 2022; HSRC, 2021). The seat of the Namakwa District Municipality is Springbok, located in the Nama Khoi Local Municipality. Contained within its boundaries are six local municipalities: Nama Khoi, Richtersveld, Kamiesberg, Hantam, Karoo Hoogland, and Khai-Ma (Namakwa District Municipality, 2022; S&P Global, 2025). The district is characterised by a

semi-arid landscape, unique Namaqualand flora, world-class astronomy infrastructure (including the MeerKAT and SALT telescopes), a deeply rooted mining heritage, and the Orange River forming its northern boundary (Namakwa District Municipality, 2020; Department of Science and Innovation, 2019).

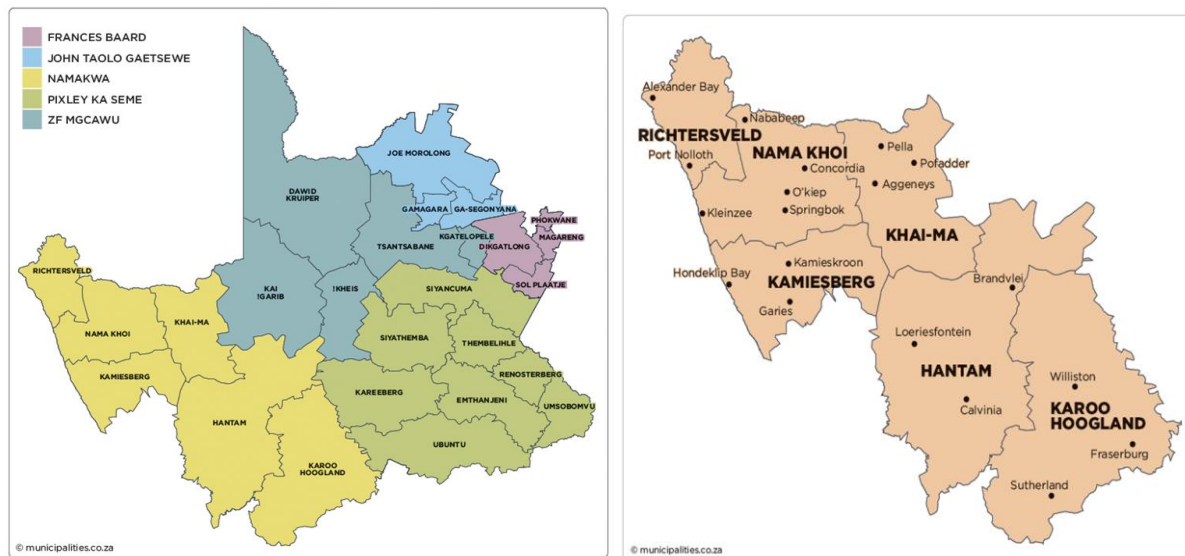


Figure 1.1 Namakwa District Locality Map Adapted from municipalities.co.za

The NDM is run through a Mayoral Executive System in which an Executive Mayor provides leadership, supported by a Mayoral Committee. The district is predominantly rural, characterised by vast inter-town distances. According to the 2022 Census, the district's population stands at approximately 148,935, with a near-equal gender distribution of 49.1% male (73,084) and 50.9% female (75,852) (Stats SA, 2022). However, the population has been declining, reflecting out-migration driven by limited economic opportunities. Notably, the Coloured population group constitutes the overwhelming majority (85.4%), with African (7.3%) and White (6.4%) groups making up the remainder (S&P Global, 2025). The district has approximately 33,947 households (Stats SA, 2022).

1.1.5. Understanding Local Economic Development (LED) in the South African Context

According to the National Framework for LED (National Framework for LED, 2018-2028: 14):

“LED is an adaptive and responsive process by which government, public sector entities, citizens, business and non-governmental sector partners work collectively to create better conditions for innovation-driven inclusive economic development that is characterised by knowledge capacity development; investment attraction and retention; image enhancement and revenue generation in a local area in order to improve its economic future and the quality of life for all.”

The LED definition as expressed in the Framework, positions local governments and local economies to transition into knowledge-based economies by prioritising Science Technology and Innovation (STI) multi-stakeholder engagements for the planning and implementation of LED. This approach to LED also promotes inclusivity and encourages participation of government, private sectors, civil society, and innovation actors in a quadruple helix fashion (government, private sector, civil society, innovation actors) to ensure an inclusive and sustainable LED programme.

As part of a policy response to the historical weaknesses of LED implementation, the Framework sought to bridge the gap between LED and STI policies, thereby transitioning into innovation driven LED (ILED). ILED encourages the following according to the National Framework LED (2018:31):

1. Strengthening local STI capabilities, networks and knowledge exchanges within local innovation (comprised of living labs, private sector innovation centres, universities, colleges, collaborations with national institutions, science councils) to increase science and innovation activities that contribute to inclusive LED.
2. Catalysing local industries and production value chains through the exploitation of technology and all forms of innovation; and
3. Enabling local government, LED agents and actors to foster innovation-driven LED through capacity building, decision-support tools and knowledge exchanges.

1.1.6. The Innovation Champions for Local Economic Development (IC4LED) Intervention

The Innovation Champions for Local Economic Development (IC4LED) is a South African government programme under the Department of Science, Technology and Innovation (DSTI), managed by the Technology Innovation Agency (TIA), that trains and places graduates (Innovation Champions) in municipal offices to integrate science, technology, and innovation into local economic planning and centering innovation as a driver of development. Key activities include mapping local innovation systems using the Local Innovation Advancement Tool (LIAT), incorporating innovation into IDP and LED processes, and building linkages with the National System of Innovation (NSI). The IC4LED SPU/Namakwa project is the third national pilot – following earlier pilots with Vhembe and O.R. Tambo District Municipalities – and aims to serve as a springboard for expansion across the Northern Cape. Innovation for Local Economic Development (ILED) departs from traditional LED by placing STI at the centre of local economic development through collaboration between government, business, civil society, knowledge institutions, innovators and citizens to advance transformative change and inclusive development.

1.2. Structure of the Document

The Namakwa LED Strategy 2027–2031 is organised into ten sections, progressing from strategic foundation to implementation:

1. Introduction & Background – Presents the vision, mission, strategic objectives, district profile, and the concept of innovation-driven LED.
2. Policy Review – Analyses national, provincial, and district policies (NDP, SPLUMA, IDP, SDF) and synthesises strategic focus areas.
3. Situational Analysis – Provides demographic, socio-economic, and economic profiles, including employment, GDP, and innovation infrastructure.

4. Institutional Analysis – Assesses institutional architecture, innovation orientation, IVC survey results, and LED capacity.
5. Opportunity Analysis – Includes SWOT analysis, sectoral priorities, strategic implications, and municipality-level opportunities.
6. Project Identification & Prioritisation – Outlines catalytic projects, LED pillars, and a prioritised project portfolio.
7. Implementation Guideline – Defines roles, implementation models, and mandatory project development stages.
8. Monitoring & Evaluation Framework – Establishes M&E mechanisms, KPIs, and strategies to avoid common LED failures.
9. Conclusion & Appendices – Summarises critical recommendations and includes supplementary data (LIAT statistics, HILIC projects, etc.)

CHAPTER 2

2. POLICY REVIEW

2.1 Introduction

This LED Strategy is formulated within the parameters of national, provincial and district government policies. Alignment with these frameworks ensures wider government support and access to funding instruments. The most relevant policies are reviewed below with specific implications for Namakwa.

2.2. National Policy Review

Table 2.1: National Policy Review

Policy / Act (Full Title)	Core Mandate for LED	Implications for Namakwa District Municipality (NDM)
Constitution of the RSA (Act 108 of 1996)	Developmental local government: promote socio-economic development, participation, & accountable governance.	LED is a core function embedded in IDP & budgets. NDM must enable investment, job creation, and inclusive growth beyond compliance.
White Paper on Local Government (1998)	Developmental local government: facilitate economic growth, enterprise development, & partnerships.	Strengthen LED function across 6 local municipalities. Drive partnerships (mining, IPPs, tourism, agriculture).
Municipal Systems Act (Act 32 of 2000)	Legal framework for IDPs, performance management, & aligning resources with priorities.	LED Strategy must be in IDP, budgets, & formal systems. Use measurable targets (jobs, enterprises, investment).
National Development Plan (NDP) 2030	Eliminate poverty/inequality via inclusive growth, diversification, & capable state.	Prioritise agriculture, agro-processing, tourism, renewables, mining beneficiation. Reduce leakage, boost value chains.
South African Township and Rural Economy Development and Revitalisation (TREDaR) Policy	Drive inclusive growth through a "whole-of-government" approach to support MSMEs and cooperatives in marginalised areas, focusing on 12 priority sectors	NDM must act as an "innovation broker"; implement 30% local procurement targets for major projects (e.g., Boegoebaai, NamSEZ); and integrate initiatives into the DDM "One Plan" for joint planning.
Industrial Policy Action Plan (IPAP)	Industrialisation, localisation, value addition (agro-processing, beneficiation, green economy).	Move from extraction to beneficiation (copper, rooibos, cosmetics). Leverage DTIC/IDC funding for bankable projects.
National Framework for LED (NFLLED)	Strategic, programmatic, partnership-driven LED. Move beyond short-term projects.	Replace fragmented initiatives with integrated programmes. Coordinate with mining, agriculture, renewables, and tourism.
SPLUMA (Act 16 of 2013)	Spatial justice, efficiency, SDFs to guide land use & infrastructure.	Align LED with SDF. Use nodal/corridor approach (Springbok, Calvinia, Sutherland). Enable spatial inclusion.
SALGA STR/RED Initiative	Small town regeneration & regional economic development via place-based targeting.	Multi-nodal approach: Springbok (primary), Calvinia/Sutherland (secondary). Coordinate vast, dispersed geography.

National Tourism Sector Strategy (2016–2026)	Grow inclusive tourism: rural, heritage, eco, astro-tourism.	Leverage Nama heritage, biodiversity, astro-tourism (Sutherland). Improve signage, digital marketing, destination management.
Climate Change Response White Paper	Climate-resilient, lower-carbon economy. Mainstream into planning.	Integrate climate resilience into LED. Address water scarcity, drought, climate-smart agriculture, green economy.
Communal Property Associations Act (Act 28 of 1996)	Communities hold/manage land collectively for land reform & economic participation.	Recognise CPAs as key stakeholders. Ensure land-based development (agriculture, tourism, renewables) is inclusive & participatory.
South Africa Connect: Broadband Policy	Universal, affordable broadband as enabler of growth, innovation, & inclusion.	Boost digital infrastructure for tourism, agriculture, mining, renewables. Enable knowledge-based development & connectivity.
Oceans Economy Master Plan	Unlock coastal/marine resources: aquaculture, fisheries, coastal tourism, ports.	Develop Port Nolloth, Hondeklip Bay, Kleinsee for fisheries, marine tourism, aquaculture. Align infrastructure & SMME support.
Intergovernmental Relations Framework Act	Cooperative governance & alignment across national, provincial, and local spheres.	Coordinate IDP/SDF/LED with provincial/national priorities. Access technical/financial support for catalytic projects.
National Environmental Management Act (NEMA)	Sustainable development via EIAs, resource protection, & green economy.	Balance mining/renewables with ecosystem protection. Leverage eco-tourism & biodiversity. Strengthening climate resilience.
Municipal Planning & Performance Management Regulations (2001)	IDP & performance management systems with measurable indicators & participation.	Align LED with IDP targets & indicators. Strengthen community participation & performance reporting across dispersed settlements.
White Paper on Science Technology and Innovation	Innovation-driven Local Economic Development	Strengthening local systems of innovation and production. Building science, technology and innovation capacities, skills and infrastructure

2.2.1. National Policy Synthesis

The national policy framework establishing the mandate for Local Economic Development (LED) within the Namakwa District Municipality is a sophisticated blend of legislative obligations, industrial strategy, and localized revitalisation mandates. Foundational policies, including the Constitution, the White Paper on Local Government, and the Municipal Systems Act, define municipalities as developmental agents responsible for integrated planning, service delivery, and the promotion of inclusive socio-economic growth. .

The National Development Plan (NDP) 2030 and the Industrial Policy Action Plan (IPAP) provide the strategic impetus for this growth, advocating for a transition from a resource-extraction model toward a diversified, value-added economy. This transition is now specifically operationalised through the South African Township and Rural Economy Development and Revitalisation (TREDaR) Policy, which identifies

rural areas defined by their intrinsic link to natural resource beneficiation as critical frontiers for economic restoration.

The TREDaR Policy introduces a mandatory "whole-of-government" approach, requiring the Namakwa District to move beyond fragmented, uncoordinated interventions. It compels the municipality to act as an innovation broker, aligning local efforts with 12 priority sectors, including the Green Economy, Mining, Agriculture, Digital Services, and Tourism. A central pillar of this new policy is the enforcement of local economic retention, specifically mandating a 30% local sourcing target for all major procurement pipelines and Enterprise and Supplier Development (ESD) initiatives. This is designed to systematically stop the "economic leakage" that historically drained value from rural districts like the Namakwa.

Furthermore, the National Framework for LED (NFLED) and the White Paper on Science, Technology and Innovation (STI) emphasize that these sectoral interventions must be innovation-led. The TREDaR framework reinforces this by positioning digital infrastructure and broadband connectivity not merely as utilities, but as fundamental prerequisites for rural business efficiency and the adoption of new technologies.

Spatially, the Spatial Planning and Land Use Management Act (SPLUMA) and the SALGA STR/RED Initiative direct development toward identified nodes and corridors. TREDaR enhances this spatial mandate by requiring that these initiatives be integrated into the District Development Model (DDM) "One Plan" to ensure joint budgeting, execution, and accountability across all three spheres of government.

Collectively, these policies establish a clear strategic direction for the Namakwa District Municipality, requiring that LED be sector-driven, spatially aligned, innovation-led, infrastructure-supported, climate-responsive and inclusive. The policy framework further emphasises the importance of institutional coordination, investment facilitation, digital connectivity, sustainability and value-added economic development.

The Namakwa LED Strategy is therefore positioned as a direct response to this integrated policy framework, translating national priorities into coordinated, place-based and impact-driven interventions that support sustainable economic growth, job creation, spatial transformation and inclusive development across the district.

2.3 Provincial Policy Review

Table 2.2: Provincial Policy Review

Policy / Strategy (Full Title)	Core Focus	Key Implications for Namakwa District Municipality
Northern Cape Provincial Growth and Development Framework (via Office of the Premier Strategic Plan 2025–2030)	Inclusive growth, jobs, poverty reduction, service delivery; aligned with NDP & MTDP. Addresses unemployment, slow growth, spatial inequality, infrastructure gaps.	Strengthen institutional coordination, planning alignment, infrastructure, and investment facilitation. Supports proactive developmental role in a dispersed, low-connectivity district.
Northern Cape Provincial Enterprise Development Strategy (Dept of Economic Development & Tourism)	Industrialisation, SMME growth, jobs. Focus: decarbonisation/green energy (Green Hydrogen Strategy), mineral beneficiation (local manufacturing), digitalisation/data hubs.	Pathway to socio-economic transformation. Key catalyst: Namakwa SEZ (near Aggeneys) with Vedanta Zinc smelter. Requires skills training (engineering, renewables, logistics), renewable energy expansion, bulk infrastructure (roads, rail, water, housing, digital). Challenges: environmental management, inclusive growth.
Northern Cape Provincial Local Economic Development (LED) Strategy	Coordinated LED across municipalities. Enabling environment for business, investment, jobs. Promotes SMMEs, partnerships, capacity building, market access.	Strengthen LED coordination, institutional alignment, partnership-driven development. Boost SMMEs in mining, agriculture, tourism, renewables. Improve municipal LED capacity & planning.
Northern Cape Agriculture and Agro-Processing Strategy	Rural development, food security, jobs. Value addition, value chains, market access, climate-resilient practices. Support for emerging farmers & infrastructure.	Supports livestock, niche crops, local processing. Need for value addition, farmer support, market access, water & transport infrastructure. Emphasises climate resilience in arid environment.
Northern Cape Mineral Sector Development Strategy	Sustainable mining growth, beneficiation, downstream industries, local supply chains, enterprise development, responsible mining, infrastructure & investment.	Leverage mining (copper, etc.) for LED. Prioritise beneficiation to retain local value. Strengthen SMME access to mining supply chains. Align infrastructure planning (energy, water, transport). Balance economic growth with environmental & community well-being.

2.3.1. Provincial Policy Synthesis

The reviewed provincial policy framework provides a coordinated and sector-focused approach to economic development within the Northern Cape, aligning governance, sector development and implementation mechanisms to support inclusive growth and regional transformation. The framework promotes employment creation, poverty reduction, infrastructure development, investment promotion and improved service delivery, while addressing challenges such as unemployment, spatial inequality and infrastructure constraints.

The Northern Cape Provincial LED Strategy reinforces the role of municipalities as facilitators of economic development, promoting more integrated, partnership-driven and programme-based approaches to LED. This is supported by sector-specific strategies such as the Agriculture and Agro-Processing Strategy and the Mineral Sector Development Strategy, which provide development pathways for key provincial sectors.

Collectively, these policies emphasise the importance of sector diversification, value addition, SMME support, infrastructure investment, rural development and institutional coordination. They also promote stronger participation of local businesses within value chains and improved alignment between provincial and municipal planning systems.

For the Namakwa District Municipality, the provincial policy framework provides a clear directive to align LED initiatives with provincial priorities while responding to local economic opportunities and constraints. The framework supports the development of sectors such as mining, agriculture, tourism, and renewable energy, while strengthening enterprise development, value chains, municipal coordination, and implementation capacity across the district. In this context, the provincial policy framework serves as a critical bridge between national policy direction and local implementation, ensuring that the Namakwa LED Strategy is both policy-aligned and responsive to the district's specific development challenges and opportunities.

2.4 District Policy Review

Table 2.3: District Policy Review

Policy / Act (in full)	Core Purpose & Alignment	Key Focus Areas	Implications for Namakwa DM (LED Context)
Namakwa District Municipality Integrated Development Plan (IDP) <i>(Municipal Systems Act, Act 32 of 2000)</i>	Primary strategic plan integrating economic, spatial & social priorities. Aligned with NDP 2030 & Northern Cape Provincial Framework.	Economic diversification, infrastructure-led growth, SMME support, human capital, spatial integration (mining, agro-processing, renewables, tourism).	Primary framework for LED. Aligns LED with sector priorities, budgeting, & spatial planning to tackle unemployment, poverty & inequality.
Namakwa District Municipality Spatial Development Framework (SDF) <i>(SPLUMA, Act 16 of 2013)</i>	Spatial expression of development strategy. Guides land use & infrastructure. Promotes spatial justice, efficiency & integration.	Nodal/corridor development (Springbok, Calvinia, Sutherland, N7/N14). Identifies SEZ, Boegoebaai, mining, energy, agro-processing zones.	Spatially targeted LED. Focus investment on nodes/corridors. Addresses dispersed settlements, weak connectivity & spatial inequality via place-based coordination.
Human Settlements Plan	Guides sustainable settlements, infrastructure & spatial integration. Aligns housing, land use & economic access. Supports SPLUMA & SDF.	Functional, inclusive settlements. Connectivity between rural areas & economic nodes. Service delivery & spatial inclusion.	Integrates settlement planning, infrastructure & LED. Strengthens connectivity & service access (water, sanitation, electricity, digital) for investment readiness.

Water Services Development Plan (WSDP) & Water/Sanitation Planning (<i>as referenced in IDP</i>)	Critical enabler for sustainable development & economic growth. Addresses arid climate, dispersed settlements & resource-based sectors.	Water security, bulk infrastructure, backlog reduction. Supports agriculture, mining, tourism, renewables, agro-processing.	Direct impact on LED & investment readiness. Prioritise water-sensitive development, bulk planning & coordination in growth nodes & rural areas.
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2.4.1. District Policy Synthesis

The Namakwa District Municipality Integrated Development Plan (IDP), Spatial Development Framework (SDF), Human Settlements Plan and Water Services Development Planning framework collectively provide an integrated local policy framework for guiding economic development, infrastructure investment, settlement planning and spatial transformation within the district.

The IDP establishes the district's development priorities, sector focus areas and implementation mechanisms, while the SDF provides the spatial framework for directing development towards identified nodes, corridors and economic zones. Together, these documents support economic diversification, infrastructure-led development, SMME support, investment facilitation and inclusive growth, particularly within sectors such as mining, agriculture, tourism and renewable energy.

The district policy framework also highlights the importance of sustainable human settlements, water security, infrastructure resilience, service delivery capacity and digital connectivity, particularly within a geographically dispersed and predominantly rural district. These issues are critical in addressing challenges related to spatial inequality, limited connectivity, infrastructure constraints and uneven access to economic opportunities.

Collectively, these policies emphasise:

- Sector-driven economic development aligned with local comparative advantages
- Spatial targeting of development through nodes, corridors and growth areas
- Infrastructure investment as an enabler of economic growth, particularly in relation to water, energy, transport and digital connectivity
- Inclusive and spatially integrated development, particularly within rural and marginalised communities
- Integrated settlement planning linked to infrastructure and economic opportunities
- Water security and service delivery capacity as foundations for sustainable development
- Institutional coordination and integrated planning across municipalities and sectors

For the Namakwa District Municipality, this integrated district policy framework provides a clear directive that Local Economic Development must be sector-focused, spatially aligned, infrastructure-led, digitally enabled and inclusive, ensuring that development interventions are coordinated, strategically located and responsive to local development needs.

2.5. Policy Integration and Strategic Implications

The review of national, provincial and district policy frameworks show strong alignment around inclusive growth, job creation, spatial transformation, infrastructure development, innovation, climate resilience, digital inclusion and institutional coordination. Collectively, these policies establish a clear mandate for Local Economic Development (LED) within the Namakwa District Municipality.

At the national level, policy provides the legislative and strategic foundation for developmental local government, sectoral growth, industrialisation, innovation, spatial planning, tourism, climate resilience, broadband connectivity and inclusive land governance. At the provincial level, these priorities are translated into implementation frameworks and sector strategies focused on mining, agriculture, enterprise development, infrastructure investment and regional economic integration. At the district level, the IDP, SDF, Human Settlements Plan and Water Services Development Planning framework localise these priorities through sector opportunities, nodes, corridors, infrastructure needs and settlement priorities.

Across all policy levels, the following strategic themes emerge:

- Inclusive economic growth and sustainable job creation
- Sector development and value addition, especially in mining, agriculture and tourism
- Infrastructure and spatial planning as enablers of economic activity
- Water security, climate resilience and sustainable resource management
- SMME development, innovation and entrepreneurship
- Digital infrastructure and broadband connectivity
- Integrated settlement planning and spatial inclusion
- Inclusive land governance and community participation
- Intergovernmental coordination and partnerships

These priorities provide a consistent policy foundation for a Namakwa LED Strategy that is sector-driven, spatially aligned, infrastructure-led, climate-responsive, digitally enabled, land-sensitive and inclusive

2.5.1. Summary of Policy Review and Alignment

The review of national, provincial, and district policy frameworks confirms strong alignment around the principles of inclusive economic growth, employment creation, infrastructure development, spatial transformation, sustainability, and institutional coordination. Collectively, these policies establish a clear mandate for Local Economic Development (LED) within the Namakwa District Municipality and provide the strategic foundation for the LED Strategy.

At a national level, policies such as the Constitution, Municipal Systems Act, National Development Plan (NDP) 2030, SPLUMA, the National Framework for LED, and the National Climate Change Response White Paper position municipalities as developmental institutions responsible for promoting economic growth, social inclusion, sustainability, and coordinated planning. These frameworks emphasise economic diversification, value addition, SMME development, climate resilience, innovation, and infrastructure investment.

At a provincial level, the Northern Cape Provincial Growth and Development Framework, Provincial LED Strategy, Enterprise Development Strategy, Agriculture and Agro-Processing Strategy, and Mineral Sector Development Strategy translate national priorities into sector-specific implementation pathways. These policies support mining beneficiation, renewable energy development, agriculture and agro-processing, tourism growth, enterprise support, and infrastructure-led development.

At the district level, the Namakwa IDP, SDF, Human Settlements Plan, and Water Services Development Planning framework localise these priorities by identifying strategic economic sectors, development nodes, infrastructure requirements, and settlement priorities. The district policy framework further highlights the importance of water security, digital connectivity, spatial integration, and coordinated infrastructure investment.

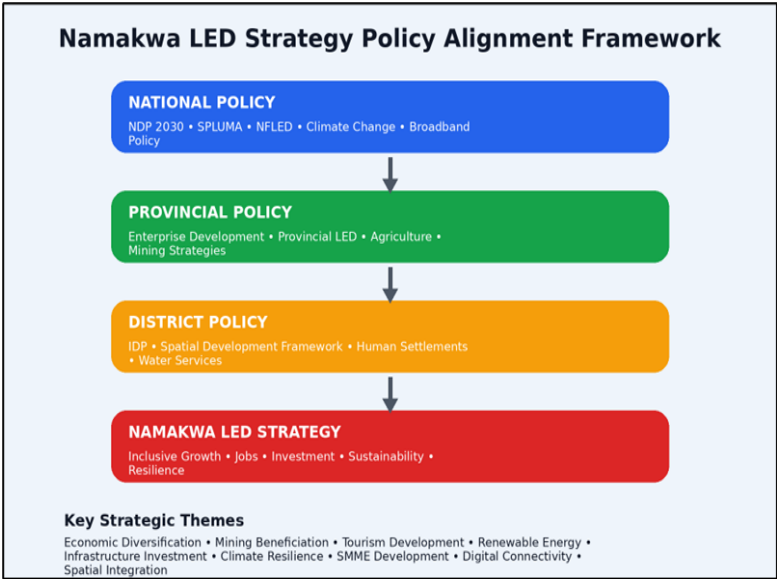


Figure 2.1: Namakwa LED Strategy Alignment Framework

CHAPTER 3

3. SITUATIONAL ANALYSIS

3.1 Overview of the Namakwa District

Namakwa District Municipality is the largest district in the Northern Cape by land area (126 836 km²), but it has the smallest population. The district has six local municipalities: Nama Khoi, Khai-Ma, Richtersveld, Kamiesberg, Hantam and Karoo-Hoogland. It has important assets such as mining, renewable energy, tourism, agriculture and world-class astronomy facilities. However, long distances, low population density, service backlogs and limited skills make it difficult for all communities to benefit equally from these opportunities.

Table 3.1: Summary of local municipalities and possible LED focus areas

Municipality	Key features	Main economic assets	Possible LED focus
Richtersveld Local Municipality	Coastal and river-linked municipality including Port Nolloth, Alexander Bay, Lekkersing, Eksteensfontein and Kuboes. It faces infrastructure, housing, service delivery and socio-economic challenges.	Boegoebaai harbour proposal, green hydrogen programme, fishing, coastal location, R382 and N7 access, Orange River and Atlantic coast.	Major LED potential lies in Boegoebaai harbour and green hydrogen. This requires better infrastructure, skills, housing, services and local supplier development. Reviving fishing can also support livelihoods.
Nama Khoi Local Municipality	Located in the north-western part of the Northern Cape. Springbok is the district administrative centre. The area has strong Nama and Khoi-San cultural and natural heritage.	Tourism, Orange River recreation, Springbok service hub, Kangnas Wind Farm and renewable energy potential.	Nama Khoi can be a district service, tourism and renewable energy hub. LED should strengthen tourism routes, heritage tourism, renewable energy investment, SMMEs and logistics services.
Kamiesberg Local Municipality	Covers about 11 742 km ² and has a small population. It includes Hondeklipbaai, Garies, Kamieskroon and Koiingnaas. Many residents are not economically active.	Fishing port, mariculture, spring wildflowers, N7 access, alluvial diamond mining, 4x4 routes and coastal tourism.	LED potential lies in nature-based tourism, coastal activity, mariculture and mining-linked opportunities. The municipality needs enterprise support, tourism infrastructure and local benefits from mining.

Khai-Ma Local Municipality	Covers about 12% of the district. It has large open spaces, farming settlements, natural landscapes and limited cell phone reception.	Gamsberg mine, proposed Vedanta Zinc smelter, possible Special Economic Zone, Orange River irrigation, eco-tourism and agro-processing.	Khai-Ma has strong potential for mining beneficiation, industrial development and agro-processing. LED should support local procurement, skills training, water-wise agriculture and better digital connectivity.
Hantam Local Municipality	The largest local municipality in the district by land area. Calvinia is a central service town. Agriculture is the main economic activity.	Sheep farming, wool, lucerne, rooibos tea, government services, nature reserves, biodiversity and landscapes.	LED should focus on agricultural value chains, agro-processing, niche products such as rooibos and eco-tourism. Calvinia should be strengthened as a rural service centre. Climate resilience is important.
Karoo-Hoogland Local Municipality	The second-largest local municipality in the district. It is sparsely populated and includes Williston, Fraserburg and Sutherland.	SALT telescope, SKA-related science infrastructure, astronomy tourism, open landscapes and Karoo heritage.	LED potential lies in science tourism, astro-tourism, research services and heritage tourism. Local businesses should be linked to accommodation, guiding, education and research-support services.

3.1.1 Key themes and related implications for LED emerging from the Namakwa municipal geographic profile

- **The district has a large land area but uneven economic activity**

Namakwa has many land-based resources, scenic areas, minerals, renewable energy potential and coastal assets. However, towns are far apart. This increases the cost-of-service delivery, transport, infrastructure and business operations.

LED planning must respond to the different strengths of each municipality. Richtersveld can focus on port and green hydrogen development. Nama Khoi can focus on administration, services and renewable energy. Khai-Ma can focus on mining beneficiation. Hantam can focus on agriculture. Karoo-Hoogland can focus on science and astro-tourism.

- **Infrastructure is central to economic development**

Several municipalities still face infrastructure challenges. These include water, electricity, roads, housing, basic services and digital connectivity. These gaps can limit investment and make it harder for local people to benefit from new economic projects.

Infrastructure must be treated as an economic investment, not only as a service delivery issue. Projects such as Boegoebaai harbour, the proposed rail link, Gamsberg mining development, irrigation schemes and tourism routes will only create broad local benefits if they are supported by better local infrastructure.

- **Renewable energy and green hydrogen can change the district economy**

The Boegoebaai Green Hydrogen Development Programme in Richtersveld and the Kangnas Wind Farm in Nama Khoi show that Namakwa has strong renewable energy potential. The district has open land, wind and solar resources, and coastal access for future exports.

Renewable energy and green hydrogen can position Namakwa as an important energy and export district. However, the district must avoid becoming only a place where resources are extracted or exported. LED planning should support local skills, technical training, community ownership, supplier development, maintenance services and related industries.

- **Mining remains important, but local beneficiation is needed**

Mining is important in several municipalities. This includes diamond mining in Kamiesberg and zinc mining around Gamsberg in Khai-Ma. The proposed Special Economic Zone and Vedanta Zinc smelter show potential for more industrial development.

Mining must be linked to wider inclusive local development. The district should promote local procurement, mining supplier parks, skills programmes, transport services, engineering services and beneficiation. Without this, mining may create limited local jobs and weak community benefits. A focus must be placed on artisanal and small-scale mining as a potential area for inclusive development that may deliver jobs and contribute to cooperative mineral beneficiation.

- **Agriculture remains important, especially in rural municipalities**

Hantam depends strongly on sheep, wool, lucerne and rooibos tea. Khai-Ma also benefits from irrigation along the Orange River. Agriculture remains an important source of livelihoods and local stability.

Agricultural development should focus on value addition, agro-processing, local branding, climate-smart farming, better irrigation and access to markets. Products such as wool, rooibos, lucerne and irrigated crops can support SMMEs and cooperatives if they are linked to processing and distribution opportunities.

- **Tourism is an opportunity across the district**

Most municipalities have tourism assets. These include the Orange River, wildflower routes, coastal towns, 4x4 routes, cultural heritage, eco-tourism landscapes, astronomy facilities in Sutherland, and Nama and Khoi-San heritage.

Tourism can support accommodation businesses, guides, restaurants, craft producers, transport operators and other small businesses. A district tourism strategy should package Namakwa as one destination that includes flowers, coast, culture, astronomy, adventure, mining heritage and eco-tourism. Technology should be exploited to advance the development of the tourism industry.

- **Science, innovation and knowledge infrastructure are unique district assets**

Karoo-Hoogland is linked to the SKA and SALT in Sutherland. These facilities create a rare opportunity for science-based development. They can support education, tourism, research services and innovation-led local development.

The district can position itself as a rural science and innovation region. Schools, colleges, SMMEs and municipalities should be linked to astronomy tourism, digital skills, research support services and science education programmes.

3.2 Demographic Profile

3.2.1 Population

Namakwa District has a total population of 148 935. Nama Khoi is the largest municipality with 67 089 people. It is followed by Richtersveld with 24 235 people and Hantam with 22 281 people. Khai-Ma has the smallest population, with 8 510 people.

Table 3.2: Namakwa total population

Municipality	Total Population	Rank
Nama Khoi	67 089	1
Richtersveld	24 235	2
Hantam	22 281	3
Kamiesberg	15 130	4
Karoo-Hoogland	11 691	5
Khai-Ma	8 510	6
NAMAKWA	148 935	

(Source: Census, 2022)

Most people in Namakwa live in Nama Khoi. This means that demand for services, jobs, consumer markets and infrastructure is likely to be highest there. LED planning should treat Nama Khoi as a main economic and service hub. Smaller municipalities such as Khai-Ma and Karoo-Hoogland need targeted support because they have smaller markets, longer distances and weaker economies of scale.

3.2.2 Household Size / Number of Households by Municipality

There are 33 947 households in Namakwa District. Nama Khoi has the highest number of households at 11 691. Hantam has 8 510 households and Richtersveld has 5 643 households. Khai-Ma has the lowest number of households at 1 938.

Table 3.3: Namakwa number of households by municipality

Municipality	Number of households	Rank
Nama Khoi	11 691	1
Hantam	8 510	2
Richtersveld	5 643	3
Kamiesberg	3 576	4
Karoo-Hoogland	2 885	5
Khai-Ma	1 938	6
NAMAKWA	33 947	

(Source: Census 2022)

The household distribution shows where housing, municipal services, local retail activity and social facilities are most needed. Nama Khoi and Hantam may have stronger local markets for SMMEs, retail and service businesses. Smaller household numbers in Khai-Ma and Karoo-Hoogland mean that LED should focus on niche sectors, mobile services, agro-processing, tourism routes and links to wider regional markets.

3.2.3 Population by Population Group

The population is mainly Coloured, at 85.5% of the district population. White residents make up 7.5%, Black African residents 5.9%, Indian or Asian residents 0.6%, and other groups 0.4%.

Table 3.4: Namakwa population by population group

Population group	Frequency	Percentage
Black African	8 792	5.9%
Coloured	127 288	85.5%
Indian/Asian	9 60	0.6%
White	11 186	7.5%
Other	6 31	0.4%

(Source: Census 2022)

The LED strategy must be inclusive and reflect the people who live in the district. Skills development, enterprise support, land-based livelihoods, heritage tourism, community ownership models and township or rural enterprise programmes should be designed around local communities. The demographic profile also creates opportunities for heritage tourism, local crafts, food value chains and community cooperatives.

3.2.4 Population by Gender

Females make up a small majority of the population at 50.9%. Males make up 49.1%.

Table 3.5: Namakwa population by gender

Gender	Frequency	Percentage
Male	73 084	49.1%
Female	75 852	50.9%

(Source: Census, 2022)

The gender profile shows that LED programmes should support women's economic participation. This includes women-owned SMMEs, access to finance, cooperatives, childcare-linked employment support, skills training and participation in tourism, agriculture, retail, services and the care economy. Women should be treated as important economic role players, not only as beneficiaries of social programmes.

3.2.5 Population by Gender and Age

Namakwa has people spread across different age groups, with many young and working-age residents. The largest male age groups are between 15 and 29 years, especially 20-24 years and 15-19 years. Female numbers are also strong in young and working-age groups. Females are more represented than males in older age groups, especially from 60 years and above.

Table 3.6: Namakwa population by gender and age

Age	Male	%	Female	%
85+	198	0.1	525	0.4
80-84	511	0.3	758	0.5
75-79	923	0.6	1 571	1.1
70-74	1 595	1.1	2 225	1.5
65-69	2 719	1.8	3 164	2.1
60-64	3 480	2.3	4 192	2.8
55-59	4 028	2.7	4 708	3.2
50-54	4 597	3.1	5 466	3.7
45-49	4 397	3	4 963	3.3
40-44	4 586	3.1	4 913	3.3
35-39	5 069	3.4	4 745	3.2
30-34	5 175	3.5	5 173	3.5
25-29	5 932	4	5 196	3.5

20-24	6 271	4.2	5 746	3.9
15-19	6 084	4.1	5 674	3.8
10-14	5 889	4	5 684	3.8
5-9	5 755	3.9	5 500	3.7
0-4	5 871	3.9	5 649	3.8

(Source: Census, 2022)

The district has a large youth and working-age population. This is both an opportunity and a risk. If the economy creates enough jobs, Namakwa can build a stronger labour force for mining, agriculture, tourism, renewable energy, construction, services and digital enterprises. If jobs and skills pathways remain limited, youth unemployment, migration and dependency may increase. LED should therefore prioritise youth skills development, apprenticeships, entrepreneurship incubation, TVET partnerships, digital skills, local procurement and labour-intensive public works.

The higher number of older females also points to a need for care services, health access, social support and age-friendly local economies. This can create LED opportunities in community care, home-based services, health logistics, local transport and social enterprises. Overall, Namakwa has a small and unevenly spread population. Economic activity and service demand are likely to be strongest in Nama Khoi, Richtersveld and Hantam. Smaller municipalities need LED approaches based on their local assets, such as agriculture, mining, tourism, renewable energy, cultural heritage and regional trade.

3.3 Socio-Economic Profile

3.3.1 Education

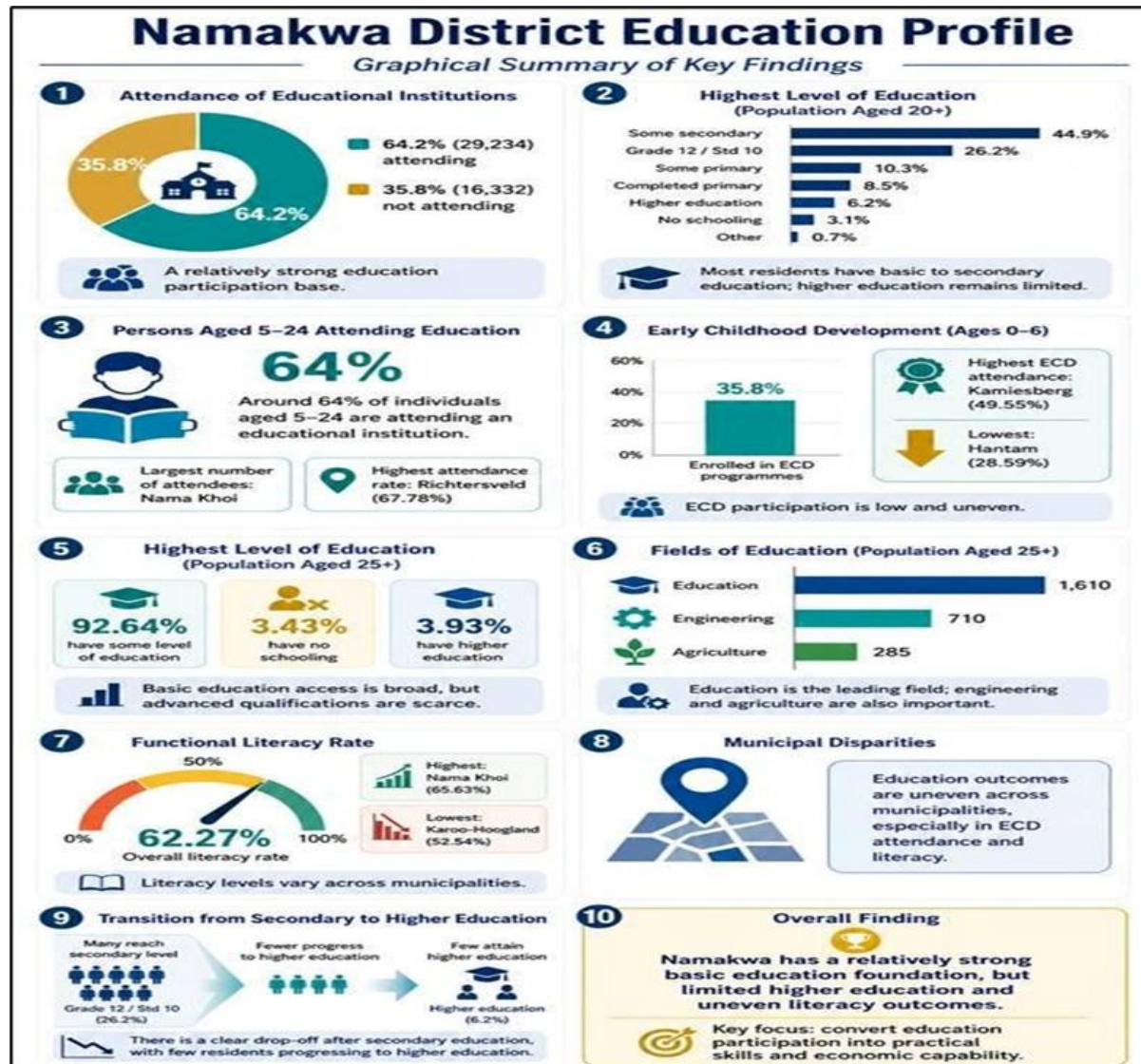


Figure 3.3.1: Education profile of Namakwa District (Census, 2022)

Table 3.7: Summary of the education profile and possible implications for LED

Education indicator	Summary of findings in Namakwa	Possible implications for LED
Attendance at educational institutions	About 64.2% of people, or 29 234 people, are attending an educational institution. About 35.8%, or 16 332 people, are not attending.	This gives the district a good base for future skills development, employment and entrepreneurship. People who are not attending may need adult education, short skills programmes and second-chance learning.
Highest level of education: population aged 20+	The largest group has some secondary education (44.9%). This is followed by Grade 12/Std 10 (26.2%). Only 6.2% have higher education.	The district has a broad basic and secondary education base. However, the low higher education level may limit professional, technical and innovation-led jobs. LED should support vocational training, artisan development, learnerships and access to post-school education.
Persons aged 5-24 attending education	Around 64% of people aged 5-24 are attending an educational institution. Nama Khoi has the largest number of learners, while Richtersveld has the highest attendance rate at 67.78%.	The youth education base can support long-term skills development. LED should link schools and training institutions to sectors such as mining, agriculture, renewable energy, tourism and services.
Early Childhood Development attendance: ages 0-6	About 35.8% of children aged 0-6 are enrolled in ECD programmes. Kamiesberg has the highest ECD attendance rate at 49.55%, while Hantam has the lowest at 28.59%.	Low and uneven ECD participation may affect school readiness and future skills. LED should support ECD centres, practitioner training and women-led ECD enterprises, especially in under-served municipalities.
Highest level of education: population aged 25+	Among adults aged 25+, 92.64% have some education. Only 3.43% have no schooling, while 3.93% have higher education.	The low no-schooling rate is positive for basic employability. However, the very low higher education rate points to a shortage of advanced technical, management and professional skills.
Fields of education: population aged 25+	Education is the largest field, with 1 610 adults qualified in this area. Engineering has 710 and agriculture has 285.	Existing qualifications can support LED sectors. Engineering can support mining, infrastructure and renewable energy. Agricultural skills can support agro-processing and climate-resilient farming. More skills are needed in business, ICT, finance, tourism and entrepreneurship.
Functional literacy rate	Namakwa's overall functional literacy rate is 62.27%. Nama Khoi has the highest rate at 65.63%, while Karoo-Hoogland has the lowest at 52.54%.	Low literacy can limit business development, digital inclusion, training and formal employment. Areas with lower literacy need adult basic education, digital literacy and workplace readiness programmes.
Municipal differences in education outcomes	Education outcomes are uneven across municipalities, especially in ECD attendance and literacy.	LED responses should be targeted by municipality. Each area needs education and skills support that matches its people, sectors and skills gaps.
Transition from secondary to higher education	Many residents reach secondary level, but few move into higher education.	This can weaken the knowledge economy. LED should support bursaries, distance learning, TVET partnerships, satellite training centres and career guidance linked to local opportunities.

Overall LED implication	Namakwa has a relatively strong basic education base, but limited higher education and uneven literacy outcomes.	LED should turn basic education participation into practical economic skills through technical training, entrepreneurship support, ECD expansion and sector-linked post-school pathways.
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Source: Adapted from the Draft IDP 2026-2027

3.4 Economic Profile

3.4.1 Employment

The total number of equivalent full-time jobs in Namakwa is 16 049. Nama Khoi has the largest share of these jobs at 42.25%. Khai-Ma follows with 28.69%, Hantam with 11.86%, Richtersveld with 8.03%, Karoo-Hoogland with 5.52% and Kamiesberg with 3.63%.

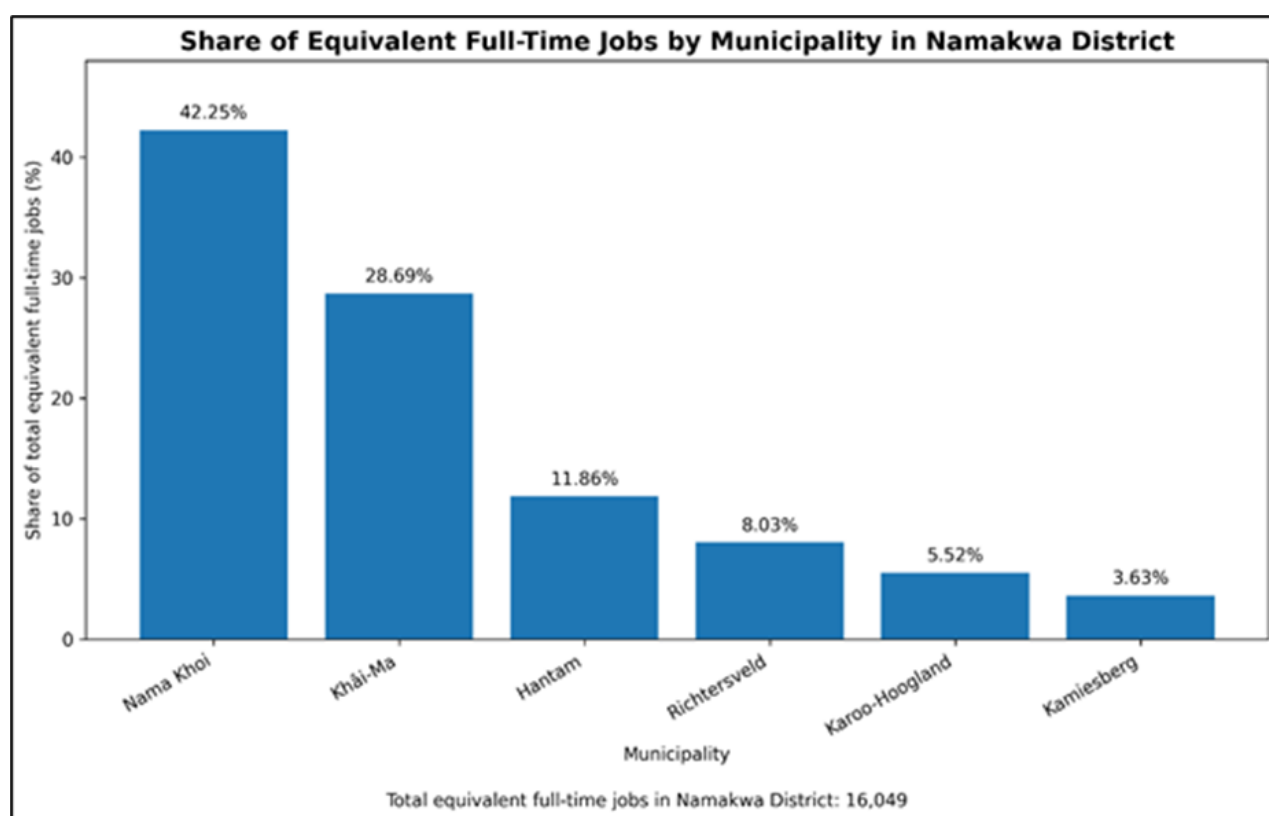


Figure 3.2: Share of equivalent full-time jobs by municipality in Namakwa District (Statistics SA, 2023)

3.4.2 Unemployment

Figure 3.3 shows employment and unemployment figures for the districts in the Northern Cape in 2022. Namakwa had an unemployment rate of 28.0% in 2022.

Table 3.3: Unemployment in Northern Cape districts (NC Socio-Economic Review, 2024)

District	Employed	Unemployed	Unemployment rate (%)
Namakwa DM	34 792	13 591	28.0
Pixley ka Seme DM	52 610	17 963	25.1
ZF Mgcawu DM	87 426	21 079	19.5
Frances Baard DM	109 084	36 502	25.8
John Taolo Gaetsewe DM	40 324	22 709	34.7

(Source: Census, 2022)

Namakwa recorded an unemployment rate of 28.0% in 2022. Although this was lower than some other districts in the province, it remains a serious development concern. LED interventions should focus on job creation, skills development, enterprise support and sector-specific employment opportunities in mining, agriculture, tourism, renewable energy and small business development.

3.4.3 GDP Contribution to Province

Figure 3.4 shows the contribution of each district municipality to the Northern Cape provincial GDP in 2022. Namakwa contributed 10.1% to the provincial GDP.

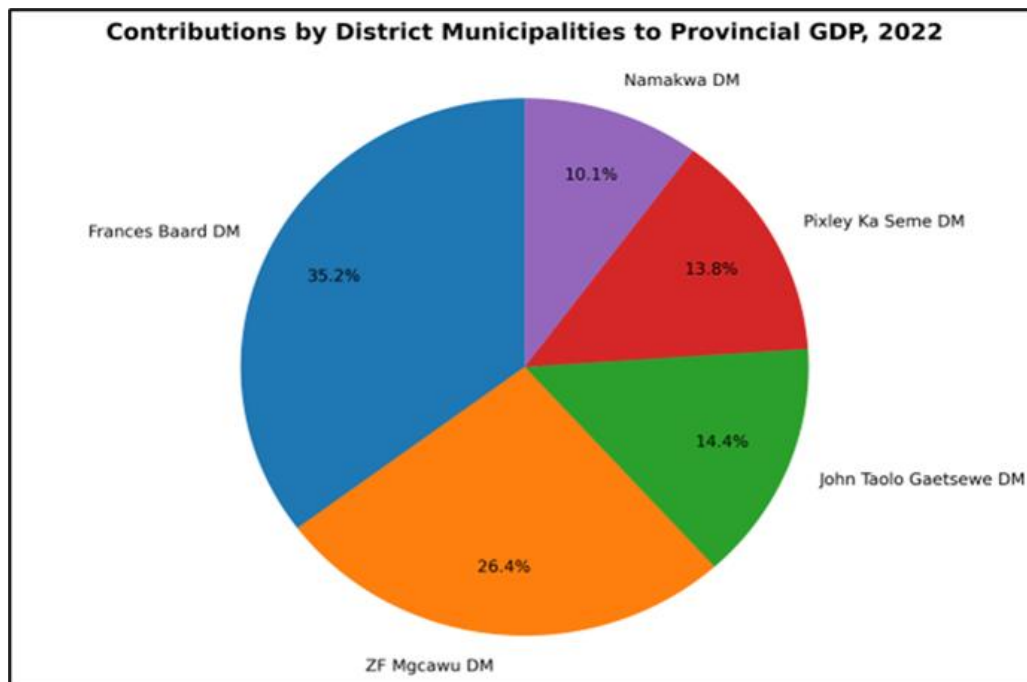


Figure 3.4: Namakwa provincial GDP contribution (NC Socio-Economic Review, 2024)

3.4.4 Main Economic Sectors

Figure 3.5 shows the contribution of each industry to total industries per district in 2022. Mining is the largest sector in Namakwa, contributing 39.8%. Community services is the second-largest sector, contributing 18.0%. Other sectors make smaller contributions to the Namakwa economy.

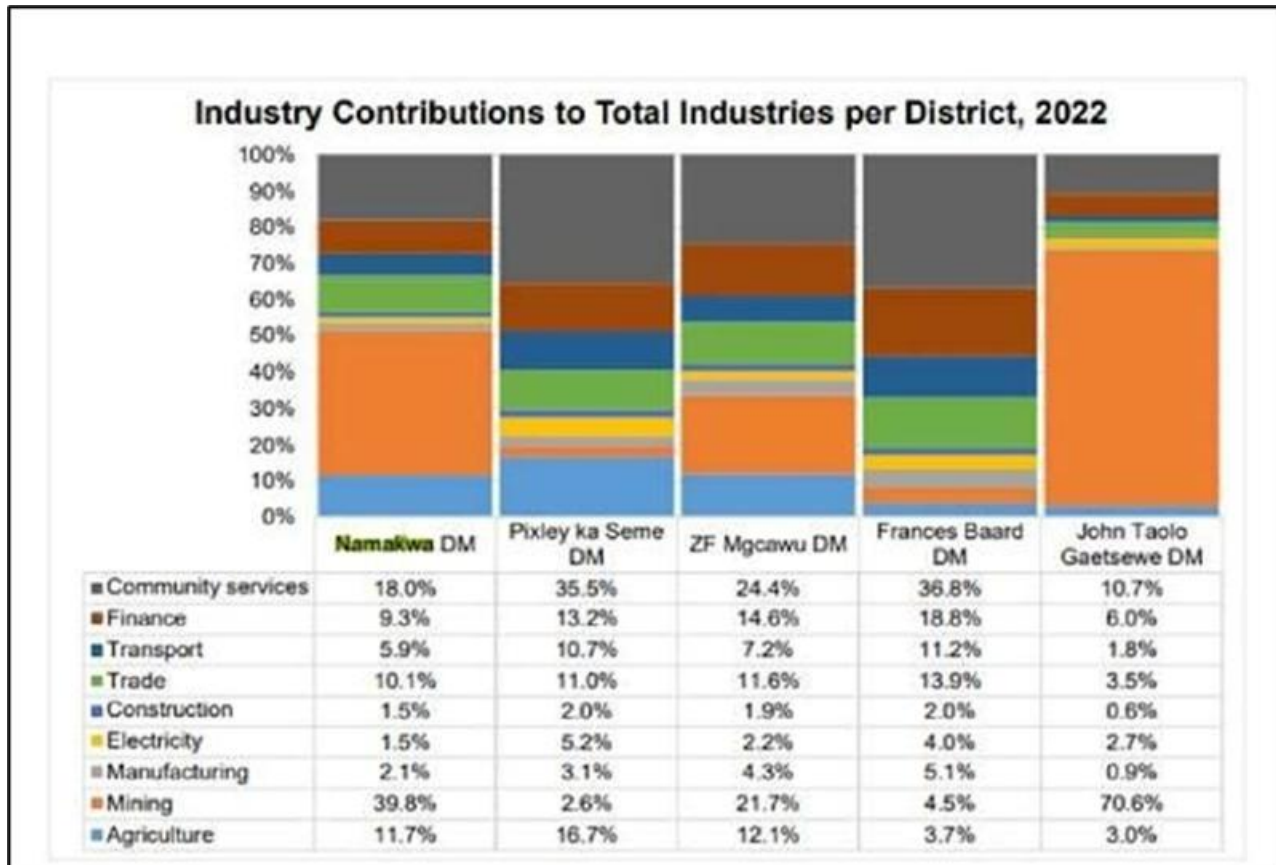


Figure 3.5: Main economic sectors in Namakwa District (NC Socio-Economic Review, 2024)

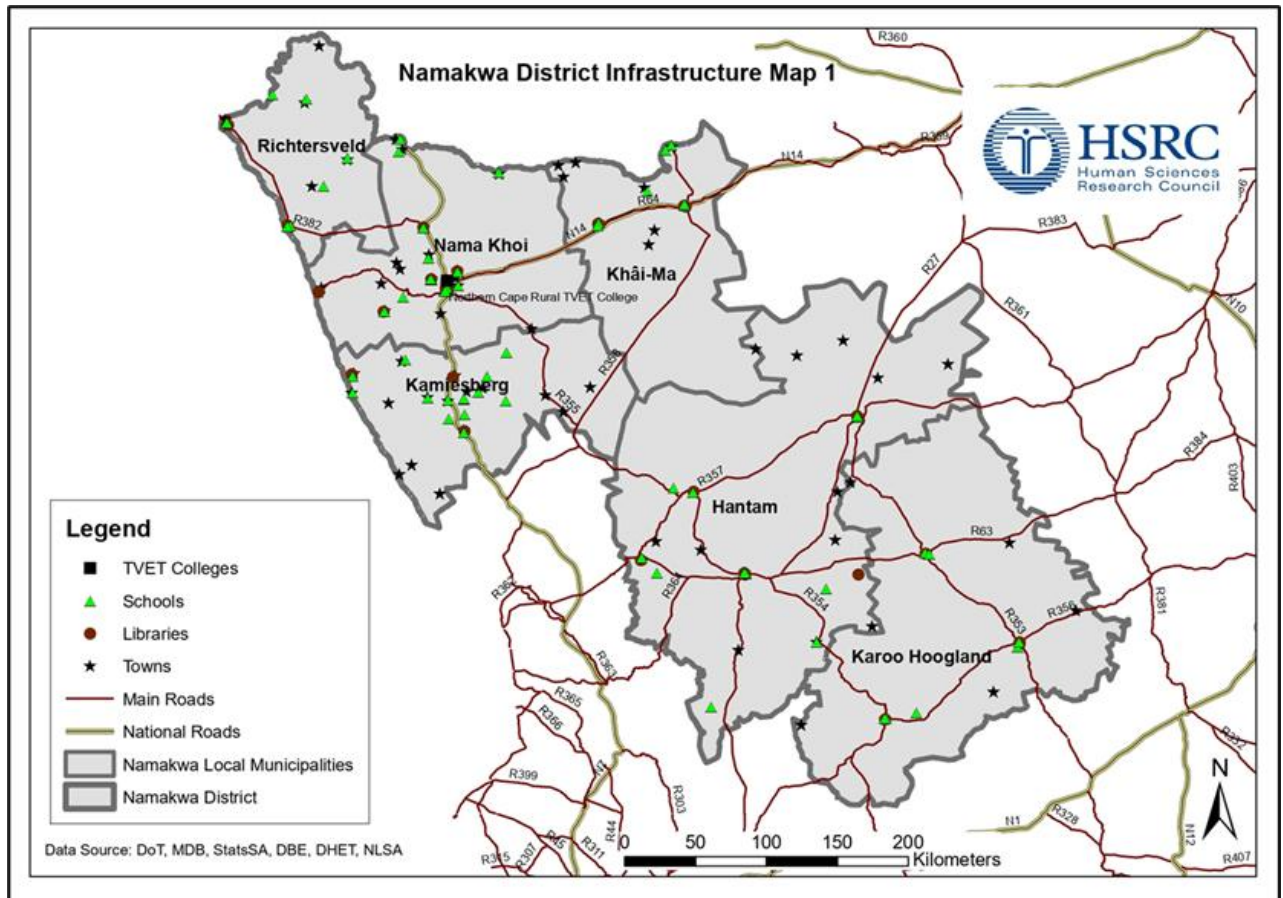
3.5 Innovation Infrastructure Analysis

The LIAT infrastructure mapping shows strong spatial inequality in innovation infrastructure across the district:

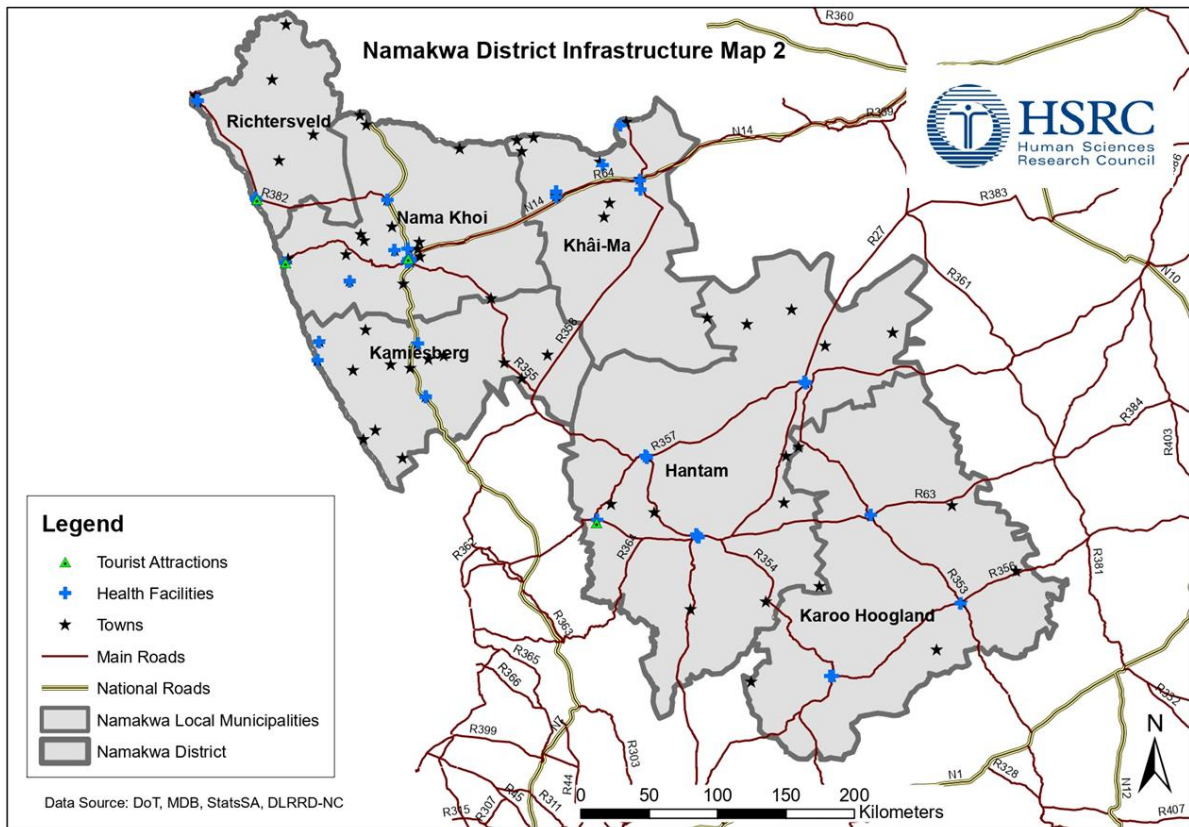
- Most innovation infrastructure is around Springbok in the north-western part of the district.
- The district has only one TVET college, located in O’Kiep in Nama Khoi. It has no universities, science councils or private research institutes.
- There are 72 public schools, mostly near Springbok, with very few in Hantam and Karoo-Hoogland.
- There are 36 libraries across the district, but only Nababeep and Springbok are well equipped with computers, recent books and internet access.
- There is only one innovation hub in the district and one living lab under construction in Springbok (located within the innovation hub).

- World-class science infrastructure, such as MeerKAT, SALT and the Sutherland Observatory, remains separate from the local economy and has limited measurable local spillover.
- Internet connectivity is stable only in Springbok. Several towns in Kamiesberg and Nama Khoi have regular outages or no reception.
- The main roads, including the N7 from Springbok to Cape Town and the N14 from Springbok to Upington, are in good condition. However, many regional roads are gravel, which limits movement between towns.

Namakwa District Infrastructure Map 1



Namakwa District Infrastructure Map 2



3.6. Conclusion

Namakwa District Municipality has many development opportunities, but it also faces serious challenges. Its main strengths are mining, renewable energy, agriculture, tourism and science infrastructure. At the same time, the district faces unemployment, slow demographic growth, unequal infrastructure and limited economic diversification.

The future development of the district will depend on its ability to add value locally, improve skills, expand digital and physical connectivity, support SMME growth and innovation, improve coordination and attract investment that benefits all areas. The district should also:

1. Use mining, renewable energy, agriculture and tourism to support supplier development, skills training and local procurement, rather than treating these sectors as isolated projects.
2. Treat basic service delivery as an economic investment. Water, electricity, refuse removal, roads and digital connectivity directly affect business productivity.
3. Build a district innovation partnership with municipalities, mines, energy developers, provincial departments, colleges, SMME support organisations and community organisations.
4. Prioritise young people and working-age residents through artisan training, digital skills, cooperative support, network-based business incubation and workplace learning.

CHAPTER 4

4. INSTITUTIONAL ANALYSIS AND INNOVATION ORIENTATION

4.1 Introduction

In this section, we profile the Namakwa District's institutional arrangement and preparedness the development of an inclusive and innovative driven LED based on the national framework for LED (2018-2028). To do this, we explore the following: Profile the district's institutional architecture – to determine its governance structures, and capacity to the development of an all-inclusive and innovation driven LED plans and implementation.

- (1) Conduct Innovation orientation assessment to establish the levels of innovation across the local municipalities in the district using the HSRC's LIAT framework.
- (2) We further present results of an innovation mapping survey administered throughout the district to identify and paint a picture of innovation activities and actors in the district. This study was conducted as part of the IC4LED Namakwa project using the innovative value chain (IVC) survey instrument.
- (3) Lastly, we conduct LED capacity assessment among the local municipalities in the district to gauge their capacity to implement and sustain an innovation driven LED.

This section presents analysis of the innovation mapping exercise conducted across all Municipalities in the Namakwa District. This study is in two parts: 1) it assessed the innovation orientation of the Municipalities and, 2) an innovation value chain (IVC) survey analysis as part of the LIAT framework. The research results presented here complement the results presented in the HSRC's Innovation landscape report of the Karoo Region (HSRC, 2020). We capture the institutional analysis when it comes to innovation and innovation actors within the Namakwa District to determine how innovation can be exploited to shape an innovation driven LED in the District.

4.2. Institutions and Organisations Undertaking LED Work in Namakwa District

Many public and private institutions are operating in Namakwa District, focusing on diverse aspects of LED. Among them are government departments, parastatals or state agencies, non-governmental organisations, business associations and tertiary institutions. Below we present the most prominent ones.

4.2.1. Government Departments and State Agencies

The Department of Cooperative Governance (DCoG) is responsible for supporting municipal capacity development, especially in municipalities experiencing skills deficits. It ensures that municipalities prepare credible Integrated Development Plans (IDPs) as well as LED strategies and Spatial Development Frameworks (SDFs). Through the District Development Model (DDM) and the Small Towns Regeneration Project, DCoG is prioritising several Karoo towns, including those in Namakwa, for coordinated development. Moreover, the department monitors how municipalities manage the capital funding they receive.

The central role of the Northern Cape Department of Agriculture, Environmental Affairs, Rural Development and Land Reform is to promote economic growth and food security through sustainable agricultural and entrepreneurship development. Its strategic goals are to: (a) create an enabling agricultural service delivery environment; (b) build a sustainable agricultural natural resource base; (c) improve agricultural production; (d) facilitate activities that yield safe and tradable animal products; (e) mount demand-led training and research programmes; (f) maintain a competitive agricultural sector; and (g) ensure that the farming community is skilled and empowered. Some of its most notable roles include funding primary production, providing technical support for cooperatives and skills development for projects, and championing the development of agricultural infrastructure. The Mase Manopole food garden programme and support for agribusinesses in towns like Calvinia are notable initiatives in the District.

The Northern Cape Department of Economic Development and Tourism (DEDAT) serves as the catalyst for economic development and tourism. It promotes the Northern Cape Province as an attractive destination for tourists, including tourism product development. DEDAT spearheads infrastructure enhancement programmes and projects, including the Namakwa Special Economic Zone (SEZ) in Aggeneys, in addition to championing effective communication and marketing. It also facilitates the One-Stop Shop for Investors to reduce the cost of doing business in the District.

The Northern Cape Department of Social Development runs programmes and projects aiming to reduce poverty, inequality and unemployment. Empowering youth and women in particular, and provision of a wide range of grants to older persons and persons with disabilities are central to social protection and realising the transformation agenda of the country, especially considering the legacy of apartheid.

The national Department of Agriculture, Land Reform and Rural Development (DALRRD) has been instrumental in availing land for commercial farming, development and spatial structuring. In terms of the Spatial Planning and Land Use Management Act (SPLUMA), the Minister proclaimed the Karoo Region in October 2020. Following this, the Karoo Regional Spatial Development Framework (KRSDF) was gazetted in September 2023. Furthermore, the department provides oversight for the legal registration of Communal Property Associations (CPAs), the drafting of constitutions, and the formal handover of title deeds. As of August 2025, the Northern Cape government handed over land to multiple CPAs in Namakwa to boost rural livelihoods, including Vioolsdrift CPA, Pella CPA, Concordia CPA, and the Richtersveld Sida! Hub.

The Department of Trade, Industry and Competition (DTIC) is another major player in the South African economy. It provides working capital for large business entities and production inputs; capacity building for external markets; and avails financial incentives and support for small, medium and micro-enterprises (SMMEs). Apart from this, the DTIC provides non-financial support, assists with business plan development, and capacity building through the Small Enterprise Development Agency (SEDA). The DTIC initiated the Incubation Support Programme Incentive (ISP), designed to develop incubators and create successful enterprises that have the potential to revitalise communities, in addition to strengthening local and national economies. The Namakwa Digital Hub in Springbok and Aggeneys is one such initiative aimed at developing local digital skills and bridging the digital divide.

The Northern Cape Economic Development Agency (NCEDA) was established to provide effective leadership in actualising the industrialisation agenda spelt out in the Provincial Growth and Development Plan (PGDP). It places special emphasis on tradable labour-absorbing goods and services, including economic linkages that catalyse job creation. Other key areas of its mission are promotion and facilitation of trade, investment and finance; creation and support of sustainable enterprises; and continuous innovation. Another

key pillar of NCEDA's core business is intensification of the Province's industrialisation process with movement towards a knowledge and skills-based economy being top priorities. NCEDA oversees the Namakwa Special Economic Zone (NamSEZ) and the Boegoebaai Port and Rail Development, acting as the link between government policy and private sector investment.

In July 2016, based on the SEZ Act 16 of 2014, the national cabinet approved the establishment of the Musina-Makhado Special Economic Zone Company. In the Northern Cape, the Namakwa Special Economic Zone (NamSEZ) was officially designated in 2024. It is strategically located in Aggeneys, near the Gamsberg zinc mine. Key to the NamSEZ is the focus on high-impact projects with the potential to trigger growth in various sectors and create employment opportunities. To date, two key focal areas in this respect are mining beneficiation (zinc and copper), green hydrogen production, renewable energy manufacturing (solar and wind components), and agro-processing. Phase 2 of the NamSEZ is scheduled for launch in June 2026.

Additionally, the Boegoebaai Port and Rail Development is a Strategic Integrated Project (SIP) located near Alexander Bay. Led by Transnet and the Industrial Development Corporation (IDC), it involves building a deep-water port and a 550 km rail line to export green hydrogen, manganese, and bulk minerals. This project is projected to create approximately 351,908 jobs and add R189 billion in Gross Value Added (GVA).

4.2.2. Non-governmental entities

In 2009, UNESCO officially recognised the existence of the Richtersveld Cultural and Botanical Landscape as a World Heritage Site. It constitutes a cultural landscape that is communally owned and managed by the Nama people. The area sustains their semi-nomadic pastoral livelihood and is the only place where the Nama still construct portable rush-mat houses (haru om). Furthermore, the /Ai-/Ais-Richtersveld Transfrontier Park (TFCA) is a cross-border conservation initiative between South Africa and Namibia. The TFCA is implementing various initiatives meant to conserve its considerably bio-diverse environment while supporting and promoting sustainable development through transfrontier tourism.

More than 80% of the Namakwa District falls under traditional authority jurisdiction, which highlights the importance of ensuring that traditional leaders are placed at the centre of LED initiatives. There are numerous Traditional Authorities in the District, including the Nama Traditional Leaders and local headmen. They are represented in Municipal Councils. Many of them are establishing development agencies and trusts to spearhead livelihood improvement programmes and projects. It is important to note that traditional leaders play a vital role in social cohesion, land governance, and are often the primary point of contact for Social and Labour Plans (SLPs) from mining and renewable energy companies.

The Namakwa District is home to several Communal Property Associations (CPAs). These are landholding institutions established under the Communal Property Associations Act No. 28 of 1996. They were created to enable groups to organise themselves as legal bodies to receive title deeds to land under the restitution and redistribution programmes. Key CPAs in the District include the Richtersveld Sida! Hub (representing towns like Sanddrift and Kuboes), Vioolsdrift CPA, Pella CPA, and Concordia CPA. Collectively, these CPAs hold over 610,000 hectares of land. Their role in LED includes negotiating surface-rights agreements with mining companies and overseeing community-based tourism and farming projects.

4.2.3. International organisations

The United Nations Development Programme (UNDP) South Africa implements the Global Environment Facility (GEF) Small Grants Programme (SGP). It designated the Namakwa District as a priority site for the Community Adaptation Small Grants Facility (SGF). The SGF provides grants (up to \$75,000) to community-based organisations (CBOs) and NGOs for climate change adaptation projects. Financial and technical support is being rendered to grassroots communities and Civil Society Organizations to accrue global environmental benefits secured through community-based initiatives and actions. The following priority initiatives are relevant for innovation-driven LED in Namakwa: innovative climate-smart agro-ecology (including rooibos tea production and livestock farming); CSO-government dialogue platforms; social inclusion (gender, youth, indigenous peoples); and low carbon energy access. Furthermore, the strategy recognises the need for infusing entrepreneurship and smart communication into programming of environmental conservation projects, all of which lie at the heart of what the New Framework for LED, 2018-2028 advocates.

The South African Local Government Association (SALGA), in partnership with the Department of Science and Innovation (DSI) and Sol Plaatje University (SPU), is forging partnerships to implement the Innovation for Local Economic Development (ILED) project. This project places unemployed graduates (Innovation Champions) in municipal LED offices to bridge digital gaps and improve strategic planning. This partnership builds on the belief that professional management and digital skills are key to effective local development.

Furthermore, the Inn Group/SASI (Brazil) is partnering with the Namakwa District Municipality on exchanging best practices regarding sustainable development in similar semi-arid regions.

4.2.4. Tertiary institutions

Northern Cape Rural (NCR) TVET College – Namaqualand Campus was established in Okiep and is the primary vocational hub for the District. It offers programmes that train artisans in various fields, including the Skills Development & Trade Test Centre for Electricians, Boilermakers, Fitters, Welders, and Diesel Mechanics. It also offers N4–N6 and NCV Programmes in engineering and business studies. These programmes are designed to feed into the Namakwa Special Economic Zone (SEZ) and the renewable energy sector.

Sol Plaatje University (SPU) although headquartered in Kimberley, is a comprehensive institution established in 2014. It offers degrees, diplomas and certificates in various fields of study, including ICT, data science, and heritage studies. Its strong community-based research drive and its Centre for Entrepreneurship and Rapid Incubator (CfERI) make it well-placed to lead innovation-driven LED processes. SPU partners with DSI and SALGA to manage the recruitment and training of Innovation Champions for the Namakwa District.

Community Education and Training (CET) Colleges, administered by the Department of Higher Education and Training (DHET), operate across smaller towns in Namakwa, including Springbok, Steinkopf, and Garies. They focus on second-chance matric programmes and basic skills development for unemployed youth who do not meet TVET entry requirements.

The Human Sciences Research Council (HSRC), while not a tertiary institution, provides critical research support for the ILED intervention, maps the innovation landscape of the District, and deploys Innovation Champions to municipal LED offices to assist with strategic planning. The Council for Scientific and

Industrial Research (CSIR) also provides climate adaptation plans (GreenBook) and supports research into renewable energy and green hydrogen infrastructure.

4.3. Innovation Orientation Assessment

The innovation orientation refers to the affinity/direction of a municipality with regards to innovation. This assessment follows a review of strategic documents of the municipality such as IDP, LED strategy and other relevant municipal documents to determine the level of innovation in a particular municipality as Table 4.1. Innovation orientation assessment (strategic document analysis) is adopted from the HSRC's LIAT tools box to assist us understand the vision of the municipality in terms of innovation. The assessment criteria is described in Table 4.1 below (level 0: little for innovation awareness, level 1: innovation awareness, level 2: innovation prioritisation, level 3: innovation entrenchment).

Table 4.1: Innovation Orientation Assessment Tool. Source: HSRC (2020)

Level 0 <i>Little or no innovation awareness</i>	Level 1 <i>Innovation awareness</i>	Level 2 <i>Innovation prioritisation</i>	Level 3 <i>Innovation entrenchment</i>
Little or no mention of innovation or related concepts is made in municipal documents. Importance of innovation in LED is not acknowledged in municipal documents	Mention and evidence of awareness of innovation is present in municipal documents. Importance of innovation in LED is acknowledged. However, there is little or no prioritisation of innovation when resources are allocated for LED	Innovation is clearly defined, mentioned frequently, and its importance in LED is emphasised. Documents show understanding and prioritisation of innovation-driven LED in resource allocation	Innovation's importance in LED is emphasised, and innovation principles are entrenched in the municipal's LED interventions. Resource allocation for LED is informed by innovation and there are incentives for innovation

Results emerging from the innovation orientation exercise were compared with the HSRC's findings in 2020. This shows how the knowledge of innovation is being reflected in the municipalities' strategic documents, hence an upward shift in the innovation orientation in some cases. Majority of the municipalities have stayed at the same level of innovation orientation between 2020 and 2026, except Khai-Ma and Nama Khoi. While Khai-Ma reflects a reduction in its innovation from 2 to 1 between 2020 and 2026, Nama Khoi shows a major leap from level 1 to 3 in the same period.

Table 4.2: Summary of Innovation Orientation Results

Municipality	Innovation Orientation level - 2020	Innovation Orientation level - 2026
Richtersveld LM	2	2
Hantam LM	1	1
Karoo Hoogland LM	1	1
Khai Ma LM	2	1
Nama Khoi LM	1	3
Kamiesberg LM	1	1

4.4 Innovation Value Chain (IVC) Survey Results

The IVC survey covered enterprises located in the different local Municipalities across the Namakwa District. The enterprises were surveyed using the IVC instruments developed by the HSRC. Selection of the enterprises was based on enterprise databases obtained from the LED units of the local Municipalities, and referral by other local and regional actors. The survey was administered in a hybrid format, consisting of enterprise visits for manual completion as well as online questionnaire completion guided by the Innovation Champions. Figure 4.1 provides a summary of the completed surveys per Municipality and number of innovator enterprises surveyed. The Figure also shows the percentage of innovators per municipality based on the total number of enterprises and total number of innovators. A total of 279 enterprises were surveyed, and 184 reported as innovators. This result demonstrates that the Namakwa district has an innovation rate of 66%.

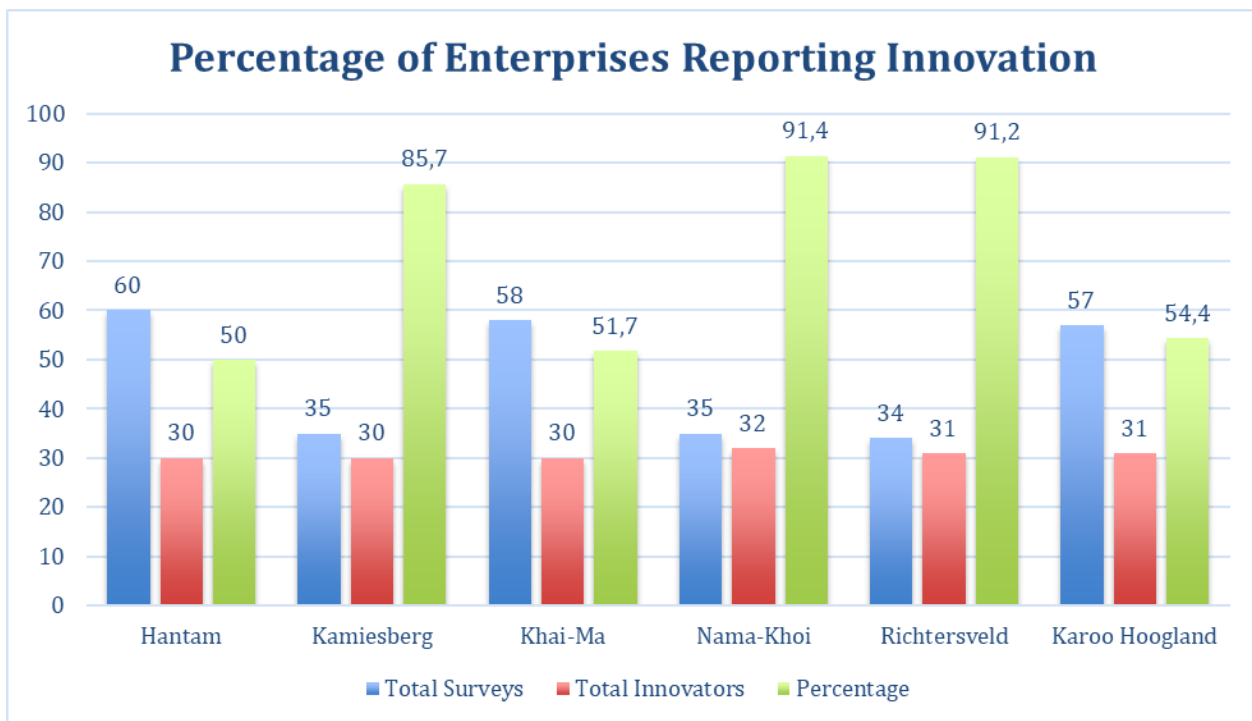


Figure 4.1: Percentage of Enterprises Reporting Innovation

In Figure 4.1, we can see that Hantam, Khai-Ma and Karoo Hoogland municipalities recorded the highest number of enterprises surveyed, 60, 58 and 57 respectively. However, the same municipalities (Hantam, Khai-Ma and Karoo Hoogland) recorded the lowest number of innovators, 50%, 51.7% and 54.4% respectively. Kamiesburg, Nama-Khoi and Richtersveld on the other have reported low innovator survey numbers (35, 35, 34 respectively), but exceptionally high innovation rate among the enterprises surveyed (85.7, 91.4 and 91.2 respectively). These results demonstrate that high survey numbers do not necessarily translate into higher innovator innovators.

4.4.1 Districts Percentage of Innovation

Having looked at innovation across the local municipalities in the Namakwa district, we now present the percent share of innovation per local municipality at the district level. Table 4.3 presents the number of innovators studied per local municipality and their percentage contribution to the district.

Table 4.3: Municipal Innovation Count and District Percentage

<i>Municipality</i>	<i>Innovators</i>	<i>District Percentage</i>
<i>Hantam</i>	30	16
<i>Karoo Hoogland</i>	31	17
<i>Khai-Ma</i>	30	16
<i>Kamiesberg</i>	30	16
<i>Richtersveld</i>	31	17
<i>Nama Khoi</i>	32	17
<i>Total</i>	184	100

There is a split group two when it comes to the percentage share of innovation at the district level. Hantam, Khai-Ma and Kamiesburg local municipalities represent 16% each while Karoo Hoogland, Richtersveld and Nama-Khoi local municipalities record 17% each.

4.4.2 Innovators Per Sector

Innovations that are widespread across the district are recorded in sectors including, activities of households & other service activities, accommodation & food services, and Arts & recreation. These are reported in all local municipalities, closely followed by the construction sector which is reported in over four municipalities. As shown in Figure 4.2, the innovations from the rest of the sectors fall between one and four local municipalities.

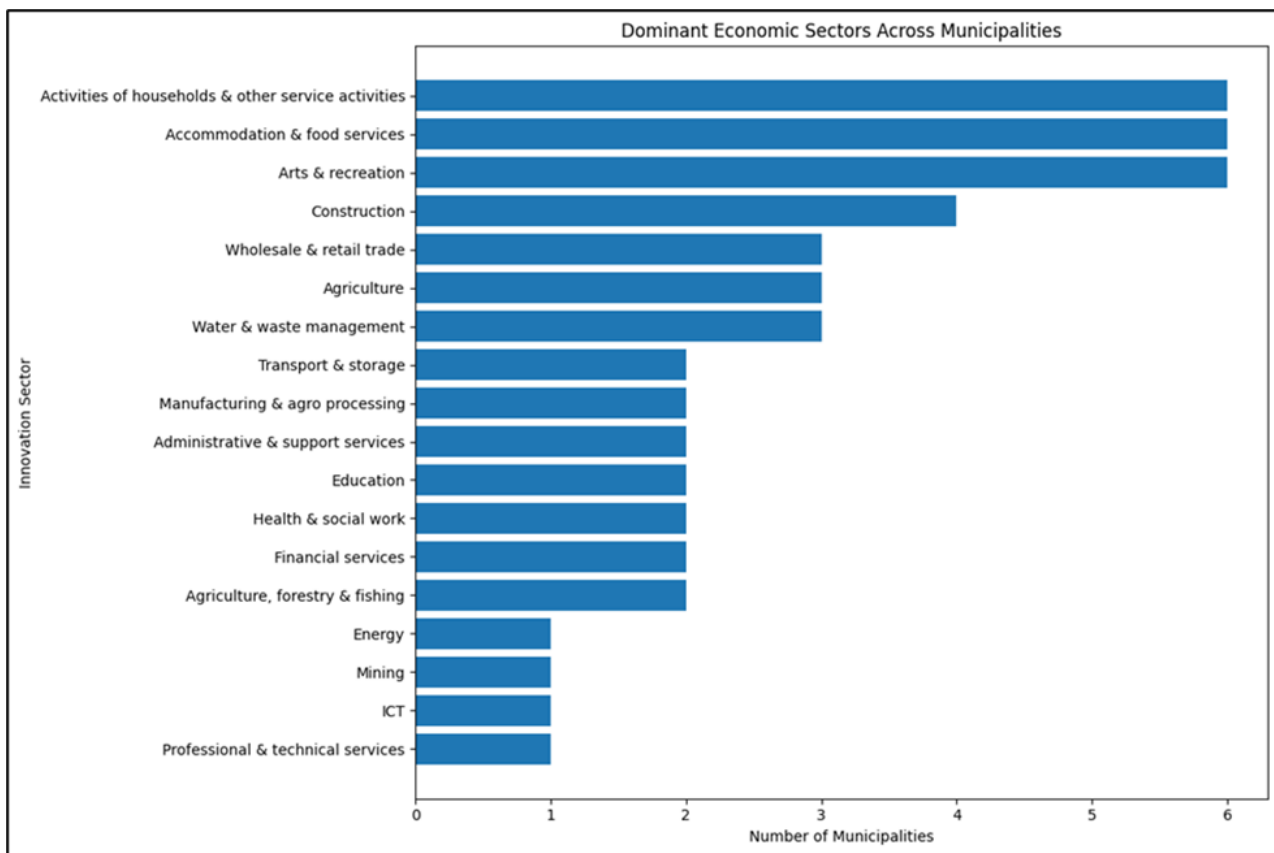


Figure 4.2: Dominant Innovation across Municipalities

The innovators are further detailed against the various local municipalities in Table 4.4. This displays a municipal view of sectors that contribute to innovation and from which the innovators were surveyed.

Table 4.4: Innovation Sectors Per Sectors

Municipality	Innovation Sectors	Total Innovators
Hantam	Activities of households & other service activities; Construction; Wholesale & retail trade; Accommodation & food services; Agriculture, forestry & fishing; Arts & recreation; Financial services; Health & social work	30
Kamiesberg	Accommodation & food services; Activities of households & other service activities; Construction; Water & waste management; Arts & recreation; Education	30
Karoo Hoogland	Agriculture, forestry & fishing; Accommodation & food services; Construction; Activities of households & other service activities; Transport & storage; Arts & recreation	31
Khai-Ma	Activities of households & other service activities; Agriculture; Construction; Wholesale & retail trade; Transport & storage; Arts & recreation; Accommodation & food services; Energy; Mining; Water & waste management	30
Nama Khoi	Activities of households & other service activities; Accommodation & food services; Education; Financial services; Administrative & support services; Agriculture; Arts & recreation; ICT; Manufacturing & agro processing	32

Richtersveld	Accommodation & food services; Wholesale & retail trade; Activities of households & other service activities; Administrative & support services; Health & social work; Agriculture; Arts & recreation; Manufacturing & agro processing; Professional & technical services; Water & waste management	31
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4.4.3 Innovation Density Across Towns in the District

The spread of innovative enterprises across the district is captured in the location of the enterprises. Figure 4.3 provides a heat wave depicting the spread of innovation across the district. The heat wave also demonstrates the innovation density in the district based on the IVC results as captured in the innovative heat wave further show a route and nodes of innovation density across the district. This route runs from Port Nolloth, Springbok, Loeriesfontein and Sutherland.

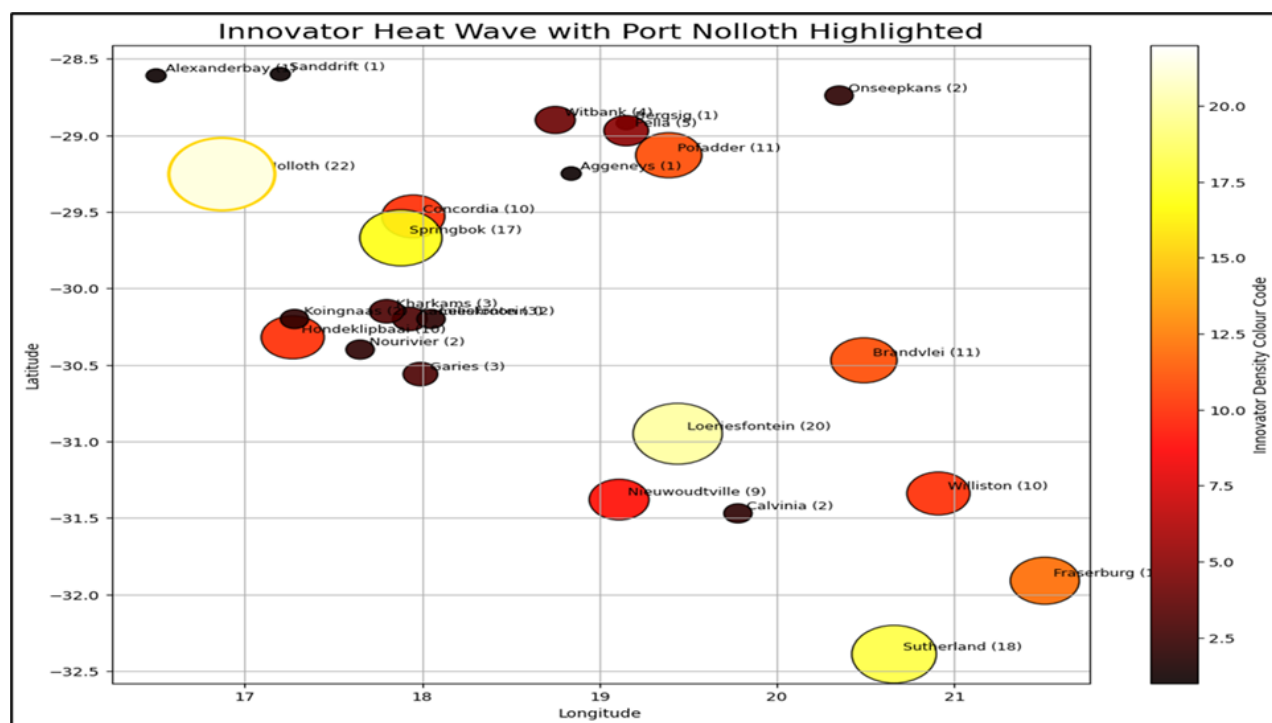


Figure 4.3: Heat Wave of Innovation Density

4.5. Conclusion and Way Forward

The institutional analysis demonstrates that the Namakwa District possesses a growing but uneven institutional foundation for advancing innovation-driven Local Economic Development. A broad network of government departments, state agencies, research institutions, NGOs, international development partners, and tertiary institutions is already active within the district, creating a strong basis for collaborative development interventions. This analysis, therefore, demonstrates gaps within the district innovation landscape and opportunities for advancement.

The analysis further confirms that innovation activity already exists across all six local municipalities, with 184 innovators identified through the Innovation Value Chain (IVC) survey and an overall district innovation rate of 66%. The spread of innovators across sectors such as agriculture, tourism, construction, retail, manufacturing, ICT, transport, and community services demonstrates that innovation in Namakwa is not confined to high technology sectors but is deeply embedded in local adaptive practices and enterprise resilience. Importantly, the findings reveal that rurality and adversity have become drivers of local innovation, particularly in municipalities such as Hantam and Karoo Hoogland.

However, the institutional assessment also highlights critical weaknesses that constrain the district's ability to fully leverage this innovation potential. Most municipalities remain at low levels of innovation orientation, with limited integration of innovation into municipal planning, budgeting, and performance management systems. LED units remain under-capacitated, particularly in smaller municipalities, and coordination between stakeholders is often fragmented. In addition, innovators continue to face barriers related to access to finance, digital infrastructure, business support services, regulatory processes, and innovation networks.

The results therefore point to an urgent need for institutional strengthening and coordinated implementation. The district must move beyond innovation awareness toward innovation entrenchment by embedding innovation objectives into municipal IDPs, SDFs, LED strategies, procurement systems, and organisational performance frameworks. This requires stronger political and administrative leadership, dedicated LED staffing, improved intergovernmental coordination, and closer partnerships with the private sector, research institutions, and community organisations.

The IC4LED intervention, the deployment of Innovation Champions, and the establishment of the Innovation-Oriented Local Economic Development (ILED) Community of Practice provide a significant opportunity to accelerate this transition. These mechanisms create an institutional platform for knowledge sharing, digital transformation, innovation support, and collaborative planning across the district

Going forward, the Namakwa District Municipality should prioritise the following actions:

- Strengthen LED institutional capacity across all municipalities through dedicated staffing, training, and technical support;
- Establish the Namakwa Innovation Hub and associated satellite support centres (within which living labs must be embedded) to coordinate innovation support services;
- Institutionalise the District LED Forum and ILED Community of Practice as permanent coordination platforms;
- Integrate innovation indicators, linked to economic development performance targets, into municipal performance management systems;
- Expand partnerships with universities, TVET colleges, science councils, and industry stakeholders;
- Improve access to digital infrastructure, business development services, and funding mechanisms for innovators and SMMEs;
- Conduct regular innovation landscape updates through biennial LIAT assessments to support evidence-based planning.

Ultimately, the institutional analysis confirms that Namakwa's greatest development opportunity lies not only in its natural resources, but in its people, enterprises, and emerging innovation networks. If effectively coordinated and adequately supported, these institutional and innovation assets can form the foundation for a more diversified, inclusive, resilient, and innovation-driven district economy.

5. SWOT ANALYSIS

5.1. Introduction

A bottom-up methodological approach was employed to discern various opportunities and potential risks across the six local municipalities: Nama Khoi, Richtersveld, Kamiesberg, Hantam, Karoo Hoogland, and Khai-Ma. The March 2026 LED Strategy Formulation Workshops attended by industry stakeholders, municipal personnel, prospective financiers, and community members were utilized in conjunction with strategic documentation to ascertain the potential opportunities and threats within the Namakwa region. The strategic documents analyzed include the Namakwa-DM-Council IDP-2025-2026; the NDM Draft Annual Report 2023/2024; and the Namakwa LED Strategy 2026 Opportunity Analysis. The March 2026 LED Strategy Formulation Workshops allowed residents to critically evaluate and propose significant transformative investments and priority economic sectors throughout the six local municipalities.

5.2. SWOT Analysis for Namakwa District Municipality

This SWOT analysis for the Namakwa District Municipality is based on a multi-source, participatory methodology that integrates empirical evidence with local realities. Three categories of information were used. First, strategic documents including the Namakwa DM IDP 2025/2026 and the Namakwa LED Strategy 2026 Opportunity Analysis provided demographic, socio-economic, and sectoral data, as well as priority projects and investment alignments such as the Namakwa SEZ and Boegoebaai Green Hydrogen SEZ. Second, primary stakeholder engagements were conducted through LED Strategy Formulation Workshops held in March 2026 across all six local municipalities (Hantam, Richtersveld, Khai-Ma, and Nama Khoi). These workshops captured community and SMME perspectives on unemployment, infrastructure deficits, skills gaps, and governance failures. Third, Innovation Champions field notes provided real-time observations on sector-specific constraints not reflected in secondary data. By triangulating these sources, the analysis offers a robust, evidence-based foundation for the LED Strategy's opportunity analysis and implementation recommendations.

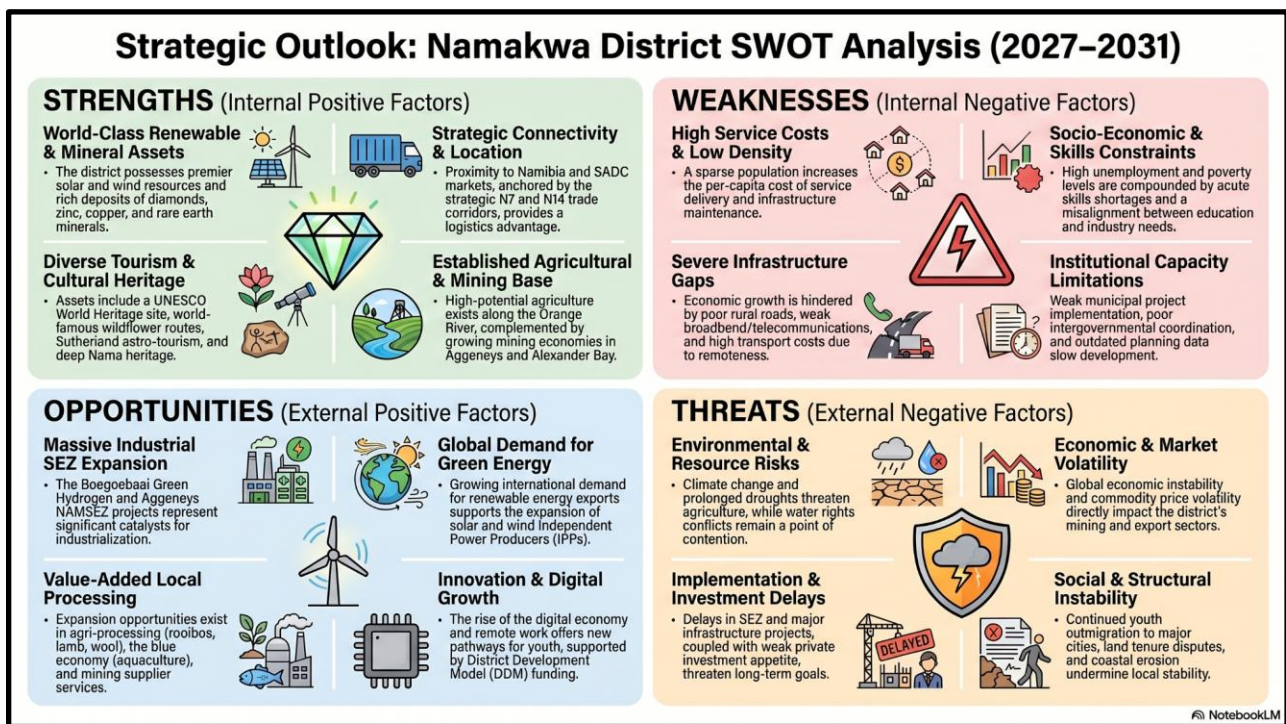


Figure 5.1: SWOT Analysis

5.2.1. Discussion of Key Sectoral Priorities

The analysis of sectoral priorities within the Namakwa District elucidates a complex and interrelated economic framework, wherein five fundamental sectors are identified as pivotal catalysts for inclusive economic advancement. Green hydrogen and renewable energy are positioned as the district's most consequential opportunity, underpinned by the Boegoebaai Deep-Sea Port and the Green Hydrogen Special Economic Zone in Richtersveld, enhanced by the operational wind energy facilities at Kangnas and Loeriesfontein, in addition to solar corridors established along the N7 and N14. The realization of this potential necessitates immediate implementation of supplier readiness initiatives and community benefit-sharing frameworks, given that local small, medium, and micro enterprises (SMMEs) remain inadequately prepared for large-scale procurement engagements. The mining and mineral beneficiation sector, particularly through the designation of the Namakwa Special Economic Zone (NAMSEZ) at Aggeneys in Khai-Ma, presents considerable localization opportunities; however, underdeveloped value chains and a lack of small-scale beneficiation of mining byproducts inhibit job creation prospects.

The district's tourism offerings are remarkable yet disjointed, encompassing the UNESCO-designated Richtersveld Transfrontier Park, Sutherland's distinguished astro-tourism facilities, the spring wildflower routes traversing Nama Khoi, Kamiesberg, and Hantam, alongside the unparalleled Nama cultural heritage endemic to the region. Notwithstanding this wealth of resources, the lack of a cohesive destination brand, inadequate digital marketing strategies, and the absence of tourism offices in critical towns such as Calvinia severely restrict potential revenue generation. The agriculture and agro-processing sector, focused on Karoo lamb, merino wool, rooibos tea, and the nascent hemp industry, demonstrates significant capacity for local economic value retention; however, emerging farmers encounter limited access to land and water resources, while existing processing facilities are characterized by suboptimal performance. Lastly, the SMME and digital economy, anchored by the Namakwa Digital Hub in Springbok and the IC4LED Innovation

Champions initiative, provides a viable pathway for youth employment and entrepreneurial ventures; nevertheless, constrained access to financial resources, inadequate digital infrastructure, and ineffective governmental communication serve as substantial impediments. A comprehensive SWOT analysis across all sectors confirms that water security, skills development, infrastructure investment, and land tenure reform are indispensable enablers, without which no prioritized project can achieve success.

5.3. Strategic Implications from the Opportunity Analysis

The strategic issues identified through the opportunity analysis across the six local municipalities are not merely operational gaps but systemic barriers that, if left unaddressed, will fundamentally undermine the district's ambition to become a benchmark for a sustainable green energy, diverse, and integrated socio-economy. The following discussion critically positions each strategic issue and its implications for LED implementation.

5.3.1. Water Insecurity

Water insecurity stands as the single most binding constraint on all economic activity in Namakwa. The district is among the driest regions in South Africa, yet every priority sector - green hydrogen production, agriculture, tourism accommodation, mining beneficiation, and even SMME enterprise depends on reliable water supply. The LED Strategy cannot merely advocate for water efficiency; it must treat desalination (linked to the Boegoebaai development), rainwater harvesting, and bulk infrastructure investment as pre-competitive enablers. Without a credible water security plan, no investor will commit, and no emerging farmer will thrive. The implication is stark: water security must be elevated from an environmental issue to an economic survival imperative, with the NDM leading urgent advocacy to the Department of Water and Sanitation and the national treasury.

5.3.2. Skills shortages

Skills shortages represent a structural bottleneck that will exclude local communities from the very investments meant to uplift them. The NAMSEZ and Boegoebaai developments promise thousands of jobs, but workshop after workshop revealed that local residents lack the CIDB registration, artisanal trades, digital literacy, and technical certifications required to participate. The absence of a TVET college in Calvinia, the limited outreach of Namakwa TVET College to Hantam, and the narrow, mining-only focus of private bursaries all point to a misalignment between education supply and economic demand. The strategic implication is that skills development cannot be a peripheral activity; it must be embedded as a condition of investment licenses, with companies required to fund learnerships, and with the NDM using its LED unit to broker curriculum reforms at provincial level.

5.3.3. Infrastructure Deficits

Infrastructure deficits particularly roads, electricity, and broadband compound the district's spatial isolation and raise transaction costs prohibitively. Poor gravel roads in Richtersveld and Kamiesberg deter tourists and delay agricultural supply chains. Limited electricity access in remote areas constrains small-scale agro-processing and digital enterprise. The absence of fibre and public Wi-Fi excludes communities from the digital economy and undermines remote work potential in Karoo Hoogland. The implication is that infrastructure investment cannot be left to incremental municipal budgets; the NDM must leverage the District

Development Model and Partner-a-District programme to unlock catalytic funding for backbone infrastructure, prioritising connectivity along the N7 and N14 economic corridors.

5.3.4. Tourism Fragmentation

Tourism fragmentation represents a missed opportunity of significant proportions. Namakwa possesses world-class assets UNESCO heritage, the largest optical telescope in the southern hemisphere, the Succulent Karoo biodiversity hotspot, and the Nama cultural heritage yet these are marketed in isolation, if at all. Calvinia has no tourism office; Springbok's visitor numbers are poorly captured; Sutherland lacks a coordinated astro-tourism booking platform. The strategic implication is that a unified "Discover Namakwa" destination brand, supported by a digital platform and ring-fenced marketing budget, is not optional but essential. Without it, the district will continue to lose tourist spend to the Western Cape and Namibia.

5.3.5. Weak Investment Coordination

Weak investment coordination currently undermines the district's ability to translate interest into implementation. Investors in the SEZ, renewable energy, and tourism sectors report navigating multiple, uncoordinated approval processes across six local municipalities, with no single point of contact. The NDM LED unit lacks a dedicated investment facilitation desk, and there is no formal mechanism to track investor inquiries, monitor SEZ procurement localisation, or hold companies accountable for community benefit commitments. The implication is that the NDM must establish an Investment Facilitation Office within the LED unit, staffed with capacity to manage investor aftercare, coordinate environmental and planning approvals, and enforce local procurement reporting.

5.3.6. Land Challenges

Land challenges, particularly communal land tenure disputes and the absence of a comprehensive land audit, constrain agricultural expansion, housing development, and SMME business establishment. The Kamiesberg workshops repeatedly highlighted how unresolved CPA disputes and unclear ownership deter investment in rooibos co-operatives and small-scale farming. Similarly, Khai-Ma lacks a land audit to determine grazing and farming availability, while Hantam's high land use application costs exclude emerging entrepreneurs. The implication is that the NDM must prioritise a district-wide land audit and use its convening power to facilitate tenure resolution working groups with the Department of Rural Development and Land Reform.

5.3.7. Local Economic Leakage

Local economic leakage the outflow of procurement spend to external companies represents a silent drain on local multipliers. The IDP and workshop reports note that municipal and government contracts are not effectively localised, and major mining and renewable energy projects do not have mandatory local supplier quotas. The Calvinia SMME market and procurement database proposal is a step in the right direction, but without enforceable local procurement targets and supplier development programmes, economic value will continue to leak to Cape Town and Johannesburg. The implication is that the NDM LED unit must develop a Local Procurement Charter, pilot a supplier verification system, and use its MSCOA compliance to ring-fence categories for local SMMEs.

5.3.8. Renewable Energy Readiness

Renewable energy readiness is the final strategic imperative that will determine whether Namakwa leads or lags the green transition. The Kangnas Wind Farm community benefit model provides a replicable template, but most IPP projects still operate with weak local content. The Boegoebaai Green Hydrogen SEZ requires a local supplier development programme that starts now, not when construction begins. The implication is that the NDM must treat supplier readiness as an emergency, with pre-qualification training for CIDB grading, health and safety certification, and cooperative governance for community trusts.

5.4. Municipality Opportunity Analysis and Priority Projects

The following sub-sections provide an opportunity analysis and a prioritized project portfolio for each of the six local municipalities within the Namakwa District. Projects are evaluated against criteria of alignment with the five district strategic objectives, feasibility, job creation potential, investment readiness, and community benefit.

5.4.1. Hantam Local Municipality

Hantam Municipality finds itself at a pivotal crossroads, characterized by considerable investments and strategic endeavors designed to diversify its economic framework and bolster local development. Dialogues conducted during the Local Economic Development (LED) Strategy Formulation Workshops, alongside insights drawn from strategic documentation, underscore agriculture and agro-processing, tourism, renewable energy and the green economy, construction, retail and agro-supply chains, education and skills development, as pivotal economic sectors. Within Hantam, a spectrum of initiatives intended to catalyze economic growth, and foster job creation has been identified; these initiatives encompass business and enterprise development, digital economy initiatives, renewable energy projects, recycling and environmental initiatives, as well as education and skills advancement.

Table 5.2: Priority Projects Analysis Hantam Local Municipality

Project Area/Sector	Key Initiatives
Entrepreneurship and Business Support	● Establish business hubs and SMME hubs ● Refurbish existing business hubs ● Implement business incubation programs and monthly SMME fairs ● Improve access to finance and cooperative support initiatives ● Reduce the requirements for operating businesses in the area ● Raise awareness for entrepreneurship and incubation programs.
Digital and Communication Infrastructure	● Provide free community Wi-Fi ● Establish digital hubs ● Offer digital skills training for businesses and community networks
Agricultural and Rural Development	● Increase access to land and water for emerging farmers ● Establish agricultural cooperatives ● Improve infrastructure for livestock and sheep farming

Renewable Energy and Sustainability	● Engage community in renewable energy projects ● Implement solar farm programs ● Provide education linked to agriculture and expand recycling opportunities
Tourism Development	● Develop hiking trails and bird watching initiatives ● Establish eco-lodges ● Train local tour guides and set up a tourism office ● Flower tourism, ● Cultural heritage tourism ● Astronomy tourism
Construction and Infrastructure	● Support sourcing local construction materials ● Develop contractor capabilities
Recycling and Circular Economy	● Initiate recycling plants ● Implement school composting programs ● Conduct industrial clean-up initiatives

5.4.2. Nama Khoi Local Municipality

The analytical assessment of opportunities in Nama Khoi Local Municipality delineates numerous priority sectors exhibiting robust prospects for economic advancement, employment generation, and alleviation of poverty. These sectors encompass renewable energy (solar energy facilities, micro-grid systems, vocational training), mining (maintenance of equipment, provision by local suppliers, support for small-scale enterprises), tourism (accommodation facilities, eco-tourism initiatives, preservation of cultural heritage), agriculture (agricultural cooperatives, domestic farming practices, agricultural technology), construction, information and communication technology (ICT), aquaculture, healthcare services, transportation and logistics, education tailored to community requirements, and systems of indigenous knowledge. Capitalizing on these sectors offers a methodical trajectory towards inclusive and sustainable local economic development in the Municipality.

Table 5.3: Priority Projects Analysis for Nama Khoi Local Municipality

Project Area/Sector	Key Initiatives
Renewable Energy	Development of solar farms and community solar micro-grids Implementation of renewable energy training programs
Mining	Establishment of equipment maintenance workshops Local supplier development and youth skills training Support for small-scale miners and reduction of bureaucratic barriers
Tourism	Development of guesthouses and flower tourism routes Training for local guides and eco-tourism strategies Cultural heritage initiatives, including audio and virtual reality museum displays
Agriculture	Formation of farmer cooperatives and promotion of backyard farming Expansion of agri-tech and value addition to agricultural products Initiatives focusing on indigenous plants, hemp, and cannabis, along with agro-processing projects
Cross-Cutting Interventions	Creation living labs and of digital platforms for cultural storytelling and marketing local products Digitization of indigenous knowledge and expansion of digital skills training

5.4.3. Richtersveld Local Municipality

The analysis of opportunities within the Richtersveld Municipality delineates considerable potential for local economic development across various pivotal sectors, which encompass renewable energy (including solar micro-grids and green hydrogen), mining and beneficiation (encompassing diamond cutting, jewellery manufacturing, and local value chains), the marine and blue economy (covering fish processing, cold storage, and aquaculture), agriculture and agro-processing (focusing on crop innovation and processing facilities), as well as tourism (highlighting eco-tourism, Nama cultural heritage, and community-based enterprises). Nevertheless, the realization of these opportunities necessitates the resolution of significant challenges such as limited economic diversification, fragile innovation ecosystems, and insufficient infrastructure.

Table 5.4: Priority Projects Analysis for Richtersveld Local Municipality

Project Area/Sector	Key Initiatives
Infrastructure Development	● Upgrade roads and transport systems ● Improve broadband and mobile connectivity ● Strengthen water and energy infrastructure ● Improve access to water and sanitation
Economic Development Projects	● Community solar micro-grid programmes ● Diamond beneficiation hub (Alexander Bay) ● Fish processing facility (Port Nolloth) ● Agro-processing and agricultural expansion ● Alignment of schools and higher education.
Skills and Human Capital	● Accredited learnerships aligned to local industries ● Digital and technical skills training in schools ● Mentorship and entrepreneurship programmes ● Strengthen curriculum support ● Improve digital inclusion
Enterprise and Innovation	● Establish innovation hubs and incubation centres ● Improve access to funding (SEDA and others) ● Create local market platforms for SMMEs ● Access to mentorship and follow-up support ● Improve collaboration and trust with community members
Tourism Development	● Community-based eco-tourism initiatives ● Digital marketing training for local businesses ● Arts and Culture heritage promotion ●
Spatial Focus of Interventions	● Alexander Bay: Focus on mining beneficiation and renewable energy ● Port Nolloth: Emphasis on the marine economy, fish processing, and tourism ● Kuboes, Lekkersing, Eksteenfontein, Sanddrift: Development of cultural tourism and rural initiatives ● Orange River region: Agriculture and agro-processing
Transport	● Improve access to the railway network to reduce long travel distances and journey times.

5.4.4. Khai-Ma Local Municipality

The opportunity analysis for the Khai-Ma Municipality identifies several priority sectors with strong potential for job creation, poverty reduction, and economic growth. These include tourism (accommodation and tourism corridors), agriculture and agro-processing (horticulture and local resource-based processing), mining (supplier development and small-scale beneficiation of mining waste), technology (digital platforms and GPS tracking), education (STEM focus and smart classrooms), indigenous knowledge systems (digitisation of cultural heritage), aquaculture (sustainable fish farming), and transport and logistics (improved services and infrastructure). Unlocking these opportunities will require targeted interventions and supportive policy measures to stimulate local economies and foster sustainable development.

Table 5.5: Priority Projects Analysis for Khai-Ma Local Municipality

Project Area/Sector	Key Initiatives
Tourism	Development of accommodation and tourism corridors.
Agriculture and Agro-Processing	Innovative practices and local resource utilization.
Mining	- Supplier development and small-scale beneficiation of mining waste. - Improve access to mining industries. - Collaboration of mining companies with SMMEs
Technology	Integration of digital platforms and GPS tracking.
Education	Focus on STEM subjects and smart classrooms.
Indigenous Knowledge Systems	- Digitization of cultural heritage. - Improve education and skills development on youth
Aquaculture	Development of sustainable fish farming practices.
Transport and Logistics:	Improvement of transport services and infrastructure.
Nam-Route Tourism Corridor	Boosting regional tourism.
Digital Platforms for Cultural Storytelling	Marketing indigenous knowledge for tourism.
Agro-Processing Initiatives:	Utilizing prosopis trees and innovative agricultural practices.
Infrastructure Development	- Improving internet connectivity and expanding community WiFi. - Offering of training on administrative systems. - Improve logistical routes for supplier development.
Smart Classrooms and STEM Promotion:	- Modern educational facilities and STEM focus. - Improve intake of learners Mathematics
Policy Reforms:	Revising mining policies for MSME inclusion.

GPS Tracking Technology in Transport:	Enhancing efficiency in transport services.
Small-Scale Beneficiation of Mining Waste:	Value addition on mining industries and job creation opportunities.
Digitization of Indigenous Knowledge Systems:	Preserving heritage while creating economic opportunities.

5.4.5. Kamiesberg Local Municipality

The opportunity analysis for the Kamiesberg Municipality delineates several pivotal sectors possessing substantial potential for local economic advancement. Fishing and mariculture, notably the cultivation of crayfish at the harbour of Hondeklipbaai, present avenues for growth and value enhancement. Tourism emerges as a robust sector for expansion, propelled by picturesque drives, 4x4 routes, and the seasonal blooming of wildflowers in municipalities such as Garies and Kamieskroon, with prospects for eco-tourism and the development of accommodation facilities. Mining, particularly concerning alluvial diamonds in the vicinity of Koiingnaas, offers prospects for the development of local suppliers and small-scale beneficiation initiatives. Agriculture, although less comprehensively detailed, continues to thrive through initiatives such as farm electrification, indicating potential for agro-processing and sustainable agricultural practices. Collectively, these sectors provide encouraging pathways for job creation and revenue generation, especially through focused support directed at the tourism and mining value chains.

Table 5.6: Priority Projects Analysis Kamiesberg Local Municipality

Project Area/Sector	Key Initiatives
Housing Development	Focus on obtaining housing accreditation from COGHSTA and implementing housing projects to address the backlog.
Tourism Development	Development of a District Tourism Master Plan, including visitor centers and tourism routes.
Deep Sea Port and Infrastructure	Development of the Boegoebaai project for a deep-sea port and associated infrastructure as part of a Special Economic Zone (SEZ).
Green Hydrogen Project	Feasibility stage project aimed at utilizing renewable energy for hydrogen production.
Drought Relief Plan	Long-term assistance plan for municipalities affected by drought.
Digital Hub	Establishment of a digital hub to support innovation and technology development in the region.

5.4.6. Karoo Hoogland Local Municipality

The opportunity analysis conducted for the Karoo Hoogland Municipality elucidates a multifaceted economic foundation with significant potential for strategic local economic development (LED) initiatives. Agriculture, with a particular emphasis on ovine husbandry, wool manufacturing, and lucerne farming, continues to serve as a fundamental pillar of the regional economy. The field of astronomy and associated research, centered around the South African Large Telescope (SALT) located in Sutherland, offers unique avenues to integrate scientific tourism with the advancement of local enterprises. The tourism sector itself is witnessing growth,

propelled by astronomical observation and the region's unique topographical features, thereby presenting avenues for eco-tourism and the enhancement of hospitality infrastructure. Although mining occupies a relatively minor position, it nonetheless plays a role in bolstering the local economy. Furthermore, the domain of renewable energy—particularly solar and wind technologies, presents promising prospects for new investments and employment opportunities. Capitalizing on the interconnections among agriculture, astronomy-driven tourism, and renewable energy can facilitate sustainable and inclusive economic growth within the municipality.

Table 5.7: Priority Projects Analysis Karoo Hoogland Local Municipality

Project Area/Sector	Key Initiatives
Housing Accreditation	Obtain housing accreditation from COGHSTA and implement according to accreditation.
District Tourism Master Plan	Develop a business plan for visitor centers and tourism routes in municipalities.
Deep Sea Port Development	Develop Boegoebaai as a deep-sea port and associated infrastructure as part of a Special Economic Zone (SEZ).
Green Hydrogen Project	Feasibility study for green hydrogen production utilizing renewable energy.
Drought Relief Plan	Long-term assistance plan for municipalities affected by drought.
Digital Hub	Establish a digital hub to support innovation and technology development.
Consolidated Infrastructure Master Plan	Compilation and implementation to be included in the District Development Model.
Sport Infrastructure	Submission of MIG application for sports facilities.

5.5. TWOS Analysis for Namakwa District Municipality

The TWOS (Threats-Weaknesses-Opportunities-Strengths) matrix constitutes an essential strategic instrument that transcends conventional SWOT analysis by explicitly correlating internal strengths and weaknesses with external opportunities and threats to formulate actionable strategies. In the context of this LED report, a comprehensive TWOS analysis was performed for each of the six local municipalities by methodically aligning the prioritized project areas identified during the stakeholder workshops conducted in March 2026 and the strategic documents (Namakwa-DM-Council IDP-2025-2026; the NDM Draft Annual Report 2023/2024; and the Namakwa LED Strategy 2026) with their relevant TWOS components. Each project was subsequently assigned a strategic orientation—S-O, S-T, W-O, or W-T—depending on whether it utilizes strengths to capitalize on opportunities, employs strengths to mitigate threats, addresses weaknesses to seize opportunities, or diminishes weaknesses to circumvent threats. This methodological framework guarantees that the LED Strategy is not solely descriptive but also prescriptive, thereby offering a cogent rationale for the prioritization of projects and the sequencing of their implementation throughout the district.

Table 5.8: TWOS Analysis for Namakwa District

Key Priority Project Area	Matching TWOS Elements	Strategic Implication	S-T	S-O	W-O	W-T
Namakwa SMME Business Support & Incubation Hub	S: Digital Hub already operational; clean audits. O: NAMSEZ supply chain demand; IC4LED programme.	Leverage existing digital infrastructure to capture SEZ-linked SMME opportunities.		X		
Springbok Wildflower Tourism Precinct Upgrade	W: No tourism office; poor data on visitor numbers. O: Growing eco-tourism demand; NCTA funding.	Address data gaps and marketing weaknesses to unlock flower tourism revenue.			X	
Nama Khoi Mining Heritage & Geo-Tourism Trail	S: Rich copper mining legacy; proximity to N7. T: Commodity price volatility; youth outmigration.	Use heritage tourism to diversify away from mining dependence and retain youth.	X			
N7 Solar Energy Supplier Linkage Programme	W: Weak local supplier development. T: Delayed IPP implementation; private sector risk aversion.	Build supplier capacity now to mitigate risk of local exclusion from solar investments.				X
Boegoebaai Green Hydrogen Local Supplier Readiness Programme	S: UNESCO heritage; Boegoebaai designation. O: R29bn+ investment; EU green hydrogen demand.	Leverage catalytic national investment to build local supplier base from outset.		X		
Richtersveld Wilderness Eco-Tourism Route Formalisation	W: Poor gravel roads; weak telecoms. O: Global eco-tourism growth; SANParks partnership.	Address infrastructure weaknesses to unlock high-value international tourism.			X	
Alexander Bay Economic Repurposing & Post-Mine Development Plan	S: Existing housing & infrastructure stock. T: Post-mining economic collapse; outmigration.	Use existing assets to transition from mining dependence to diversified SEZ service hub.	X			
Orange River Aquaculture & Mariculture Pilot	W: Limited technical skills; weak value chains. T: Climate change; water rights conflicts.	Pilot small-scale, climate-resilient aquaculture before large-scale investment.				X
Nama Cultural Heritage Centre & Living Museum	S: Unique living Nama heritage. O: Cultural tourism growth; digitisation of indigenous knowledge.	Convert unique cultural assets into a formal, marketable tourism product.		X		
Kamiesberg Wildflower Eco-Tourism Circuit	S: Succulent Karoo biodiversity hotspot; Kangnas template. O: High-value international eco-tourism.	Leverage world-class biodiversity to attract premium, low-volume tourism.		X		
Rooibos & Indigenous Plant Agri-Processing Co-operative	W: Underdeveloped processing; communal land tenure. O: SARS IP provisions; organic cosmetics markets.	Address processing and tenure weaknesses to access premium export markets.			X	
Kangnas Community Benefit Sharing Model Scale-Up	S: Operational wind farm; established trust. T: Slow IPP rollout; community expectation gaps.	Scale proven model to pre-empt community dissatisfaction in future projects.	X			
Communal Land Smallholder Farmer Support Programme	W: Unresolved CPA disputes; limited water access. T: Prolonged drought; climate change.	Provide packaged support (fencing, seeds, water harvesting) to mitigate climate risk.				X

Kamiesberg Dark-Sky Reserve & Astro-Tourism	S: Pristine dark skies; low light pollution. O: International Dark Sky Place designation.	Use dark-sky assets to attract astro-tourism and diversify beyond wildflowers.		X		
Karoo Lamb GI & Premium Market Access Programme	S: Established sheep farming; wool & mutton quality. O: GI certification; premium retail & export markets.	Convert existing agricultural strength into certified, higher-value market access.		X		
Nieuwoudtville Botanical Tourism Destination Development	W: No tourism office; weak digital marketing. O: SANBI partnership; world "Bulb Capital" status.	Address marketing and institutional weaknesses to capture botanical tourism value.			X	
Hantam Hemp Production & Cooperative Establishment	S: Agricultural land & farming experience. T: Regulatory uncertainty; delayed Masterplan implementation.	Use existing farming capacity to pioneer hemp while managing regulatory risks.	X			
Loeriesfontein Renewable Energy Tourism & Museum Hub	W: Limited tourism infrastructure. T: Community exclusion from renewable benefits.	Convert weakness into opportunity by creating an interpretive centre to demonstrate local benefit.				X
Calvinia SMME Market & Local Procurement Drive	W: Weak local procurement; high land use costs. O: IC4LED Champions; PaD funding.	Address procurement weaknesses using IC4LED grassroots capacity.			X	
Sutherland International Astronomy & Dark-Sky Tourism Hub	S: SALT telescope; pristine dark skies. O: International Dark Sky Place; science tourism growth.	Leverage world-class astronomy assets to become Africa's premier astro-tourism destination.		X		
Karoo Hoogland Remote Work Destination Campaign	W: Limited broadband; aging population. O: Global remote work growth; low cost of living.	Address connectivity weakness to capture the digital nomad market.			X	
Karoo Wool & Mohair Value Chain Upgrade	S: Fine-fibre wool quality; Woolmark potential. T: Commodity price volatility; climate change.	Upgrade the value chain to premium markets as a hedge against price volatility.	X			
Film & Media Location Industry Development	W: No formal location registration; limited local skills. T: Competition from Western Cape.	Register with NFVF to mitigate competitive threat and formalise industry.				X
Karoo Hoogland Biodiversity Economy Programme	S: Critical Biodiversity Areas. O: Payments for Ecosystem Services (PES).	Monetise biodiversity protection through PES schemes.		X		
NAMSEZ Local Supplier Development & Community Benefit Programme	S: NAMSEZ anchor investment (Vedanta, Frontier). O: R29bn+ committed; 10,000+ jobs.	Leverage SEZ designation to pre-position local SMMEs for procurement pipelines.		X		
Aggeneys Industrial Township & Worker Accommodation Development	W: Limited housing; inadequate social infrastructure. O: 5,000+ workers expected; developer interest.	Address housing weakness to capture SEZ-related accommodation demand.			X	
Orange River Horticulture & Wine Corridor Expansion	S: Irrigation rights; established farming. T: Water rights conflicts; climate change.	Use existing irrigation assets to expand while managing water allocation risks.	X			

N14 Solar Energy Industrial Zone Development	W: Poor cellphone reception; limited grid capacity. T: Delayed IPP implementation.	Address infrastructure weaknesses to attract solar investment along the N14 corridor.				X
Pella Heritage & Cultural Tourism Product	S: Historic Pella Mission; Nama heritage. O: Orange River tourism route; cultural tourism growth.	Convert heritage assets into anchor for broader Orange River tourism corridor.		X		

Key: S-O (Strength-Opportunity), W-O (Weakness-Opportunity), S-T (Strength-Threat) and W-T (Weakness-Threat)

5.6. Conclusion

In conclusion, the strategic implications are clear: the Namakwa LED Strategy must shift from aspirational planning to binding implementation. Water security, skills alignment, infrastructure investment, tourism unification, investment coordination, land reform, local procurement, and renewable energy readiness are not separate agendas but an integrated package of enabling conditions. Without them, the district's vision of reshaping Namakwa for future generations will remain out of reach.

6. IDENTIFICATION OF CATALYTIC PROJECT

6.1. Catalytic Project Identification Criteria

Catalytic projects are identified through 1) a socio-economic review of the Namakwa district, 2) SWOT analysis, 3) innovation value chain survey, and 4) pre-strategy stakeholder workshops across the district. Figure 6.1 Shows the projects identified. The catalytic projects are categorised in accordance with the District Development Model (DDM) catalytic project level descriptors. The DDM level descriptors include:

- **Level 1 Catalytic Projects (Game Changers)** are government funded mega infrastructure projects. By nature, these are projects of multi-sectoral significance.
- **Level 2 Catalytic Projects (Major Enablers)** are private sector led partnership projects, such as PPPs and joint ventures, that have the capacity to be major enablers in a particular sector or sectors
- **Level 3 Catalytic Projects (Community Projects)** are community or civil society-led initiatives that improve the quality of life of a particular community within a district

Table 6.1: Catalytic Projects

Catalytic Project	Strategic Rationale	Geographic Focus	Linked LED Pillars	DDM Catalytic Level
Boegoebaai Green Hydrogen & Deep-Sea Port	Largest potential economic catalyst; unlocks renewable energy exports, logistics, and industrialization.	Richtersveld / Boegoebaai Corridor	Renewable Energy, Logistics, Industrialization	Level 1: Game Changer (Government Mega Project)
District Broadband & Digital Connectivity	Multi-sectoral infrastructure foundational to the digital economy, remote work, and smart education.	District-wide	Digital Economy, Education, Innovation	Level 1: Game Changer (Government Mega Project)
District Water Security & Climate Resilience	Addresses the district's single biggest economic constraint to sustain mining, agriculture, and energy. Desalination to address water insecurity. Explore Vioolsdrift Dam for potential irrigation and rain water harvesting.	District-wide	Infrastructure, Climate Resilience	Level 1: Game Changer (Government Mega Project)
Namakwa Special Economic Zone (NamSEZ) & Mineral Beneficiation Hubs	Enables mineral beneficiation (Diamond, zinc, copper), and industrial localization linked to private anchor investments. This should replace mineral resource "extraction only" models.	Aggeneys, Springbok, Alexander Bay	Mining Beneficiation, Manufacturing SMMEs	Level 2: Major Enabler (Private Sector & PPPs)
Namakwa Innovation Hubs & Living Labs	Institutional anchor to coordinate innovation and	District-wide	Innovation, Digital Economy, SMME Development	Level 2: Major Enabler (Private Sector & PPPs)

	technology support for SMMEs.			
Vocational Training & Satellite Campuses	Establishing satellite TVET/University campuses	District-wide (Satellite Sites)	Education, Human Capital	Level 2: Major Enabler
Astro-Tourism Corridor	Integrates fragmented world-class astronomy assets (SALT/MeerKAT) into a unified tourism economy.	Sutherland, Calvinia, Springbok, Richtersveld	Tourism, Services Economy	Level 2: Major Enabler (Private Sector & PPPs)
Regional Sovereign Wealth Fund	Proposed 5% to 10% fund derived from private sector revenue to support SMME startups and community infrastructure.	District-wide	Finance, Enterprise Development	Level 2: Major Enabler (Private Sector & PPPs)
Agro-Processing & Indigenous Knowledge	Upgrades agricultural value chains to reduce economic leakage and support niche exports. Leverages local adaptive ingenuity in niche crops (rooibos, hemp, snail mucin) to reduce economic leakage. Develop medicinal remedies using Indigenous Knowledge Systems (IKS).	Hantam, Kamiesberg, Nama Khoi	Agriculture, Agro processing	Level 2: Major Enabler (Private Sector & PPPs)
Fish Processing & Marine Economy Development	Unlocks coastal economic opportunities through aquaculture, cold storage, and export. Explore revitalisation of the Port Nolloth Fishing Factory.	Port Nolloth, Hondeklip Bay, Kleinsee	Blue Economy, Agro-processing	Level 2: Major Enabler (Private Sector & PPPs)
Green Energy SMME & Artisan Incubator	Addresses technical skills shortages by linking youth to renewable energy pipelines. Addresses the structural skills gap to ensure local youth participate in the RE/SEZ job markets.	Springbok, Aggeneys, Calvinia	Skills Development, Green Economy	Level 2: Major Enabler (Private Sector & PPPs)
District Land Audit & Agricultural Access	Resolves tenure disputes and Communal Property Association (CPA) land challenges to unlock communal land for commercial farming.	District-wide	Agriculture, Rural Development	Level 2: Major Enabler (Private Sector & PPPs)

Community Solar Micro-Grid Programme	Community-led initiative to expand energy access in remote areas and support cooperatives.	Khai-Ma, Richtersveld, Kamiesberg	Green Economy, Community Development	Level 3: Major Needs (Community Project)
Innovation-Driven Library & Smart Learning	Converts under-resourced libraries into digital centers to address educational inequality.	District-wide	Education, Digital Economy	Level 3: Major Needs (Community Project)
Community-Based Cultural & Eco-Tourism	Supports rural livelihoods by monetising the unique Nama cultural heritage and UNESCO assets through digital storey telling, and community-run eco-lodges.	Kuboes, Lekkersing, Eksteenfontein, Sanddrift	Tourism, Cultural Economy	Level 3: Major Needs (Community Project)
Circular Economy & Recycling Hubs	Recycling glass, plastic, and granite waste into alternative building materials	District-wide	Waste Management, Manufacturing	Level 3: Major Needs (Community Project)
Food Security & Small-Scale Farming	Addresses hunger and unemployment via backyard gardens, poultry hubs, and local market creation.	District-wide (Rural settlements)	Agriculture, Social Resilience	Level 3: Major Needs (Community Project)
Local Procurement & Supplier Development	Enforce a 30% local sourcing target and reduce leakage. Explore the re-vitalisation of local brick/block factories	District-wide	Enterprise Development	Level 3: Major Needs (Community Project)

6. 2. Possible Value Chains for the Catalytic Projects

Level 1: Game Changers (Government Mega Projects)

These are government-funded infrastructure projects of multi-sectoral significance that serve as the foundation for the regional economy.

1. Boegoebaai Green Hydrogen & Deep-Sea Port Development

Strategic Rationale: The district's largest potential catalyst, aimed at unlocking renewable energy exports, global logistics, and industrialization.

Geographic Focus: Richtersveld / Boegoebaai Corridor.

LED Pillar: Renewable Energy, Logistics, Industrialisation.

Value Chain Activities:

- Generation: Harvesting world-class wind and solar resources.
- Input: Integrated desalination to provide water without impacting local security.
- Production: Electrolysis for green hydrogen and ammonia conversion.
- Logistics: Development of a 550 km rail line and deep-sea port for global export.

2. District Broadband & Digital Connectivity Programme

Strategic Rationale: Directly addresses severe ICT deficits to enable digital inclusion, remote work, and smart education.

Geographic Focus: District-wide.

LED Pillar: Digital Economy, Education, Innovation.

Value Chain Activities:

Infrastructure: Rollout of fiber-optic cables and towers to eliminate outages.

- **Service Provision:** Establishing local ISPs and community **Digital Hubs** in towns like Springbok and Calvinia.
- **Human Capital:** Digital literacy training (coding/robotics) through smart learning centers.
- **Economic Application:** Enabling e-commerce for SMMEs and the "digital nomad" market.

3. District Water Security & Climate Resilience Programme

Strategic Rationale: Addresses the district's single most binding constraint to sustain mining, agriculture, and tourism.

Geographic Focus: District-wide.

LED Pillar: Infrastructure, Climate Resilience.

Value Chain Activities:

- **Capture:** Developing desalination (linked to Boegoebaai) and large-scale rainwater harvesting.
- **Infrastructure:** Building bulk pipelines to growth nodes.
- **Allocation:** Prioritizing water for mining beneficiation and agricultural irrigation.
- **Innovation:** Implementing greywater-operated eco-toilet systems to reduce waste.

Level 2: Major Enablers (Private Sector & PPPs)

Private sector-led partnership projects that enable specific economic sectors and leverage public-private investment.

4. Namakwa Special Economic Zone (NamSEZ)

Strategic Rationale: Enables industrial localization and supplier development linked to major mining operations.

Geographic Focus: Aggeneys / Khai-Ma Municipality.

LED Pillar: Mining Beneficiation, Manufacturing.

Value Chain Activities:

- Primary Processing: Smelting and refining of zinc and copper.
- Knowledge Expansion: Manufacturing components for the renewable energy sector, such as solar and wind parts.
- Logistics: Integrating local manufacturing into international trade pipelines.

5. Namakwa Innovation Hub (including a network of living labs) & Digital Network

Strategic Rationale: Acts as the institutional "anchor" to coordinate innovation and technology support for over **300 district innovators**.

Geographic Focus: Springbok (Hub) with satellite nodes in Calvinia, Port Nolloth and Sutherland.

LED Pillar: Innovation, SMME Development.

Value Chain Activities:

- Knowledge Input: Research partnerships with Sol Plaatje University and the HSRC.
- Incubation: Prototyping support and mentorship for informal and formal innovators.
- Commercialisation: Intellectual Property (IP) registration workshops and annual Innovation Indaba networking.

6. Diamond Beneficiation & Jewellery Hub

Strategic Rationale: Transitions the economy from raw mineral export to local value addition.

Geographic Focus: Alexander Bay / Nama Khoi / Richtersveld.

LED Pillar: Mining, Manufacturing, SMMEs.

Value Chain Activities:

- Valuation: Local sorting and valuation of alluvial and marine diamonds.
- Value-Add: Establishing cutting and polishing centers in partnership with NCEDA and De Beers.
- Manufacturing: High-end jewellery design for the international tourism and export market.

7. Rooibos, Botanical & Agro-Processing Cluster

Strategic Rationale: Reduces "economic leakage" by processing niche products locally instead of exporting raw materials.

Geographic Focus: Hantam, Kamiesberg, Nama Khoi.

LED Pillar: Agriculture, Agro-processing.

Value Chain Activities:

- Cultivation: Cooperative farming of rooibos, botanical oils, and Karoo lamb.
- Specialized Extraction: Scaling snail mucin extraction for the high-end cosmetic industry.
- Branding: Securing Geographic Indication (GI) certification for Karoo Lamb to protect brand equity.

8. Astro-Tourism & Namakwa Tourism Corridor

Strategic Rationale: Integrates assets like SALT, MeerKAT, and wildflowers into a year-round tourism brand.

Geographic Focus: Sutherland, Calvinia, Springbok, Richtersveld.

LED Pillar: Tourism, Services Economy.

Value Chain Activities:

- Protection: Designating Dark-Sky Reserves to protect pristine astronomy assets.
- Product Development: STEM-based tourism packages and digital storytelling.
- Service Delivery: Training local STEM-certified tour guides and eco-lodge operators.

9. Fish Processing & Marine Economy Development

Strategic Rationale: Unlocks coastal economic opportunities including fisheries, mariculture, and cold storage.

Geographic Focus: Port Nolloth, Hondeklip Bay, Kleinsee.

LED Pillar: Blue Economy, Agro-processing.

Value Chain Activities:

- Production: Sustainable harvesting and mariculture, such as crayfish and oysters.
- Infrastructure: Establishing cold chain storage hubs.
- Value-Add: filleting and processing facilities to prepare products for export.

10. Green Energy SMME & Artisan Incubator

Strategic Rationale: Addresses technical skills shortages by linking local youth to renewable energy pipelines.

Geographic Focus: Springbok, Aggeneys, Calvinia.

LED Pillar: Skills Development, Green Economy.

Value Chain Activities:

- Assessment: Skills gap analysis linked to SEZ and IPP requirements.
- Certification: Accredited trade testing for electricians, fitters, and welders.
- Incubation: Pre-qualification training for CIDB grading and safety certifications.

11. District Land Audit & Agricultural Access Programme

Strategic Rationale: Programmatic enabler to resolve land tenure disputes and facilitate agricultural expansion.

Geographic Focus: District-wide.

LED Pillar: Agriculture, Rural Development.

Value Chain Activities:

- Mapping: Comprehensive district-wide land audit to identify available farming land.

- Resolution: Mediation of Communal Property Association (CPA) disputes to unlock land.
- Support: Providing boreholes, fencing, and market access for newly established cooperatives.

Level 3: Major Needs Projects (Community Projects)

Community-led initiatives that address pressing basic needs and social cohesion.

12. Community Solar Micro-Grid Programme

Strategic Rationale: Expands energy access in remote areas while supporting community ownership of energy resources.

Geographic Focus: Khai-Ma, Richtersveld, Kamiesberg.

LED Pillar: Green Economy, Community Development.

Value Chain Activities:

- Mobilisation: Organizing residents into energy cooperatives.
- Installation: Setting up off-grid solar micro-grids and battery storage.
- Maintenance: Local artisan upkeep of grids to ensure long-term reliability.

13. Innovation-Driven Library & Smart Learning Upgrade

Strategic Rationale: Converts under-resourced libraries into digital access centers to address educational inequality.

Geographic Focus: District-wide (targeting all 36 libraries).

LED Pillar: Education, Digital Economy.

Value Chain Activities:

- Hardware: Provision of high-speed internet and modern computer labs.
- Content: Integration of e-learning, coding modules, and robotics.
- Human Capital: Hosting private tutoring to increase university pass rates for local youth.

14. Community-Based Cultural & Eco-Tourism

Strategic Rationale: Supports rural livelihoods through the preservation and monetization of Nama heritage.

Geographic Focus: Kuboes, Lekkersing, Eksteenfontein, Sanddrift.

LED Pillar: Tourism, Cultural Economy.

Value Chain Activities:

- Preservation: Documenting indigenous knowledge and traditional rush-mat house construction.
- Design: Community-run eco-lodges and hiking trails.
- Retention: Using VR/AR displays to monetize cultural storytelling locally.

15. Local Procurement and Supplier Development Programme (Cross-Cutting)

Strategic Rationale: Reduces economic leakage by ensuring local SMMEs are positioned for procurement pipelines.

Geographic Focus: District-wide.

LED Pillar: Enterprise Development.

Value Chain Activities:

- Verification: Creating a verified database of local SMMEs from the innovator directory.
- Capacity: Pre-qualification training in financial management and safety.
- Enforcement: Implementing a Local Procurement Charter with 30% local sourcing targets.

6.3 Policy Implications for the Catalytic Projects

In Table 6.2, we present an alignment of the catalytic projects with the national, provincial and district policy framework to demonstrate how policy alignment could enable resource mobilisation and effective implementation.

Table 6.2: Alignment of Catalytic Projects to Policy Framework

Catalytic Project	Relevant Policy Frameworks	Key Policy Implications & Alignment
1. Boegoebaai Green Hydrogen & Port	NDP 2030; NC Green Hydrogen Strategy; TREDaR Policy	A Level 1 Game Changer; aligns with national industrialisation goals and mandates a 30% local sourcing target for all major procurement pipelines to ensure local economic retention.
2. District Broadband & Digital Connectivity	SA Connect: Broadband Policy; NC Digitalisation Strategy; TREDaR Policy	Positions digital infrastructure as a fundamental prerequisite for rural business efficiency and the adoption of new technologies for the 184 identified innovators.
3. District Water Security & Resilience	Water Services Development Plan (WSDP); NDM IDP/SDF; Climate Change White Paper	Positions water security as an economic survival imperative, acting as the foundational enabler for mining, energy, and agriculture in an arid environment.
4. Namakwa SEZ (NamSEZ) & Mineral Beneficiation Hubs	IPAP; NC Mineral Sector Development Strategy; DDM "One Plan"	Directs the transition from raw extraction to industrial localisation; must be integrated into the DDM "One Plan" for joint budgeting and execution across all three spheres of government.
5. Namakwa Innovation Hubs & Living Labs	NFLED; White Paper on STI; TREDaR Policy	Mandates the NDM to act as an "innovation broker", aligning local entrepreneurial efforts with 12 priority sectors and strengthening local innovation systems.
6. Vocational Training & Satellite Campuses	NC Enterprise Development Strategy; TREDaR (Skills priority); DHET mandates	Aligns education supply with economic demand; mandates that major investments be conditional on Enterprise and Supplier Development (ESD) and technical trade certifications.
7. Astro-Tourism Corridor	National Tourism Sector Strategy (NTSS); SALGA STR/RED Initiative	Mandates tourism-led diversification through a place-based regional brand, utilizing the nodal/corridor approach directed by SPLUMA.
8. Regional Sovereign Wealth Fund	TREDaR (Finance/ESD mandates); Municipal Systems Act	Supports local economic retention by monetizing a percentage of private sector revenue to finance SMME startups and community infrastructure.

9. Agro-Processing & Indigenous Knowledge (IKS)	NC Agriculture Strategy; TREDaR Policy; IKS Act	Directs value chain upgrading for niche crops (rooibos, hemp) and identifies rural areas as critical frontiers for economic restoration through natural resource beneficiation.
10. Fish Processing & Marine Economy	Oceans Economy Master Plan; NDM SDF; TREDaR Policy	Implies unlocking coastal resources (aquaculture, fisheries) by aligning bulk infrastructure with small-scale fishery support to restore local livelihoods.
11. Green Energy SMME & Artisan Incubator	NC Enterprise Development Strategy; TREDaR (ESD Mandates)	Addresses structural skills gaps to ensure local youth participate in the Renewable Energy (RE) and SEZ job markets.
12. District Land Audit & Agricultural Access	Communal Property Associations (CPA) Act; SPLUMA; NDM Human Settlements Plan	Requires spatial mapping and tenure resolution to ensure land-based development (agriculture, renewables) is inclusive and participatory.
13. Community Solar Micro-Grid Programme	Climate Change Response White Paper; TREDaR (Green Economy Priority)	Aligns with mandates for a lower-carbon transition and promotes community ownership and participation in the green energy transition.
14. Innovation-Driven Library & Smart Learning	SA Connect: Broadband Policy; NFLED; NC Digitalisation Strategy	Addresses the policy goal of building learning and skilful economies by converting under-resourced hubs into digital access points.
15. Community-Based Cultural & Eco-Tourism	NTSS; UNESCO Framework; TREDaR Policy	Mandates inclusive growth by converting unique Nama heritage and biodiversity assets into marketable, innovation-led tourism products.
16. Circular Economy & Recycling Hubs	IPAP; NEMA; TREDaR Policy	Focuses on localisation and value addition by recycling waste (glass, plastic, granite) into alternative building materials to create immediate local jobs.
17. Food Security & Small-Scale Farming	NC Agriculture and Agro-processing strategy; TREDaR Policy	Addresses hunger and unemployment via backyard gardens and local market creation, aligning with rural development and food security mandates.
18. Local Procurement & Supplier Development	TREDaR Policy; NFLED; Municipal Systems Act	Compels the NDM to enforce a 30% local sourcing target to systematically stop the economic leakage historically draining value from the district

CHAPTER 7

7. IMPLEMENTATION GUIDELINE

This Chapter presents guidelines for the implementation of the LED strategy including roles and responsibilities of stakeholder organisations. The commitment of these stakeholders would contribute to the realisation of the aspirations of the strategy. Table 7.1 displays the stakeholders and a summary of their responsibilities. A detailed implementation plan would be developed at a later stage to guide effective implementation of the strategy once adopted.

Table 7.1: Roles and Responsibilities

Institution	Roles and Responsibilities
National Government (DSTI, DMRE, DAFF, DEDAT, DTIC, COGTA)	Sets and regulates national LED policy; provides innovation support funding (TIA, IDC, SEDA); deploys LIAT framework for biennial innovation landscape updates
Northern Cape Provincial Government (DEDAT, NCEDA, Dept Agriculture)	Sets provincial LED policy; provides support to Namakwa DM and LMs; links projects to provincial incentive programmes
Namakwa District Municipality	Develops and champions this strategy; coordinates LED across six LMs; establishes the Innovation Hub and SMME Support Programme; convenes the District LED Forum and annual Innovation Indaba; maintains the Namakwa Innovator Directory
Local Municipalities (all six LMs)	Develop LM LED strategies aligned with this district strategy; champion project implementation locally; convene local LED forums; incorporate LED priorities into annual IDP and budget
Private Sector (Mines, Agribusiness, Tourism operators, IPPs)	Champion and co-invest in projects aligned with their operations; fulfil Social and Labour Plan commitments through district LED projects; participate in the District LED Forum and annual Mining Exposition
Civil Society and NGOs	Support community engagement; advocate for inclusive access to LED opportunities; facilitate social innovation documentation and support
Innovative Enterprises (LIAT-identified)	Participate in the Namakwa Innovator Directory and Innovation Indaba; engage with SMME support, funding access and mentorship programmes; share innovations through diffusion networks
Research Institutions (SPU, HSRC, CSIR, SARAO)	Conduct biennial LIAT innovation landscape update; provide technical support to LED project design; develop science-to-innovation pathways through MeerKAT/SALT partnerships

8. MONITORING AND EVALUATION FRAMEWORK

8.1 Purpose and Rationale

The implementation of this LED Strategy must be monitored on an ongoing basis. The LIAT framework provides a unique evidence-based M&E foundation — using the biennial innovation survey to track change in the district’s innovation ecosystem over time, not just project completion rates. Progress on investment, employment creation and innovation activity must be continuously assessed and fed back into the strategy.

The rationale for a robust M&E system is to:

- Inform national and provincial departments of Namakwa’s development needs and achievements;
- Ensure all role players are aware of projects planned and their progress;
- Track improvement in Namakwa’s innovation orientation level from Level 1 toward Level 3;
- Pinpoint areas requiring corrective intervention through quarterly progress reporting;
- Compare Namakwa’s LED performance year-on-year and against comparable rural districts.

8.2 M&E Mechanisms

Monitoring and Evaluation Mechanisms

To ensure the catalytic projects remain on track and adapt to economic shifts, three primary mechanisms are utilized:

- **The District LED Forum (Primary Oversight):** This body convenes **quarterly** to serve as the main accountability structure. It receives progress reports from all six local municipalities, private sector champions (mines, IPPs), and support agencies like SEDA and TIA regarding the status of catalytic projects.
- **Biennial LIAT Innovation Survey:** Conducted every two years by the HSRC, this survey provides **longitudinal evidence** of progress. Unlike standard reports, it tracks changes in the number of innovative enterprises and identifies specific barriers (regulatory or digital) that may be stalling catalytic projects.
- **Annual IDP Strategic Review:** Catalytic projects are reviewed annually during the IDP consultation process. This includes re-evaluating the **SWOT analysis** to ensure the projects remain relevant and restructuring any that are underperforming based on the latest innovator directory data

The following framework aligns the catalytic projects with specific monitoring targets and expected impacts:

Table 8.1 M&E Framework for Catalytic Projects

Level 1: Game Changers	Boegoebaai Port, District Broadband, Water Security	Infrastructure Milestones: Completion of rail/port phases, broadband coverage maps, and bulk water delivery.	Regional Enablement: Number of secondary projects unlocked by these "backbone" utilities.
Project Level	Catalytic Projects	Primary Monitoring Target	Expected Impact Metric
Level 2: Major Enablers	NamSEZ, Innovation Hub, Astro-Tourism, Agro- Processing, Green Energy Incubator	Value Chain Integration: Number of local SMMEs successfully entering mining and energy procurement pipelines.	Economic Retention: Reduction in "economic leakage" and increase in local mineral/crop beneficiation.
Level 3: Major Needs	Community Solar, Smart Libraries, Cultural/Eco- Tourism	Community Inclusion: Number of households connected, youth enrolled in smart learning, and community-led tourism revenue.	Social Resilience: Improvements in local Human Development Index (HDI) and youth employment

CHAPTER 9

9. CONCLUSION

The successful transformation of the Namakwa economy depends on the collective ownership and mutual accountability of all stakeholders—municipalities, private enterprises, research institutions, and civil society. No single actor can achieve this vision; it requires a unified commitment to shifting from a resource-based to a knowledge-driven economy.

The Namakwa LED Strategy 2027–2031 is structured around the six core pillars of the National Framework for LED 2018–2028, adopting them as the primary strategic objectives for the district. Table 9.1 below demonstrates how the strategy aligns with these objectives through specific interventions and catalytic projects.

Table 9.1: Alignment with the National Framework for LED 2018-2028

Strategic Objective	Alignment in Namakwa LED Strategy	Key Projects & Evidence
Building diverse and innovation-driven local economies	Focuses on transitioning from a resource-based to a knowledge-based economy by exploiting technology in local production value chains.	Namakwa Special Economic Zone (NamSEZ) and Boegoebaai Green Hydrogen SEZ to move from raw extraction to industrial beneficiation.
Developing inclusive local economies	Places the poor and disadvantaged specifically women, youth, and remote communities at the centre of development.	Community-Based Cultural & Eco-Tourism and Community Solar Micro-Grids designed for rural livelihoods.
Enterprise development and support	Creates an enabling environment for SMME and cooperative development, including the mapping of 184 documented innovative enterprises.	Local Procurement and Supplier Development Programme with a target of 30% local sourcing.
Developing learning and skilful economies	Addresses structural skills gaps by aligning education supply with the demands of the green energy and mining sectors.	Green Energy SMME & Artisan Incubator and Innovation-Driven Library & Smart Learning Upgrades.
Economic governance and infrastructure	Treats infrastructure (water, energy, roads, digital) as a pre-competitive enabler and economic survival imperative.	District Broadband & Digital Connectivity and District Water Security & Climate Resilience Programme.
Strengthening local innovation systems	Aims to move the municipality from Innovation Awareness (Level 1) to Innovation Entrenchment (Level 3) by 2030.	Namakwa Innovation Hub, the IC4LED Innovation Champions project, and the biennial LIAT Innovation Survey.

9.1 Strategic Recommendations for Success

Based on the evidence-led findings of the LIAT survey and stakeholder workshops, the following actions are critical for immediate implementation:

- **Prioritize Innovation Nodes:** Focus immediate resources on sectors with the highest existing development potential and documented innovative activity, specifically botanical agro-processing, snail farming, and astro-tourism.
- **Reposition the Municipality:** The Namakwa District Municipality must transition from a traditional service provider to an active innovation broker and investment facilitator.
- **Formalize Private Partnerships:** Actively engage mines and Independent Power Producers (IPPs) as genuine co-investment partners, ensuring their Social and Labour Plan (SLP) obligations are aligned with the catalytic projects identified in this strategy.
- **Strengthen Innovation Networks:** Foster "networked innovation" by utilizing the Innovation Indaba, the Innovator Directory, and the District LED Forum to connect dispersed enterprises to resources and markets.

9.2 The Strategic Imperative

The district's most vital economic asset is the adaptive ingenuity of its documented innovators and rural communities who thrive in the face of geographic and climatic adversity. This strategy provides the necessary roadmap to bridge the gap between their latent capacity and the capital and technology required for scale. Consequently, the Namakwa District Municipality formally commits to reaching Level 3 Innovation Entrenchment by 2030.

10.3 Final Call to Action

Inclusive local economic development will be realized when every role-player works in a spirit of shared purpose. By executing the 15 catalytic projects outlined in this roadmap, Namakwa will secure its future as a sustainable, integrated, and resilient green economy for generations to come.

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