

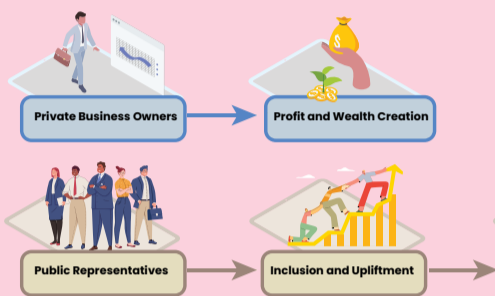


# Vuthela SPARK

## IGNITING INCLUSIVE ECONOMIC DEVELOPMENT IN ILEMBE

### Growing from within

Creating an inclusive economy involves a new way of tackling the local challenge of including the marginalised in the property development and construction sector.



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### Interview: Sibusiso Mahlangu

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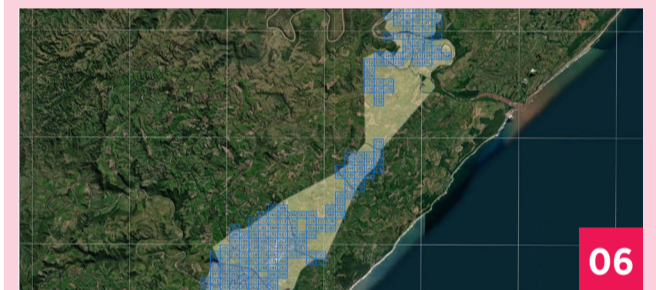
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## Editorial:

## Role of infrastructure to create an enabling environment for LED

This issue of *Vuthela Spark* has a strong focus on municipal infrastructure and the crucial role that efficient functioning infrastructure plays in creating an enabling environment for local economic development.

Well planned and functioning infrastructure that provides essential services, such as electricity, water supply, sanitation, roads, and stormwater management is necessary for the safety, wellbeing and quality of life of residents and the development and sustainability of businesses. Access to reliable and affordable utility services is vital for attracting investments and supporting business expansion. Conversely, such investments are necessary to enable municipalities to operate and maintain such infrastructure and services.

Infrastructure contributes to creating a favourable business environment by reducing transaction costs (time, effort, money) and improving the ease of doing business. Efficient transportation networks, reliable energy supply, and safe and efficient water and sewer systems enable businesses to operate smoothly and cost-effectively.

The *Spark* newsletter also reports on the progress in installing and operating the R24 million Supervisory Control and Data Acquisition (SCADA) system and Control Room in the KwaDukuza Local Municipality. The SCADA is being implemented to monitor the energy supply in real time for outages and load conditions and to transmit such information, providing greater predictability about

the network's performance for better management of the electricity network and components. The new system will help residents and businesses to cope with planned, but also often unpredictable disruptions to their electricity supplies due to loadshedding. It will also improve the response times by the municipality as information is immediately available on the potential causes of outages and as appropriate, remote-controlled commands can be executed instead of first sourcing human and transport resources to go and investigate a site.

The design and implementation of the SCADA system and Control Room were conceived already before the energy issue was overtaken by the broader concern of energy security.

Recently the Vuthela iLembe LED Support Programme held a participatory dialogue seminar with KwaDukuza and Mandeni local municipalities, the private sector, consultants, and other role players to look at the energy issues in the coastal iLembe district, dealing with both energy network reliability and security, including energy alternatives in the district. A Vuthela case study will be produced on the discussions at the seminar and circulated to *Vuthela Spark* readers.

We also update *Spark* readers on the Review of the Siza Water Concession contract, its monitoring and the strengths and weaknesses arising that municipal decision makers will need to consider when looking at the various options beyond 2029, when the current concession contract will end.

**Infrastructure contributes to creating a favourable business environment by reducing transaction costs ...**

The Municipal Infrastructure component of the Vuthela programme has undertaken five projects dealing with asset management of water infrastructure at iLembe District Municipality. This issue focuses on a recently completed project to strengthen the attributing, location and mapping of components of the water and sanitation infrastructure onto the iLembe District Municipality's corporate Geographic Information System (GIS) database and Fixed Asset Register (FAR). This will assist to reduce turnaround times for maintenance and enhance the levels

of water and sanitation services in the district and identify areas of improvement when it comes to data accuracy and completeness. It will furthermore improve reporting on the extent of infrastructure coverage to the political leadership and electorate.

Sibusiso Mahlangu, the Manager for Planning and Integrated Development Planning at iLembe District Municipality and a core member of the Vuthela Programme's Project Management Team (PMT) shares his insights on working with the Vuthela programme over several years, and the strengths and weaknesses of the programme from his perspective.

Finally, we look at lessons coming from Africa to promote inclusive business growth, and the approach that business and local government could take in partnership to blend economic and social aspirations to resolve the elusive challenge of social-economic inclusion and growth.



# Growing from within

A study into creating an inclusive economy in Africa suggests a new way of tackling the local challenge of including the marginalised in the property development and construction sector writes **Richard Clacey**, Programme Manager for the Vuthela iLembe LED Support Programme.



Richard Clacey,  
Vuthela Programme Manager

**T**he commitment to creating an inclusive economy is strong in the private and public sector in the iLembe District Municipality, with both conducting several enterprise development programmes and support initiatives aimed at transforming the local economy.

But many previously marginalised business owners are still finding themselves on the sidelines of the mainstream economy.

Like many other districts in South Africa, municipal structures and business organisations within the iLembe District Municipality have been grappling with the challenge of creating an enabling environment for inclusive business development.

Private business owners and operators are driven by the necessary market imperative to make profit and create wealth if they are to be commercially sustainable. Public representatives are driven by a social policy mandate to include and uplift those who have been kept out of the economy in the past, which will lead to transformation and greater equity.

South Africa's national challenges in forging inclusive business growth are part of broader issues facing the entire continent. Solutions to the South African problem can be found by considering the experience of inclusive business interventions in Africa.

## Shared point of departure

A recent study among 100 companies and organisations in Africa offers potential to resolve this persistent challenge by blending social and economic aspirations to create a shared point of departure for inclusionary strategies that could satisfy South Africa's urgent need for growth.

In their post on "The 10 key drivers for inclusive business in Africa", Rob van Tulder and Siri Lijfering argue that "we need to fundamentally reshape the way we think about growth: from a focus on GDP as the single (and misleading) metric for development to inclusive societies as the basis for sustainable development and growth".

Their research was published in a book titled *Inclusive Business Strategies in Africa. A Business Model Perspective*<sup>1</sup>, which details the 10 driving factors that turn societal challenges into opportunities and create shared value through inclusive business practices. More on these factors will be expanded on later in this article.

This will enable the continent to tackle some of the greatest challenges that Africa is facing such as extreme inequality, poverty, food insecurity, access to health and education, and climate change.

## Private sector role

"The private sector plays a vital role in facilitating this transition," they concluded, after conducting research into 100 companies and organisations in Africa at The Partnerships Resource Centre of the Erasmus University in Rotterdam.

The research has reference to South Africa's current unsustainable economic trajectory: growth has stagnated, unemployment is rising, inequality remains high and the poverty that prevails in many communities is yet to be eliminated.

Economic conditions in the iLembe district reflect national circumstances, and the construction and property sectors appear to be particularly hard hit.

The Business Confidence index published by the iLembe Chamber of Commerce, Industry and Tourism states:

"Business sentiment in the construction, property development, property sales sector continues to slump, with this key sector in the iLembe District's economy becoming the 5th least confident business sector."

Reasons for the decline in confidence in the construction and property sector included delays in planning approvals, unwieldy building control processes, inadequate development of infrastructure, and high developers' contributions for infrastructure development.

A recent survey conducted by the Chamber found that the main constraints to conducting business in the iLembe district were the market size amidst the prevailing economic decline, the district's competitiveness and its adaptability, service delivery and infrastructure provision, regulations and compliance, and property rates and taxes.

Other factors that constrained business activity and

**Private business owners and operators are driven by the necessary market imperative to make profit and create wealth... Public representatives are driven by a social policy mandate to include and uplift those who have been kept out of the economy in the past...**

growth included skill shortages and labour-related issues, crime, and access to finance and liquidity.

Interventions underway in the iLembe district to address inclusive business growth include various municipal Enterprise Development programmes to upskill entrepreneurs and SMME operators in the region.

The electricity supply network is being upgraded to meet development demands and the impact of loadshedding is being addressed with the implementation of a SCADA (Supervisory Control and Data Acquisition) system that will allow the KwaDukuza Local Municipality to predict and manage outages better. The KwaDukuza Local Municipality is also examining the potential of an Independent Power Producer programme to alleviate disruptions due to loadshedding.

## Business accelerator

The iLembe Chamber's programmes to address the challenges facing small local business operators include a business accelerator for small business owners with an annual turnover of less than R6 million, and an Emerging Contractors programme supported by the Master Builders' Association (MBA), which includes a one-year free membership to the MBA.

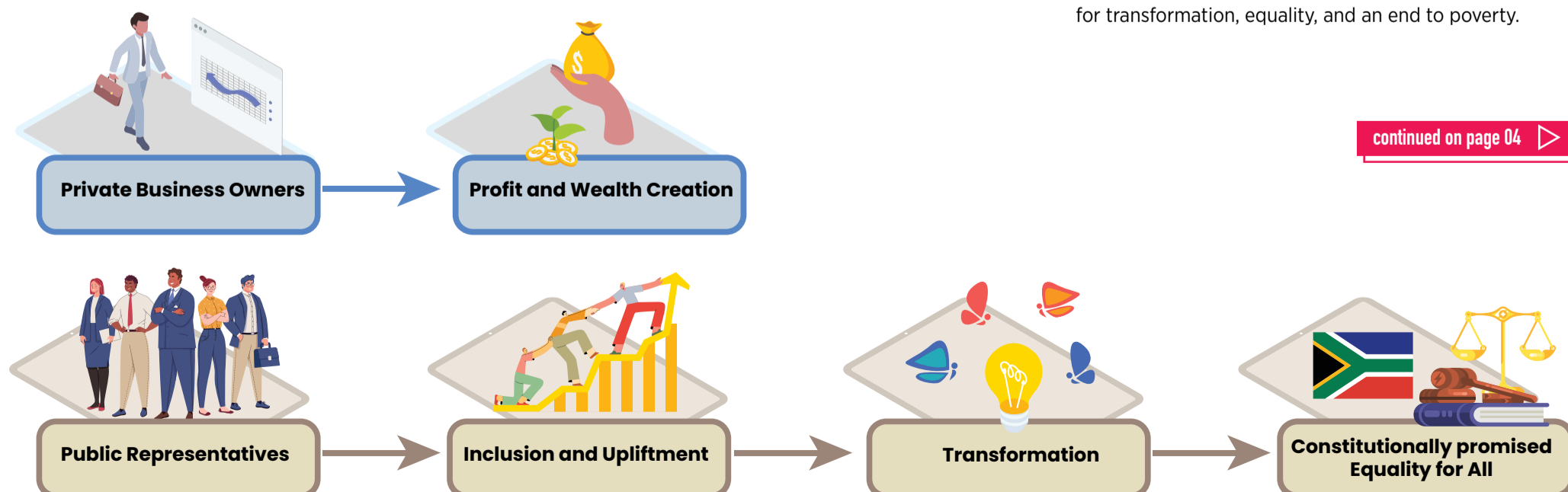
Many private property developers conduct Enterprise Development programmes aimed at bringing small emerging local businesses into the property sector and some have a local economic development policy which sets aside a percentage of total spend for small and medium businesses.

Private companies also subscribe to the national YES Programme to enhance employment opportunities for youth and programmes are in place to promote the participation of women in the sector.

Despite these efforts, significant inclusive participation of youth, women and small black-owned businesses in the construction and property sector remains elusive for many in the district.

The challenge of growing the local economy can be addressed by including previously marginalised small businesses in a manner that expands operations, opens up new markets and supports long-term market expansion in the property and construction sector.

This requires combining the business-minded imperative for profitability with socially minded aspirations for transformation, equality, and an end to poverty.



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# Helping service delivery through Public-Private Partnership

The Vuthela iLembe LED Support Programme has played an extensive role in assessing the performance of South Africa's first Public-Private Partnership (PPP), highlighting successes of the concession, and identifying challenges to be addressed to deliver efficient water and sewer services in the iLembe district in the future.



**A** comprehensive formal review of the Siza Water PPP, coupled with informal interactions between parties to the concession, has revealed how the PPP has succeeded in fulfilling many operational obligations in a business-like fashion - but has fallen short on some social mandates advanced by municipalities.

Under the PPP signed 25 years ago, private company Siza Water was contracted to provide water and sewer services to the then Dolphin Coast Municipality. The contract is now managed by the iLembe District Municipality and will expire in 2029. The concession area includes Ballito, Chaka's Rock, Umhlali, Shakaskraal, Etete, Nkobongo, Shakashead, Tinley Manor and Sheffield Beach.

The review was conducted by the Vuthela iLembe LED Support Programme. Late last year Vuthela also hosted a seminar for stakeholders to share their perspectives on the ground-breaking partnership.

The review and case study which emerged from the seminar has contributed towards a thorough understanding of the PPP's benefits and challenges, enabling stakeholders to make sustainable decisions around the delivery of essential water and sewer services in the district. The information and insights will also be useful to other municipalities in South Africa who face similar service delivery challenges.

The Vuthela assessment included a comprehensive legal review of the contract and supplementary agreements.

"Most aspects of the contract are not in line with the regulations which have been issued under the Water Services Act, specifically as they related to basic minimum standards and as they relate to certain operational aspects," according to a report on the review.

There was no reference to the incident management mechanisms set up in the National Environmental Act and the National Water Act.

## Exit management strategy

No provision had been made for an exit management strategy in the initial agreement, but a Supplementary Agreement in 2022 introduced a formal undertaking to cater for an exit management strategy.

The financial review included a comprehensive review of the Annual Financial Statement for the last five years, quarterly reports and income reports. The financial model was also assessed to determine when the profit-sharing target will be achieved.

The review found that the financial model was "fairly static", with no provision for scenarios or sensitivities to be run. Further information has been requested before proceeding with this aspect of the analysis.

The Vuthela Programme assisted the iLembe District Municipality's technical department to develop an enhanced understanding of the infrastructure asset base within the concession area. The review assessed the condition of pipelines, treatment works, pump stations, reservoirs, and other assets. It also analysed the quality management systems and quality control standards.

The review did not find much evidence of basic sanitation servicing or the desludging of septic tanks and VIP latrines once they reach full capacity. This obligation is stipulated in the concession agreement.

It was found that the current five-year plan (2019-2023) had not been approved during the assessment period, which does not comply with the concession agreement, which requires that the five-year plan be developed and approved at least four months before expiry of the current five-year plan.

An assessment of the demographics within the concession area with regards to socio-economic environment, income and affordability, and the extent of expected growth was conducted.

It was found that the number of households collecting water from standpipes more than 200m from their homes was below the required level of service.

The growth in informal housing had increased the demand at standpipes and on the water infrastructure.

## Stakeholder positions

In addition to the formal review of the concession, the Vuthela seminar facilitated a thorough consideration of stakeholder positions and the key issues which required attention.

The PPP's strengths included its operational capacity and technical expertise to deliver water services to communities in a significant and highly populated portion of the iLembe district.

Water losses were cut from 50% at inception to 8% and the collection rate for water services was raised to 97% for water services provided. Sewer overflows have been minimised.

Siza Water had achieved Blue Drop and Green Drop certification for the water services delivered under the concession and its water reuse plant brought environmental and economic benefits.

Concerns of municipal officials and community representatives included issues around the profit-sharing component - this was taking too long to materialise and the iLembe District Municipality has not yet received any share of profit.

The concession area included low-income and indigent consumers who have a right to free basic services they cannot afford, but Siza Water did not provide free water services to indigent consumers, or the same level of services in affluent and low-income areas of the concession. Siza Water officials said the company had provided water services in both areas according to the terms and standards specified in the contract.

Low-income consumers found the connection fee was too high and developers complained that the charges imposed by Siza Water for installing new services were also steep.

The seminar identified several opportunities arising from the stakeholder perspectives.

It was widely acknowledged that private sector technical expertise, financial funding and operational models could achieve better service delivery than many municipalities.

However, a cross-subsidisation model in which affluent consumers support services to low-income and indigent users of water may have to be considered.



## Shared understanding

Vuthela Programme Manager Richard Clacey said the formal review and informal discussions had contributed towards forging a better shared understanding among private and public sector stakeholders.

"The decision on how to proceed after the contract ends will be made at the appropriate local government forum," said Clacey.

All the elements were in place for a comprehensive handover plan to be developed, and this will ensure a smooth transition to the next phase of operations once the concession ends.

Clacey indicated that recent shifts in national government policy towards greater participation of PPPs in service delivery, and the Department of Water and Sanitation's Water Services Improvement Plan, had widened the range of options available for municipalities to improve the delivery of water services.

"Several options for other municipalities who share similar challenges in providing water and sewer services are now emerging, and we hope that the information, perspectives and insights which have come out of the Vuthela Programme will help all municipalities to deliver efficient services to their communities," said Clacey.

# Interview: Sibusiso Mahlangu

Sibusiso Mahlangu, Manager: Planning and Integrated Development Planning at iLembe District Municipality, one of three municipal partners of the programme, shares his insights on working with Vuthela.

**You have a very long association with the Vuthela Programme since its early planning and initiation in 2015. What would you say have been the main benefits of the programme for the iLembe District Municipality that have or will contribute towards an improved business enabling environment?**

I've been closely associated with the Vuthela Programme since its inception. I was co-opted in 2018 for three months and since October 2021, I have been part of the Project Management Team (PMT) along with representatives from the local municipalities of KwaDukuza and Mandeni.

I see the main benefits as the following:

✓ **Reducing Non-Revenue Water (NRW):** Efforts towards decreasing NRW have resulted in a grant allocation that will be transferred to the iLembe District Municipality to undertake the procurement and implementation of the project internally. Ultimately, we intend to maximise revenue through practical solutions, and infrastructure investment can be streamlined for greater economic diversification necessary to sustain the region's current growth.

✓ The **Development Charges Policy** was prepared and finalised through the Vuthela Programme. The policy's premise is based on an equitable and sustainable model for providing infrastructure to promote economic growth.

✓ The iLembe District Municipality has benefitted from the development of a **single indigent register** for the family of municipalities to consider the socio-economic and other conditions, such as unemployment and poverty. Municipalities must keep a register of people in need who require free water and other basic services. Without a credible register of indigent people, municipalities will be spending on free basic services that they cannot account for or producing bills for accounts that will never be paid.

✓ **Asset management**, in general, has received particular attention regarding establishing standardised policies and processes. However, introducing

the integrated asset infrastructure management information systems (EDAMS) will be a "game changer" for iLembe District Municipality, particularly to support activities to reduce infrastructure constraints and complement infrastructure planning.

✓ The substantial focus on **skills development** was instrumental in changing the mindset of officials and political office bearers. In addition, several of the training offerings are accredited, which significantly impacts the team's overall morale by empowering their personal goals while equipping them with the tools to perform the task at hand.

**What have been the key strengths of the programme?**

The Vuthela offices were located within the iLembe District Municipality, specifically in the CBD of KwaDukuza, which proved valuable for the overall interaction, ownership and access of the component experts.

The inception phase was fundamental in adapting and ensuring the programme was tailored to the participating municipalities and influenced by the 43 projects that were identified.

Good institutional arrangements and policy framework for managing the programme contributed to its success. The involvement, particularly of the accounting officers and mayors, with assigned roles and responsibilities of the relevant institutional structures and signatory authority guided by the policies put in place, also resulted in positive outcomes for the Vuthela Programme.

Project document management, together with the programme, organisation and administration, at times possibly overlooked in other programmes, was exceptional, transparent, and proved helpful.

**What have been the weaknesses of the programme and how do you think this has been addressed?**

Social media presence was relatively slow in the programme's initial phases but has since gained momentum, especially with the *Vuthela Spark* newsletter



introduction and updating of the website, which aided in reaching a broader spectrum of readers.

**Were the programme to be replicated in some form elsewhere, what changes would you make to the programme? What have been the key learnings from the programme experience?**

There is no one-size-fits-all solution. Before implementing a similar programme in another municipal district, the dynamics of the region must be considered. The local context must be considered when coming up with interventions to achieve the desired outcomes.

The Vuthela Programme has been hosting thematic seminars which proved extremely useful in getting insight from external stakeholders and providing a neutral setting for matters to be deliberated on. I would recommend that in implementing a similar programme that these seminars be included in the inception phase.



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## Growing from within

Solutions to the South African challenge can be found by considering the experience of inclusive business interventions in Africa.

### Driving factors

The research-based book *Inclusive Business Strategies in Africa. A Business Model Perspective* details the driving factors that can turn societal challenges into opportunities and create shared value through inclusive business practices.

The driving factors that emerged from the African study bear close resemblance to the challenges and the opportunities to create solutions that are prevalent within the iLembe district.

The first step involves formulating an inclusive value proposition that strives towards a triple bottom line - a positive social and environmental impact in addition to a financial return on investment.

This allows a process of co-creation to cater for the needs of low-income and marginalised groups, working with partners that can complement resources.

"Contributing to inclusive development requires moving from stand-alone initiatives to innovation

ecosystems in which a variety of partners work together to reach greater societal impact," say the authors.

"Engaging in cross-sector partnerships can provide businesses with complementary resources and capabilities needed to create and deliver value in novel ways while minimising costs and risks.

"The notion of inclusive business calls for additional focus and innovation in the way companies do business. It involves creating new forms of employment, new markets, and affordable products and services. This spurs economic growth and encourages entrepreneurship."

These insights offer many potential solutions for municipalities throughout South Africa.

### Combined business-social mandate

Apparent gaps in the current public and private strategies appear to be the acknowledgment that the social mandate for sustainable transformation through inclusion is an essential part of business operations and process, and the depth of partnerships and collaboration needed to execute inclusive growth strategies is yet to be attained.

Combining the business and social mandates offers

potential to develop a unique exercise for inclusive economic development in the iLembe district. It also has the potential to turn the challenge of social transformation into a solution for economic growth by bringing in innovative entrants, expanding markets for goods and services and serving local needs with non-traditional products.

An intensive level of collaboration and coordination between the private sector, the public sector and communities within the iLembe district will be required to implement such an over-arching enabling intervention and to create additional ones that will support future economic reforms in the district.

This suggests the need for a fresh look at creating a growth coalition that will include municipal officials, private property developers, Enterprise iLembe, public regulators, business and community representatives with a shared mandate to formalise, lead and coordinate projects and systems interventions for inclusive, transformational growth in the district.

By crafting a combined social and business mandate as their point of departure, such a coalition could set off on the right footing on the long haul towards inclusiveness and the final destination of greater equity.

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# Taking control of power

While it is not possible to avoid the national schedule of loadshedding completely, the KwaDukuza Local Municipality is showing how technology can minimise the impact.

The KwaDukuza Local Municipality is about to turn the key on a new system that will help residents and businesses to cope with planned, but also often unpredictable disruptions to their electricity supplies due to loadshedding.

The KwaDukuza Local Municipality is in the process of installing a Supervisory Control and Data Acquisition (SCADA) system to monitor the energy supply in real time for outages and load conditions, and transmit the information to a central point. From this Control Room, the main sub-stations can be remotely controlled to better manage the electricity network and components.

This enables the entire electricity supply network to be remotely monitored and controlled from a central Control Room, providing greater predictability about the network's performance, and allowing the municipality and consumers to manage the disruption to their schedules due to loadshedding. It will also allow an improved, rapid response to electricity outages, with the likely cause of outages immediately visible on the SCADA system.

The KwaDukuza Local Municipality and its contractor are installing equipment and developing the functionality of the SCADA software, suited to the municipality's operations and needs. The full SCADA system and Control Room are expected to go live in August this year. It can only become fully operational once the KwaDukuza Local Municipality and contractor have performed the necessary factory, software, and site acceptance tests to ensure safe and functional communications and operations.

The initial functional design specifications for the R24-million SCADA system were developed under the Vuthela iLembe LED Support Programme. This assisted the KwaDukuza Local Municipality to successfully apply for funding, with the technical support of the Vuthela Programme, from the European Union's General Budget Support Programme's (GBS) 5th Call for Proposals, facilitated through National Treasury.

Municipalities in South Africa cannot avoid the impact of loadshedding completely at present, but the SCADA system will allow the municipality to better manage the network and benefit from live communications on the electricity network and components operated and managed by the KwaDukuza Local Municipality.



*Elements of the neatly-designed and manufactured panel components to record and communicate real-time information on the substation's operations at and between the local SCADA and master SCADA at the Control Room.*

## Communicating with clients

It will allow the municipality to communicate with clients with certainty, informing them accurately about outages or the potential causes thereof and in turn, the turn-around time to restore power.

The SCADA system will not stop loadshedding, but it will help people to manage the impact better.

This project is a legacy of the Vuthela Programme. It demonstrates how

innovation and technology can be applied in a developmental manner to improve the delivery of essential services and thereby contribute to economic growth.

The Vuthela Programme began planning this project in 2019. The support of many people in the municipality, the Swiss State Secretariat for Economic Affairs (SECO), technical partners and service providers were required throughout the project.

## World Bank support

The World Bank provided technical and advisory support from inception through to implementation and it is hoped it will be able to continue to play an advisory and training role to ensure the successful operation of the SCADA system. This includes advising on the operational procedures suited to the KwaDukuza Local Municipality's business and infrastructure environment, continuation of training and capacity building, establishing Standard Operating Procedures and ensuring SCADA communication protocols are optimal for the municipal system.

The system uses digital signals to relay critical information about the status and performance of the electrical system to the Control Room in real time, providing an accurate measure of the maximum demand and the load profile on the network. It is envisaged that the communication platform will make use of the GSM network.

Contractors are now completing the installation and commissioning of the Human Machine Interface (HMI) panels at main sub-stations on the network and testing software configurations to make sure they were compatible with the municipality's systems and according to the specifications of the SCADA and Control Room functionality requirements.

Technicians have received initial training to operate the system and additional operators will be appointed and trained in the new municipal financial year (2023/2024).

Once it is operational, the SCADA system and Control Room will significantly enhance the capacity of the KwaDukuza Local Municipality to provide efficient electrical services to its residential and business consumers.

It will provide real-time monitoring and control of the electrical network, enabling operators to optimise the power available through measuring the demand and improving efficiency.



*Factory Acceptance Testing of Human Machine Interface panels, March 2023. In the centre, Mr Duma Mhaule Director: Electrical Engineering Services, and the KDM Project Manager Mr Brendan Pillay on left, with staff from Control SI, illustrating the built components and their operations.*

## Reduced response times

The SCADA system will also reduce response times to customer queries and technical faults through quicker fault finding, power restoration and preventative maintenance.

The system will improve metering and revenue collection and enable constant trend analysis of the network's performance. The implementation of the project faced many challenges, including the lack of technicians who have had experience or expertise in designing, building, installing or operating SCADA systems.

Municipalities who are considering the installation of similar systems should appoint skilled and experienced technical project managers to interface with project contractors, as the project requires specialised technical expertise.

The KwaDukuza Local Municipality project needed to provide for delays in obtaining essential equipment, and coordination with the timing of other municipal projects proved to be critical. The timing of activities for the installation of the Control Room had to be coordinated with the municipal communications network to avoid disruptions.

Another valuable learning was that good functional design, with all the correct technical specifications and accurate cost estimates, assists hugely with applications for funding.

The Vuthela Programme with support from the World Bank, assisted the municipality to develop its successful application for funding from the European Union.

Vuthela is facilitating further engagement with the World Bank for the continuation of capacity building and support to the KwaDukuza Local Municipality.

The completion of Phase 1 of the project means that monitoring and communication equipment has now been installed at all major distribution sub-stations in the supply network and is in the process of being connected to the planned central Control Room in KwaDukuza.

Phase 2 will include installing equipment at the 36 key switching sub-stations.

Phase 3 will include a smart metering system that will measure the power flowing through all the feeder lines and the 1 405 reticulation transformers in the network.

Once the entire system is complete, the SCADA system will be a model for other municipalities to consider. The enormous benefits of bringing predictability to a situation which has become increasingly uncertain and disruptive recently will help communities, businesses, and the municipality cope better as loadshedding continues.

# New system pinpoints public assets

A recently completed Vuthela project shows how municipalities can use readily available technology to improve service delivery.

An improvement of the digital data and processes that use geographic information systems (GIS) technology to spatially represent every component of the water and sewer infrastructure in parts of the iLembe District Municipality is set to improve the delivery of essential services to residents.

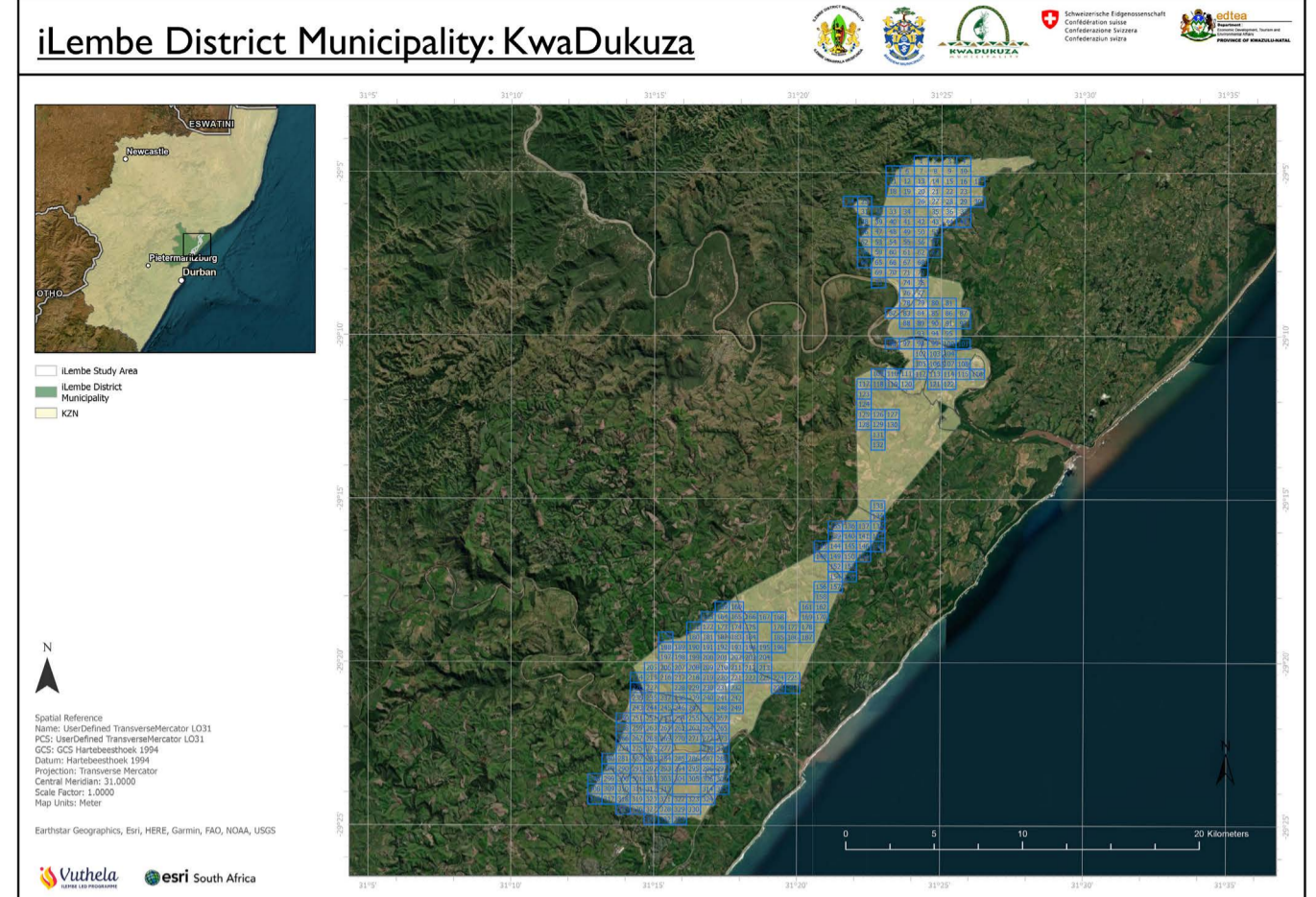
Previously, the iLembe District Municipality's information about the location of its water pipelines, pumpstations, reservoirs and sanitation infrastructure was recorded in several data formats. Some details could only be found in print documents, which restricted access as municipal officials would have to inspect the documents physically to locate infrastructure that required maintenance.

This made the process of reporting on or locating components that needed repair or replacement a cumbersome and lengthy one.

A project undertaken by the Vuthela iLembe LED Support Programme has now strengthened the location and mapping of components of the water and sanitation infrastructure onto the iLembe District Municipality's corporate Geographic Information System (GIS) database and Fixed Asset Register (FAR).

## Reduced turnaround times

This means that the precise location of infrastructure components will be immediately available on the iLembe District Municipality's GIS. This will assist to reduce turnaround times for maintenance and enhance the levels of water and sanitation services in the district. It



will furthermore improve reporting on the extent of infrastructure coverage to the political leadership and electorate.

The project focused on the KwaDukuza and Mandeni Local Municipalities and specifically included the urban areas of Groutville, Darnall, Padianager, Sundumbili, Mandeni town, Isithebe industrial and KwaDukuza town.

The complex infrastructure systems, dynamic local government environments and a range of service delivery challenges make it imperative that municipalities have direct, immediate access to accurate information that enable them to make informed decisions about budgets, expenditure and infrastructure management priorities and plans.

The Vuthela project made this possible by collecting and compiling spatial data that reflects the water and sewer infrastructure as a layer of information within the iLembe District Municipality's existing information systems. The level of information allocated (or to be sourced in future) for each infrastructure component aligns to the requirements of the Department of Water and Sanitation as well as supporting that currently being implemented through the asset information system, EDAMS, that is currently being installed in the municipality through another Vuthela project.

## Digital format

Focusing on the six geographic areas, the Vuthela project included an extensive desktop review and capturing of all the current information about the existing water and sewer systems into a digital format. This included extensive work on transforming and transferring data from hard copies, from officials' inputs or from digital scanned imagery to the required GIS format.

It was essential to ensure that the captured information was accurate and complete through appropriate data verification and quality control processes, including hands-on workshops and custom-built web applications. It further involved a process of data cleaning to ensure a topological correct network of water and sewer infrastructure for future hydraulic modelling and zoning of supply areas.

The project further evaluated and reported on the alignment of the digital FAR and the GIS operated by the iLembe District Municipality, to illustrate the areas of convergence or the areas where gaps need to be addressed, to ensure a one-to-one linkage between the two asset systems.

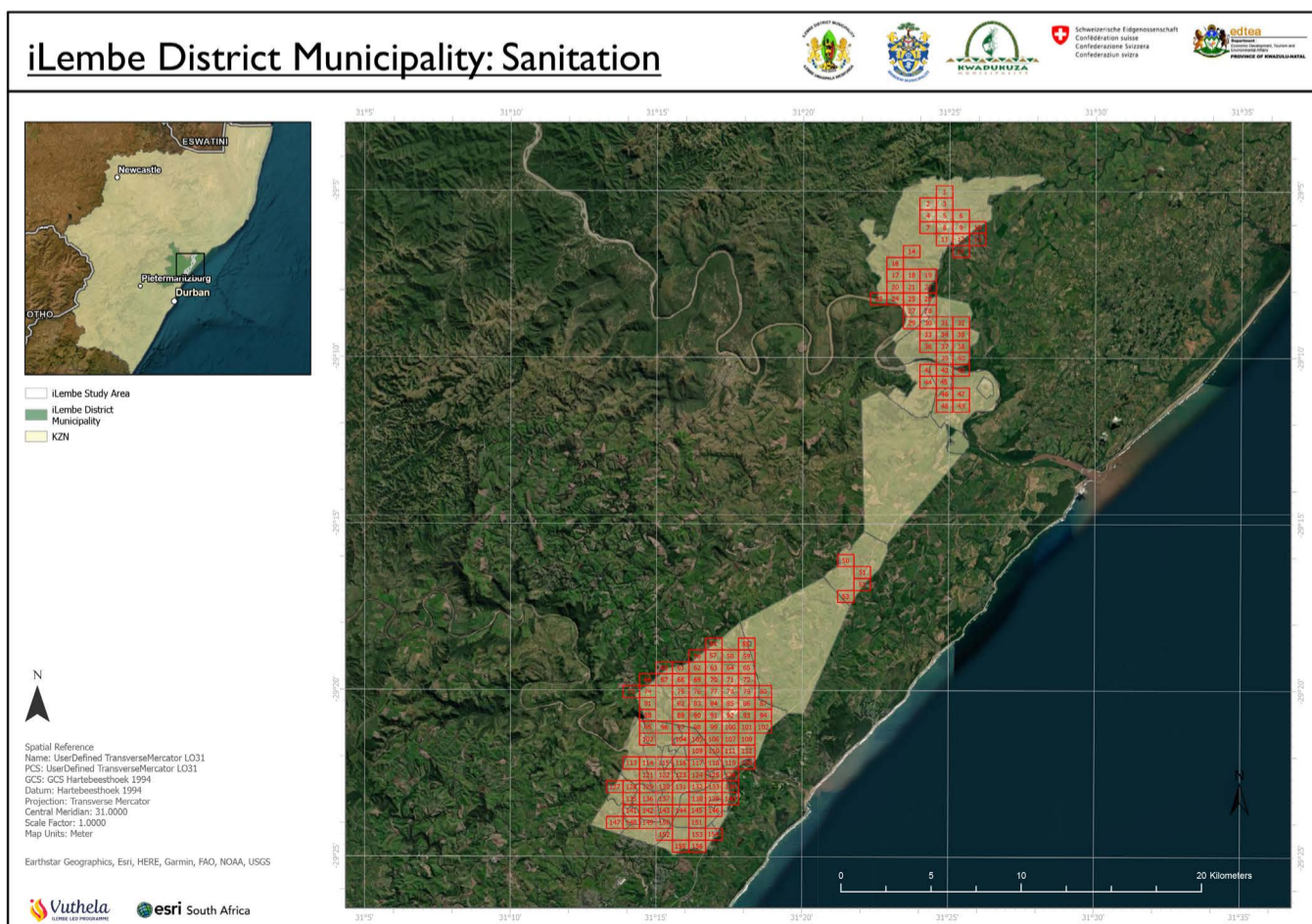
Another output of the project was the production of detailed digital map books indicating the location of communities and the extent of infrastructure coverage with the latest satellite imagery in the background. This can assist GIS and technical officials to not only evaluate the areas for which GIS information exists, but also to identify gaps in the digital data based on local knowledge of the water supply and sanitation systems' network coverage.

The list of items included in the water services FAR include springs, boreholes, abstraction works, dams, reservoirs, pump stations and water treatment works. Water delivery equipment includes canals, pipelines, break pressure tanks, bulk meters, and consumer connections. The FAR also indicates the locations of standpipes in communities that do not have access to piped water. Most of the point elements from the FAR could be represented on the GIS after some data cleansing.

Items located in the sewer services FAR include bulk sewer lines, manholes and monitoring points, pump stations, wastewater treatment works and wastewater discharge points. Once again, most of the point features could be represented in the GIS after some data cleansing.

The exercise allowed the iLembe District Municipality to identify and compare items of equipment and infrastructure that were listed in the FAR with those detailed in the GIS and to rectify anomalies.

continued on page 07



# New system pinpoints public assets

## Replication possible

The entire process of collecting, preparing, and managing the information was documented in detail, allowing it to be readily applied in other areas. This included the development of Standard Operating Procedures (SOPs) that can be applied to replicate the project's methodology elsewhere in the iLembe District Municipality.

The SOPs include technical guidance for the collection and management of data obtained in the field, a detailed breakdown of the structure of the data, the classifications used and data capture protocols. Policies to back up and share the data were also developed. These play a very important role in the project and asset management life cycle where the municipality implements construction projects.

It is also critical that the as-built information is also provided to the municipality and to the GIS unit for capturing in the corporate GIS. In turn, once an asset has

been capitalised, it will become part of the portfolio of assets managed and maintained by the municipality and as such, any activities that result in the replacement or change of an asset's information, should also be recorded, and provided to the GIS unit to keep the corporate GIS up to date.

## Challenges

Challenges encountered during the Vuthela project centred around the GIS infrastructure, missing and incorrect data, and data that was available in a wide variety of formats and had to be converted to a suitable format. In addition, there are areas for which there is no digital or hard copy information available, bar from the knowledge of long-serving officials.

An option is to use modern technologies to survey such areas to capture the necessary information, but it requires specialised skills and needs to be planned and budgeted for.

A report on the project recommended that standardised data formats be used in the future and the SOPs developed for this project should be included in all tenders and used by departments within the iLembe District Municipality.

It was also recommended that the GIS unit be included in all future infrastructure projects' management activities to ensure the correct and timeous handling of information – by and within the municipality and from consultants.

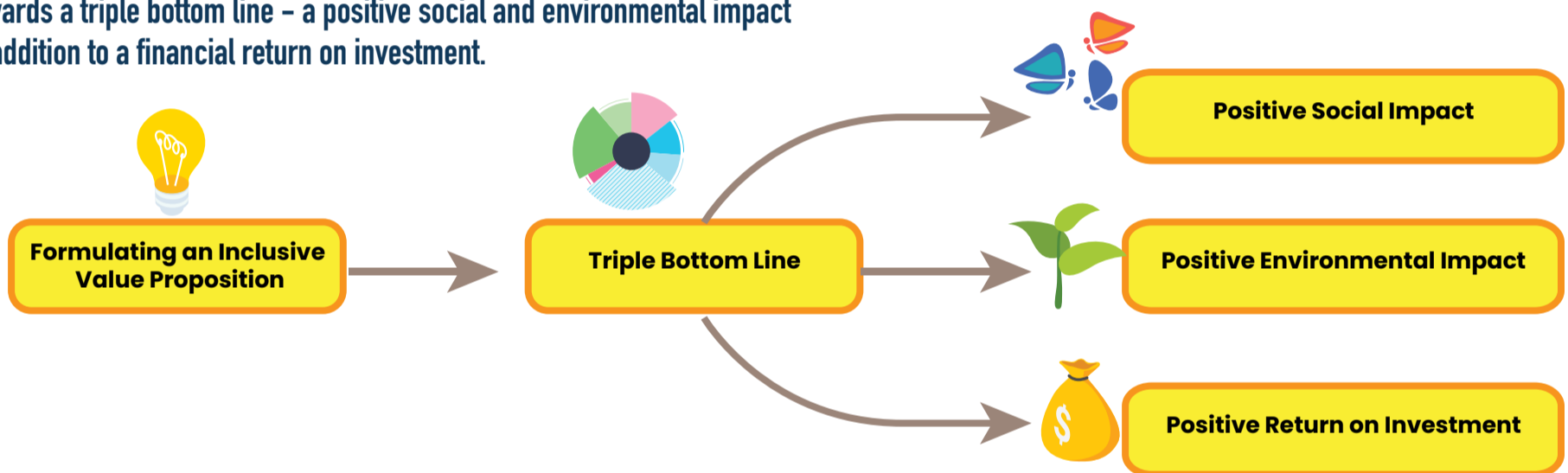
While the completion of the register of assets is expected to bring many benefits for the iLembe District Municipality, it also indicates the vast potential of applying digital technology to enhance service delivery in many other municipalities.

The development and setting of SOPs are critical to assist inter-departmental and external data handling and management. The Vuthela project assisted the iLembe District Municipality greatly in this regard and the same SOPs can easily be applied or adapted for use by other municipalities.



# Growing from within

**The first step involves formulating an inclusive value proposition that strives towards a triple bottom line – a positive social and environmental impact in addition to a financial return on investment.**



In summary, the 10 factors detailed in the book *Inclusive Business Strategies in Africa. A Business Model Perspective* are:

### 1. Inclusiveness as a process rather than an outcome

Formulating an inclusive value proposition and striving towards a triple bottom line that aims for a positive social and environmental impact in addition to a financial return on investment, and designing processes of co-creation to cater for the needs of low-income and marginalised groups and working with partners that can complement resources.

### 2. The importance of a societal mission-driven identity

Developing a mission statement and connecting it to the Sustainable Development Goals (SDGs) helps organisations to become more focused and able to connect with others that are set out to work on the same issues.

### 3. Long-term strategy and vision

Inclusive business is not a quick-fix and entrepreneurs need to be in it for the long haul. Inclusive business entrepreneurs need a long-term investment horizon and commitment to work on institutional as well as business development.

### 4. Creating space for intrapreneurship

Inclusive businesses are made up of inclusive business entrepreneurs that develop innovative solutions for

pressing societal needs. Creating a business environment where 'intrapreneurship' can flourish is crucial for inclusive business success.

### 5. Organising last mile distribution

Rural areas are often accessible only by poor quality road infrastructure; products and services providing essential societal value often do not reach the intended customers or are more expensive and of lower quality than the products available to other populations. Organising last mile distribution, either by leveraging existing retail channels or developing new distribution channels, is a critical aspect of inclusive business success.

### 6. Serving local needs

Contextual factors determine to a large extent the uptake of the inclusive business model. To develop a business model that caters to specific local needs and requirements, inclusive businesses need to have a thorough understanding of the local context.

### 7. "If you want to go fast, go alone. If you want to go far, go together"

Contributing to inclusive development requires moving from stand-alone initiatives to innovation ecosystems in which a variety of partners work together to reach greater societal impact. Engaging in cross-sector partnerships can provide businesses with complementary resources

and capabilities needed to create and deliver value in novel ways while minimising costs and risks.

### 8. Scaling

Scaling is important both from a business perspective: to reach commercial viability by compensating for low margins, and from a development point of view: to meet the needs of the four billion people living in poverty. Inclusive businesses can employ different scaling strategies that focus on developing new products or services, entering new markets or a combination of both.

### 9. Managing by measuring

Many inclusive ventures often have longer expected payback periods and standard business protocols, and evaluation methods are not fit for purpose. Inclusive businesses need to formulate and evaluate environmental and social key performance indicators as well as financial targets to reach triple bottom line impact.

### 10. Creating a learning environment

To develop a successful inclusive business model, inclusiveness needs to be institutionalised within the core business by creating a learning environment that captures and shares lessons from inclusive business success and failures.

1 <https://www.robvantulder.nl/wp-content/uploads/2020/07/Inclusive-business-in-Africa-V3.pdf>





## WHAT IT IS ABOUT

The Vuthela iLembe LED Programme responds directly to the urgent need to address unemployment, poverty and inequality by accelerating inclusive local economic development and growth in line with the National Development Plan, the KZN Provincial Growth and Development Plan, iLembe District Municipality Growth and Development Plan as well as the Integrated Development Plans of the family of local municipalities in the district.

## OBJECTIVES

The overarching objective and expected impact of the programme is to contribute to the improvement of the economic future of the iLembe District and the quality of life of its inhabitants, through sustainable growth of the local economy, and the creation of higher, better and more inclusive employment and income generating opportunities.

## STATUS OF PROJECTS

Of the 43 project contracts, 28 have been completed, eight are in implementation, two are subject to transfer to municipalities and five have been formally withdrawn.



## WHO ARE THE PARTNERS?

The Vuthela iLembe LED Programme, is a joint initiative of the State Secretariat of Economic Affairs of the Swiss Confederation, the KwaZulu-Natal Department of Economic Development, Tourism and Environmental Affairs, the iLembe District Municipality, and the KwaDukuza and Mandeni Local Municipalities. The programme includes participation of the Ndwedwe and Maphumulo Local Municipalities.

## THE FIVE INTER-RELATED COMPONENTS OF THE PROGRAMME

- ▶ **Public Finance Management** - strengthening the financial position of municipalities through better capacity to plan, finance and manage infrastructure investments and the provision of public services. skills development; greater investment in and growth of Small and Medium Enterprises, leading to increased employment.
- ▶ **Municipal Infrastructure** - improved planning and access to infrastructure services for development investment, effective and efficient service delivery, and sustainable growth.
- ▶ **Private Sector Development Component** - Address obstacles to doing business in the district by improving the regulatory environment and supporting
- ▶ **Building Inclusive Growth Component** - inclusive and sustainable growth and employment interventions to support SMEs in growth sectors.
- ▶ **Programme Management, Partnership and Co-ordination Component** - sustained partnerships and capacity for local economic development in the iLembe District, and the replication of the approach in policy elsewhere in South Africa.

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