



**bigen**<sup>®</sup>

Doing good while  
doing business

# Development Impact Report 2017



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# About

this report

This 2017 Development Impact Report provides our shareholders, clients, stakeholders and partners with a reflective summary of our performance, value creation and impact for the financial year September 2016 - October 2017.

We use the following icons for ease of navigation and to highlight the integration between our strategic drivers (SD's), our key enablers and our alignment with the UN Sustainable Development Goals (SDGs).

**Strategic drivers (SDs)**



**Business enablers**



**Our capabilities**

ENERGY      HEALTH      REAL ESTATE      TRANSPORTATION      WATER



UN Sustainable Development Goals (SDGs) relevant to Bigen activities as reflected upon in this report.

# Message from the Executive Chairperson

Our infrastructure development solutions **create a sustainable impact in Africa**, and for the people of Africa.

**I take great pleasure in presenting this 2017 Bigen Development Impact Report. During the past financial year, our efforts resulted in, *inter alia*, a number of ‘firsts’ for Bigen: this report as the first of future annual development impact reports and also the first publication to reflect our new brand as a socio-economic development impact organisation.**

**We also established the African Infrastructure Preparation Facility (AIPF) as a first of its kind and developed an electronic impact reporting tool (the ImpactPro) as a first for our business, to add further value to our service offerings.**

As the founder investor in the AIPF, Bigen will invest R650 million over the next 10 years in early-stage project preparation prior to fundability and financial closure. We expect to unlock more than R6 billion in capital projects and create a pipeline of potentially bankable infrastructure projects on the continent of Africa.

Our new electronic ImpactPro Mobile Application measures service delivery against socio-economic development impact. We have partnered with economists to extrapolate our outputs into impacts. The ImpactPro application will be available to clients in 2018.

Bigen’s insightful and cost-effective infrastructure solutions have supported sustainable infrastructure development for more than 46 years. Our holistic approach, which combines financial, technical, socio-economic, environmental and institutional services in the water,

real estate, transportation, energy and health sectors – where Bigen is recognised as a powerful force – has seen many thousands of lives transformed and economies boosted in more than 19 African countries.

We regard empowering local communities through economic inclusion, skills development, employment and procurement opportunities as a critical component of all our infrastructure development services.

During the past year alone, we were involved in 400 projects across Bigen’s five major sectors throughout Africa. As such, more than 625 000 people are benefitting from water, sanitation, roads, schools and housing infrastructure, while about 12 million people now have access to potable water and 585 000 are benefitting from housing units with electricity. Our real estate projects will provide housing to more than 56 000 families, while more than 169 000 jobs were created in the transportation and real estate sectors.

In Namibia, our involvement in the Namibian Kranzberg to Walvis Bay railway improvement project will create 11 540 direct and indirect jobs and in Botswana, Bigen’s role as the Government’s representative in the 360-km North-South-Carrier water transfer system – the country’s largest engineering project ever undertaken – averted a major water crisis in Gaborone, where almost a million people live.

As the recipient of many prestigious industry awards since 2003, Bigen’s commitment to efficiency, transformation, development impact and quality is well-acknowledged. Awards that came our way during 2017 included a Top 500 Best-Managed Company (South Africa) Award in the category Best-Performing Company in Consulting Engineering, Mining and Infrastructure, as well as the African Business and Social Responsibility Award for Corporate Innovative Societal Action and a Consulting Engineers South Africa (CESA) AON Engineering Excellence Award for



Mentoring Company of the Year. We appreciate and are humbled by this peer and industry recognition.

I would like to thank the Bigen directors for their continued confidence in me to fulfill the role of Executive Chairperson. I look forward to overseeing the expansion of the Bigen Group into the continent, through our restructured capital structure with head offices now in South Africa and Mauritius and a focus on becoming one of Africa's top five socio-economic impact activist organisations. I also thank our strategic partners, service providers and suppliers locally, in Africa and internationally – some in Europe, Scandinavia and Canada – for their shared commitment to creating development impact in Africa.

As a Bigen team, we appreciate the Board's insightful and wise counsel, which ensures that we remain focused on our Vision 2021 trajectory.

As always, my appreciation also goes to all Bigen employees for their steadfast commitment to driving our efficient+ goals and our service delivery on brief, on budget and on time. And indeed, to God Almighty for giving us the strength to make a difference in communities by *doing good while doing business*.

I hope that you find the 2017 Bigen development impact story in this report interesting and informative. As we increase our wingspan throughout the continent, we invite you to join us, as friend, stakeholder or partner, in the immensely rewarding pursuit of creating a significantly transformed Africa!

**EXECUTIVE CHAIR: DR SNOWY KHOZA**

# Financial Drivers

The Bigen Group delivered **a sound financial performance** for the year ended 30 September 2017 and indications are that the positive returns will continue into 2018.

**We attribute this resilience, in the face of a weak economy, to our thought-leading strategy, skilled people, strong leadership, collaborative business model and diverse services and customer base.**

**Over the years, our strategy has systematically transformed the company into a leading infrastructure development activist in Africa, committed to social betterment and delivering infrastructure development impact that optimises long-term project sustainability.**

We regard sustainability as underpinned by the inseparability of people, business and community. Bigen will continue to optimise opportunities in economic, environmental and social developments and conduct business with integrity, aligned with a high standard of ethics and appropriate risk management.

We generate financial value for all our stakeholders, from employees (salaries and other benefits), the state and municipalities (tax revenues) and suppliers (payments for goods and services) to clients and consumers (high-quality services) and shareholders (dividends and share appreciation). An imperative is to reinvest for future growth (see p9).

## Financial sustainability

As a profitable going concern with a robust balance sheet, we translate strategy into actionable tasks/projects with a focus on a development impact across all sectors. This creates ownership and wealth creation opportunities for key value-adding professionals and strategic partners. Our emphasis on sound cash management, cash conversion and regular reviews of key working capital indicators has created a strong cash culture within the Group.

## Diversification

Bigen's revenues and earnings are diversified across its business and services, market sectors and clients, to mitigate cyclical trends that impact markets, industries or countries and to ensure that we create development impact across all sectors. Though our Vision 2021 strategy we have restructured and added revenue streams to create a multi-dimensional business that excels wherever we operate. Our engineering and advisory services are now supplemented by earnings from investments and concessions and socio-economic development activities, all leveraged through the Bigen Rubix - our African 'services supermarket' that provides clients with a one-stop service-supplier option. This also ensures that we continue to grow our balance sheet. Our solid reputation and constructive stakeholder relations contribute to repeat business, which is a significant portion of our annual fee revenue.

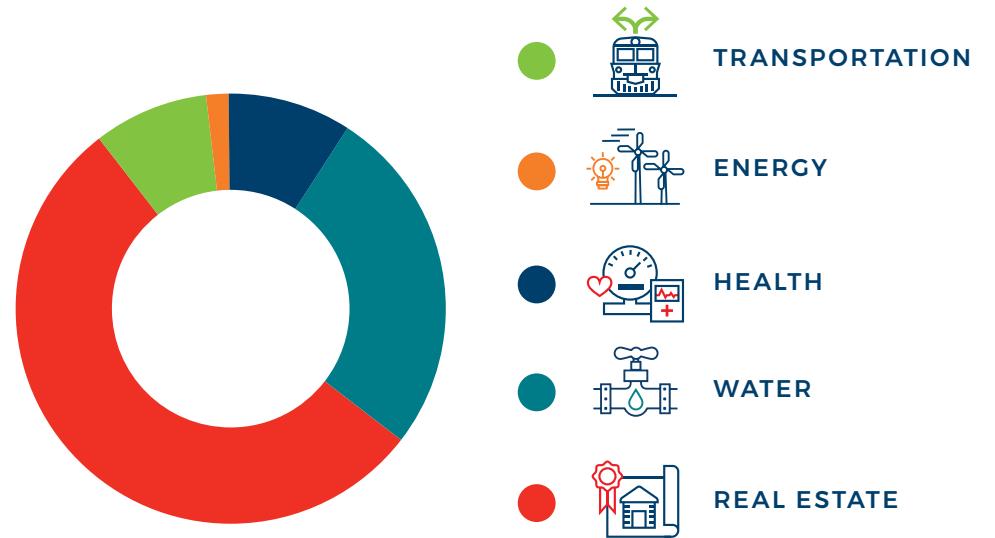


# Performance Highlights

## Value creation for stakeholders



## Our five major market sectors



## Social betterment impact

from some projects profiled in this report

± 625 000 people benefitting from water, sanitation, schools, roads and housing projects		
± 12 million people benefitting from access to potable water		
± 585 000 people benefitting from housing units with electricity		
± 56 000 families benefitting from homes and services		
± 169 000 jobs created in the real estate and transportation sectors in 2017		
Many 1 000s of people benefitting from healthcare facility upgrades and maintenance		

## Performance impact

past, present and future

- **2017** sound financial performance for all stakeholders
  - Revenues and earnings diversified across business, services, markets and clients
  - Revenues generated from engineering and advisory services, investments and concessions, SED and leveraging the Rubix
  - High profit margins maintained
  - Sound return on working capital maintained
- **400 projects** across Bigen's five major sectors throughout Africa
- **R7 million** time and monetary value contributed to CSI community upliftment since 2014
- **± 24%** total shareholder's return p/a 2012-2017
- **13%** of net Group revenue from Namibia and Botswana in 2017, set to grow in 2018



Creating the Bigen story in Africa,  
of Africa and **for Africa**

# The Bigen Story

**Our story has humble beginnings - it all started with the establishment of a small engineering consultancy in 1971.**

**Our growth has seen us transform from a traditional engineering firm to an engineering firm with a conscience and ultimately an infrastructure development company committed to socio-economic well-being wherever we work.**

Today Bigen employs more than 400 professionals who are actively creating a sustainable impact throughout Africa. As proudly African, Bigen's story of growth over 46 years into an influential, multinational group, working in Africa for the people of Africa, has embedded the impact of our indelible and reputable infrastructure development footprint across the continent.

We utilise Africa's limitless business opportunities to accelerate productivity, growth and economic prosperity for all who live here. That is why we create sustainable environments that unleash the potential of communities and individuals to improve their livelihoods. Wherever our activities take us, we see it as our responsibility to improve quality of life by *doing good while doing business*.

# Who we are

## Our business profile

Improving the quality of life of our people defines us. Our philosophy of *doing good while doing business* is evident in every step we take. We focus on what truly matters and we are inspired to do better every day.

# 401

Bigen Group employees



# 14 offices

across Africa staffed by highly skilled, qualified professionals

Innovative infrastructure development impact solutions in

# 19 African countries

Ethical standards aligned with the OECD Anti-Bribery Convention and South Africa's PCCA, 2004

'Green-principled' ecological footprint aligned with the **ISO 14001** international standard

# R7 million

contributed towards adopted charities since 2014

Collaboration with the rest of Africa drives our expansion

Transforming the lives of impoverished and socially deprived Africans by *doing good while doing business*

**Efficient+** delivery underpinned by an indelible **46-year track record** in Africa

Focused on localised and indigenised **job creation** wherever we work

**R200+ billion** infrastructure development projects in Africa

over the past **10 years**

## Our competitive strengths



Competitive infrastructure product equity



Incorruptible values



Proven development impact philosophy



International and regional capabilities



Proven 46-year track record of delivering excellence and socio-economic impact



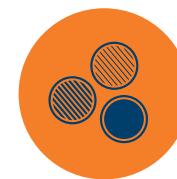
Infrastructure solutions through tailored delivery models



Strict risk management profile



Strong partnership approach



Diversification

### Our strategic drivers



Africa expansion



Expanding the core



Strategic investments

### Our deliverables

- Core bespoke services combined and applied seamlessly across sectors and disciplines from our six regional offices throughout Africa and in Mauritius
- Full package of environmental, financial, institutional, social and technical services delivered in the energy, health, real estate, transportation and water sectors.

### Our enablers



Employer of choice



Efficient+



Investment of choice

### Our sustainable business practices



Quality management



Health and safety



Environmental management



Social responsibility

# Our leadership

**It is time for Africans to find African solutions to Africa's infrastructure development challenges.**

Bigen believes that the development of great leadership ensures sustainability and relevance in our industry. Our leadership team consists of 'professionals with a conscience', who actively pursue the Group's vision of improving quality of life through sustainable infrastructure development impact solutions and a commitment to *doing good while doing business*.

The skills, expertise and related business experience of this core group range across disciplines and make them eminently proficient to lead, guide and manage our people and our projects.

Just as Bigen's comprehensive infrastructure development value-chain provides Africa with a 'supermarket' of services, our leaders provide the company with the requisite range of expertise, capabilities and competencies that cover every aspect of our business.

Our leaders sign a "morals by agreement" code that embodies Bigen's 'lead-by-doing' moral compass. This defines and guides organisational behaviour, internally and externally, wherever and with whomever we interact, to safeguard and maintain our proud organisational reputation.

We source future leaders from within and outside the company to remain flexible in responding effectively to rapid change in our operating environment and maintaining our competitive advantage. We develop young leaders who can become board-level executives through exposure to various leadership programmes including INSEAD (International Graduate Business School), University of Life, Future Business Leaders and Future Technological Leaders, as well as a personal CEO business leadership and mentoring programme.

## Bigen's combined 259 years of leadership expertise include:

- Business and institutional management
- Research, strategy development and management
- Financial and investment modelling and management
- Project and construction management
- Engineering and infrastructure design
- Contract administration, tax accounting and capital programme management
- Risk management and mitigation
- Governance and IT, systems and knowledge management
- Multidisciplinary team and performance management
- Strategic partnerships and relationship management
- Development facilitation and management
- Technical leadership



# What we **strive** for



## **Our vision**

To be the preferred African provider of sustainable infrastructure solutions that improve quality of life



## **Our goal**

To be one of the top-five African infrastructure development companies by 2021



## **Our values**

Creativity · Commitment ·  
Empowerment · Fun · Integrity



## **Our common purpose**

*Doing good while doing business.*

An undertaking that whatever we do will benefit the communities in which we operate, as well as our clients, stakeholders and employees

# Our strategy, stakeholders and value creation

**Our vision is clear: to be a top-five African infrastructure developer by 2021.** To achieve this, we will build on past successes, embrace new technologies and learn from the best to remain at the forefront of our industry.

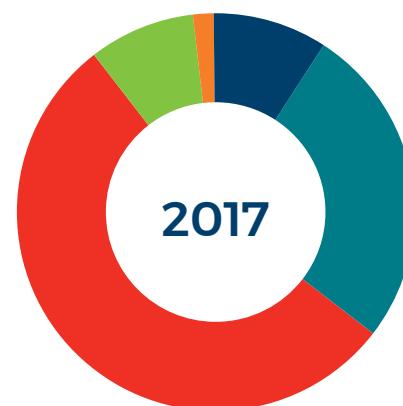
## At Bigen we:

- Create platforms that combine international, regional and local capabilities
- Share calculated risk to create value and reward for strategic partners
- Offer infrastructure development solutions to a defined range of economic sectors
- Develop a pipeline of bankable projects with finance institutions
- Deliver advisory and engineering services, investments and concessions and turnkey EPC + F (engineering, procurement and construction + finance)
- Develop with impact to improve African lives.

Bigen's target-driven, five-year vision strategies have stood the company in good stead for 46 years. This defined-period planning has yielded solid, award-winning business growth, despite difficult economic cycles and positioned the Group as a leader in its holistic, innovative, multidisciplinary and partner-focused approach to socio-economic infrastructure development impact.

Our current Vision 2021 (V2021) strategy is a further evolutionary building block in Bigen's future trajectory. We will increase investor, client and shareholder value through a revised capital structure that promotes transformation, inclusiveness, socio-economic development and a collective effort to entrench relevance and accelerate growth. Our revenue and earnings are diversified across five sectors - energy, health, real estate, transportation and water - and underpinned by a range of socio-economic development services that mitigate the potential cyclical instability of markets, industries and countries.

**Current** sector diversification



**Foreseen** sector diversification



## Reflecting on **lessons learnt**

**Inherently African**, we have a deeply embedded understanding of the challenges and opportunities that exist within this vast continent from the many lessons learnt during the past four-and-a-half decades.

# At age 46, we know that:



**zero tolerance to theft and corruption** creates a safe, productive and invigorating working environment

regional expansion is the **foundation for future growth**

operational efficiency and cost control **underpin net profits**

**collaboration between a diverse range of employees** add value and inspire innovation

**our proactive partnership approach** is an effective force that drives earnings

**a strong leadership team** and adequate resources spur vigorous growth

**business success is achieved through a dynamic and flexible strategy** that celebrates interim achievements and copes with financial, target, structure and development finance deviations

# Our partnering and partnerships

Our proactive partnership approach leverages a combination of capabilities towards sustainable infrastructure development impact solutions.

In line with Bigen’s Vision 2021, partnering and partnerships are integral to our delivery mechanisms in:

- enabling skills development and capacity building for the continent
- supporting and delivering infrastructure, economic growth and development
- positioning Bigen’s capabilities and utilising our strengths
- empowering small, micro and medium enterprises to function optimally.

Bigen follows a formal partnership strategy to drive revenue generation and project delivery. Our partnering approach is fundamental to presenting our African infrastructure ‘supermarket’ and project portfolio platform.

International partnerships include a range of European, Scandinavian and Canadian infrastructure development firms with access to donor and development finance institutions. We also join forces with local and in-country partners to position the business as a regional partner of choice and honour our commitment to localisation and beneficiation.

Our revenue pipeline is developed through the following generators:

- **Socio-economic development:** Delivering SED outcomes through sustainable infrastructure development impact programmes
- **Investments:** Acquiring assets to generate dividends and future capital value appreciation
- **Concessions:** Securing long-term agreements between the private and public sectors to afford the private sector the right to develop and deliver infrastructure or operate a specific utility business within government’s jurisdiction
- **The Rubix partnership platform:** Offering capabilities and project solutions across disciplines; Infrastructure Development Facility/AIPF (investments and concessions); international donors and DFIs
- **Engineering and advisory:** Professional/consulting services.

Bigen’s Rubix approach, illustrated here, reflects our operational model.



**Project Portfolio Platform:**  
“INFRASTRUCTURE DEVELOPMENT FACILITY”

# A sustainable development impact partner

We focus on what truly matters.

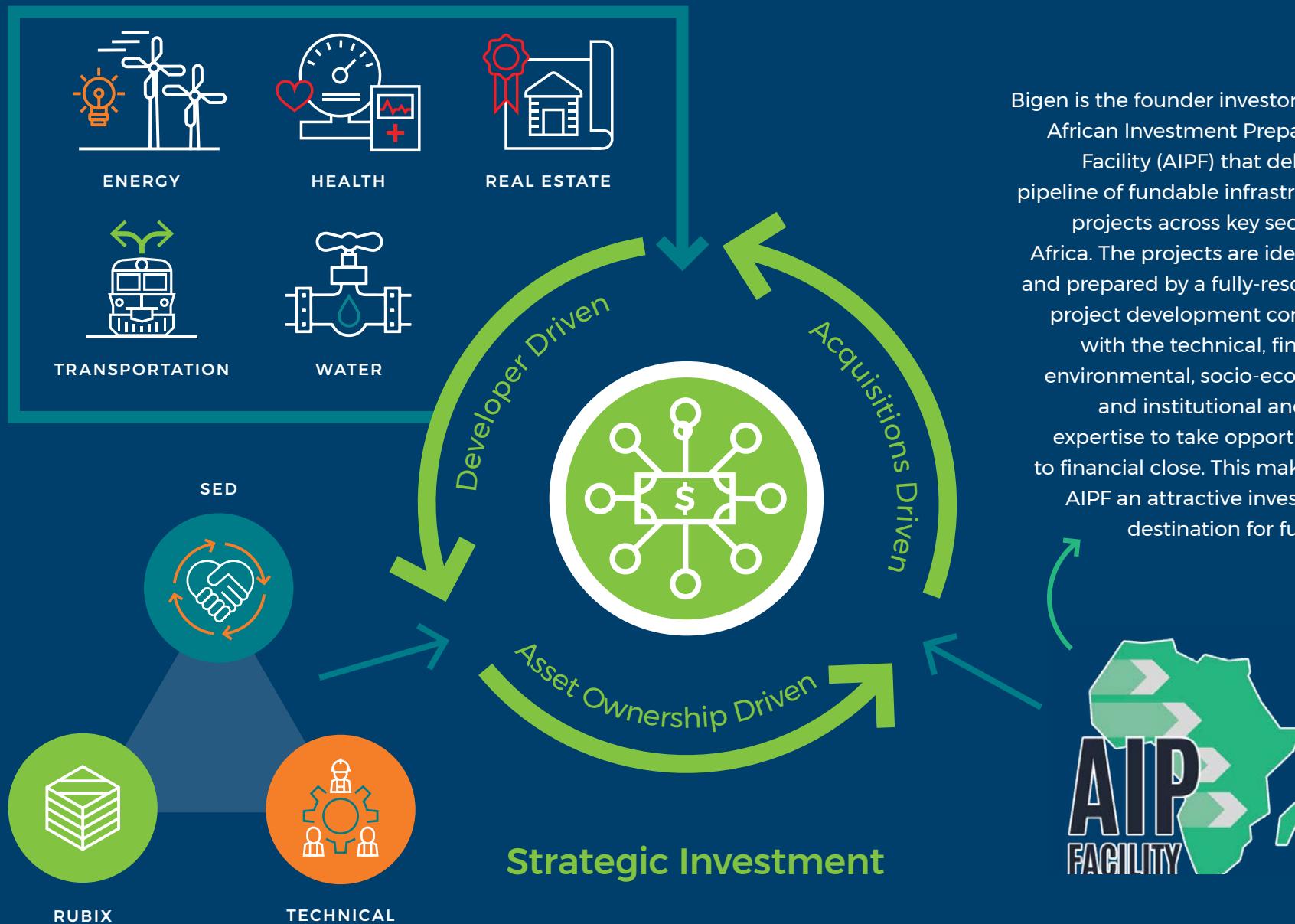
We put people first. Our sustainable infrastructure development programmes provide meaningful social and economic development outcomes and impact. In pursuing our business intent of becoming one of the top-five socio-economic impact organisations in Africa, we see our responsibility as improving quality of life by empowering communities to unleash the inherent potential of their members.

We regard socio-economic development as more than poverty alleviation, we rather see it as addressing vulnerability, unemployment, exclusion and the lack of basic services.



# Our investments and concessions

Bigen's Vision 2021 steers the company and its investment partners towards a common goal of an increasingly robust balance sheet and market relevance in our five focus sectors. Our investments and concessions are integral to our partnership programme.



Bigen is the founder investor in the African Investment Preparation Facility (AIPF) that delivers a pipeline of fundable infrastructure projects across key sectors in Africa. The projects are identified and prepared by a fully-resourced project development company with the technical, financial, environmental, socio-economic and institutional and legal expertise to take opportunities to financial close. This makes the AIPF an attractive investment destination for funders.

Our investments aim to create, capture, extract and share value for Bigen, its strategic partners and stakeholders.

Our Vision 2021 steers the company and our investment partners toward a common goal of doubling the enterprise value by 2021.

Our INVESTMENTS entail acquiring assets to generate dividends for future capital value appreciation. Bigen’s independent investment committee assists management to evaluate potential investments and make recommendations based on international best practice.

In addition to our existing investment portfolio, we finalised equity stakes in a number of strategic partner companies and project-specific SPVs. Our pipeline of quality transactions continues to grow, with financial close expected for at least three of these transactions during 2018.

Our investment in infrastructure projects are aligned with the strategic objectives of our Energy, Health, Real Estate, Transportation and Water directorates. Part of our responsible investing is the use of Bigen’s own funds to, *inter alia*, assist our young professionals with accommodation near their place of work – investing, therefore, in the health and welfare of our own people by *doing good while doing business*.

Bigen’s investment decisions differentiate between what is bankable and what is socio-economically viable. The difference lies in the projected economic return. A strategic blend of funding sources is critical to this process, as indicated in the related table on this page.

Our CONCESSIONS entail securing long-term public-private and private-private sector agreements where Bigen and its partners can develop and deliver infrastructure or operate a specific utility business over the medium- to long-term, with a defined exist strategy and end date.

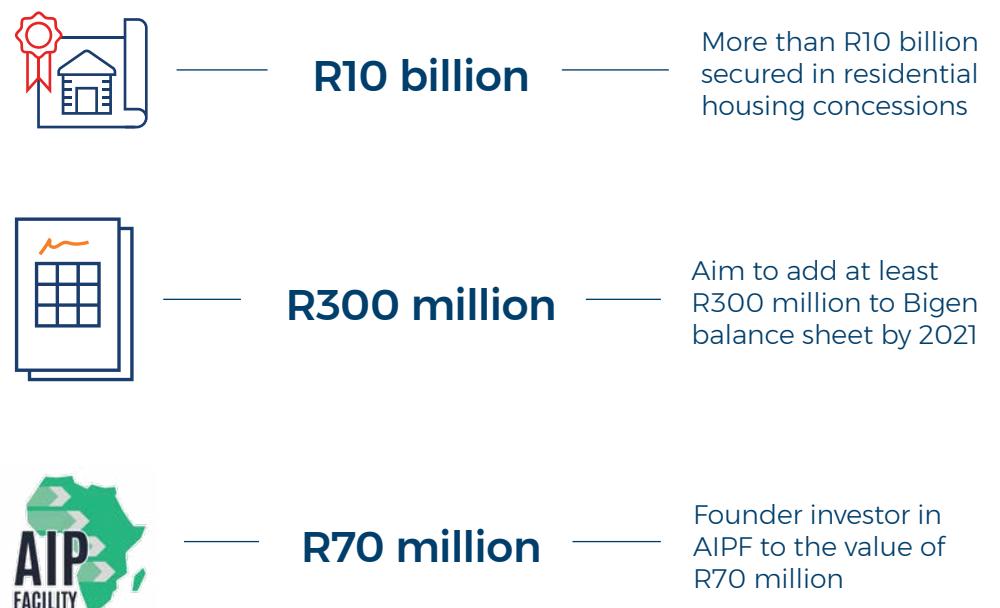
The concessions also contribute to company and partner revenue streams for advisory services. In addition, dividend income from these concessions are paid directly to shareholders (shareholders’ return) and is not used for operational costs.

Blending of funding sources	
Donor/ philanthropic	Capital that seeks to create positive and/or environmental impact and not financial return
Impact investments	Investments that seek measurable social and/or environmental impact and financial returns
Socially responsible investments	“Negative screening” excludes investments incompatible with ESG* investment criteria
Responsible investments	Investments that acknowledge ESG factors
Traditional investments	Investments that seek only financial returns

- Social value
- “Blended” social and financial value
- Financial value

\*ESG = Environmental, social and governance

·Social value · “Blended” social and financial value ·Financial value





believe

We believe in dreams

# Our services

## FINANCIAL



- Specialist financial, commercial, project structuring and arranging services that support the entire project development process

## TECHNICAL



- Engineering and advisory services across the infrastructure development value-chain, including feasibility studies, development funding, project structuring, arranging, preparation, management and implementation
- Customised, integrated infrastructure solutions that meet client, regional, local economic and empowerment requirements
- Bankable, fit-for-purpose projects that benefit the end-users

## ENVIRONMENTAL



- Qualified and skilled environmental engineers, scientists, sociologists, psychologists, economists and analysts with local, regional and international experience
- Integrated academic and professional expertise and project management skills to meet sector environmental and social challenges

## SOCIO-ECONOMIC



- Skills development through business mentorship, education and training on infrastructure projects, including for youth, women and the disabled
- SMME support and development, job opportunities and preferential (local) procurement strategies to build local capacity
- Sustainable solutions that safeguard the environment for current and future generations
- Collaboration with governments, communities, civil society and the private sector to meet human needs without undermining the integrity and stability of our natural systems

## INSTITUTIONAL



- Extensive institutional risk management and support services as part of our multidisciplinary service offering, including political economy analysis and strategic advice, strategic stakeholder engagement and legal due diligence
- Institutional capability support services, including policy advice and development, transaction advice and capacity building
- Legal advisory, contractual and transactional contract drafting services



# Socio-Economic Development

The thread that runs **through** all we do

Bigen believes in improving quality of life by optimising the sustainable social and economic impact of infrastructure development.

**During more than four decades of working in Africa, for Africa, we have learnt that we grow by uplifting others.**

## Our SED services

- SED: Socio-economic development design and implementation
- LED: Local economic development design and implementation
- ESD: Enterprise and supplier development
- Social investment project design, implementation and fund management
- Monitoring and evaluation

**At Bigen, SED means social and economic inclusion that hinges on four pillars:**



**Sustainable infrastructure**

**Sustainable development**

**Social development**

**Economic development**



Our SED services are the golden threads that run intentionally through all our projects, wherever we operate.

Our localisation focus aligns our services with country-specific development goals that support transformation, poverty eradication and systemic social and economic development challenges to achieve a long-term impact. Our experienced SED professionals are from diverse cultures and experts in their disciplines. Our services are combined into a single point of responsibility with extensive exposure to government and public and private sector clients, locally and elsewhere in Africa.

During 2017, we developed the Bigen ImpactPro Mobile Application to measure the social and economic impact of our projects. The ImpactPro App focuses on seven key areas, each linked to their related SDGs:

-  **Economic inclusion**
-  **Community social investment**
-  **Environment**
-  **Health and safety**
-  **Infrastructure investment**
-  **Service delivery**
-  **Skills development**



The performance indicators for each key area are complemented by a robust electronic capturing platform to measure the impact of our projects. We look forward to implementing the ImpactPro App in 2018.

Our SED approach is the epitome of *doing good while doing business.*

## A case study

Without electricity, the Sol Plaatje community in Helderkruin on the Gauteng West Rand in South Africa, was riven with crime, dangerous for residents and people had to spend a lot of money on gas because there were no lights. Bigen's role in the electrification project not only helped to reduce crime and improve livelihoods for thousands of households but also enabled local entrepreneurs to start their own businesses.

**“The electricity has helped our kids because they can now use computers and the network is available, so we are very happy about this.”**

*- Mr Manqoba Ndlovu, an 11-year township resident*

Access to electricity has also enabled local entrepreneur, Gladys Maroleng, who has lived in Sol Plaatje for 17 years, to finally start her own crèche. *“The community had a lot of old people, but now more young people have moved back with their families. I saw many children playing in the street. The electricity has helped me to start a crèche in my house so that the children can come when their mothers go to work and they can learn and eat and not be in the street.”*



# Developing our enterprise and suppliers

2017 IMPACT



3 026

cumulative, in-kind hours spent by Bigen professional staff at no cost to enterprise/supplier beneficiaries



R5 172 784

value of time spent with beneficiary/supplier companies



Business Growth

Lotshephe Engineers business growth: appointed additional resources due to work from Bigen



Business Partner

Umbono Engineers: migrated from enterprise development beneficiary to supplier development beneficiary (Bigen business partner)

The main driver of our enterprise and supplier development programme is to create new networks that leverage access to projects. We select companies with the potential to eventually become partners in our business.

Our professionals give of their time to provide these companies with in-kind mentoring, as well as technical, capability-specific leadership and commercialisation advice and training.

#### 2017 enterprise development beneficiaries

- Africando Civil and Project Managers (Water)
- BES Africa Engineering (Water)
- Indigo Kulani (Health)
- Lotshephe Engineers (Transport)
- Tlou Integrated Tech CC (Water)
- Umbono Engineers (Real Estate)
- Xpanders (Water)

“This programme has been very helpful thus far and the collaborative support that I receive from Bigen is great.

**Being associated with Bigen has positioned my small consulting company very well.** The ability to go for bigger opportunities through the association with Bigen has been amazing. I would recommend being on Bigen’s ED/SD\* programme to other small companies.”

LUTHANDO PETER,  
UMBONO ENGINEERS

*\*ED: Enterprise development  
SD: Supplier development*



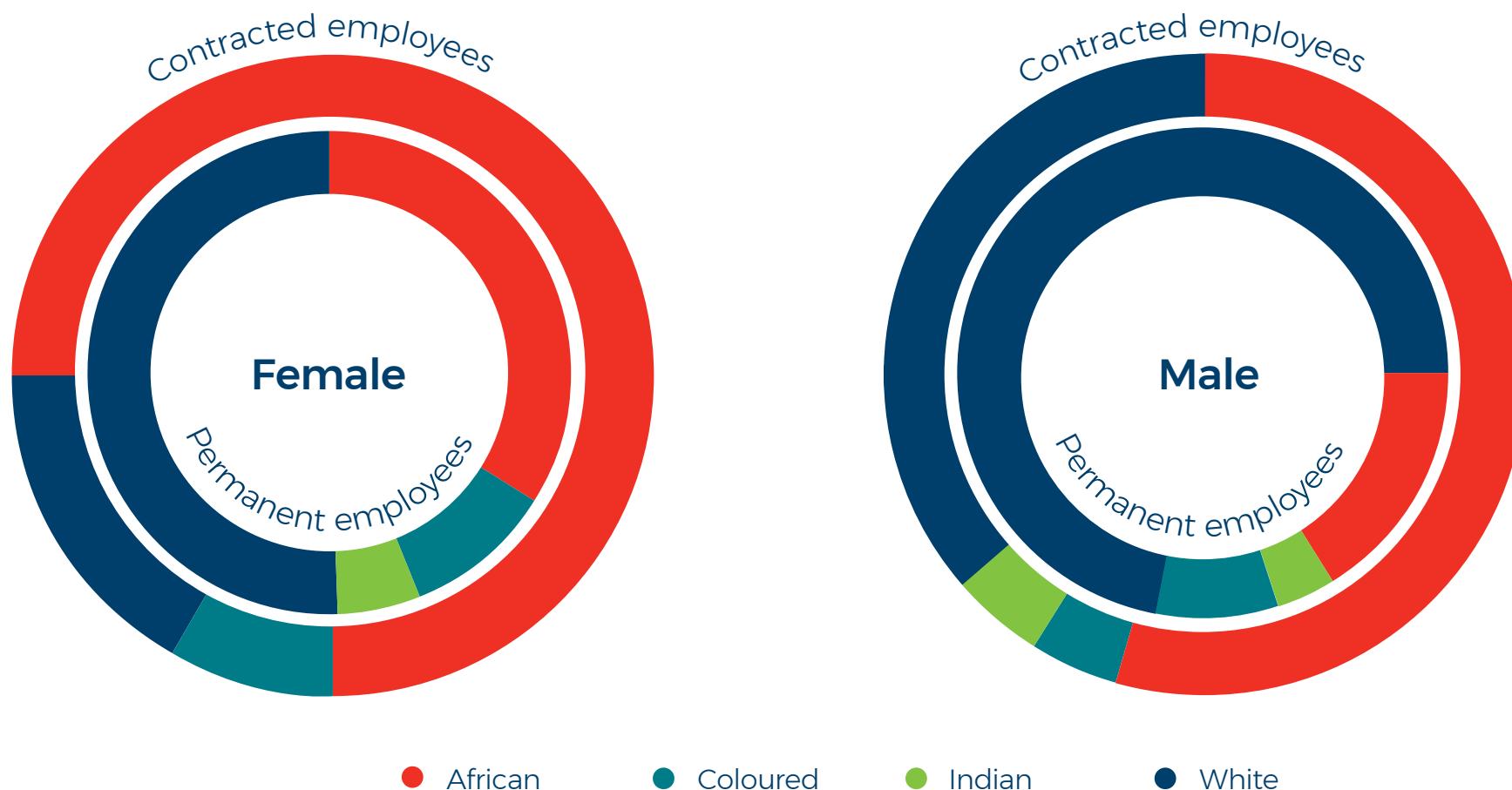
# Our people

**401** skilled people with qualifications that range across diverse professions in the built environment

Being an “Employer of Choice” is a key enabler in attracting and developing talent, appointing local staff to support country-specific projects and providing employees with a safe place to work and a superior value proposition. This lends itself to the development of all employees and future organisational leaders to create a pipeline of new future business owners.

A new programme is being implemented for our senior managers (age 55 and above) to further develop and transfer their skills in a structured and timeous manner to younger mentees in a hand-over process that mitigates the need for crisis management when people leave our employ.

## Our Bigen Group employee profile (including Bigen Kuumba (BKBA) in Namibia)



## Ownership and shareholding

- 100% employee-owned currently, future trajectory towards 60% employee/40% external investors
- 55 employee shareholders (*ie professional shareholders*)
- 42% shares held by executive leadership
- ± 15% dividend yield per annum over the past five years (target 12-16%)
- ±24% total shareholder's return p/a 2012-2017
- Buyers' (*professional shareholders*) acquisition of shares funded by a large local commercial bank with soft company warranty, which limits shareholding liquidity risk



## Guiding principles of our shareholder structure

### Active shareholding

Active employees; active, strategic and Rubix partners; cornerstone investors; indigenous transition shareholders

### Ownership concentration

15% of employees; maximum 10% shares per single employee

### Positive bias emphasis

Expand shareholding of future business leaders; increase indigenous shareholders

### Total return emphasis

Deliver sustainable growth in total shareholder return as measured by share price appreciation and dividends recovered over the shareholding term

### Policy

- Retiring shareholders step down progressively over a five-year period
- Share-trading bi-annually
- Share Trust managed by Independent Trustees

# Recognition and awards



Bigen is the proud recipient of 47 prestigious industry awards since 2003 (find out more on the Bigen website at [www.bigen.com](http://www.bigen.com)). The recognition by our industry peers and partners attest to Bigen’s efficient+ commitment

to service delivery, an attribute woven into the fabric of our operations. Some of the awards that came our way during the past two years are listed here.

## 2016

- CESA Aon Award for Business Excellence
- CESA Aon Award for Best Mentoring Company
- Top Five Gender Empowerment Engineering Company
- Best South African Multidisciplinary Infrastructure Development Company
- PMR.africa Bronze Arrow Award for Civil Consulting Engineers
- PMR.africa Bronze Arrow Award for Structural Consulting Engineers
- PMR.africa Combined Award for Civil and Structural Engineers

## 2017

- Top 500 Best-Managed Companies (South Africa)
- Top two awards for the Best-Performing Company in the Consulting Engineering Mining and Infrastructure Category
- African Business and Social Responsibility Award for Corporate Innovative Societal Action
- Consulting Engineers South Africa (CESA) AON Engineering Excellence Award for Mentoring Company of the Year
- CESA AON Engineering Excellence Award Water Reclamation Plant at Royal Bafokeng Platinum (Commendation).



# Our footprint in Africa



- 1 ANGOLA
- 2 BOTSWANA
- 3 COTE D'IVOIR
- 4 ETHIOPIA
- 5 GHANA
- 6 KENYA
- 7 LESOTHO
- 8 MAURITIUS
- 9 MOZAMBIQUE
- 10 NAMIBIA
- 11 NIGERIA
- 12 RWANDA
- 13 SOUTH AFRICA
- 14 SWAZILAND
- 15 TANZANIA
- 16 ZAMBIA
- 17 ZIMBABWE
- 18 DRC
- 19 UGANDA

 6 Regional offices

 Operational footprint in 19 countries

# What we do **matters**



## **We influence**

The infrastructure development landscape on the continent

## **We deliver**

The full value-chain of infrastructure development solutions to improve quality of life

## **We address**

The prevailing global threats, such as climate change, urbanisation and water, food, energy and health security

## **We lead**

An infrastructure development company with an innovative, multidisciplinary and partner-focused approach

## **We impact**

Livelihoods, quality of life, economic growth through job creation and skills training, community health, safety and general well-being

## **Our** business model

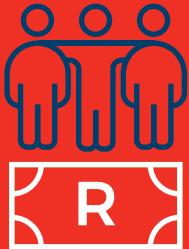
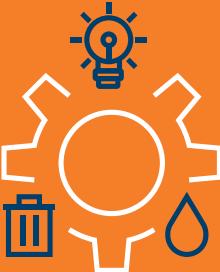
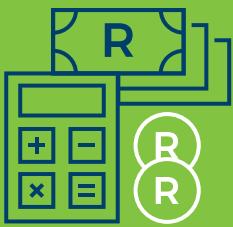
- A combination of **international, regional and local capabilities**
- Value creation and due reward through **calculated risk sharing**
- **Infrastructure development solutions** and alternative delivery models
- **We have a pipeline of bankable projects** with development finance institutions
- Our development impact is to **improve the lives of people**

**Pursuing development impact is at the heart of what we do to help the continent achieve its sustainable development goals (SDGs) by 2030, as set out by the United Nations (UN).**

Bigen's commitment to improving quality of life through sustainable infrastructure development underscores our vision, shared values, strategic drivers and the ways in which we engage our stakeholders and nurture long-term business relationships.

We respond to Africa's socio-economic development needs by offering a value-chain of financial, technical, environmental, socio-economic and institutional services in real estate, energy, water, health and transportation, in South Africa and throughout the continent.

Our Vision 2021 strategy coordinates our approach to achieving a new pinnacle of growth and relevance. Three strategic drivers underpin our earning power and business sustainability.

<p><b>AFRICAN EXPANSION</b></p>		<p>Core to Bigen's history is its growth from a one-man business in one location to a continental leader with offices in six African countries. Our regional footprint and development impacts are visible in 19 countries and we regard further expansion into Africa as a cornerstone of future growth. Target countries are selected based on economic opportunity, ease of doing business, value alignment and other country risk factors. Namibia and Botswana currently contribute 13% to net revenue, which is set to grow in 2018. We also attract staff from across the continent to support our expansion strategy, more recently from countries such as Zimbabwe, Uganda, Rwanda and the DRC. We mitigate country-specific political and legislative risk by selecting strong project participants with political influence and instituting early public participation.</p>
<p><b>EXPANDING THE CORE</b></p>		<p>The ability to offer a one-stop African 'supermarket' of infrastructure development services is at the core of our Vision 2021. This enables access to tailored infrastructure development solutions and a combination of international, regional and local capabilities that ensure that we deliver development impact. To achieve this position, we expanded our core business to beyond engineering and advisory services (real estate and water) and combined our existing capabilities in health, energy and transportation into dedicated directorates. During 2017, shareholders saw good results from these sectors, which bodes well for the forthcoming 2018 financial period. The Group and its affiliates are accredited under the ISO 9001:2015 quality management standard and ISO 31000:2019 risk management standard.</p>
<p><b>INVESTMENTS</b></p>		<p>Our Independent Investment Committee panel assists our leadership to evaluate potential investments and make recommendations based on international best practice. A number of the company's strategic investments impact positively on our earning ability. Bigen also owns equity stakes in a number of active concessions. These contribute to overall earnings through long-term service level agreements.</p>

# How we govern

## Parallel ownership structure

Sound governance and stable business systems support Bigen’s agile pursuit of becoming a top-five development impact activist on the African continent.



### Bigen Africa Group Holdings (BAGH)

- Held from **South Africa**
- Business development in all SADC common monetary areas



### Bigen Group Limited (BGL)

- Held from **Mauritius**
- Business development in all sub-Saharan Africa non-common monetary areas

## Shareholding

### Shareholders/ Holding companies

- Professional shareholders jointly hold a majority equity interest in the Bigen holding companies, aligning shareholder and management interests within the Bigen Group
- Holding companies make in-country investments, but include local equity

### Share placement

- Share trading trusts have been established in each principal jurisdiction
- Share trading trusts conduct all share transacting in the holding company, apart from new issue and related subscription for shares
- Two share placement and trading periods per financial year

### Share pricing

- Bigen Group boards set the share price for each entity in advance of placement periods
- Share pricing and dividend distributions follow shareholder-approved dividend policies
- Adopted a dividend yield policy of 12-16%

## Governance

<p><b>Bigen Group boards</b></p>	<ul style="list-style-type: none"> <li>• Shareholders elect each principal governing body for a three-year term, in compliance with Bigen Group constitutional documents</li> <li>• Appoint/nominate subsidiary and investment company boards</li> <li>• Oversee/guide compliance with governance codes, eg King IV; Bigen Group constitutions; code of ethics; licensing, royalties and master service agreements</li> </ul>
<p><b>Board committees</b></p>	<ul style="list-style-type: none"> <li>• Oversee audit, risk, ICT, human capital, remuneration, social, environmental, ethics, governance and shareholder matters</li> <li>• Hold five meetings annually</li> <li>• Report into holding company board cycles</li> <li>• Set policy with the respective boards for each functional area</li> </ul>
<p><b>Delegation of authority</b></p>	<ul style="list-style-type: none"> <li>• Bigen boards delegate functions to board committees, the BAGH CEO or the BGL MD</li> <li>• CEO and MD delegate functions to prescribed Bigen Group officers</li> </ul>
<p><b>Management</b></p>	<ul style="list-style-type: none"> <li>• Executive Chairperson guides the governing bodies in their fiduciary duties, including representing the interests of all PPP stakeholders</li> <li>• BAGH CEO and BGL MD manage day-to-day strategy implementation and operations</li> <li>• Prescribed officers direct operational and key support service areas</li> </ul>
<p><b>Transfer pricing policy</b></p>	<ul style="list-style-type: none"> <li>• Governs project and support service contracting between the two legs of Bigen.</li> </ul>
<p>Reporting compliance and governance disclosures available online at <a href="http://www.bigen.com">www.bigen.com</a></p>	

<b>Support services</b>	
<b>Finance</b>	<ul style="list-style-type: none"> <li>• Reports to the Chief Financial Officer</li> <li>• Responsible for financial planning, transacting, capital management, controls, payroll, policy and reporting on the Bigen Group and subsidiaries as per international financial accounting standards</li> <li>• <b>IMPACT: Ensuring sustainable profit and fairly remunerated people</b></li> </ul>
<b>Human capital</b>	<ul style="list-style-type: none"> <li>• Reports to the Human Capital Director</li> <li>• Responsible for employment, culture, leadership and skills development, transformation, remuneration, performance, reporting and human capital policy</li> <li>• <b>IMPACT: Developing effective people who deliver sustainable Profits with a positive development impact on People (communities) and Planet (environment)</b></li> </ul>
<b>ICT</b>	<ul style="list-style-type: none"> <li>• Reports to the Chief Information Officer</li> <li>• Responsible for information and document management, business continuity, technology development and trends, ICT policy</li> <li>• <b>IMPACT: Robust, bespoke systems that enable and support business agility</b></li> </ul>
<b>Legal, audit and risk</b>	<ul style="list-style-type: none"> <li>• Reports to the Chief Risk Officer</li> <li>• Responsible for legal services for partnerships, contracts, constitutional documents, procurement, internal audit, quality, HSE and enterprise risk management, using DMTs</li> <li>• A formal risk committee is accredited under ISO 9001:2015 and ISO 31000:2009</li> <li>• Insurance (professional indemnity; public and directors' and officers' liability, commercial crime and asset risks) is placed annually</li> <li>• <b>IMPACT: Ensuring ethical behaviour and sustainability</b></li> </ul>
<b>Governance</b>	<ul style="list-style-type: none"> <li>• Reports to the Company Secretary</li> <li>• Responsible for BAGH and BGL governance delivered to executive and board committees and various investment vehicles</li> <li>• Contracts out foreign (non-RSA) governance, overseen by the Bigen company secretary</li> <li>• Maintains entity and partnership databases, oversees policies and compliance</li> <li>• <b>IMPACT: Guiding and ensuring compliance with the triple bottom line - Profit, People, Planet</b></li> </ul>
<b>Marketing</b>	<ul style="list-style-type: none"> <li>• Reports to the Human Capital Director</li> <li>• Responsible for organisational branding, positioning and internal and external communication</li> <li>• <b>IMPACT: Solid reputation and positioning as a socio-economic development activist organisation</b></li> </ul>

## Accreditation and policies - Bigen places a high premium on:



### Best business practices

We benchmark against and align our business activities with international best practice and standards

## ZERO tolerance

We live our organisational values with zero tolerance for bribery and corruption



### Social responsibility

We apply a localised, indigenised recruitment policy in the countries where we operate

## Environmental responsibility

As a responsible environmental citizen, we align our ecological footprint with the green principles of the global ISO 14001 standard

## Health and safety

We apply the principles of the international ISO 45001 health and safety standard and comply with the HSE policies of clients and partners



### Managing quality

Our ISO 9001 quality certification assures clients and partners that through our quality system, standards and procedures, we deliver quality work consistently

## Economic empowerment

Our Level-2 B-BBEE status in South Africa affords Bigen 110% BEE procurement recognition and our beneficiaries with enhanced recognition for procurement spend



### Risk management

Our international ISO 31000 certification is based on a world-class, fully automated risk management system that facilitates proactive risk management

## Professional association

Our staff affiliations/associations/accreditations include, *inter alia* the Engineering Council of South Africa; Institution of Municipal Engineers of Southern Africa; Institute of Waste Management of South Africa; National Home Builders Registration Council; Project Management Institute; South African Institute of Civil Engineering; Consulting Engineers South Africa; South African Institute of Electrical Engineers; Southern African Institute for Steel Construction; Water Institute of Southern Africa and the Green Building Council of South Africa.

# How we pay it forward

Bigen's commitment to *doing good while doing business* supports our core vision of improving quality of life with sustainable infrastructure and drives our corporate social investment initiatives.

Socio-economic inclusiveness, indigenisation and development impact are, therefore, central pillars in Bigen's business excellence trajectory.

## Akaretsa (Include me)

**A social conscience is part of the Bigen DNA and integral to our corporate culture. We have a rich history of helping communities beyond commercial value or demand.**

- Total monetary and time-value **contributions** since 2014: **R7 million**
- **Designed and constructed houses** for three underprivileged families in Lephalele
- **Donations** given to our social partners in Ghana, Zambia and Botswana

Launched in 2014, Bigen's enterprising Akaretsa fundraising programme reflects our social DNA of caring for and helping those who cannot help themselves.

The contributions we make provide significant relief to deserving non-profit organisations (NPOs) who empower people and support sustainable community development through education, skills development, job creation, medical care and community infrastructure. During 2016, Bigenites gave of their time and joined forces with Carte Blanche and other donors to renovate the Infant High Care unit at the Sebokeng Hospital, one of our beneficiaries.

Growing support among employees and clients, partners and suppliers for our commitment to socio-economic upliftment has increased the stakes significantly over the years: from contributing an initial R900 000 in 2014 to R4 million in 2017, our goal for 2018 is R5 million.

A significant portion of our contributions are 'in-kind' from Bigen employees who give of their time to participate in community clean-up, maintenance or gardening projects – or simply spending quality time with children and adults from disadvantaged backgrounds. Our reward is knowing that we are helping to bring hope, care and comfort to people who often face a bleak future.

Within Bigen, the Akaretsa programme has entrenched an appreciation of the value of cultural diversity and communication in the workplace and an understanding that in an effective company, we need to speak, hear and understand one another.

## Akaretsa monetary and time-value contributions during 2017



› **R1.8 million time-value**

› **R2.3 million monetary contributions**

**Our beneficiaries:** PopUp (People Upliftment Programme), House David for Children, Sungardens Hospice, Funanani, Lerato House, Brainlife, Ditshego House, Little Eden and the Sebokeng Hospital

Our CSI initiatives are aligned with Bigen’s ultimate goal of developing economically sustainable infrastructure that delivers socially desirable developmental impact. The way in which we deliver products and services reinforce key emerging public policy priorities within sub-Saharan Africa and promotes inclusive economic growth and human development while upholding international best practice.



## Impact

- Trained 41 NPO leaders
- Bigen’s support for Sungardens Hospice assists with HIV testing and awareness campaigns that touch the lives of 5 000 people every month
- Youth focus in 2017 through support and contributions to Funanani, Lerato House and Ditshego House



# Our development impact

Benefits accrual: **clients, partners, employees, society**

**Improving the quality of life of Africans throughout the continent defines who we are.**

At the core of every Bigen project is a focus on long-term social impact. Wherever we operate, our intent is to help transform communities for the better.

Sustainable socio-economic development that helps to change lives is a key priority for us.

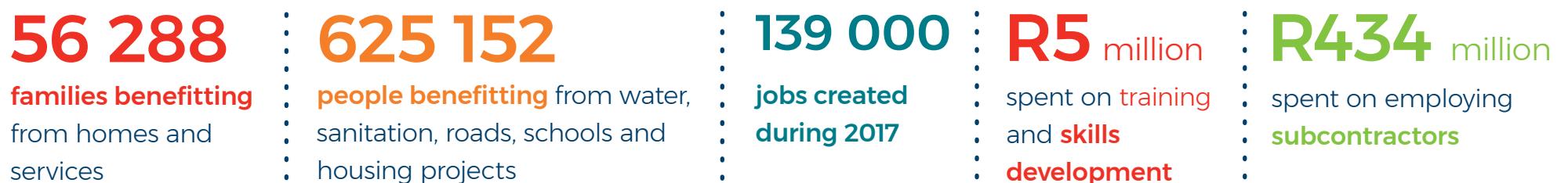




# Real Estate

The **roots** of social stability

Our approach to infrastructure development as a derivative of socio-economic development supports our philosophy of optimising sustainable impact to improve quality of life.



Our development impact during 2017 included:

## Chief Mogale Integrated Housing Development

<b>IMPACT</b>		<ul style="list-style-type: none"> <li><b>Integrate</b> fragmented towns of Azaadville, Kagiso and Rietvalley within Mogale City</li> <li>Residents benefit from a safer, <b>vibrant and socially, ecologically and economically sustainable neighbourhood</b></li> </ul>	
	<b>Location</b>	Mogale City Local Municipality (MCLM), Gauteng, South Africa	<b>Bigen Role</b> Project management, civil and electrical engineering, contract administration and site supervision, development management
	<b>Client</b>	ABSA DevCo (with MCLM, GDLG, GDHS)	
	<b>Stakeholders</b>	Residents, municipality, government, funders	
	<b>Scope</b>	9 400 residential units and amenities	
	<b>Value</b>	<b>R1.1 billion</b>	
	<b>Partners/Associates</b>	Geogroup (geotechnical); Marsh (environmental); ADA Urban Design; Deltaplan (land surveyor); ITS Engineers (traffic engineer)	

## Klarinet Integrated Housing Development

 	<h1>12 000 safe and secure housing opportunities</h1>		
	<b>Location</b>	Emalalheni Local Municipality (ELM), Mpumalanga, South Africa	<b>Bigen Role</b>  Project management, civil and electrical engineering, contract administration and site supervision, development management
	<b>Client</b>	ABSA DevCo (with ELM, MDoHS, NDoHS)	
	<b>Stakeholders</b>	Residents, municipality, government, funders	
	<b>Scope</b>	12 000 mixed-housing units and amenities	
	<b>Value</b>	<b>R1.2 billion</b>	
	<b>Partners/Associates</b>	ADA Urban Design; Engeolab Geotechnical Engineers; Uband Dynamics Town Planners; Cleanstream Environmental; Apil Architects	

## Leeuwpoot Integrated Housing Development

 	<ul style="list-style-type: none"> <li>• <b>24 000</b> institutional, bonded and subsidised housing opportunities</li> <li>• <b>Safe, vibrant and socially, ecologically and economically sustainable neighbourhood</b></li> </ul>	
	<b>Location</b>	Ekurhuleni, Gauteng, South Africa
<b>Client</b>	Leeuwpoot Development (Pty) Ltd for the Ekurhuleni Metropolitan Municipality (ELM)	
<b>Stakeholders</b>	Residents, municipality, government, funders	
<b>Scope</b>	24 000 residential opportunities and amenities	
<b>Value</b>	<b>R2.3 billion</b>	
<b>Partners/Associates</b>	Urban Dynamics Gauteng Inc (shared development and project management)	

## Lufhereng Integrated Housing Development

<b>IMPACT</b>		<ul style="list-style-type: none"> <li>• <b>21 848</b> mixed-type housing units</li> <li>• <b>Safe, vibrant and socially, ecologically and economically sustainable neighbourhood</b></li> </ul>
<b>Location</b>	Johannesburg, Gauteng, South Africa	<b>Bigen Role</b> Part of development and project management teams; consulting civil and electrical engineers
<b>Client</b>	Lufhereng Development Company (Pty) Ltd for the City of Johannesburg	
<b>Stakeholders</b>	Residents, municipality, government, funders	
<b>Scope</b>	21 848 mixed-type housing units and amenities, including an urban agricultural component	
<b>Value</b>	<b>R2 billion</b>	
<b>Partners/Associates</b>	Urban Dynamics (Gauteng) Inc; Raubex Construction (Pty) Ltd	

## Rugarama Park Estate, Rwanda

<b>IMPACT</b>		<ul style="list-style-type: none"> <li>• <b>\$500 million</b> on R-GDP economic support during construction</li> <li>• <b>\$160 million</b> post-construction on R-GDP economic support</li> <li>• <b>8 000 jobs</b> during construction and 2 100 jobs post-construction</li> <li>• Model for rest of Africa</li> <li>• <b>Restored sense of community</b> through sustainable neighbourhoods</li> </ul>
<b>Location</b>	City of Kigali, Nyarugenge District, Rwanda	<b>Bigen Role</b> Project management, civil engineering
<b>Client</b>	Rwandan Ministry of Infrastructure	
<b>Stakeholders</b>	Potential residents	
<b>Scope</b>	Phase 1 of 494 housing units in Rugarama Village	
<b>Value</b>	<b>\$131 313 563</b>	
<b>Partners/Associates</b>	Roko Consortium Rwanda Ltd; Development Bank of Rwanda; Shelter Afrique; City of Kigali	

# DBE Programme Support Unit for ASIDI



IMPACT

- Replacement of **500 schools** built from inappropriate materials throughout South Africa
- Improved water supply, sanitation and supply of electricity through **2 500 services projects**
- **Scholars benefit** from improved water, sanitation, electricity, lighting and fencing infrastructure
- Improved sports facilities, disabled access, communications technology and safety
- **Job creation** through construction projects

<b>Location</b>	Nationally, all nine provinces in South Africa	<b>Bigen Role</b> Programme management, engineering services, project management, M&E, social facilitation, skills development services, legal services, infrastructure and building assessments, enterprise development services
<b>Client</b>	Department of Basic Education (DBE)	
<b>Stakeholders</b>	ESKOM, provincial Departments of Education, Public Works, SGBs and various implementing agents including DBSA, Mvula Trust, IDT and CDC	
<b>Scope</b>	Upgrading of school infrastructure in South Africa to conform with minimum norms and standards set by DBE	
<b>Value</b>	<b>R11 billion over six years</b>	
<b>Partners/Associates</b>	BTKM, Mott MacDonald, Batseta, Indigo Kulani, Aurecon and Core Focus	

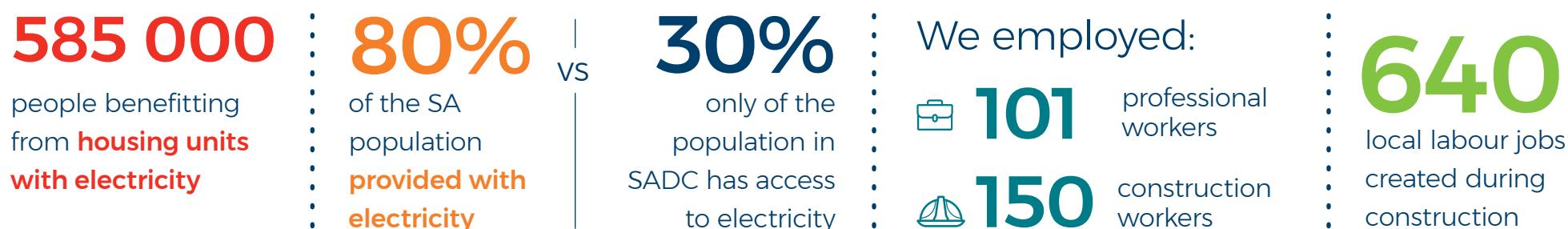




# Energy

Powering economic development and growth

Our energy services provide end-users with innovative solutions to improve livelihoods sustainably, locally and throughout the African region.



The socio-economic development impact of some of our 2017 projects:

## Simba Cement Solar PV Pre-feasibility Study

<b>IMPACT</b>		<ul style="list-style-type: none"> <li>• <b>Improved</b> supply quality</li> <li>• <b>Low</b> operating and maintenance costs</li> <li>• <b>High</b> savings potential against Tanesco electricity tariffs</li> </ul>
<b>Location</b>	Tanga Province, Tanzania	
<b>Client</b>	Simba Cement (Afrisam company)	
<b>Stakeholders</b>	Simba Cement shareholders	
<b>Scope</b>	Improve the quality of electricity supply and reduce electricity costs from Tanesco	
<b>Value</b>	<b>Estimated USD 40 million</b>	
<b>Partners/Associates</b>	S&P Power, Pretoria	
		<b>Bigen Role</b>
		Technical alternative analysis; concept design for a grid-tie, battery back-up Solar PV system at Simba Cement; financial viability pre-feasibility study for the proposed solution

## Electrification of Housing Developments

IMPACT		<ul style="list-style-type: none"> <li>• Electrification of <b>122 000</b> houses</li> <li>• <b>305 000+ people</b> with electricity in Leeuwpoot (75k), Lufhereng (60k), Soshanguve (50k) and Zenzele (30k) townships and Rama City (90k)</li> <li>• Employment and education opportunities due to schools, business and industrial areas</li> </ul>											
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Partners/Associates	Urban Dynamics, COncO; Tshepang Electrical												

## 132kV Transmission Line and Substation Project

IMPACT		<ul style="list-style-type: none"> <li>• Electrify <b>110 villages</b> benefiting more than <b>150 000 people</b></li> <li>• Expand electricity network and services</li> </ul>											
	<table border="1"> <tr> <td>Location</td> <td>South West Ethiopia (Key Afer)</td> <td rowspan="6"> <b>Bigen Role</b>             Lenders' technical advisor; project management services         </td> </tr> <tr> <td>Client</td> <td>Ethiopian Electricity Utility (EEPSCO)</td> </tr> <tr> <td>Stakeholders</td> <td>EEPSCO shareholders</td> </tr> <tr> <td>Scope</td> <td>Implement Sawula Key Afer 132kV transmission line and 132/33kV substation, incl electricity at 33kV and internal reticulation to villages</td> </tr> <tr> <td>Value</td> <td><b>More than USD 150 million</b></td> </tr> <tr> <td>Partners/Associates</td> <td>Dihlase Consulting Engineers</td> </tr> </table>	Location	South West Ethiopia (Key Afer)	<b>Bigen Role</b>  Lenders' technical advisor; project management services	Client	Ethiopian Electricity Utility (EEPSCO)	Stakeholders	EEPSCO shareholders	Scope	Implement Sawula Key Afer 132kV transmission line and 132/33kV substation, incl electricity at 33kV and internal reticulation to villages	Value	<b>More than USD 150 million</b>	Partners/Associates
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Value	<b>More than USD 150 million</b>												
Partners/Associates	Dihlase Consulting Engineers												

## Luangwa PV Pre-feasibility Study

 	Off-grid <b>electricity to villages</b> without electricity		
	Location	Luangwa, Zambia	<b>Bigen Role</b> Technical concept design for an off-grid, battery back-up, diesel generator integration solar PV system; financial viability pre-feasibility study for the proposed solution
	Client	Luangwa Solar Power Company	
	Stakeholders	Client and residents in villages	
	Scope	Off-grid electricity generation option (solar PV, batteries, diesel generator integration)	
	Value	<b>Estimated USD 7million</b>	
	Partners/Associates	S&P Power, Pretoria	

## Telkom NNOC Rooftop Solar PV Project

 	<ul style="list-style-type: none"> <li>• <b>Low</b> operating and maintenance costs</li> <li>• <b>High</b> potential savings against Eskom electricity tariffs</li> </ul>	
	Location	Pretoria, South Africa
Client	Rhino Energy, EPC to Telkom SA	
Stakeholders	Telkom shareholders	
Scope	Design, supply, implement 3MW rooftop solar PV projects on more than 50 roofs at the Telkom NNOC	
Value	<b>Estimated more than R70 million</b>	
Partners/Associates	Rhino Energy	

## Teebus Hydropower Station Feasibility Study

<b>IMPACT</b>		<ul style="list-style-type: none"> <li>• <b>Short</b> payback period</li> <li>• <b>Low</b> operating and maintenance costs</li> <li>• <b>High</b> potential income</li> <li>• <b>Low</b> levelised cost of electricity</li> </ul>												
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<b>Partners/Associates</b>	Sinotech, Lidwala Specialist Solutions													

## Finningley Housing Development Renewable Energy

<b>IMPACT</b>		<ul style="list-style-type: none"> <li>• <b>90 000 people +</b> will receive electricity from clean and green energy sources, including solar PV, wind and gas</li> <li>• Reticulation of <b>18 000 houses</b></li> </ul>										
	<table border="1"> <tr> <td><b>Location</b></td> <td>Kwazulu Natal, South Africa</td> <td rowspan="5"><b>Bigen Role</b> Electrical design and project management for renewable energy, supply substations and reticulation, including street lights</td> </tr> <tr> <td><b>Client</b></td> <td>Finningley Development Company</td> </tr> <tr> <td><b>Stakeholders</b></td> <td>KwaZulu-Natal residents</td> </tr> <tr> <td><b>Scope</b></td> <td>Design, construct and commission renewable energy systems, incl rooftop solar PV, water heating, LPG and LNG gas turbines; design and implement supply of substations and reticulation to houses</td> </tr> <tr> <td><b>Value</b></td> <td><b>More than R1 billion</b></td> </tr> </table>		<b>Location</b>	Kwazulu Natal, South Africa	<b>Bigen Role</b> Electrical design and project management for renewable energy, supply substations and reticulation, including street lights	<b>Client</b>	Finningley Development Company	<b>Stakeholders</b>	KwaZulu-Natal residents	<b>Scope</b>	Design, construct and commission renewable energy systems, incl rooftop solar PV, water heating, LPG and LNG gas turbines; design and implement supply of substations and reticulation to houses	<b>Value</b>
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# Water

Giving life, growing the future

Water is more than a precious commodity for life to exist, it is at the heart of our existence and all socio-economic development. More than any other aspect of sustainable development, long-term planning for managing our invaluable water resources is an imperative for all governments.

**2 384**

jobs created during 2017

**12**

million +

people benefitting from water projects

Helped deliver the **Botswana North-South-Carrier water scheme** and **water supply** to neighbouring countries

**Communities benefit** from water infrastructure expertise accumulated over more than **four decades**

Our development impact during 2017 includes:

## Botswana North-South-Carrier (NCS)-2 Water Transfer Scheme



- **± 1 480** local labourers employed
- Close to **200 local suppliers** and subcontractors employed
- **5 811 locals** and labourers trained during 45 299 training hours
- Direct contribution to the growth of the national economy

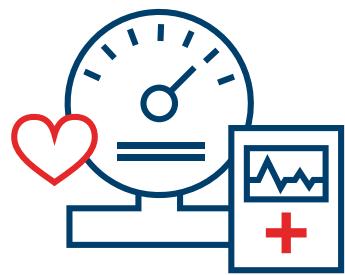
<b>Location</b>	Eastern Botswana	<b>Bigen Role</b> Employer's representative, regional planning, design, contracts administration, construction management
<b>Client</b>	Botswana's Ministry of Minerals, Energy and Water Resources (MMEWR)	
<b>Stakeholders</b>	0.9 million of Botswana's population	
<b>Scope</b>	Upgrade of water transfer scheme and communications network	
<b>Value</b>	<b>R10 billion</b>	
<b>Partners/Associates</b>	Water Utilities Corporation (WUC), Botswana; Civil Works JV (WBHO & CCC)	

## Lower Thukela Bulk Water Supply Scheme (LTBWSS)

<b>IMPACT</b>		<ul style="list-style-type: none"> <li>• <b>238 000 people</b> receive water from the <b>55 Mℓ/d</b> plant, distribution and storage site</li> <li>• More than <b>23 000 local labour days</b></li> <li>• <b>Improved livelihoods</b> through access to clean, potable water</li> </ul>												
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<b>Value</b>	<b>R1.6 billion</b>													
<b>Partners/Associates</b>	DWS; CoGTA; iLembe DM													

## Zeekoegat Waste Water Treatment Works (WWTW)

<b>IMPACT</b>		<ul style="list-style-type: none"> <li>• <b>400 000</b> work days to date</li> <li>• <b>50 community members directly employed</b> for duration of construction</li> <li>• <b>425 000 people served</b>, 275 000 more now have access to potable water</li> <li>• Computer laboratory, accessible to all, installed in local community</li> <li>• Local soccer team sponsored with complete match wear</li> <li>• Improved effluent quality</li> </ul>												
	<table border="1"> <tr> <td><b>Location</b></td> <td>Roodeplaat, Pretoria, South Africa</td> <td rowspan="6"><b>Bigen Role</b> Design and construction supervision of the extension of the works</td> </tr> <tr> <td><b>Client</b></td> <td>City of Tshwane Metropolitan Municipality</td> </tr> <tr> <td><b>Stakeholders</b></td> <td>Tshwane residents</td> </tr> <tr> <td><b>Scope</b></td> <td>Upgrade and expansion of the WWTW</td> </tr> <tr> <td><b>Value</b></td> <td><b>R500 million</b></td> </tr> <tr> <td><b>Partners/Associates</b></td> <td>KV3 Engineers (Kwezi V3 now Worley Parsons); Electron Technologies</td> </tr> </table>		<b>Location</b>	Roodeplaat, Pretoria, South Africa	<b>Bigen Role</b> Design and construction supervision of the extension of the works	<b>Client</b>	City of Tshwane Metropolitan Municipality	<b>Stakeholders</b>	Tshwane residents	<b>Scope</b>	Upgrade and expansion of the WWTW	<b>Value</b>	<b>R500 million</b>	<b>Partners/Associates</b>
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# Health

This is the **game changer**

Much needs to be done to improve healthcare in Africa. The challenge is to narrow disparities and create opportunities for people to lead healthy, productive lives. **We need innovative ideas and actions to create the social infrastructure that supports a healthy population.**



**Reduce**  
mortality



**Upgrade**  
and maintain health  
care infrastructure



**Increase**  
life expectancy  
and quality of life

Our development impact includes:

## Kampala International Hospital

<b>IMPACT</b> 	<ul style="list-style-type: none"> <li>• <b>Lighten the burden</b> of health impediments in the country</li> <li>• <b>Upgrade and maintain</b> health facilities</li> <li>• Provide Ugandan people with improved access to health services</li> </ul>											
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## Siloam District Hospital

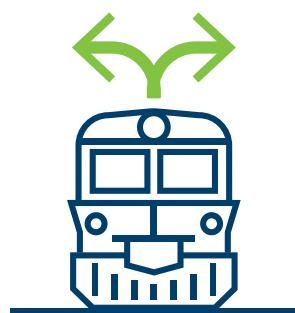
IMPACT		<ul style="list-style-type: none"> <li>• Access to a <b>306-bed</b> district hospital</li> <li>• Aligned with Limpopo DoH Health Strategic Transformation Plan</li> <li>• Support for <b>15 clinics</b> and <b>1 CHC</b> in the Thulamela Municipality</li> </ul>	
	Location	Limpopo, South Africa	Bigen Role Advisory services to hospital management for operations
	Stakeholders	Residents in the city and surrounds	
	Scope	Health consultancy panel participation	
	Value	<b>R1.9 billion</b>	

## Nelson Mandela Children's Hospital

IMPACT		<ul style="list-style-type: none"> <li>• State-of-the-art, world-class healthcare for South African children</li> <li>• <b>Reduced</b> neo-natal and child mortality</li> <li>• Specialised paediatric care, research and training</li> <li>• Capacity to improve outputs of specialists and sub-specialists</li> <li>• <b>±1 000 children</b> have already benefitted from access to the facility</li> </ul>	
	Location	Johannesburg, Gauteng, South Africa	Bigen Role Leading the procurement of medical equipment, human capital planning and development of hospital policies
	Client	Nelson Mandela Children's Hospital (NMCH) Trust	
	Stakeholders	Children and their families	
	Scope	Commissioning of the 200-bed Paediatric Hospital	
Value	<b>R1 billion</b>		

**“A children’s hospital will be a credible demonstration of the commitment of African leaders to place the rights of children at the forefront. Nothing less would be enough.”**

– Nelson Mandela



# Transportation

## Pumping lifeblood into economies

Transportation is a life-giving artery for a country’s industrial, trade and economic well-being. We integrate multidisciplinary expertise to address Africa’s logistical infrastructure challenges and deliver **solutions for Africa by Africans**.

**Ground-breaking** SANRAL Eastern Cape model, using small contractors to **maximise supplier development** in major road construction

**30 000 +**

jobs created in 2017



**Trained, mentored & assisted**

**identified groups** to maximise exposure and future project participation

Delivered **skills transfer, localisation, small business creation** and **technology transfer** in projects in South Africa and Namibia.

During 2017, we responded to the skills development goals of the National Development Plan in all our major projects by providing suppliers and members of local communities with development opportunities and stimulating direct (construction

and operations) and indirect (downstream) job opportunities and youth-tailored (<35 years) construction packages. We also applied robust procurement strategies aligned with government’s socio-economic policies.

The development impact of some projects included:



## eThekweni Integrated Rapid Public Transportation Network (IRPTN)

IMPACT		<ul style="list-style-type: none"> <li>• <b>6</b> emerging contractors were included in the JV to perform 51% of the work</li> <li>• <b>11 418 jobs</b> created through JVs</li> <li>• <b>9 778</b> local BEE jobs created</li> <li>• <b>32 subcontractors</b> from local wards employed</li> <li>• Contractor sponsored sports and school events and community functions</li> </ul>									
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Location	Pinetown, KwaZulu-Natal, South Africa	Bigen Role Project manager, contracts engineer, design and contract administration									
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Stakeholders	Residents in eThekweni municipal area										
Scope	Implementation of Corridor C3B of the IRPTN										
Value	<b>R963 million</b>										

## Kranzberg to Walvis Bay Railway Line Upgrade

IMPACT		<p>Projected development impacts are:</p> <ul style="list-style-type: none"> <li>• <b>±5 540</b> direct jobs created</li> <li>• <b>±5 000</b> indirect jobs created</li> <li>• <b>Skills development</b> in labour-intensive construction</li> <li>• Community participation, learnerships and generic training</li> </ul>									
	<table border="1"> <tr> <td>Location</td> <td>Namibia</td> <td rowspan="5">Bigen Role Full EPCM services</td> </tr> <tr> <td>Client</td> <td>Ministry of Works &amp; Transport</td> </tr> <tr> <td>Stakeholders</td> <td>Erongo Region communities and regional transport industry</td> </tr> <tr> <td>Scope</td> <td>Upgrading and improvement of railway line</td> </tr> <tr> <td>Value</td> <td><b>N\$4 billion</b></td> </tr> </table>	Location	Namibia	Bigen Role Full EPCM services	Client	Ministry of Works & Transport	Stakeholders	Erongo Region communities and regional transport industry	Scope	Upgrading and improvement of railway line	Value
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Scope	Upgrading and improvement of railway line										
Value	<b>N\$4 billion</b>										

## N11-8 between Ermelo and Hendrina

	<ul style="list-style-type: none"> <li>• <b>±R46 million</b>-spend on labour from local communities</li> <li>• <b>±R176 million</b>-spend on 32 local subcontractors</li> <li>• All staff transported by <b>local operators</b> during the project</li> <li>• <b>Sponsored</b> sports, school and community events, repaired roads and improved access roads in adjoining townships</li> </ul>												
	<table border="1"> <tr> <td>Location</td> <td>Mpumalanga, South Africa</td> <td rowspan="6"> <b>Bigen Role</b>                      Project management, detail design, contracts administration, contracts engineer                 </td> </tr> <tr> <td>Client</td> <td>South African National Roads Agency (SANRAL)</td> </tr> <tr> <td>Stakeholders</td> <td>Communities and residents in towns along the road, South African road users, Eskom Generation</td> </tr> <tr> <td>Scope</td> <td>Rehabilitation of the Eskom Coal Haulage Roads Network</td> </tr> <tr> <td>Value</td> <td><b>R663 million</b></td> </tr> <tr> <td>Partners/Associates</td> <td>Eskom; Mpumalanga DPWRT, P A Louw &amp; Associates, Bridge Design</td> </tr> </table>	Location	Mpumalanga, South Africa	<b>Bigen Role</b> Project management, detail design, contracts administration, contracts engineer	Client	South African National Roads Agency (SANRAL)	Stakeholders	Communities and residents in towns along the road, South African road users, Eskom Generation	Scope	Rehabilitation of the Eskom Coal Haulage Roads Network	Value	<b>R663 million</b>	Partners/Associates
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Partners/Associates	Eskom; Mpumalanga DPWRT, P A Louw & Associates, Bridge Design												

## Road maintenance R56-6 Indwe-Elliot and R56-7 Elliot-Maclear

	<ul style="list-style-type: none"> <li>• <b>1 064 jobs, 736 youth</b> appointments and <b>170 full-time jobs</b> created</li> <li>• <b>R57 048 069</b> value for a total of <b>598 050</b> hours</li> <li>• <b>41 black-owned</b> enterprises engaged to the value of <b>R107 953 786</b></li> <li>• <b>108 people trained</b> in <b>113 courses</b> to a total value of <b>R162 086</b></li> <li>• <b>234 women</b> and <b>197 female youth</b> employed</li> <li>• <b>98 subcontracts</b> to <b>64 enterprises</b> valued at <b>R159 444 488</b></li> </ul>										
	<table border="1"> <tr> <td>Location</td> <td>Indwe to Maclear, Eastern Cape, South Africa</td> <td rowspan="5"> <b>Bigen Role</b>                      SMME procurement and sub-contract administrative assistance                 </td> </tr> <tr> <td>Client</td> <td>South African National Roads Agency (SANRAL)</td> </tr> <tr> <td>Stakeholders</td> <td>Communities, commuters</td> </tr> <tr> <td>Scope</td> <td>National routes maintenance; road sections in Indwe and Maclear</td> </tr> <tr> <td>Value</td> <td><b>R750 million</b></td> </tr> </table>	Location	Indwe to Maclear, Eastern Cape, South Africa	<b>Bigen Role</b> SMME procurement and sub-contract administrative assistance	Client	South African National Roads Agency (SANRAL)	Stakeholders	Communities, commuters	Scope	National routes maintenance; road sections in Indwe and Maclear	Value
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Client	South African National Roads Agency (SANRAL)										
Stakeholders	Communities, commuters										
Scope	National routes maintenance; road sections in Indwe and Maclear										
Value	<b>R750 million</b>										

# Rustenburg Integrated Rapid Public Transportation System - North-East-Corridor (NEC) and Feeder Routes

<b>IMPACT</b> 	<ul style="list-style-type: none"> <li>• <b>332 local jobs</b> created and <b>20 local subcontractors</b> employed</li> <li>• <b>Contractors trained</b> in kerb-laying, paved footpaths and cycle lanes</li> <li>• <b>Increased pedestrian safety</b> and public transportation for 20-30 communities</li> <li>• JV with <b>100% black-owned</b> local subcontractors</li> </ul>	
	<b>Location</b> Rustenburg town and R510, North West province, South Africa	<b>Bigen Role</b> Design, tender administration and construction supervision, staff training
	<b>Client</b> Rustenburg Local Municipality	
	<b>Stakeholders</b> Road users, municipality	
	<b>Scope</b> Bus rapid transit (BRT) public transportation system	
	<b>Value</b> <b>R900 million</b>	
	<b>Partners/Associates</b> Lotshephe Africa JV; ITSE; Nemaï Consulting; KBS Consulting Engineers; M Pavlakis; M Civils; UMSO Construction	



# Abbreviations and Acronyms

<b>AIPF</b>	Africa Infrastructure Preparation Facility	<b>JV</b>	Joint-venture
<b>ASIDI</b>	Accelerated Schools Infrastructure Delivery Initiative	<b>LED</b>	Local economic development
<b>BaBPT</b>	Black business participation target	<b>LM</b>	Local municipality
<b>BAGH</b>	Bigen Africa Group Holdings	<b>MCHRN</b>	Mpumalanga Coal Haulage Road Network
<b>BGL</b>	Bigen Group Limited	<b>MD</b>	Managing Director
<b>BNG</b>	Breaking New Ground (government strategic human settlements initiative)	<b>MCLM</b>	Mogale City Local Municipality
<b>BRT</b>	Bus rapid transport	<b>MDPWR</b>	Mpumalanga Department of Public Works, Roads and Transport
<b>CBO</b>	Community-based organisation	<b>MDHS</b>	Mpumalanga Department of Human Settlements
<b>CEO</b>	Chief Executive Officer	<b>MMEWR</b>	Botswana's Ministry of Minerals, Energy and Water Resources
<b>CCC</b>	Consolidated Contractors Company in Gaborone, Botswana	<b>NGO</b>	Non-government organisation
<b>CHC</b>	Community Health Clinic	<b>NPO</b>	Non-profit organisation
<b>CoGTA</b>	Department Corporate Governance and Traditional Affairs	<b>NNOC</b>	National Network Operations Centre, Telkom
<b>DApp</b>	Development Impact Application	<b>NMCH</b>	Nelson Mandela Children's Hospital
<b>DoE</b>	Department of Energy	<b>OHS</b>	Occupational health and safety
<b>DFI</b>	Development Finance Institutions	<b>OOPE</b>	Out of programme experience
<b>DMT</b>	Database management tool	<b>PBPT</b>	Priority business participation target
<b>DPT</b>	Disability participation target	<b>PPP</b>	Public Private Partnership
<b>DWS</b>	Department Water and Sanitation	<b>PPPFA</b>	Preferential Procurement Policy Framework Act, 5 of 2000
<b>EDT</b>	Enterprise development target	<b>PV</b>	Photovoltaic
<b>EMM</b>	Ekurhuleni Metropolitan Municipality	<b>R-GDP</b>	Rand-Gross Domestic Product
<b>EPC</b>	Engineering, procurement and construction	<b>SANRAL</b>	South African National Roads Agency
<b>EPCM</b>	Engineering, procurement and construction management	<b>SDT</b>	Skills development target
<b>ESG</b>	Environmental, social and governance	<b>SED</b>	Socio-economic development
<b>GDHS</b>	Gauteng Department of Human Settlements	<b>SIPDM</b>	National Treasury Standard for Infrastructure, Procurement and Delivery Management
<b>GDLG</b>	Gauteng Department of Local Government	<b>SPV</b>	Special project vehicle
<b>HSE</b>	Health, safety and environment	<b>TLET</b>	Targeted labour employment target
<b>IDT</b>	Independent Development Trust	<b>UoL</b>	University of Life
<b>I&amp;C</b>	Investments and Concessions	<b>WPT</b>	Woman participation target
<b>IRPTN</b>	Integrated Rapid Public Transport Network	<b>WWTW</b>	Waste water treatment works
		<b>YPT</b>	Youth participation target

A photograph of a woman hugging a young boy from behind. Both are smiling warmly. The image is overlaid with a semi-transparent red filter. The text 'wwe rise' is written in a large, white, sans-serif font across the middle of the image, with the 'w' and 'e' overlapping the woman's shoulder and the 'r' and 'i' overlapping the boy's face.

wwe rise

by lifting others

# We'd like to hear from you

## **Bigen**

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Pretoria, South Africa

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