

# Thetha

Alumni & Friends Magazine, July 2019



**BIG BLUE**  
Saving our oceans

**#FAST  
FORWARD**  
The future is here

**LIONHEART**

Madibaz' bowler Lutho  
Sipamla is pitch perfect

**Hey, John Man!**  
Meeting Mr Kani

**Ghosts in a forest**  
The last Knysna elephant





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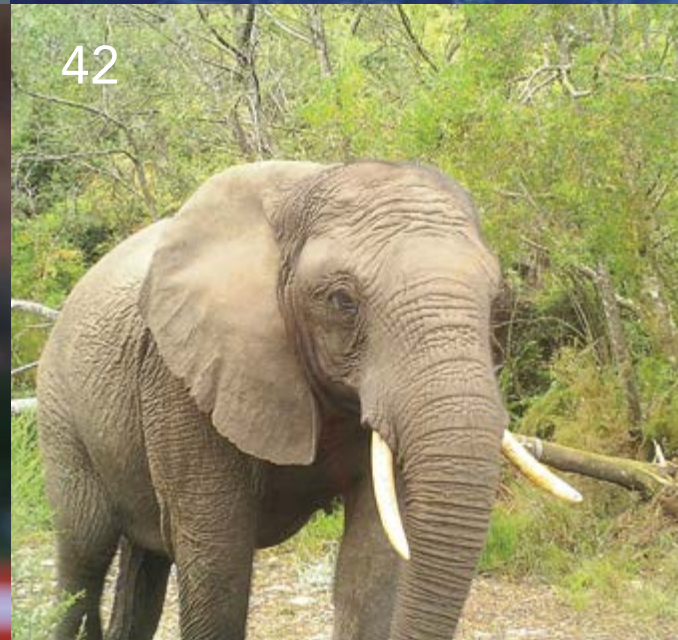


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**Cover Image:** Green sea turtle (Chelonia mydas) with a plastic bag. The bag was removed by the photographer before the turtle had a chance to eat it. Credit: © Troy Mayne / WWF  
 WWF is advocating for national governments to support a legally binding agreement on marine plastic pollution.

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We invite you to step inside this second issue of *Thetha*, where we share with you a glimpse of our university's ability to imagine and reimagine the meaning and lived experience of social justice, entrepreneurialism and science for a sustainable future. This is how we are taking the university forward, based on our intellectual and social project *In Service to Society*.

In pursuit of this, we are building bridges between the natural sciences and the humanities, between universities in Africa and globally, and between our university and communities.

We hosted two major international ocean sciences conferences in March this year, namely the Second International Indian Ocean Expedition (IIO-E2) – hosted for the first time in Africa – and the South Africa–Norway Research Co-operation on Blue Economy, Climate Change, the Environment and Sustainable Energy (SANOCEAN).

The world's oceans, which cover 70% of our planet, are a critical source of oxygen, food, marine resources, employment, and subsistence. All are at risk.

The conferences brought together partners from throughout the world, including major ocean sciences nations, in a united effort to advance sustainable policies and conservation action. A superb 12-page supplement emanating from this was published in the Mail & Guardian on 31 May this year. [mg.co.za/report/ocean-sciences-1](http://mg.co.za/report/ocean-sciences-1)

Contributing to our growth in the marine and maritime university sector,

on the Summerstrand campus, which will generate just over 10% of our university's electricity requirements. Spanning two hectares and equipped with 4500 fixed and sun-tracking PV modules, it's the biggest on-campus solar power plant in the country.

Another proactive focus of our university is entrepreneurialism, and we are immensely proud of our many students and alumni who personify entrepreneurial drive. One of our honorary doctorates this year, Dr Judy Dlamini, a medical doctor and entrepreneur, explains that her success started with being born to parents who taught her the

merits of hard work and the value of education as an escape from poverty.

Business pioneer and alumnus Quinton Uren, co-founder and MD of the automotive engineering firm, Jendamark Automation, was named Africa's Industrialist of the Year at the 2018 All Africa Business Leaders Awards. He says: "Industry 4.0 [also known as the Fourth Industrial Revolution or 4IR] and how it pertains to the South African environment is not about automation, but about

developing software technologies that can help our various industries and the country become more efficient, effective and transformed ... Our global headquarters remain in Port Elizabeth. People often underestimate this city, but I see it as a beacon of what is possible in Africa and specifically in the Eastern Cape."

Further north, in Zambia, BSc IT alumnus Lukonga Lindunda co-founded BongoHive, Zambia's first-ever tech hub and start-up accelerator. Lindunda received the Rising Star Alumni Award from Nelson Mandela University in 2017.

All our faculties are producing rising stars. Alumna Parmi Natesan, chartered accountant and BCom Honours, took over the reins as CEO at the Institute of Directors in Southern Africa (IoDSA) from April this year. She received the Rising Star Alumni Award in 2016 and says: "Gone are the days where we only try to create value for shareholders. Yes, we need to be a sustainable business, create value and make decent returns for investors and stakeholders, but we need to do it responsibly – we need to look after the best interests of the company, taking into account all the stakeholders. We should not only have the interests of shareholders and customers at heart, but also those of communities, the environment and our planet."

Environmental sustainability is one of the pillars of Nelson Mandela University and the research on the last elephant in the Knysna forest, in which Professor Graham Kerley from our Centre for African Conservation Ecology participated, is hopefully a wake-up call. As Prof Kerley says: "She is the metaphor for our treatment of all species that live on this planet with us. The saying 'the elephant in the room' could not be more apt; she is telling us we are making some big mistakes and we are going to lose a lot more than her if we don't substantially change how we treat and value biodiversity."

We are seeing significant environmental shifts across our country, including severe drought. In June 2017 the prolonged drought contributed to one of the worst wildfires on record in Knysna, burning 15 000 hectares, claiming the lives of

seven people, destroying more than 800 buildings and razing thousands of hectares of forest plantations and natural vegetation (mainly fynbos). "This called for research and engagement on the factors that contributed to the fire, a fire of such severity that it could happen again if preventive measures are not taken to limit the fuel loads," says Dr Tineke Kraaij from our School of Natural Resource Management in George.

Environmental and social engagement is part of our core as an engaged university and we are forging ahead with the KaziBantu programme, a Swiss–South African partnership between Nelson Mandela University,

aimed at improving teachers' health. "This is probably the first study of its kind looking at the health of teachers in this depth," says Prof Walters.

On the subject of physical activity, one of our students, 20-year-old Madibaz fast bowler Lutho Sipamla, is holding our cricket flag high. He was selected as the rookie player for the Tshwane Spartans and he says he enjoyed the special experience of sharing a changing room with South African batting icon AB de Villiers. In years to come, young players will no doubt mention Sipamla's name with the same reverence.

Which goes to show, it is all in a name. And our university's new

**Contributing to our growth in the marine and maritime university sector, last year our Faculty of Engineering, Built Environment and Information Technology (EBEIT) launched a Marine Engineering degree, and this year we launched our Marine Robotics Unit.**

the University of Basel in Switzerland, and the Swiss Tropical and Public Health Institute. Our Department of Human Movement Science's Professor Cheryl Walter is the South African principal investigator.

Poor health and inactivity negatively impact children's ability to achieve in the classroom and reach their full potential, with children in the poorest schools being the most affected. KaziKidz is a programme within KaziBantu that is being piloted with eight disadvantaged primary schools in Nelson Mandela Bay to improve the health and physical activity of the children. The aim is to roll it out to 300 schools across the Eastern Cape by next year, and then to expand it beyond our borders to other countries in Africa. Another part of the programme is KaziHealth,

naming and renaming project is well underway across all seven campuses. Last year our students proactively engaged in the renaming process, presenting names for their residences that will inspire current and future generations. The process offers the university the ideal opportunity to build on our new identity, which foregrounds the intellectual Mandela brand and encourages our students to be brave, bold, hard-working and entrepreneurial, with a social conscience and commitment to helping make our city, province, country and world a better place. They will be following in the footsteps of you, our inspiring alumni, who are already living this culture.

**Professor Sibongile Muthwa**  
Vice-Chancellor





# Centenary Celebrations

Since its name changed two years ago, Nelson Mandela University has been exploring its role as the only university in the world that carries Madiba's name, and the enormous responsibility that goes with this.

Among others, this sparked an idea to introduce Critical Mandela Studies at the University – studies where Mandela, as a figure of social justice, becomes the lens through which the huge challenges of our time can be viewed, grappled with and understood, and ultimately pave the way towards new and better ways to solve them.

The idea of a Transdisciplinary Institute for Mandela Studies (TIMS) was the focus of the Dalibhunga: This time? That Mandela? colloquium, held at the University in March.

The colloquium was one of the few remaining activities under the University's year-long Centenary Celebrations Programme – launched in July last year – which has been firmly rooted in the academic project as the best contribution the University could make towards preserving and nurturing Nelson Mandela's legacy.

"Through TIMS, we want to develop Mandela scholars. There are many people doing great work in isolation, but not in a programme that will bring them together. That's the uniqueness of TIMS ... We want to attract people who have a deep sense of the issues Nelson Mandela would have been interested in, and to study them at a postgraduate level," says Prof Andre Keet, Chair for Critical Studies in Higher Education Transformation (CriSHET) at Mandela University.

Vice-Chancellor Professor Sibongile Muthwa, in her inaugural address last year and at numerous institutional events thereafter, has placed emphasis on the role of universities in making a meaningful impact in the communities they serve.

One of the spin-offs from this has been the concept of the Hubs of Convergence (HoC), which will be physical spaces where the university meets community members to engage on common platforms to find solutions to practical

problems that affect our immediate communities.

"The hubs will provide an outward focus, and will benefit from the intellectual and other assets of the University, and the conscious wisdom of the communities that surround us," says Prof Muthwa.

Through the Hubs of Convergence, the university intends to commit its resources, skills, assets and knowledge to work with government, private sector, non-governmental organisations and civil society.

Work towards the first HoC began on May 3, with an initiation conversation held at the Govan Mbeki Multipurpose Sports and Community Centre, in the heart of Nelson Mandela Bay townships.

Other Centenary Programme activities that have taken place at the university this year include two pivotal international ocean sciences conferences held in March.

The first was the Second International Indian Ocean Expedition (IIOE2), which was hosted on African soil for the first time and brought together partners from every country in the world, including the big ocean sciences nations, in the single largest effort to study the Indian Ocean in a transdisciplinary manner to advance our understanding and

enable informed decisions.

The second conference was the South Africa–Norway Research Co-operation on Blue Economy, Climate Change, the Environment and Sustainable Energy (SANOCEAN), where long-term programmes in this partnership have enhanced the knowledge base for policies and decisions for sustainable development in the areas of the blue economy and the environment.

The University also launched its Naming and Renaming Project this year, which is a very important part of the institutional transformation and identity building process.

The Centenary Celebration programme will close with the hosting of two Mandela lectures and the second annual Youth Development Convention in July.

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## YEARS OF MANDELA



# Building a more inclusive future

## Naming principles

A naming policy to support the roll-out process for change is in place offering the following naming principles and criteria:

- Names should serve to build social cohesion and inspire present and future generations
- Names should redress imbalances of the past and seek to honour local people and the history of the area
- Choose names of those who have contributed significantly to advance the cause of all South African
- Consider places of significance and meaning; significant moments or events in our history; geographical features; indigenous flora or fauna and names that are in line with strategic priorities, vision, mission and values
- The primary users of a building or space should be given the opportunity to provide input on its name.

**A** new Naming and Renaming project aimed at building an inclusive institutional culture that contributes to transformation is underway across all seven university campuses.

It's an expansive and multi-layered project that through both its consultative processes and choice of names, will seek to recognise, respect and honour all peoples in a way that will ultimately resonate and reflect the values of our namesake.

It's unlikely to be an easy process. Name choices and the associated identities are always going to be a contentious, tricky business. But nonetheless, it's a business that needs tackling as Nelson Mandela University seeks to nurture and grow its new, emerging identity as an institution set on being in service to society.

It's what Mandela himself would have advocated – an opportunity

for robust, mutually respectful engagement towards a greater understanding and appreciation of proposed choices, whether they be the names of individuals, significant moments in our history, specific fauna or flora, or geographic spaces. He championed any project that promoted dignity and humanity.

This process is all about building an inclusive culture, says project leader Michael Barry, of the Arts, Culture and Heritage Department.

"Social cohesion and inclusivity is the African institutional culture that we aspire to achieve at Mandela University and the process – the collective naming and renaming of buildings, spaces, roads and other places – will help enhance and enable this."

### Nelson Mandela name

The university officially launched its new name in 2017 as part of the next phase in its journey to becoming a

great African university.

With the Mandela mantle come huge responsibilities – not least that of giving life to Mandela's dream of social equality, social justice and social cohesion.

And so the naming process gives the university the ideal opportunity to do this, to build our new identity – one that foregrounds that intellectual Mandela brand. For it is beholden upon us, "to liberate the minds of the oppressed and awaken in them the potential of African scholarship", to quote President Cyril Ramaphosa, who attended the 2017 launch.

Nelson Mandela University should, indeed, be an academic university that has an intellectual identity, denoting a significant footprint globally associated with human rights, engagement, decolonisation and cultural upliftment.

These new names – those that will replace the discriminatory ones of the past and the other innocuous, empty ones of today – will also serve as an important visual indicator of the university's transformation interventions, and more especially as the university celebrates Mandela's centenary year.

### Students lead way

In 2018 Mandela University, guided by the new Naming Policy, proactively engaged students to seek names for their residences that resonate with our namesake and will inspire generations of students to come.

The likes of the Eastern Cape's Sarah Baartman, whose resilience paints a painful picture of how women have been marginalised, and Lillian Ngoyi, who led the 9 August 1956 women's march to the Union Buildings in Pretoria to protest against the apartheid government's pass laws,

**What's in a name? Quite simply, everything when your name is Nelson Mandela University, writes Debbie Derry, as the institution embarks on an exciting Naming and Renaming project aimed at further enhancing the iconic statesman's ethos.**

were among the names selected and approved.

### Official launch

The 18 to 24-month roll-out of the process of naming and renaming was officially launched by Vice-Chancellor Professor Sibongile Muthwa in May, with staff, students and the families of those after whom the first residence buildings have been renamed in attendance.

### Processes

The proposals for all the places, spaces and buildings that form part of this reimagining process will be submitted to various committees, including the Arts, Culture and Heritage Committee, before being presented to Council.



Student residences

- Claude Qavane Residence (formerly Xanadu)
- Sarah Baartman Residence (Melodi)
- Solomon Mahlangu Residence (Unitas)
- Lillian Ngoyi Residence (Veritas)
- Hector Pieterse Residence (Letaba)
- Charlotte Maxeke Residence (Lebombo)
- Indwe Residence
- Ikamva Residence
- Sol Plaatje Residence (Protea)
- Yolanda Guma Residence (Oceana)

In the spirit of inclusivity, you can have your say by going to [www.naming.mandela.ac.za](http://www.naming.mandela.ac.za)



Sarah Baartman Residence (Melodi)

Daughter of our Soil



Solomon Mahlangu Residence (Unitas)

Hero of the Revolution



Lilian Ngoyi Residence (Veritas)

Politics with a Purpose



Claude Qavane Residence (Xanadu)

A Young Leader par Excellence



Yolanda Guma Residence (Oceana)

A Leading Light



Hector Pieterse Residence (Letaba)

A Symbol of Sacrifice



Charlotte Maxeke Residence (Lebombo)

A Woman Before her Time



Sol Plaatje Residence (SSV Protea)

The Wisdom of Words



Home-grown sculptor Jonathan van der Walt is the man behind the artworks of those whose men and women whose names were chosen for student residences as part of the Naming and Renaming project at Nelson Mandela University.

"I feel that art plays a fundamental role within society and the small act of drawing iconic figures, the process of creative re-representation, assists in reiterating the importance of such figures in contemporary society more so than what an archival photograph would have," says van der Walt.

Van der Walt is also the intern gallery manager at the Bird Street Gallery, the university's Visual Arts Department's contemporary art gallery at its campus in Central. Here he assists in the arranging and coordinating of exhibitions, the curating and hanging of these exhibitions.





# FAST FORWARD

**T**he 21st century promises a brave new world of driverless cars, 3D printed organs and unparalleled medical breakthroughs, fuelled by the men and women pioneering the Fourth Industrial Revolution – an explosion of trailblazing technology set to transform the way we think, work and play. Nelson Mandela University has long been positioned to embrace these changes, producing the unparalleled expertise and skills critically needed as Port Elizabeth places itself at the heart of Africa's contribution to an exhilarating future.



Photo courtesy of Nelson Mandela Bay Tourism

Could continent lead the Fourth Industrial Revolution?

## African wave

**From myths to mammoth tech start-ups, unicorns are rising – and Africa is holding her own, writes Cathy Dippnall.**

The new 'dot-com' start-ups, known as 'unicorns' in tech world parlance, are a class of highly successful (mainly tech) companies that have reached, through venture capital and seed funding, \$1-billion (R14.5-billion) valuations and include giant app-based companies Uber, Airbnb, and Lyft, who all make use of smartphone technology.

In Africa, there are two millennial unicorns, South Africa's Cell C mobile

phone company and Nigeria's online marketplace, Jumia, hailed as Africa's Amazon.

"Smartphones only came into being from 2007 and have already changed the world. Everyone is using them – even rural farmers are using agri-tech apps to help them choose and manage their crops more efficiently," says Chris Adendorff, Professor in Future Studies at Nelson Mandela University.

He is understandably enthusiastic about the Fourth Industrial Revolution (4IR) and says that the 21st century is all about Africa and the growth of the digital economy.

"It is a very exciting scenario which will totally change the way we work, and it is important for this generation to have the foresight and prepare for the future in the context of changes that come with new innovations."



Seeds of change

Africa has a young, growing population compared to populations elsewhere that are shrinking and ageing.

“In the past decade we’ve seen Africa growing four times faster than the United States. By 2050, one in four people will be African, with the highest rate of working to non-working people in the world, which is why the 4IR is so important to Africa because even by 2030, two billion current jobs will not exist,” explains Prof Adendorff.

4IR involves a combination of artificial intelligence (AI) and automated machines that has the potential to disrupt every industry. For example, the Internet of Things (IoT) is the extension of internet connectivity into physical devices so that they can talk to each other – such as the driverless car that can be remotely monitored and controlled.

“Only 20 countries in the world have called for change for 4IR and South Africa is one of them. There are fewer than 10 countries in the world affiliated to the World Economic Forum’s centres for the 4IR network; and the first in Africa, South Africa, is among them, as it has just launched an affiliate centre at the Council for Scientific and Industrial Research (CSIR) in Pretoria.

“Technology has already begun reshaping the way we manufacture goods and produce services, how we communicate and interact, how we can administer health and how we educate our youth. Any economic development and global transformation will be shaped by how quickly we are able to embrace and master the technologies associated with 4IR.”

Obstacles to growth

But South Africa has challenges, such as poverty, inequality, unemployment, and an unsubstantial education system poorly equipped to change to the educational requirements needed for 4IR.

“We have to be sensitive to [this],” says Prof Adendorff. “The local affiliate centre will allow stakeholders

to discuss how 4IR can be applied to the South African scenario.

“Education in South Africa will be forced to change its methods to keep ahead of the global 4IR. We have the potential to become the second biggest world economy if we start now with education and change the way we think.

“All youth should be educated until they are 16 years old with a 70/30 ratio of 70% of learners going on to artisanal college, where 20% of the curriculum consists of programming, the Internet of Things, blockchain and networking.

“The remaining 30% go to university, but already the three-year courses are too long, as the technology of doing things changes rapidly.”

Prof Adendorff expects that many working people will have to have six months micro training to change professions as their current jobs become obsolete.

He also suggests educators move to Apple’s Swift education curricula, a collection of computer science resources that will assist them in

“The Fourth Industrial Revolution is synonymous with uncharted growth in digitisation and internet connectivity. It has the potential to drive Africa forward like never before, enabling innovation, spurring new business models, and improving the delivery of public services.” David Meads, President of Cisco Africa.

“We have the potential to become the second biggest economy if we start now with education and change the way we think”

bringing Swift programming language into schools and colleges.

“It will teach learners through experiential learning using a customised suite of lesson plans, presentations, and blockchain projects.”

Technology 4IR has already taken Africa out of the middle ages into a sci-fi 21st century, bypassing all the traditional learning routes with smartphone technology.

With half the world living in Africa, India or China by 2100, educational needs will drive the use of technology. Global leadership and sales of educational goods and services will be shaped to meet their specific issues over any other world economies.

Presidential Commission on 4IR

Professor Chris Adendorff of Nelson Mandela University’s Business School, who specialises in Future Studies has been appointed by President Ramaphosa to the Presidential Commission on the Fourth Industrial Revolution (4IR).

The mandate of the Commission is to advise the government on policies, develop a framework for implementation of a multi-sectoral strategy; coordinate, monitor and evaluate multi-sectoral initiatives that will position South Africa as a globally competitive player in 4IR.

The commission comprises representatives from

key sectors such as banking, agriculture, science and technology, academia, the private sector and labour organisations.

In addition, two other members included on the Commission are connected to our University, Alumnus Baxolile Mabinya and Adjunct Professor, Andile Ngcaba. Baxolile completed his Master’s in Commerce: Computer Science and Information Systems (*cum laude*) in 2007 and is currently a director at a digital technology company, Deviere. He was also a recipient of our prestigious Alumni Rising Star Award in 2014.



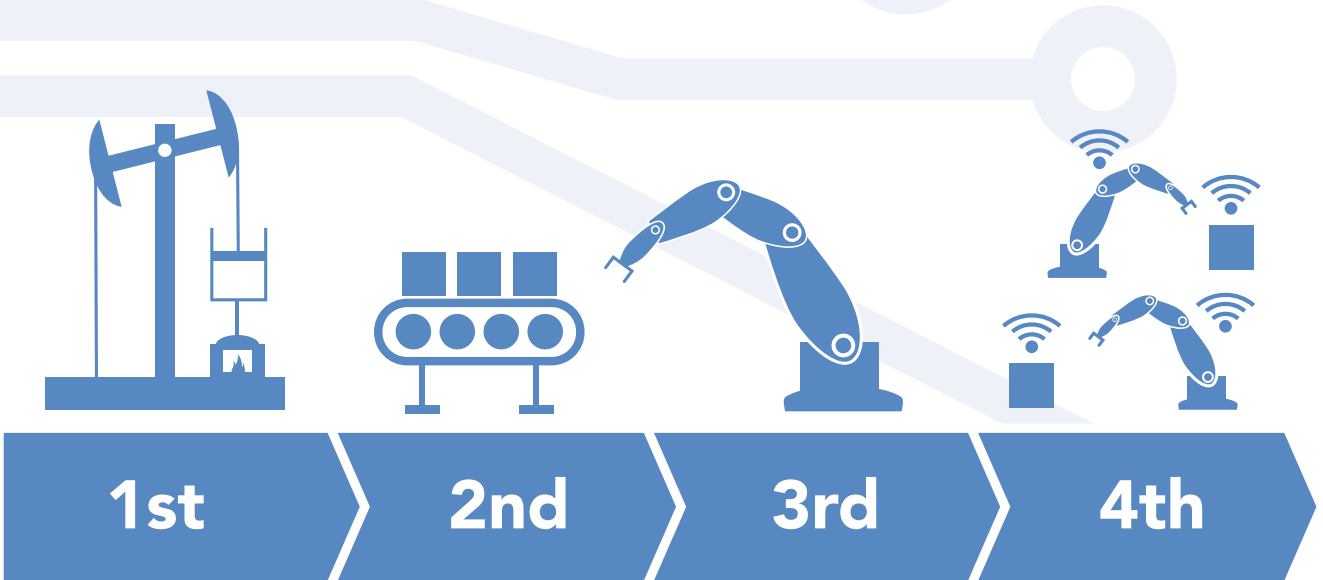
Andile Ngcaba



Baxolile Mabinya



Chris Adendorff







# Port Elizabeth an emerging software hub

**With the advantages of the Fourth Industrial Revolution (4IR) on our doorstep, Nelson Mandela University's forward-thinking approach to cutting-edge technology and the city's appealing lifestyle, Port Elizabeth is fast attracting software development's best and brightest, writes Lize Hayward.**

"As [an] academic, I have been tracing the employment of our graduates over the past few years," says Professor Jean Greyling, associate professor in Mandela University's Department of Computing Sciences.

"About five years ago, the majority left the Eastern Cape for Gauteng and Cape Town. Today a substantial portion of our graduates now actively pursue employment in Port Elizabeth, and lately also East London.

"This is a direct result of a growing software development industry. Various new software companies have been founded in the region, while national and international companies have opened local offices. It has also become very common that local companies have clients in many foreign countries.

"It is cost effective to run a business locally, which includes reasonable office rental rates, less travel distance and time as well as cheaper living costs. World-class connectivity in the city and the presence of quality graduates produced here make Port Elizabeth an obvious choice."

## **Work-life balance promotes wellness**

According to Klaus Schwab, founder

and chairperson of the World Economic Forum, the desire for purposeful engagement is becoming a major issue. This is particularly the case for the younger generation, who often feel that corporate jobs constrain their ability to find meaning and purpose in life.

In a world where boundaries are disappearing and aspirations are changing, people want not only work-life balance, but also harmonious work-life integration.

"We know that few people manage to live up to the popular motto of 'keeping our work and personal lives separate.' So, the healthier lifestyle, such as the slightly slower pace of Port Elizabeth, the absence of long commuting to work and the privilege of looking at the ocean, contribute to the wellness of employees and workplace satisfaction," says Dr Sue Petratos, Director of the university's School of ICT.

## **Team effort**

The critical importance of collaboration plays an important role in the city's software boom.

According to Schwab, as young dynamic firms and established enterprises connect with one another

and to cities and universities, cities become sites of experimentation and powerful hubs for turning new ideas into real value for local and global economies.

The Nelson Mandela Bay iHub (NMB iHub), Propella and Mercedes-Benz South Africa are examples of such collaboration.

NMB iHub supports small businesses in the Information and

## **The Fourth Industrial Revolution**

The 4IR is the fourth major industrial era since the initial Industrial Revolution of the 18th century. It is characterised by a fusion of technologies that is blurring the lines between the physical, digital and biological spheres – collectively referred to as cyber-physical systems.

Schwab describes the 4IR as fundamentally different from the previous three revolutions. He regards its underlying basis as advances in communication and connectivity, rather than technology.

Communication Technology (ICT) sector by providing, inter alia, office infrastructure, training, mentorship and interaction with other tech entrepreneurs.

Propella is another vital conduit, established four years ago as a joint venture between the then Nelson Mandela Metropolitan University and Engeli Enterprise Development.

The aim is to grow entrepreneurs by assisting with development and commercialisation of products and business models.

One of its highlights was the establishment of a 'Smart City' (see [thepropella.co.za/home/SmartCity](http://thepropella.co.za/home/SmartCity)) that acts as a pilot site for Smart City solutions – and is open to the public.

Further afield, Daimler AG, parent company to Mercedes-Benz South Africa, recently announced the establishment of an IT Hub at its plant in East London. The IT Hub will provide the global Daimler manufacturing plants with Information Technology (IT) applications specialising in the manufacturing operations for production systems, supply chain and maintenance services.

## **Our Smart City**

According to Dr Petratos, the 4IR is already here, as the "future world of work" has become the current world of work.

"Offices no longer need to be pinned down to a physical location or even a specific time zone. IT is an enabler of the shared economy – popular examples are Airbnb and Uber, which have monetised otherwise idle assets. A shared work environment allows collaboration and idea sharing, which is vital in today's entrepreneurial environment.

"By far the most exciting idea is that Port Elizabeth can be the first Smart City in South Africa. It is just big enough – or small enough – to actually make it work. Imagine students going to class with just the tap of their phones or student cards, when accessing transport or having accommodation problems solved through SmartApps?"

## **The future of our city and country**

What factors are important to continue driving this evolving hub status of Port Elizabeth into the future?

"We need to continue producing quality computing graduates. Consequently, we need the software industry as a financial partner of the relevant academic departments. Continuous postgraduate research is important to ensure cutting-edge skills, in touch with reality. One of our initiatives includes reaching out to schools, recruiting top learners into the discipline," says Prof Greyling.

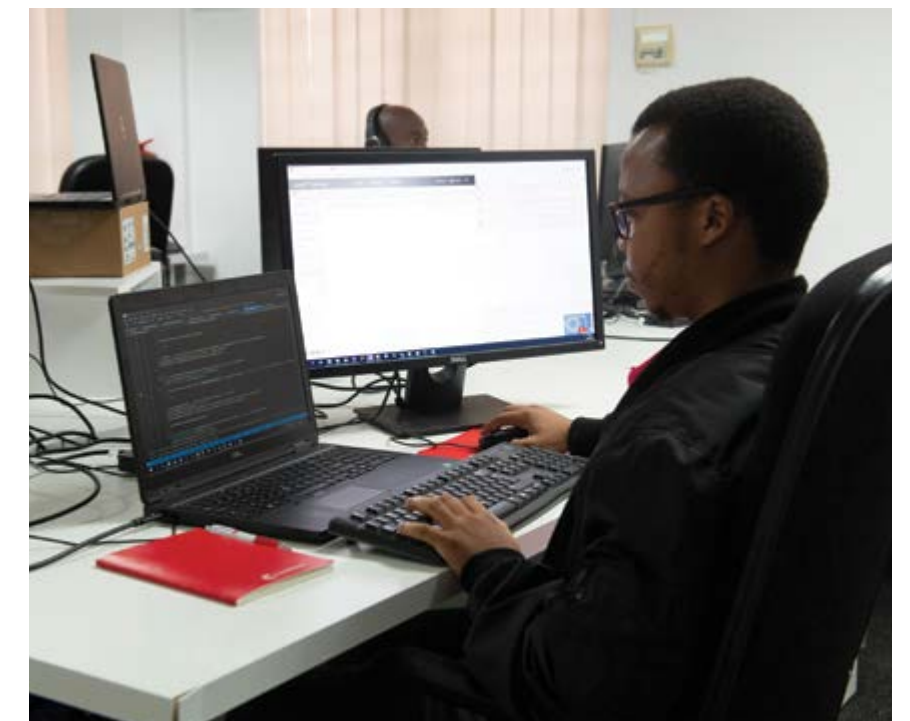
According to Dr Petratos, the injection of funds into innovative technology hubs is also crucial.

"The School of ICT supports this trend by offering access across the spectrum of tertiary qualifications. Students who do not have access to higher education through the traditional routes of degrees and diplomas can gain access through our Higher Certificate in User Support Services. Our Centre of Community Technologies (CCT) has many overseas partners and projects which include assessing and preparing schools for the use of technologies.

"Digital inclusiveness is an imperative to the growth of our country. Not paying urgent attention to this will see the 4IR leave South Africa in ruins. Education needs a major revamp to ensure that school children and tertiary education graduates all have digital skills. If we do not do this, we will find ourselves too far behind to ever catch up, leaving a wasteland of unused potential."

## **S4 Integration – an established local**

"I believe that Port Elizabeth is the growing software hub of South Africa. There is a trend of companies with existing software development based in other cities, opening offices here. There is clearly a realisation that Port Elizabeth has the talent," says Nico Claassen, software development manager at S4 Integration – himself an electrical engineer from Mandela University. Established in Port Elizabeth in 1996, S4 employs about 210 people, of whom 71 are software developers – of these, 65 are Mandela University graduates.





# LexisNexis – a multi-national opens locally

A leading provider of content and technology solutions worldwide, LexisNexis officially opened an office here in 2017. “We definitely see Port Elizabeth as an attractive prospect because of its pipeline of graduates. Our presence in the city allows us to tap into the province’s burgeoning computer science and information technology graduate base,” says Benno Schoonraad, senior project leader, who studied Computing Science at Mandela University and joined the company five years ago. A large percentage of his colleagues also hail from the university.



# Avocado Chocolate – a fast-growing start-up

Local software development consulting firm, Avocado Chocolate, has grown from two to 18 staff members in just over three years. The company employs 14 software developers – all Mandela University graduates. “Port Elizabeth is an emerging software hub, looking at employment opportunities and the university’s talent pool. Companies are opening offices here and new start-ups are thriving in the city,” says Cornelius Greyling, co-founder and CEO.



Cornelius Greyling, Martin Stolk and Chris Hurrel



Steering South Africa towards cleaner transport

# GREEN WHEELS

As the world strives to slow down human-induced climate change – and the carbon emissions that have led to it – business as usual in the field of transportation is no longer an option, writes Nicky Willemse.

India has boldly declared that by 2030, all new cars in that country will be only electric. And Paris and London are targeting 2040 to become emissions-free cities. In South Africa – where 91,2% of carbon emissions within transport is directly caused by motor vehicles – there is pressure to follow suit. If we don’t, we could become a “dumping ground” for petrol and diesel cars the rest of the world doesn’t want, warns Hiten Parmar, director of the national uYilo eMobility Programme, which is hosted by Nelson Mandela University.

**Road to change**  
South Africa already has 1 221 electric cars on the road – and it’s predicted that this number could grow to 145 000 by 2025, by which time electric cars should cost the same as petrol and diesel cars. A major part of uYilo’s work is to create a broader “enabling environment” for the introduction of electric mobility technology into South Africa, which means working with government and industry to define the roadmap for electric mobility technology in South Africa. “Within government, it’s about highlighting policies, regulations and the standards frameworks, identifying and

filling the technology gaps, and trying to reduce the barriers that stand in the way of the uptake locally of electric mobility technology,” says Parmar. “For industry, it’s about creating awareness and building cohesion among industry role players. “And within the applied research and development space, it’s about promoting local development to be part of the global technology chain, which leads towards the global supply chain.” Parmar said one of the biggest challenges facing uYilo was the lack of awareness in both government and industry. “The technology evolves so quickly. A lot of people think electric cars are still years away, but they are here already, and the industry is growing. But we need the various actors in the country to come together to fast-track this. “The technology has many benefits for the country – the biggest impact being that we will improve the air quality in our cities by adopting electric transportation.”

**Challenges**  
New Delhi in India is currently ranked 30th in the world for air pollution. In November 2017, the news broadcaster CNN equated the city’s pollution levels to smoking 44 cigarettes a day.



# Green transportation shift not just limited to cars

"There are electric motorbikes, utility vehicles, passenger cars; even motorsport and aviation are becoming electric," says Mandela University's Hiten Parmar.

"Rail has been electric for some time and marine is advancing quite quickly into electric. The whole transport industry is radically changing."

The transition towards electric mobility goes hand in hand with the global shift towards renewable energy.

"No matter where you are in the world, the two biggest pollutants are the energy (i.e. dirty coal-burning energy) and transportation industries."

He says one of the criticisms levelled against electric cars in South Africa was that they were charged using "a dirty source of energy", but this was already massively offset by the eradication of exhaust emissions.

However, the ideal case scenario would be to have added renewable energy sources to charge the cars.

"When people ask about load-shedding, I say yes, it's a problem that possibly exists [for electric mobility] but it could also be the best thing that's happened for electric cars in South Africa as, out of this frustration, it's pushed businesses and home owners to go off-grid and to turn to renewable energy."

"When you're working within the broader sustainability and efficiency space, that's what you actually want."

## The way forward

Globally, many countries are setting ambitious targets for renewable energy.

"We don't need to build more coal power stations. The cost of wind and solar with battery technology has gone down in recent years – and they can be sustainably implemented."

"The same is true for electric cars. The cost of the technology is coming down."

However, there are also broader challenges standing in the way of South Africa achieving electric mobility as quickly as other countries, including poverty and unemployment.

"We need to align the technology introduction to tackle this as well."

Despite this, it is critical that South Africa continues promoting and using electric mobility, especially to avoid repeating the mistakes of the past and to improve air quality for the country's citizens.

"If we don't create the right policy framework for South Africa and Africa, we will become a dumping ground ... Manufacturers who are heavily invested in petrol and diesel technology have got to radically change to electric for international market supply. Because if they can't sell their cars in Europe, where are they going to sell them? They will bring their cars to Africa."

"Once you start seeing policies like the Green Transport Strategy alongside a bolder commitment from government, that's when you can start seeing some radical shifts, like in India and the other countries."

"We need to set a bold target and work towards it to start getting a change in habit [towards cleaner transport], we need to have a ... radical commitment."

Johannesburg is ranked 13th. And yet, not enough is being done to incentivise South African consumers to buy cleaner electric vehicles. The total taxation (excise duty and ad valorem tax) imposed on electric cars stands at 43%, and the country's highly regulated market makes it challenging for the technology to enter South Africa in the first place.

However, a move in the right direction is the government's Green Transport Strategy 2018–2050, which was approved by cabinet in August 2018.

"It's the first broader policy in South Africa that

addresses green transport. It's a positive move forward and shows government's commitment towards greening the transport sector and reducing carbon emissions."

Parmar said Strategic Pillar Eight in the Green Transport Strategy was a key objective to promote electric and hybrid electric vehicles.

"The uYilo electric mobility programme is also profiled as a strategic initiative within the Green Transport Strategy towards improving the country's adoption of electric transportation."







## One ocean, many lives

**H**umanity depends heavily on the health and sustainability of the world's ocean mass – and Nelson Mandela University's dedication to its conservation has put the institution at the forefront of global efforts to support ocean sciences development and the blue economy.

Pioneering research, South Africa's first Ocean Sciences campus, partnerships with leading universities both locally and abroad, a new marine engineering degree, a dedicated marine robotics unit and a wide range of ocean science-related qualifications and programmes

underpin our commitment to addressing critical factors at play today: climate change, food security, pollution, marine employment and resource management.

The Western Indian Ocean (WIO) region, of which South Africa is a part, is of particular concern to scientists, given its crucial position in the lives of millions of Africans whose survival and livelihoods depend on it.

In this section, we explore the trailblazing advances made by Mandela University and its partners in the ocean sciences field.

Green sea turtle (*Chelonia mydas*) with a plastic bag. The bag was removed by the photographer before the turtle had a chance to eat it. WWF is advocating for national governments to support a legally binding agreement on marine plastic pollution. Photo: © Troy Mayne / WWF.



# Blue decade

**Nelson Mandela University is partnering with international universities to research solutions for ocean conservation and a sustainable blue economy, writes Heather Dugmore. These developments are critical not only for South Africa, but the world.**

Two major international ocean sciences conferences were held at the university in March this year, namely, the Second International Indian Ocean Expedition (IIO-E2) and the South Africa–Norway Research Co-operation on Blue Economy, Climate Change, the Environment and Sustainable Energy (SANOCEAN).

In her welcome address, Vice-Chancellor Professor Sibongile Muthwa gave delegates a detailed overview of the institution's position as a marine and maritime leader.

Key to the university's long-term plans was its positioning as the hub of ocean sciences in Africa and the Western Indian Ocean (visit [oceansciences.mandela.ac.za](http://oceansciences.mandela.ac.za)).

"We have reached the hour when we need to know what is being done to conserve our oceans and to ensure that the so-called blue economy is sustainably developed. To achieve this, we need new modes of thought and novel solutions that engage all our communities, locally and globally, and address poverty and inequality.

"As we know, the oceans cover 70% of our planet and are a critical source of oxygen, food, marine resources, employment, and subsistence. We have lost more than 40% of the biodiversity in the ocean in the past 40 years, and the latest International Panel on Climate Change report shows that since the 1970s, about 93% of the excess heat from greenhouse gas emissions has been absorbed by the oceans. At the same

time the oceans are under pressure from unsustainable resource extraction. This is a crisis call for collective action.

"What is encouraging is that a growing network of outstanding research and innovation initiatives in South Africa, the continent and internationally are collaborating to better understand this vast body of water and to implement solutions for its conservation and sustainable development.

## Taking a stand

As part of the University's engagement in this, it hosted the two pivotal international ocean sciences conferences, she said.

The IIO-E2 was hosted for the first time in Africa, and brought together partners from throughout the world, including major ocean sciences nations, while SANOCEAN long-term partnerships would enhance the knowledge base for policies and decisions



**Triton: a three-person ocean research vessel with a diving depth of 2300m that will be used by researchers on REV I.**  
Photo: REV Ocean.

**Divers inspecting deployed receiver off Mozambique.** Photo: Ryan Daly.

for sustainable development in the areas of oceans and ocean space (the blue economy), environment (with emphasis on oceans and pollution), climate change and sustainable energy in South Africa and Norway.

The countries partnered on several key marine and maritime programmes and research chairs, together with collaborations between other coastal countries in Africa and globally, as well as other local universities, the Nelson Mandela Bay Metro, government and key industry players.

## Ocean expertise

"Our faculties and dedicated Ocean Sciences Campus (the first of its kind in South Africa) offer a range of qualifications and programmes to support ocean sciences development, conservation and a sustainable, well-managed blue economy.

"The director of the University's Institute for Coastal and Marine Research (CMR), Dr Bernadette Snow, was integral to the organisation of the IIOE-2 and SANOCEAN conferences. The CMR ([cmr.mandela.ac.za](http://cmr.mandela.ac.za)) is situated at our Ocean Sciences Campus with members from all seven faculties, including 50 staff members and over 100 postgraduate students, doctoral candidates and

postdoctoral researchers.

"Our Faculty of Law's FishFORCE programme works closely with Norway in combatting the major problem of organised fisheries crime ([law.mandela.ac.za](http://law.mandela.ac.za)). The university also collaborates with several Norwegian universities and institutions on ocean research, innovation and sustainable industry for the blue economy.

"We are also positioning ourselves as a maritime hub. Last year the Faculty of Engineering, Built Environment and Information Technology (EBEIT) launched a Marine Engineering degree, and this year we launched our Marine Robotics Unit ([ebeit.mandela.ac.za](http://ebeit.mandela.ac.za)).

"We welcome the United Nations declaration of the Decade of Ocean Science for Sustainable Development from 2021 to 2030 ([en.unesco.org/ocean-decade](http://en.unesco.org/ocean-decade)).

"It will hopefully be the largest driver ever to protect the oceans, address ocean warming, use the space sustainably, and bridge science, policy and practice.

"With South Africa's coastline, spanning approximately 3000km, bordered by three oceans – the Atlantic, Southern and Indian Ocean – we are perfectly placed to contribute to and benefit from the much-anticipated 'blue decade'."





**Boaty McBoatface** – one of the National Oceanography Centre's autosubs – a long range autonomous vehicle that can travel for many kilometres and to great depths underwater, gathering scientific data. Photo: National Oceanography Centre (NOC)

# Sea machines

In an exciting development for modern-day ocean research, Nelson Mandela University has been chosen by the Second International Indian Ocean Expedition (IIOE-2) to be a marine robotics hub.

The hub, which forms part of a Western Indian Ocean (WIO)-wide research network, is of critical importance, given the depth and vastness of the ocean.

In March 2019, the university's Faculty of Engineering, the Built Environment and Information Technology (EBEIT) launched its transdisciplinary Marine Robotics Unit (MRU). The MRU's engineering team is headed by Akshay Lakhani, Group Specialist: Systems and Control at eNtisa, a research and innovation hub within the faculty.

"Our oceanographic researchers need robotic technologies to collect *in situ* ocean data both in the coastal and offshore regions, and we need to develop innovative ways to assist robotic platforms to navigate in unknown and difficult regional ocean environments," Lakhani explains.

"Current methods of collecting ocean sciences data using conventional ships, amongst other methods, are very expensive, and few developing countries

have the resources to own and operate research vessels. Marine robotics offer a much-needed solution, as they are relatively inexpensive and easy to deploy, allowing our ocean scientists and research units to operate at a world-class level."

As part of Nelson Mandela University's growth in the marine and maritime space, in January 2018 its Faculty of Engineering, the Built Environment and Information Technology (EBEIT) launched a bachelor's degree in Engineering Technology in Marine Engineering. The degree is accredited by the South African Maritime Safety Authority and the Engineering Council of SA. EBEIT will offer Naval Architecture honours (from 2022) and master's degrees thereafter.



**Left:** The Faculty of EBEIT's first Naval Architecture PhD candidate, Boswell Douse, is focusing on the hulls of fishing vessels in the southern hemisphere. He explains that all fishing vessel hulls are designed for northern hemisphere ocean conditions, and our southern oceans are very different, which calls for a different design of hull. **Right:** ecoSUB shoal ready for deployment in Loch Ness in January 2019.



ecoSUB air launch from unmanned aircraft. Photo: ecoSUB

## Cutting-edge tech

"The Marine Robotics Unit is collaborating with the Norwegian University of Science and Technology (NTNU) in Trondheim, Norway ([folk.ntnu.no/assor](http://folk.ntnu.no/assor)) in the development of new marine robotics and deployment systems, specifically designed for our oceans," says Lakhani.

"This includes aerial platforms (i.e. drones), specialised sensor development, and optimised data-capturing, storage and sharing in support of ocean sciences."

The MRU will also manage the deployment and operation of existing robotics such as autonomous underwater vehicles (AUVs), subsurface ocean gliders, surface wave gliders and ARGO floats. These platforms can be deployed from small boats and remain at sea for anything from days to months. The MRU will host and maintain this equipment with dedicated Nelson Mandela University engineers, technologists and technicians.



Akshay Lakhani.



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University's 1 MW solar plant part of bold sustainability plan

## SUN SENSE

Last month, Nelson Mandela University switched on its new 1 MW solar photovoltaic (PV) power plant, which will generate just over 10% of the university's electricity requirements, writes Nicky Willemse.

Spanning two hectares and equipped with 4500 fixed and sun-tracking PV modules, it's the biggest on-campus solar power plant in the country – and one of many steps the university is taking in pursuit of a more environmentally, financially and socially sustainable future, in line with global goals to conserve resources and grow clean energy sources.

In addition to reducing its energy usage – which includes the shift towards renewable energy – the university is also determined to significantly decrease its water consumption and landfill waste. It is also planned that any savings the institution makes in relation to achieving these goals, will be ploughed back into additional sustainability projects.

"The solar power plant is part of our five-year plan to replace 25% to 30% of our existing energy needs with renewable energy sources," says the university's sustainability engineer, Andre Hefer.

The R18-million solar power plant, set to produce 1740 MWh of electricity

for each year of its 20-year lifespan, has resulted from a partnership between Mandela University and renewable energies company, Tasol Solar.

For 10 years, Tasol Solar will own and maintain the plant, installed on South Campus, selling the energy back to the university. And then, the university will take over ownership for the remaining decade.

There are also plans to replicate the solar power plant model on all of the university's other five campuses.

"Once again, we are looking to partner with a company, so we don't have to fund the installation of the power plant, and it's just a matter of buying electricity, which we would have to do anyway," says Hefer.

"We're hoping this model can also serve as a pilot for other organisations, such as schools, who can initiate similar projects on available space they may have."

Also in the pipeline are rooftop and carport-style solar PV installations for North and 2nd Avenue campuses.



"Over the next five years, we hope to achieve a 30% reduction in our municipal water usage, by increasing our usage of cheaper secondary water sources,



#### War on waste

But over and above introducing renewable sources, the university is also focusing on managing energy demand, "greening" new buildings by integrating clean energy, and "green procurement", which involves buying only environmentally friendly equipment and fittings.

The university's other long-term sustainability goals focus mainly on water and waste.

"Over the next five years, we hope to achieve a 30% reduction in our municipal water usage, by increasing our usage of cheaper secondary water sources, and a 20% reduction in our landfill waste, while also increasing our recycling initiatives by 20%," says Hefer.

"These three areas – electricity, water and waste – are giving us tangible and achievable goals to focus on."

They are also opening doors for new initiatives, thanks to a budgetary directive requiring all savings achieved in relation to these goals to directly fund additional sustainability projects.

The solar plant, for instance, has a net present value of over R38 million – which is the profit it is expected to generate over the next 20 years. Much of this will be ploughed into further projects.

When it comes to water, the university is already reducing usage and from this month (June 2019), will be saving money by piping return-effluent water to its vast South Campus sports fields.

"Instead of paying around R17 per kilolitre for municipal water, we will be paying around R2,20 per kilolitre. This will generate several million rands in savings over the next three to five years, which will be directed back into sustainability.

"We are planning on using these savings to set up fully automated irrigation zones, which we can set to run at night, thus avoiding any water wastage through evaporation. It will optimise what we're already doing."

To further reduce its reliance on municipal water sources, the university has also drilled several boreholes on its Nelson Mandela Bay and George campuses.

The return-effluent water and borehole water is being integrated into new infrastructure projects – including new

residences – for the flushing of toilets and irrigation.

"We are building a new 1800-bed residence on North Campus. Our plan is to get non-municipal flushing sources from day one," says Hefer.

As part of its efforts to reduce waste, the university has been meeting with local waste entrepreneurs and social influencers to assist with a strategy around waste management practices, which can be practically implemented on all six of its campuses.

"We are exploring key waste management initiatives, which may lead to the creation of self-funding social enterprises. These might include well-managed waste and recycling systems on

**"It's all about doing the right thing. There are massive gains to be made by reducing waste along with our electricity and water usage."**

campus, along with city-wide interventions, aligned with the municipality and other organisations in Nelson Mandela Bay."

Hefer says all sustainability projects being undertaken were only given the go-ahead after a stringent vetting process, which sought proof of their sustainability from an environmental, financial and social point of view.

"It's all about doing the right thing. There are massive gains to be made by reducing waste along with our electricity and water usage – and the university can have great impact on its society by doing so."

The university is also developing financial, social and environmental indicators, to measure and report on these interventions.

In addition to this, a social and economic impact assessment will be commissioned to determine the institution's influence in the region.



# Hey, John Man

In February this year, iconic performer, director and playwright Dr John Kani received a lifetime achievement award at kykNET Fiëstas for his enormous contribution to the arts in South Africa and the struggle for democracy. Heather Dugmore interviews him about home, Shakespeare, isiXhosa and the need to find each other.

**T**he award is one of many honours Kani has received, but in his moving acceptance speech he started with: "I was born in New Brighton a little outside Port Elizabeth, a small township where the inhabitants of that black township worked in white Port Elizabeth ..."

For this celebrated Eastern Cape export, there has never been any place quite like home.

"I see myself as a migrant labourer who lives and works in Johannesburg and around the world, but with every small excuse possible, I shoot like an arrow back home to New Brighton and Zwide in Port Elizabeth," says Kani, who received an honorary doctorate from Nelson Mandela University in 2013.

"My wife Mandi is also from New Brighton and what I love about being home is that our family and friends have never met John Kani; they

know me as their brother or friend or uncle. They call me by my clan name 'Mthembu' or 'Tata' or 'John'. My friends say 'Hey John man' when I return, whereas in the places where I perform, people treat me like John Kani the celebrity."

At the time of our interview in April, Kani was performing at the Royal Shakespeare Company (RSC) in Stratford-upon-Avon, England, where he first performed in *Hamlet* in 2006, followed by *The Tempest* in 2009 alongside South African actor Antony Sher.

This time around, he again performed with Sher in a play that Kani wrote, titled *Kunene and the King*. He considers it his finest writing to date and it was directed by South Africa's Janice Honeyman. Following its world premiere at the RSC, it returned home in May, to the Fugard Theatre in District Six, Cape Town.



*Kunene and the King*. Photo: Royal Shakespeare Company



## South Africa in 2019

The play is a portrait of contemporary South Africa. Set in 2019, it centres on two South African men from contrasting walks of life who are thrust together 25 years after the first democratic elections. One is an older black man, Lunga Kunene, played by Kani, and the other is an older white man, Jack Morris, played by Sher.

Both have lived through apartheid and democratic South Africa. Jack, a classical actor well known for performing Shakespeare roles, finds out he has cancer. He requires the services of nurse Lunga, who carries the scars of being black in apartheid South Africa, and, as Kani puts it: "Although the scars have healed, he still feels the itch".

Lunga's dignity and forbearance wrestle with an endogenous anger about past and present injustices.

"*Kunene and the King* is a bird's-eye critical review of 25 years of democracy. I wanted to ask both a black and white South Africans what had happened in their respective lives in the past 25 years."

## Julius Caesar in isiXhosa

The two fight and laugh about South African politics from their respective pasts, perspectives and cultures, and although they are often at odds, they both love the works of Shakespeare, which is what brings them together.

Why Shakespeare?

"Because Shakespeare speaks about humanity and the search for humanity. All of our incredible African writers do the same. Athol Fugard is one of them," says Kani, who first read Shakespeare in 1959 at Cowan High School in New Brighton.

"It was Julius Caesar in isiXhosa," he recalls. "Later on, I found the English version and I felt that Shakespeare had failed to capture the pathos and celebration of language in the same way that the Xhosa version did!"

The Xhosa translation was done in 1957 by the talented Bennett B. Mdledle.

"We need to recognise the importance and beauty of isiXhosa and we should be writing far more books in isiXhosa and all our indigenous languages, from

**"We need to recognise the importance and beauty of isiXhosa and we should be writing far more books in isiXhosa and all our indigenous languages."**

kindergarten to university.

"Our children must be able to speak to their grandmothers. Many have gone to school in the formerly white areas for a better education, but then you are told that 'this child speaks English, not isiXhosa' and some say it with great pride.

"In the Eastern Cape, you should be able to study in isiXhosa from your first year at school all the way through your degree. I would have got a distinction in mathematics if I was taught in my own language; the translation is very difficult."

## A life well-lived

Kani turns 76 in August and he says that it is only when he writes down his birthdate that he realises that he has lived for three-quarters of a century.

"When I close my eyes, I am still that young kid running through the streets of Port Elizabeth. That young

## PHOTOS:

1. *Missing*. Photo: The Market Theater

2. *So Ry Ms Daisy*. Photo: The PE Opera House

3. The late Winston Ntshona, Athol Fugard and John Kani. Photo: The PE Opera House.

4. In 2013 John Kani received an Honorary Doctorate from Nelson Mandela University.

5. *Kunene and the King*. Photo: Royal Shakespeare Company.



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kid who saw his first movie at the age of eight, featuring Roy Rogers, King of the Cowboys.

"Most of the movies we saw back then were westerns, and there would be one stagecoach fighting and winning against ten thousand Native American Indians or Red Indians as they were called."

But Kani told his friends a



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different story: "I told them the Native American Indians actually won but that the people who made the movie couldn't put it like that or they wouldn't be able to make another movie. I was a spin doctor from a young age!"

He was also an actor from a young age. After finishing high school, he began working with various drama groups in and around New Brighton, performing at schools and community halls. In 1965, at the age of 22, he was working at the Ford Motor Company in Port Elizabeth when he joined the Serpent Players drama group.

Here, he met Athol Fugard – and here, he became John Kani.



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## Black Panther

In the 2018 movie *Black Panther*, Kani portrayed the older T'Chaka, King of Wakanda and Black Panther and father of T'Challa, while his son, Atandwa Kani, portrayed the younger T'Chaka.

"Growing up with Superman and Spiderman, we always thought superheroes were white," says Kani, who was responsible for isiXhosa being the official language of Wakanda in the movie and thus sharing the language with the world.

"But now a little black kid can sit watching a movie and the superhero steps onto the screen and he is black and he is a good hero from an African country that was not colonised and that is technologically so advanced, but also willing to share this technology with the world.

"Imagine how inspiring it is for that child who can think: 'The hero is me'. And when Xhosa was spoken in the movie, the South African kids exploded."

"I experienced the power of the movie first hand when I visited a school in Nelson Mandela Bay and all the children were standing with their hands crossed on their chests, saying 'Wakanda Forever'. In that moment I smiled to myself – in my life I have done many beautiful things and won many awards, yet here I am, famous because I did a comic book!

"If the story is good and the actors are top quality and we have real budgets to do really good work, the South African film industry could excel. The Chinese are making wonderful Chinese movies for the Chinese and the Australians are making wonderful Australian movies for the Australians.

"We need to stop make movies that might go to Hollywood and win best foreign movie award. We need to make quality movies that tell South African stories for South Africans and that are universal."



The premier of *Black Panther*



### The time is now

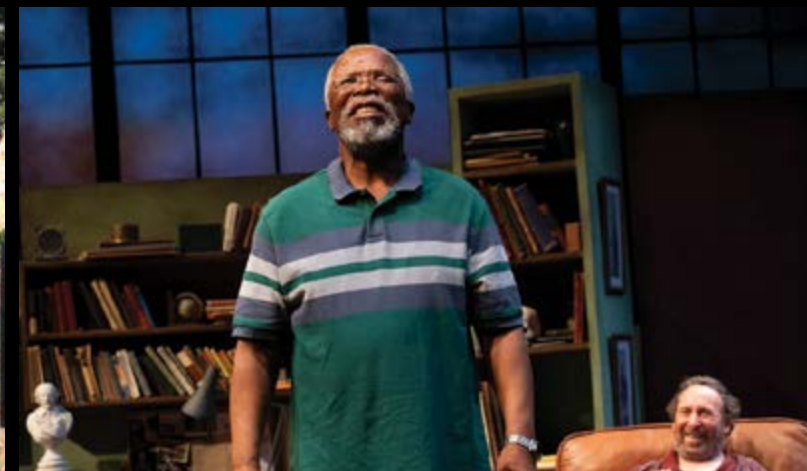
A brilliant career has brought him all the way to the age of 75. In the wake of the elections, he is a man who has seen so much come to pass in our beloved country.

"When you are 75, you understand we haven't got much time to sort out our problems. If we don't think urgently, we fail as a people, as parents, as a state, as a nation. We are seeing the rise of militarism and people promising utopia and preying on people's desperation by promising they can change their lives for one vote.

"People have to understand that everyone is looking for a job, including politicians like Julius Malema. They want to be MPs and get paid; they want to be ministers and get paid and they want to be president and get paid. America landed up with Donald Trump. We need to stop believing in these politicians and start making life better for ourselves."

Kani believes that we have been denied each other, and that we must all make an effort to find each other again.

"We need to find the things that bring us together, not pull us apart, we need to find a common goal in this country, we need to find our humanity. Every day each of us needs to do something good for someone else rather than for ourselves, and to



The stained glass window at Port Elizabeth Opera dedicated to Winston Ntshona, John Kani and Athol Fugard.

say something nice to someone else, without expecting it to be returned. Gandhi said, be the change you want to see in the world.

"The arts are playing a critical role in social cohesion and business is opening up. Good things are happening, we have black CEOs and woman VCs and we need to talk more about this and build on this. We need our young people to grow up with immense respect for women and children, and to appreciate the patriarchal past has gone; that we live as equals.

"We know there has been a huge divide between black people and white people; each of us has to make that effort to change. We all have a job to do to bring our people together in schools and universities and sports. It is not going to happen on its own."

## Plays written by John Kani include:

- Sizwe Banzi is Dead (1972) (co-authored with Athol Fugard and Winston Ntshona)
- The Island (1973) (co-authored with Athol Fugard and Winston Ntshona)
- Nothing But the Truth (2002) (sole playwright)
- Missing (2014) (actor and sole playwright)
- Kunene and the King (2019) (actor and sole playwright)





Life an opportunity waiting to be discovered

# My secret to success

**Award-winning business pioneer Quinton Uren saw – and overcame – four major hurdles when he viewed them as positive challenges, rather than insurmountable obstacles, writes Lize Hayward.**

“Classified as ‘coloured,’ I come from an underprivileged background. There were no silver spoons, just having the right intent, working hard and taking advantage of the opportunities I got,” says Uren, co-founder and MD of Jendamark Automation and named Africa’s Industrialist of the Year at the All Africa Business Leaders Awards last year.

The winning formula in any game plan, explains Uren, whose automotive engineering firm has gone from strength to strength since its founding in 1992, is to identify your hurdles and transform them.

**Hurdle #1 – Bursary application rejected**  
**Opportunity – Gain work experience and save money**

Growing up in Port Elizabeth’s northern areas, Uren’s love for mechanics and machinery started while helping his auto mechanic father fix cars. After matriculating, he applied for a bursary, but was rejected. As he had no intention of giving up, he started working to save money for his studies. He collected

industrial sewage samples for the municipality for six months, before registering at the then PE Technikon. After his first semester, he was accepted into a General Motors’ training scheme. Four years later, he obtained his Diploma in Mechanical Automotive Engineering and was recruited to join SKF Bearings as a design engineer.

**Hurdle #2 – Retrenchment**  
**Opportunity – Focus on own business**  
While working at SKF, he bought his own computer-aided design machinery (CAD) and started his first company, Nasquin Designs, with his wife, Nasieba. As a married father to a small child, he worked during the day and built his business at night. He designed in the evenings and Nasieba did the detailing during the day. When Uren was retrenched from SKF in 1989 due to economic sanctions, he started working full-time on Nasquin Designs. Having designed some fixtures for a company called Jendamark Electronic Component Industries, Uren realised he and his soon-to-be business partner were a

perfect match – he was good at mechanics and his partner at electronics. In 1992, Jendamark Automation was born.

**Hurdle #3 – Manufacturing industry struggles**  
**Opportunity – Build experience in different industries**

The manufacturing industry struggled to survive and Nasquin Designs did not generate significant income. When sanctions were lifted in the early ‘90s and Nasquin merged with Jendamark ECI, the new business grew from strength to strength. They first focused on manufacturing test units for electro-mechanical devices such as window winders, steering racks and jacks for the automotive sector. They also took on jobs in other industries such as pharmaceuticals, food and beverages.

**“Our global headquarters remain in PE. People often underestimate this city, but I see it as a beacon of what is possible in Africa and specifically in the Eastern Cape.”**

**Hurdle #4 - Collapse of world economy**  
**Opportunity – Expand into new markets**

The good times came to an abrupt end with the 2008 collapse of the world economy. Uren realised that Jendamark could not survive by focusing on the South African market only. Jendamark took the risk and started aggressively expanding into European and Asian markets, with a focus on the automotive sector and with three new directors as business partners. At first it was difficult, but due to the team’s relentless determination, the orders started to increase.

**A global footprint and multiple awards**  
Today the company exports manufacturing assembly solutions to 18 countries worldwide. It has grown into a global automation technology leader with local offices in Port Elizabeth, East London and

Pretoria.  
It has an international presence in India, Germany and the USA, with a strong focus on expanding further into Europe and Asia. Its German office focuses largely on innovative research, while most manufacturing is done in South Africa and India.

Today, more than 90% of the group’s business comes from exports. Apart from scooping the African Industrialist of the Year Award, Uren has seen Jendamark named two-time winner of the Eastern Cape Exporter of the Year Award.

**Industry 4.0 – the next big thing**  
“Industry 4.0 and how it pertains to the South African environment is ... not about automation, but about developing software technologies that can help our various industries and the country become more efficient, effective and transformed,” says Uren.

“Together, we can change the landscape, but we have to move quickly, or the landscape will become barren.”

Investing in Industry 4.0 is the competitive edge that attracts investment and transforms local business, as well as the continent, he explains.

“(This) enables on-the-job upskilling and job creation through skills development, using virtual reality and augmented reality technology, among other things. I believe it is a great leveller of the playing field.”

**Believe in local to go global**  
Uren is positive about the future.

“Our global headquarters remain in PE. People often underestimate this city, but I see it as a beacon of what is possible in Africa and specifically in the Eastern Cape. We have an amazing talent pool and supplier base, which makes us more than a business – we are in industry.

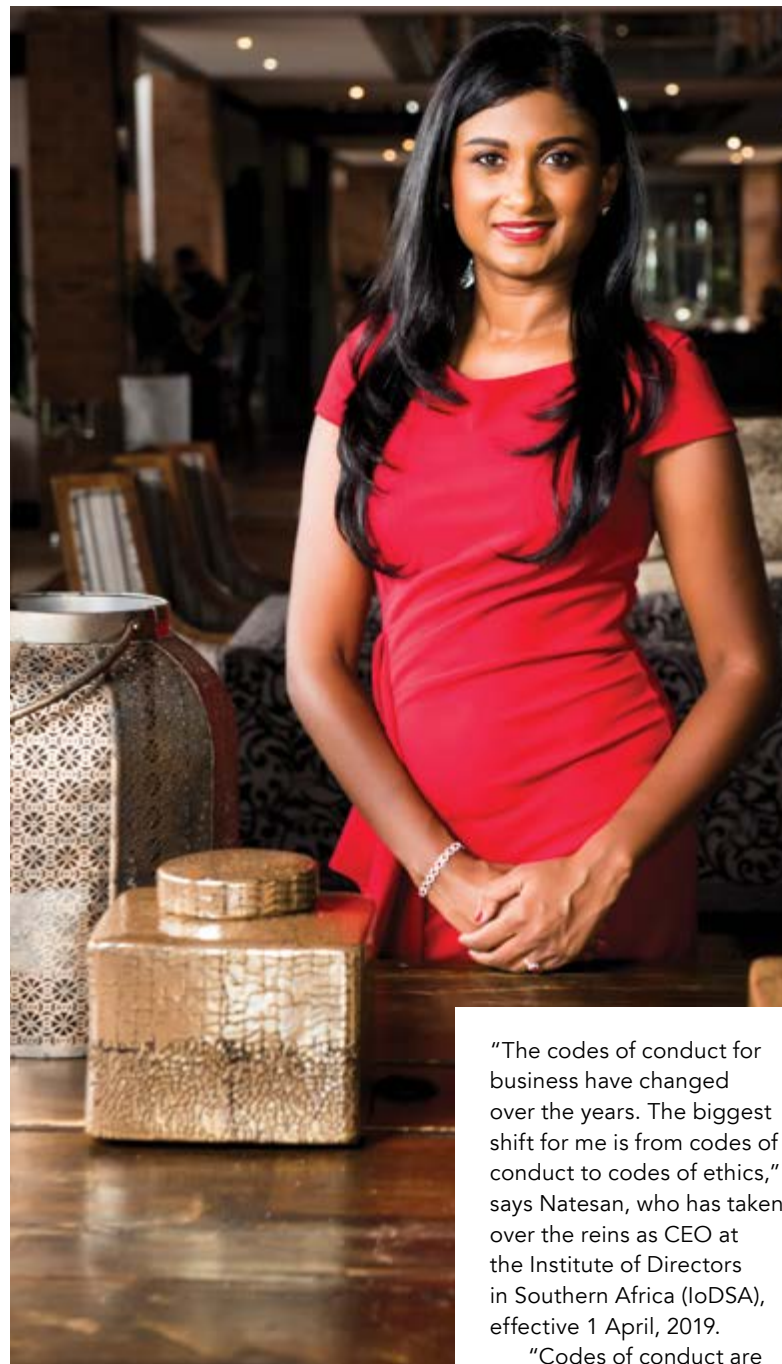
“The dedication and hard work of our home-grown, talented team creates success. We operate in a very competitive manufacturing sector, and we succeed globally.

“We need to believe in ourselves and our local talent and apply ourselves to the available global markets. Today, there are fewer barriers than before and with technologies available to most, young people have amazing tools to succeed. I have hope and proof that it’s possible.”



# Clean corporate governance

With state capture and the Zondo Commission of Inquiry on everyone's lips, Mandela University alumnus Parmi Natesan offers a refreshing approach to corporate governance – from codes of conduct to codes of ethics, writes Lize Hayward.



"The codes of conduct for business have changed over the years. The biggest shift for me is from codes of conduct to codes of ethics," says Natesan, who has taken over the reins as CEO at the Institute of Directors in Southern Africa (IoDSA), effective 1 April, 2019. "Codes of conduct are

very much rules-based, where codes of ethics are more values-based; for example, acting with honesty and integrity. The latter are more difficult to measure, but they yield better results.

"The minute you have rules, you find ways of bending them or moving outside of the rules. Moving towards ethics and values is more meaningful."

## Critical role

Established in 1960, today the IoDSA's membership represents over 8 500 prestigious and diverse South African business leaders. (Read more about the IoDSA in the sidebar below.)

Natesan is a sought-after corporate governance specialist who worked her way up the ranks at KPMG (a professional service company and one of the Big Four auditors along with Deloitte, Ernst & Young and PricewaterhouseCoopers) and the IoDSA after qualifying as a Chartered

## Who is IoDSA?

IoDSA is a voluntary professional body, a non-profit organisation that represents directors, professionals, business leaders and those charged with governance duties in their individual capacities on South Africa. It offers its members governance guidance, director development and certifications, and it conducts board appraisals and other governance advisory services. Its tag-line is: Better Directors, Better Boards, Better Business.

Accountant with BCom (cum laude) and BCom (honours) degrees at the then University of Port Elizabeth.

She is a multiple award-winning achiever and recipient of the 2016 Nelson Mandela University Rising Star Alumni Award, proudly living its vision of leadership and value of integrity.

Her past role at the IoDSA included representation on various forums and committees, such as the King Committee and the Integrated Reporting Committee, thought leadership and media and regular speaking engagements, as well as oversight of governance advisory services, director training and certifications. In her new role, she will be responsible for the strategic progress of the whole business.

## Ethical behaviour is a choice

"King IV has 16 principles of good corporate governance and places much emphasis on creating an ethical culture and mindset," explains Natesan.

"It is centred on the values of integrity, competence, responsibility, accountability, fairness and transparency. But, while its intentions are good, King IV remains a voluntary code."

She is passionate about the power of governance to transform business and ultimately the country as a whole.

"No piece of code or legislation can stop someone from doing wrong if they choose to. The codes are aspirational – stakeholders are pushing companies to comply and to report thereon transparently.

"IoDSA is not a regulator that can make the King IV codes compulsory, but we advocate for its application because it's good governance, which means it's good for them and for the country."

## From shareholders to stakeholders

Forward-thinking companies look at more than just their shareholders' interests.

"Gone are the days where we only try to create value for shareholders. Yes, we need to be a sustainable business and make money, but we need to do it responsibly – we need to look after the best interests of the company, taking into account all the stakeholders.

"We should not only have our clients' interests at heart, but also the interests of the

## State capture – what went wrong?

"It boils down to our definition of corporate governance in King IV – **ethical and effective leadership**. This should apply to all sectors, including the public sector and government itself."

community and the environment. Stakeholder inclusivity means more than just a bottom-line approach – which is not sustainable," Natesan argues.

## A balance of thoughts

In her new role as CEO, Natesan aims to motivate and drive her team in a world of predominantly male leaders.

"We want more women on boards and in other leadership positions, but we don't want them to act like men. Instead, we are seeking balance and fairness. It's about men and women complementing each other's skills in the boardroom, ensuring a balance of thoughts. True diversity on boards brings companies closer to their employees, shareholders and other stakeholders."

## What is King IV?

The King Report on Corporate Governance sets out ground-breaking guidelines for the governance structures and operation of companies in South Africa. It is issued by the King Committee on Corporate Governance. Three reports were issued: in 1994 (King I), 2002 (King II) and 2009 (King III) and a fourth revision (King IV) in 2016. The IoDSA owns the copyright of the King Report on Corporate Governance and the King Code of Corporate Governance. Compliance with the King Reports is a requirement for companies listed on the Johannesburg Stock Exchange. The King Report on Corporate Governance has been cited as "the most effective summary of the best international practices in corporate governance."

**"Stakeholder inclusivity means more than just a bottom-line approach – which is not sustainable."**



# And then there was one

Only a single elephant remains in the Knysna forest and surrounding fynbos – the last truly wild, free-roaming elephant in South Africa and the southernmost in the world, writes Heather Dugmore.



This tragic finding was recently published by leading mammal scientists in a scientific article titled *And Then There Was One*, following a rigorous camera trap survey, using 72 passive infrared-triggered cameras, 24/7, from July 2016 to October 2017 in the Knysna elephant range that spans 185 km<sup>2</sup>.

The range includes the Garden Route National Park, privately owned commercial timber plantations and privately owned forested land. The Knysna elephants have always moved directionally and seasonally along clearly defined elephant pathways between feeding patches and water in the area.

"There has been a debate for years now about how many Knysna elephants there are, as they are difficult to see or locate," says Professor Graham Kerley from the Centre for African Conservation Ecology at Nelson Mandela University, one of six renowned mammal

researchers who participated in the research and co-authored the article.

The others are Lizette Moolman, Melanie de Mornay and Dr Sam Ferreira from the South African National Parks Scientific Services, Professor André Ganswindt from the Mammal Research Institute at the University of Pretoria, and Dr

**"Over the past 300-odd years they were forced, as a result of persecution and human encroachment, to retreat into the forest as a refugee population."**

Joyce H. Poole from ElephantVoices, Norway.

"To have it confirmed that there is only one Knysna elephant left is a shock to many, as there is a deep aura of mystique and mythology around them, fuelled by their elusiveness, and by stories like Dalene Matthee's *Circles in a Forest*," says Kerley.





Matthee's iconic South African novel explores the destruction of the great indigenous Outeniqua forests and the hunting and persecution of elephants over the centuries.

### Tracking ghosts

To conduct the survey, the cameras were deployed at 38 locations within the elephant range and set to take high-quality images with a one-second interval between sequential photographs, and a two-second delay between video clips.

The cameras were fastened to trees within one metre of elephant-used roads and paths, at a height of 1–1.5m. Recent technological improvements in camera trap technology makes it a widely used, reliable application in ecological studies.

"The cameras were all active for 15 months, and covered the range evenly during this time, ensuring there were no gap areas where elephants might reside undetected," explains

SANParks scientist Moolman. Over a period of 17 306 active camera trapping days, a total of 5195 elephant photographs or video clips (15–30 seconds each) were captured, in 144 capture events. All of these solely identified one heavy, round-bodied adult female with a highly wrinkled forehead that forms a unique, easily identified pattern.

"She is about 45 years old and moves in the indigenous forest and fynbos areas on SANParks and neighbouring private land," says Moolman.

Elephants have unique individual physical features such as ear notch patterns and tusk shape and size, making them individually identifiable. In addition to this female's shape and forehead, she has unique 'serrated' ear notch patterns on both her left and right ears and relatively wide-spaced asymmetrical unbroken tusks – the left tusk higher than the right tusk.

"The brutal reality is there is no longer a population of Knysna

elephants. All the mystique of the Knysna elephant is reduced to a single elephant left in rather tragic circumstances," says Kerley.

Female elephants are not meant to be alone – they spend their lives in family units of related adult females with their calves.

The images reveal that although she is a fully mature adult female, she lacks developed breasts, because she is neither pregnant nor lactating. Her shrivelled mammary glands suggest that she has not had a calf in a long time, if ever.

Kerley adds that she appears to be in reasonably good condition with the exception of her swollen temporal glands with excessive temporal streaming, suggesting that she is experiencing stress – very possibly as a result of being alone.

### Driven to destruction

"Considering all these factors, the debate about how we have allowed this population to go functionally



Professor Graham Kerley

extinct and how to manage the last elephant is very emotional and very serious as she is a symbol of how we are treating biodiversity as a whole," Kerley explains.

"It is a societal responsibility, as we have forced these elephants, which are savanna elephants, into inhospitable forest habitats as a result of hundreds of years of hunting them and chasing them out of their natural habitat."

While we call them the Knysna forest elephants, the forest is not their typical habitat, explains Moolman.

"The Knysna elephant is of the same subspecies as all the other savanna elephant populations in South Africa, namely *Loxodonta africana*. The elephants that roam in Central African rainforests are of a different subspecies, namely *Loxodonta cyclotis*."

The leaves of the Knysna forest trees are low in protein and high in fibre – a poor quality food. Most of the forest canopy is also 30–40 m high, and out of browsing reach. By deduction, the Knysna elephants appear to supplement their diet on

the forest edge and in the fynbos.

Historically, the Knysna elephants roamed in their thousands as a continuous population for hundreds of kilometres along the southern Cape coast. They had access to thickets, fynbos and Karoo habitat. Over the past 300-odd years they were forced, as a result of persecution and human encroachment, to retreat into the forest as a refugee population.

By 1876, the thousands of southern Cape and Knysna elephants had dramatically decreased to between 400–500 animals (according to the Conservators of Forests' official reports). In 1920, a Major PJ Pretorius conducted the last known legal hunt of Knysna elephants – he had a permit to kill one elephant, but five died in the process, reducing the elephants to approximately thirteen.

By 1970, they were down to 11 (Wildlife Society Survey); by 1981 down to three (Forestry Department records).

In 2007, a faecal DNA genotyping survey (Eggert, Patterson & Maldonado) suggested an increase to five female elephants, a calf and a

breeding male, but this kind of survey only provides statistical estimates of population size, not an actual count, which the camera survey does.

### Research challenges

An added limitation to faecal DNA surveys is that dung freshness affects the reliability of the DNA genotyping results. Kerley says the dung should not be older than 12 hours when tested, and preferably much fresher; ideally "still steaming".

Of the 18 genotyped dung samples for the Knysna elephant DNA 2007 survey, five were older than five days and the rest were reported to be between one and four days old. It is likely that this may have led to unreliable results and an overestimate of numbers.

But, however earlier estimates were arrived at, current evidence is clear; there is now only one remaining elephant. She could live to 65 years, as elephants do, and she could be in the forest for another 20 years, or not – nobody knows.

"Managing her is a huge challenge because she is very shy and avoids humans," Kerley explains.

"It is not viable to introduce savanna elephants from other populations – from Addo or Kruger – to the forest. This was tried with three young Kruger elephants in September 1994 and it failed. In less than a month, one died of stress-related pneumonia and the other two left the forest, causing human–elephant conflict, and ultimately had to be moved to Shamwari Game Reserve."

Kerley hopes that humankind has learned a bitter lesson from this lone survivor's story.

"It is ultimately our fault that we are down to the last elephant here. She is the metaphor for our treatment of all species that live on this planet with us. The saying 'the elephant in the room' could not be more apt; she is telling us we are making some big mistakes and we are going to lose a lot more than her if we don't substantially change how we treat and value biodiversity."

## Where to now?

What options do we have for the last Knysna elephant, given failed attempts to bring other elephants to the forest?

Since she has the same genetics as the Addo and Kruger populations, scientists have considered whether or not she should be translocated out of the forest to a herd.

"The option of capturing her and moving her somewhere else would be dangerous for her and we don't know if it would even be of any value to her, as she only knows the forest and might not be able to settle into another area with other elephants," says Kerley.

The same goes for any attempts at artificial insemination; it's too risky and if it was decided to attempt the 'impregnation' route, it would be better to move her to another elephant population, which, as Kerley explains, could be too traumatic.

He says a major voice that needs to be considered in the decision about her management, is the people of Knysna – who, in all probability, would not want to see her go.

"It comes down to a societal decision as it is no longer a population decision; it is about the last Knysna elephant's well-being. My personal opinion is that we should leave her be."







## 'Extinct' fynbos species **REDISCOVERED**

Most people associate veldfires with destruction. But to those who are well acquainted with the Cape region's unique fynbos vegetation, flames bring the promise of new beginnings, and sometimes the return of a species thought to be extinct.

In Nelson Mandela University's nature reserve – an 800-hectare piece of protected land which runs along both sides of Marine Drive – two critically-endangered fynbos species, very rarely seen over the past 50 years, popped up after recent fires.

The two species – *Aspalathus recurvispina* and *Aspalathus cliffortiifolia* – both have small, bright-yellow flowers and are a close relative of *Aspalathus linearis*, more commonly known as rooibos.

"The reason they are threatened is because they only occur in small areas which are now under pressure from coastal development and alien plant invasion," explains Debbie Bodley, who researched the plants of conservation concern in the reserve as part of her honours studies.

South Africa's largely unprotected dune fynbos belt, stretching from Cape Town to Port Elizabeth, is home to many plant species found nowhere else in the world.

When a species hasn't been seen for decades, it is presumed extinct – but a fire can sometimes change that.

Dr Adriaan Grobler – a post-doctoral botany researcher at Nelson Mandela University and a member

of the Custodians of Rare and Endangered Wildflowers (CREW), affiliated with the South African National Biodiversity Institute (SANBI) – says some fynbos species "tend to disappear once the veld becomes older ... and they rely on fire to regenerate".

As the land becomes crowded with plants, the smaller plants cannot compete with the bigger ones for resources, so some species die or become dormant. But beneath the soil, their roots lie dormant or their seeds wait, sometimes for years, until a "heat shock" stimulates new growth.

"A fire resets the system. It's a clean slate for all the plants. ... The fire clears the old stuff and you get a lot more light. From the burnt plant matter, you get a flush of nutrients [into the soil] and these plants start coming up," says Dr Grobler.

"We need fires in these systems every 10 to 20 years. Without them, we are in danger of losing these species. They can't keep their food stores forever."

After a fire, there is a noticeable increase in diversity – plants not seen in years, says the university's nature reserve ranger of 11 years, Craig Breedt, who liaises with Bodley and Dr Grobler to identify unknown plants.

"What I enjoy about these new discoveries is that it raises awareness about the importance of conservation and of our nature reserve."





### Did you know?

Nelson Mandela University's nature reserve conserves 48% of the Cape's endangered St Francis Dune Fynbos vegetation type – and is home to zebras, buck and other animals. It is open to the public free of charge for walking and cycling. There are also guided tours for school children.



**Above** Looking for endangered plant species in Nelson Mandela University's 800-hectare nature reserve are (from left) nature reserve ranger Craig Breedt and botany researchers Debbie Bodley and Dr Adriaan Grobler.

**Bottom left:** *Brunsvigia litoralis*

**Bottom right:** Other species of conservation concern in the reserve include *Erica chloroloma*, which is listed as vulnerable, and *Brunsvigia litoralis*, which is an endangered species.



## Fanning the flames

In June 2017, one of the worst wildfires on record in Knysna, Western Cape, burned 15 000 hectares, claiming the lives of seven people, destroying more than 800 buildings and razing 5000 hectares of forest plantations. Heather Dugmore investigates.

A third of the area that burned was in natural vegetation (mainly fynbos shrublands), and more than half was in plantations of invasive alien (non-native) pine trees, or in natural vegetation invaded by alien trees.

"This called for research on the factors that contributed to the fire, a fire of such severity that it could happen again if preventive measures are not taken to limit the fuel loads," says Dr Tineke

Kraaij from the School of Natural Resource Management, whose field of interest is fire ecology in South African vegetation types, particularly fynbos.

"It's like living in an earthquake prone area; it is not a question of whether it will happen again, it is a question of when, as the average natural frequency of fires would be 20 to 30 years in fynbos vegetation – many species of



which need fire to stimulate germination.”

In a 2018 paper published in the journal *Fire Ecology*, titled “An assessment of climate, weather and fuel factors influencing a large, destructive wildfire in the Knysna region, South Africa”, Dr Kraaij and her co-authors researched the factors that contributed to the severity of these fires.

Her co-authors are Johan A. Baard from the South African National Parks, Garden Route Scientific Services, Jacob Arndt from the Department of Geography, Environment and Society, University of Minnesota Twin Cities, Lufuno Vhengani from the Meraka Institute, Council

thicket and forest species or invaded by alien trees and shrubs. Historically, mega-herbivores, such as elephants, rhinos and hippos, no longer present in the area, would also have helped to reduce fuel build-up between the natural fire occurrences.”

Adding to the fuel loads was the presence of alien invasive plants, including commercial pine plantations close to the town and also invasions of pine, wattles and eucalyptus trees in the coastal vegetation and mountain catchments. Fire intensity is not only affected by the amount of fuel, but also by the moisture and chemical content of fuels.

**Keeping watch**

To measure the severity of weather conditions in relation to fire risk, researchers and fire managers use a system called the Fire Danger Index, where blue and green is safe, yellow or orange is moderate and red is very high danger. The index is based on weather parameters that include temperature, relative humidity, wind speed and rainfall – which includes factors such as whether it rained the day(s) before.

Weather conditions equivalent to (or worse than) those experienced on the day that the Knysna fires started occurred on approximately 0.1%–0.2% of days since the 1940s.

“On average, you thus get one day every three years in the Knysna area where the weather conditions are as extreme as those experienced during the fire,” Dr Kraaij explains. The fire danger conditions during these fires were therefore very high, but not unprecedented in recorded history.

“However, what we found was that the drought conditions over the 18 months preceding the fire were the worst in the recorded history for the southern Cape (Knysna, George) and Port Elizabeth regions.”

The rainfall was also the lowest in recorded history during that 18-month period, and the drought indices – including factors such as the

extent to which the soil has dried out and what amount of rain it would take to moisten the soil – were also the worst in recorded history.

The vegetation was therefore extremely dry and much had died off as a result of the drought, providing large amounts of dry fuel.

“This time around when the fires started – with two distinct fires at the outset – they could not be controlled, such was their severity, with extreme berg wind conditions

for Scientific and Industrial Research, and Professor Brian W. van Wilgen from the Centre for Invasion Biology, Department of Botany and Zoology, Stellenbosch University.

“Natural fires had been largely suppressed for over 50 years in the Knysna area because of the commercial timber plantations and development in and around Kynsna,” says Dr Kraaij.

“Much of the fynbos in the Knysna coastal area had therefore become moribund and partially encroached by

Call to action

The devastating fires in Knysna highlight the urgency of what needs to happen to prevent – or at least minimise – the possibility of tragedies in the future.

Dr Tineke Kraaij from the School of Natural Resource Management says that overall, the following key factors must be addressed:

- Control of alien invasives
- Reduction of plantations in fire-prone areas, particularly in neighbouring urban areas
- Reintroduction of prescribed burning programmes, particularly in the urban–wildland interface
- Strict regulation of town development in areas of high fire risk.

“Far better town planning is required, and it needs to include the insurance companies, which should not insure properties that are situated in very fire-exposed parts of the landscape, in the same way they shouldn’t ensure properties built below the flood line,” she says.

Many of the houses across the socio-economic spectrum are being rebuilt in exactly the same places where they burnt down. Owners also need to focus on managing the vegetation around their properties to keep down the fuel loads immediately surrounding their assets.





fuelling the rapid spread of the fires, so they even jumped the Knysna estuary.”

**Timber timebomb**

The fires wreaked havoc in the commercial timber plantations, mostly pine, which are only flammable under very dry hot weather conditions. When this happens, they burn with high severity, exacerbated by the large amounts of biomass.

“The amount of biomass consumed during the fire – which may be interpreted as a proxy for fire intensity or severity – was significantly higher in plantations of invasive alien trees, and in fynbos invaded by alien trees, than in uninvaded fynbos, providing support for the contention that invasion by alien trees increases the impact and difficulty of control of wildfires,” says Dr Kraaij, who presented these results at a meeting of the Southern Cape Landowners Initiative.

“Our results show that commercial plantations and alien invasions comprised 50% of the total burnt area, and these results support calls to control invasive alien plants, reduce commercial planting of invasive alien trees, ensure that there are proper, well-maintained firebreaks in key areas and strictly regulate development in areas of high fire risk, as well



as maintaining awareness of the need for fire-wise practices.

“We need to think critically about the timber industry, as the commercial plantations around Knysna are situated in former fynbos areas, which means they are located in the fire-exposed and fire-prone parts of the landscape, situated in the fire paths. The fire risk is really high and plantation companies need to think of fires as something that will happen, and not as unexpected disasters when they do happen.

“The region’s municipalities need to closely consider fire in their town planning and closely look at the location of

developments in relation to berg wind-driven fire paths. The recent fires burnt many areas with very poor residential planning, including informal settlements, as well as low-density estate developments situated on hilltops with plenty of alien-invaded fynbos around them.”

As the authors concluded in the *Fire Ecology* paper: “Growth in the human population has been accompanied by development in rural areas and an increase in the urban–wildland interface, increasing the risk of exposure to wildfires. These factors, combined

with very high fire danger weather conditions, preceded by an unprecedented drought, and vast amounts of alien invasive plants led to the destructive wildfires of 2017.

“Events like these are infrequent and people can quickly lose interest in implementing fire-wise practices and become increasingly willing to place developments in high-risk areas in the long inter-fire periods.”

People cannot afford to become complacent, warns Dr Kraaij as, “it is not a question of whether it will happen again; it is a question of when.”

# LEADER of the pack

## Sipamla Statistics

**PERSONAL**

**Born:** Port Elizabeth, May 12, 1998

**Education:** Grey Junior, Grey High, Nelson Mandela University

**Style:** Right-arm fast bowler, right-hand batsman

**DOMESTIC**

**Senior teams:** Eastern Province, Warriors

**First-class debut:** EP v Border, January 5 to 7, 2017

**Best bowling:** First-class: 5/53 (innings), 9/112 (match); List A: 3/40; Twenty20: 3/19

**Wickets:** First-class: 50; List A: 19; Twenty20: 29

**INTERNATIONAL TWENTY20**

**Debut:** SA v Pakistan, February 3, 2019, in Johannesburg (five caps)

**Best bowling:** 2/22

**Wickets:** 4 at economy rate of 8.36

*Stats as at April 20, 2019*

The Mzansi Super League delivered Madibaz bowler Lutho Sipamla into the big time.





**Madibaz fast bowler Lutho Sipamla will look back on the inaugural Mzansi Super League as an event which altered his cricket career and set him on the path to potential stardom.**

**S**outh African cricket's bid to create the equivalent of India's IPL and Australia's Big Bash was stalled after the T20 Global League failed to get off the ground in 2017.

This outcome, however, spawned a second attempt and in the last two months of 2018, the Mzansi Super League came to life, providing a chance for rookies such as 20-year-old Nelson Mandela University student Sipamla to get up close and personal with a host of established international stars.

It's likely that the talented sportsman

would have made it to the top anyway after ticking all the right boxes as he progressed through several age-group representative teams.

#### **On the fast track**

But the Mzansi Super League provided the fast track for the Madibaz speedster to stake his claim for a place in the national side.

Chosen as the rookie player for the Tshwane Spartans, Sipamla enjoyed the special experience of sharing a changing-room with South African batting icon AB de Villiers.

"Being in the same environment as AB really meant a lot to me," recalls Sipamla.

"The way he goes about his cricket helps to calm you because he speaks to you and gives you plans.

"I learnt a lot from that experience because at times he allowed me to set the field myself, according to what I wanted."

The frenetic nature of the shortened Twenty20 format means a player needs to learn fast. There is little opportunity to settle into your role.

Thanks to the guidance he received from players such as De Villiers, among others, Sipamla quickly made his mark. He clocked up deliveries as quick as 145km/h, but also performed well up front and at the death.

His composure under pressure saw him become the third highest wicket-taker in the competition – bagging 16 wickets in 10 matches.

#### **Natural progression**

Being selected for the national side seemed a given, although the second-year business management student reacted with "shock and surprise" when the call came from selection convener Linda Zondi.

He became Nelson Mandela University's latest national cricket representative when he took the field at the Wanderers for the second Twenty20 international against Pakistan on February 3 this year.

It was an occasion he will not forget and he even managed to rein in his nerves as he delivered a typically efficient performance to finish with 0/23 in his four overs.

Interviewed on the ESPNcricinfo website, Sipamla said it was all about controlling his emotions and letting it all soak in.

"Walking onto the pitch to a full house and knowing that I was realising a childhood dream was an impeccable moment," he said after his debut.

"The nerves were definitely there. I guess anyone would be nervous on the day of making a debut for the Proteas."

#### **A Grey past**

Born Lubabalo Lutho Sipamla on May 12, 1998, the young sportsman, like many before him, came through the cricketing ranks at Grey Junior and Grey High to make his mark at an Eastern Province representative level.

He turned out for the provincial U15 and U19 teams and gained national selection for the U17 and U19 squads.

As a youngster, he had thoughts of becoming a chartered accountant, but his cricketing potential was too rich to ignore and he ended up in the Eastern Province Cricket Academy.

After playing for the EP semi-pro outfit, Sipamla graduated to the Warriors franchise team at the start of the 2018-19 season, where he suddenly realised how much he still had to learn.

"When you play franchise cricket you have to be good ... and I had to work a lot on my execution and my consistency," he says.

"Concentrating on that helped me to improve my overall game and become a better player, I guess."

#### **Driving forces**

He adds that the coaching teams at Madibaz and the Warriors have been a big driving force in his cricket.

"Every practice and every game I play, I get to learn from all the seniors by speaking to them and asking questions.

"Every day I am learning and that's what I need to do at this stage."

Even though his focus remains on the present, the national selectors will surely have the promising fast bowler on their short list for future consideration.

He comes into the national scene at a time when the country is well stocked with fast bowlers. Talented exponents such as Kagiso Rabada, Lungi Ngidi, Junior Dala and fellow Warriors player Anrich Nortje are leading the way at this stage.

The World Cup in May and June may have come too soon for the young Sipamla, but he will surely take his place among those who have batsmen reaching for their helmets in no time.

#### **Final word**

The final word belongs to someone who has been around the block, AB de Villiers.

"I think he has all the credentials to become a serious fast bowler for South Africa in the future," he told ESPNcricinfo.

"He is a fantastic kid. He has the right head on his shoulders and he needs to be given proper guidance and support to learn and improve over the next few years.

"I am looking forward to watching him grow."





The EP team celebrating winning the Currie Cup for the first time in 1988/89, nine of the squad of 12 were either from UPE or alumni of the varsity.

# Walking with GIANTS

When Madibaz fast bowler Lutho Sipamla walked into a cauldron of noise at the Bullring in early February, he would naturally have been focused on bowling his maiden delivery for South Africa.

The 20-year-old was making his national debut in the second Twenty20 international against Pakistan and proving that he belonged among such illustrious company would have been at the forefront of his mind.

But, for someone with a deep attachment to the Eastern Cape, and more particularly Nelson Mandela University, it would have been a poignant moment to reflect on the institution's storied cricketing history.

## Legacy of cricketing excellence

In earning his cap at the highest level, Sipamla was continuing a legacy of cricketing excellence at the institution, crafted by a succession of high-quality players since the birth of the University of Port Elizabeth over half a century ago.

Once the gentlemen's game became an integral part of the then-UPE's extracurricular programme in 1966/67, it began producing a constant stream of provincial cricketers who made their mark on the South African scene.

Several went on to receive the highest accolade in the

sport when they were selected to represent South Africa, performing with distinction around the world.

Possibly one of the biggest coups for cricket at the institution was pulled off by the late Kotie Grove in 1986, when he was instrumental in bringing to UPE South African sports great Kepler Wessels, who had grown disillusioned with his international career in Australia.

Although no longer a student, the talented cricketer's dedication and strict discipline rubbed off on his colleagues in the University and Eastern Province setups.

He was the catalyst for a golden period in EP cricket when they won seven domestic trophies in six seasons and had a lasting influence on the plethora of cricketers who played under his captaincy.

When EP won the Currie Cup for the first time in 1988/89, nine of the squad of 12 were either from UPE or were alumni of the varsity.

When the country was welcomed back into the international fray in 1991, Wessels, along with ex-UPE students Dave Richardson and Tim Shaw, were among those chosen for the ground-breaking three-match tour of India.



are continuing the varsity's proud history under the banner of Nelson Mandela University.

## The slog to the top

As remarkable as it may seem, given the numerous league and national titles they have accumulated over the years, the first team once competed in PE's second-tier competition.

That was until 1971/72, when they were crowned PE first reserve league champions, gaining promotion to the then first league.

It was an indication of the game's growth at the institution, but it was to be another decade of slogging before they announced themselves on the national stage by capturing the SA Universities title for the first time in 1981.

The triumph spawned a string of successes that would put the university squarely on the national cricketing map.

Including that first title, teams from the institution have won the SA students' tournament on 12 occasions while lifting the national club trophy four times from 10 finals.

While they have won many premier league titles, there was a remarkable sequence when they were crowned PE champions for eight successive seasons from 2008/09 to 2015/16.

It should be no surprise that the class of 2019 continued to underline the strength of Madibaz cricket by regaining the premier league title and qualifying for the national club championship.

## In the Grove

None of this would have been possible without the enthusiasm and dedication of two administrators whose names have become synonymous with cricket here – Kotie Grove and Flip Potgieter. Both passed away within months of each other last year.

They were lecturers at Nelson Mandela University, but their passion for the game led them to the cricket fields, where they took on the roles of chairman (Grove) and president (Potgieter) in the early seventies.

There were many others who contributed, but it was their partnership and commitment which ignited a permanent and palpable pride in the sport.

Former EP cricket chief executive Dave Emslie placed

Richardson went on to become the country's first-choice wicketkeeper until his retirement in 1998, whereupon he joined the International Cricket Council, later becoming its chief executive officer.

Nearly three decades since that trio walked onto the hallowed pitch at Eden Gardens, Sipamla and fellow quickie Anrich Nortje

their contribution in perspective after Grove passed away.

"Kotie was such a remarkable person in that he had so much energy, and he put that energy to good and positive use.

"He was always the kind of guy who you were pleased to see and vice versa. Of course, nature takes its course, but this loss has certainly left a big hole that will be difficult to fill."

He added that Grove and his "twin", a former EP president, managed to bring club cricket at the university back from the grave and that, in turn, had a knock-on effect for the province.

The two administrators, for whom being involved in the game was a labour of love, were honoured for their contribution to the club by being named Honorary Life Presidents in 2013.

## Proud heritage

Since UPE, PE Technikon and Vista University amalgamated to eventually become Nelson Mandela University, a new crop – led by the likes of Sipamla and Nortje – have been honouring the proud heritage created by those pioneers.

Madibaz Sport cricket manager Sipho Sibande has a ringside view of what the sport means to the class of 2019.

"There is an expectation of success every time the guys pull on their shirts," he said in an interview at the cricket clubhouse.

"They realise that hard work is part and parcel of it, but there is a genuine desire to keep improving because every year they aim to go one step further than those who went before them.

"Given the rich history of the club, there is still plenty of hunger to succeed.

"It helps to have a facility like this where pictures date back to that maiden league victory in 1971/72. They can see the history of the club and know that they are in the same rooms where many greats celebrated their successes."

When they next walk out for the Proteas, Sipamla and Nortje will no doubt be focused on the job at hand.

But, one day, they will visit the clubhouse and look at yellowing photos from their prime, knowing that they form part of the rich tapestry of cricket at the institution.



The late Kotie Grove (from left), Deputy Director: Sport Riaan Osman and the late Flip Potgieter.





# MADIBAZ

## leave their mark on Varsity Shield

The FNB Madibaz rugby team made an impressive impact on the FNB Varsity Shield competition, in which they competed for the first time this year.

This came about after they were relegated from the Varsity Cup and where, according to competition rules, they will sweat it out for two seasons before having a chance at gaining promotion to the top flight.

Fielding a youthful line-up under the guidance of head coach Jarryd Buys, the Madibaz enjoyed a highly

successful season, topping the log with 30 points after winning all six matches in the league phase.

They achieved their goal of earning a bonus point in each of their matches to finish five points clear of Cape Peninsula University of Technology (CPUT).

Facing the University of KwaZulu-Natal in the semifinals, they produced the perfect defensive performance, combined with searing attacking play, to win 46-0.

Unfortunately, they lost to CPUT in the final, played in Port Elizabeth, when the Cape side scored a try with a minute remaining to make it 32-28 at the final whistle.

Buys started the season by saying he wanted to instil a winning culture and, despite the blip in the final, it's safe to say he achieved his aim.

This has given the class of 2020 something to build on as they chase their goal of graduating to the Varsity Cup competition.

### Tale of the tape

- Matches played: 8 (won 7, lost 1).
- Points for: 332; Points against: 90.
- Points difference: 242 (CPUT next best with 105).
- Won Player that Rocks and Steers Kinging Moment awards in seven matches.
- Final log: 1 Madibaz (30 points), 2 CPUT (25), 3 Walter Sisulu (18), 4 University of KwaZulu-Natal (16), 5 Fort Hare (9), 6 Tshwane University of Technology (5), 7 Rhodes (4).
- Playoffs: Madibaz 46 UKZN 0 (semifinals); CPUT 32 Madibaz 28 (final).

FNB Madibaz captain Riaan Esterhuizen dives over for a try in the team's opening Varsity Shield match against Cape Peninsula University of Technology in February.  
Photo: Michael Sheehan



# ALUMNI ACHIEVER AWARDS

## DAVID BROWN

**BCom Honours graduate (2001) David Brown is the Vice-President: Elastic Compute Cloud (EC2) at Amazon.**

He currently leads the various EC2 Compute, Networking and Load Balancing teams, building and maintaining cloud-based services used by several of the Internet's largest global domains, including many that are accessed by millions on a daily basis.

Amazon is an international online shopping store, selling anything from the earth's biggest selection of books, magazines, music, DVDs, videos, electronics, computers and software to apparel and accessories.

The company recorded a fourth quarter turnover of \$60.5 billion (R850 billion) in February 2018. Prior to his current role at Amazon, David held numerous positions, including Director: Software Development and Software Development Manager. He was also employed at Mosaic Software as a Software Development Manager and Senior Developer in Cape Town.



## KURT KANNEMEYER

**BProc (1999) graduate Kurt Kannemeyer is based in Spring Valley, New York, where he is the Chief Executive Officer at the Haitian American Cultural and Social Organization, Inc.**

He has over 18 years of experience in leadership roles in both the non-profit and corporate sectors, and is a writer and sought-after speaker both nationally and internationally.

Some of his previous positions include Chief Development Officer at St Christopher's, Inc. in New York, where he also served as Director of Internal Affairs, Senior Paralegal and Senior Director of Camp Services. Prior to this, he served as the Chief Compliance Officer for Central News Agency in Port Elizabeth.

Kurt also serves as a Director of the International & National Fellows Program of the Fellows of the Academy (Greenburgh North-Castle UFSD) and plays an active role within the leadership of Westchester Alumni Association. He serves on several boards and has received a number of awards, including the Rising Star Award from the Business Council of Westchester and The Haitian Resource Center Community Partner Award. He also featured in the "Top 25 Inspirational Stories" on *The Today Show* in the USA. He is a passionate advocate for social justice.



## KURT PAKENDORF

**Kurt Pakendorf graduated with a BProc (1991) and is currently the Chief Strategy Officer and General Counsel for Face IT Limited in London, UK and California, USA.**

He has led and negotiated the establishment of one of the world's one of the world's largest professional esports leagues, Professional Counter Strike: Global Offensive Professional eSports leagues, with 20 professional teams and \$3.5 million (R50 million) in prize money. He is also the Director of Esports Championship Series CS Limited London and the founder, director and co-owner of Anicus Law Limited, which is a boutique, international legal services firm offering legal and strategic business consulting services.

Kurt is the co-founder and a managing partner of The Sable Accelerator in the UK, which is a trusted expert network of expatriate South Africans giving back to their country in different forms. Prior to this, he was the Chief Executive Officer and Director of MobileWave Group plc in London and the Vice-President and General Counsel at Havok.com Inc. in the USA.

From 2000 to 2002 he served as a legal officer with the United Nations Peacekeeping Mission in Kosovo. Kurt also co-authored the UK Current Law Statutes and Petroleum Law 1998.



### ALUMNI RISING STAR AWARDS

## AMANDA ANTONY

**Amanda Antony is popularly known by her stage name Amanda Black. She graduated with a National Diploma in Music Education in 2015.**

In the same year she was a contestant in the Idols SA competition, becoming the fans' favourite for Season 11 of the talent show, in which she made it to the top 7. A year later, Amanda released her studio album *Amazulu*, which was certified platinum after only three weeks following release. Her hit single "Amazulu", meaning 'the Heavens', was nominated for several South African and international category music awards.

She earned two Metro FM Awards and received four South African Music Awards. During 2017, she released her single "Kahle", receiving great airplay on local radio stations as well as reaching over one million views on YouTube.



Nominate a Mandela University Alumnus for recognition by going to [alumni.mandela.ac.za](http://alumni.mandela.ac.za)  
Closing date: **Tuesday 23 July 2019**



# HITEN PARMAR

Hiten Parmar’s Nelson Mandela University qualifications include the National Diploma (2005), BTech (2007) and MTech (2011) specialising in Electrical Engineering, as well as a Postgraduate Diploma in Business Administration (2016).

He is currently the director for the national uYilo eMobility Technology Innovation Programme hosted at Nelson Mandela University, where some of his key areas include business development, stakeholder engagement, government lobbying and thought leadership. Prior to this, he was deputy director as well as Senior Engineer: Electric Vehicle Systems and Infrastructure.

Before his current employment, he was an electrical engineer at the Volkswagen Group, tenured at the Ostfalia University of Applied Sciences: Wolfsburg, in Germany and worked at BC Automation in South Africa.

Hiten’s passion extends across contributing to global advancements within industry through the deployment of technological interventions to solve major societal, economic and competitiveness challenges. He also serves as the Secretariat of the Electric Vehicle Industry Association, and liaison for multiple working groups, including NAAMSA, SABS and SASGI.



# SOLOMON MUDEGE

Zimbabwean-born Solomon Mudege graduated with a BCom HMS: Sport & Recreation (2005), BCom Hons Business Management (2007) and a Nelson Mandela University/FIFA/CIES Executive Programme in Sport Management certificate (2010).

Later in 2010, he graduated with a FIFA Master qualification – an International Master in Management, Law and Humanities of Sport, which must be completed at three international universities: De Montfort University in Leicester (UK), SDA Bocconi School of Management in Milan (Italy) and the University of Neuchâtel (Switzerland). Thereafter, he began his career working for FIFA in Switzerland, starting as Master Trainee, followed by Marketing Alliances Manager and now as Senior Development Manager.



# DR RANDALL JONAS

Dr Jonas (MA 1998, PhD 2014) served as an Executive Committee Member of the former UPE Alumni Association and was the first president of the former Nelson Mandela Metropolitan University Alumni Association.

He served as the Deputy President of Convocation until the merger of the two structures in 2013 to form a new single alumni governance structure which he chaired until 2018. He is recognised for his service to his alma mater representing the interests of alumni on Council and his leadership role of alumni governance structures.



SPECIAL AWARD

# PROFESSOR HUGH JEFFERY

Prof Jeffery graduated with a National Diploma in Technology: Industrial Engineering Machine Systems in 1998 and was Dean of the Engineering Faculty at the former PE Technikon.

He served as a member of Council of the University from 2005 to 2018 as well as a member of the Alumni Association Executive Committee for the same period.

As a proud ambassador of the University, Prof Jeffery’s professional affiliations include being an Honorary Fellow of SAIMechE and a member of the Institute of Professional Engineering Technologists and the Chamber of Engineering Technology.

Some of his contributions to professional associations, societies and councils locally and internationally include: Past President of SAIMechE (2005–2007), Past Regional Chairperson for SAIMechE (Eastern Cape), Chairperson of the Student Merit Bursary Awards Committee as well as being a member of, among others, the Council and Education Committee of SAIMechE, the Metal Industries Training Board and the Aerospace Industries Training Board.





# HONORARY DOCTORATE RECIPIENTS 2019

## Voice of the people

**Veteran ANC leader, cleric and author Frank Chikane spent decades fighting apartheid, enduring severe hardships in his battle for the emancipation of his fellow South Africans.**

Reverend Chikane matriculated from Orlando High School in Soweto and went on to study science at the University of the North (Turfloop), now the University of Limpopo.

Following student arrests in 1974 Rev Chikane led the Student Aid Committee, giving evidence on behalf of students. He was advised not to

return to the university for his own safety.

He later taught in Soweto, but the Security Police pressurised the school, forcing him to leave. He joined Christ for all Nations (CFAN) in 1975, convinced of God's calling.

Again, the security establishment threatened CFAN and he joined the Apostolic Faith Mission (AFM), was ordained as a pastor and then defrocked for political involvement. A reinstatement and apology followed in 1990.

Rev Chikane was detained and tortured between 1977 and 1982 for his activism. A founder and vice-president of the United Democratic Front (UDF), he was arrested for treason in 1985, tried and acquitted, together with fellow UDF leaders, including Albertina Sisulu.

Rev Chikane obtained master's degrees in both Religious Studies and Public Administration and was appointed General Secretary of the South African Council of Churches (SACC) from 1981 to 1987 – a challenging period of

repression, violence and human rights abuses.

Following banning and restrictions imposed on most organisations in 1988, the SACC became the only voice of the people. Consequently, its headquarters was bombed and Rev Chikane's clothes laced with a toxic chemical substance.

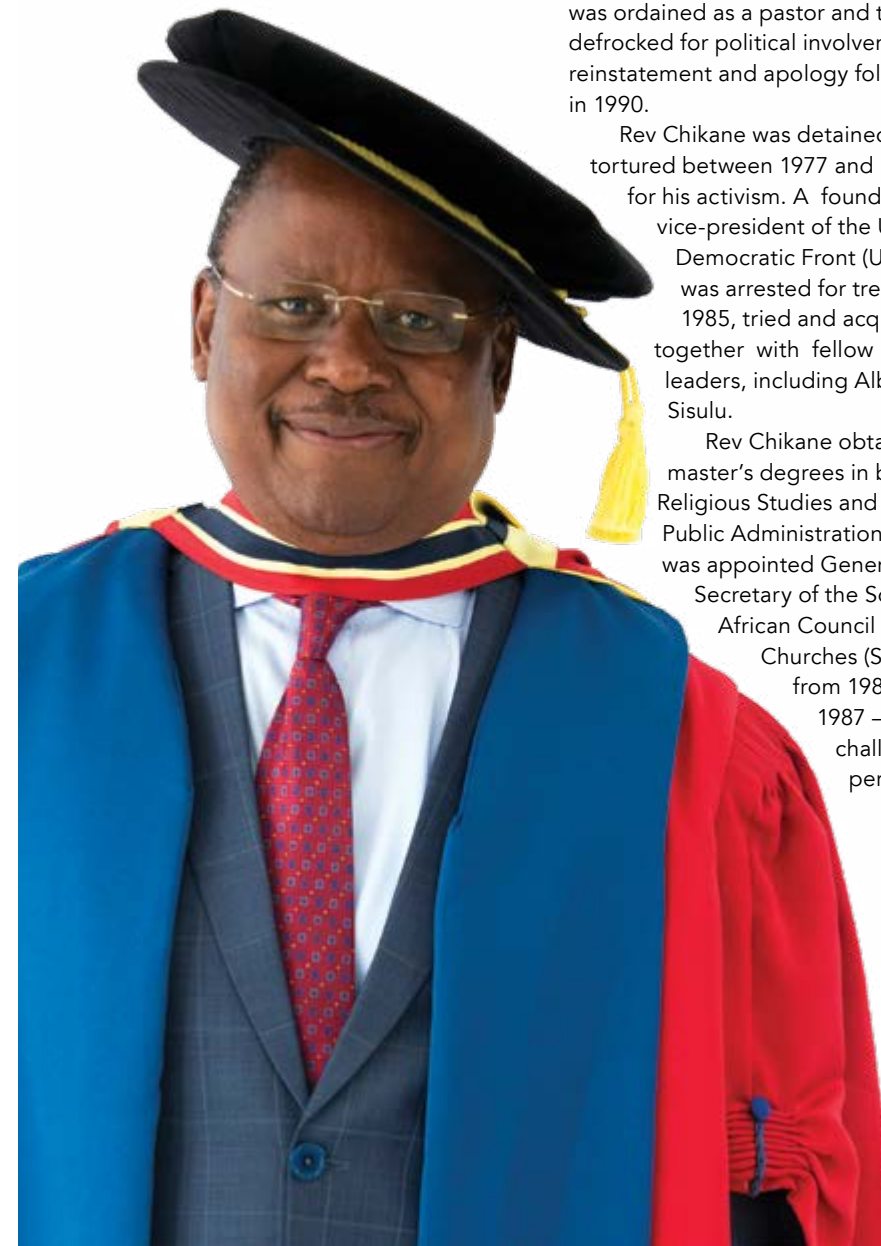
After serving as a commissioner on the Independent Electoral Commission, he held several key roles in democratic South Africa, including Director General in the Presidency and ANC National Executive Committee member.

His published works include his autobiography *No Life of My Own* (Wipf & Stock, 2010), the so-called 'Chikane Files', *Eight Days in September: The Removal of Thabo Mbeki* (Picador Africa, 2012) and *The Things That Could Not be Said* (Picador Africa, 2013).

Other positions and accolades include his appointment as Senior Research Fellow in UCT's Department of Religious Studies, AFM International President, the Swedish Diakonia Peace Prize for Outstanding Theology Contribution for Justice and Peace in SA and the Peace and Freedom Prize from the Swedish Labour Movement.

He now serves as Moderator of the Churches Commission on International Affairs (CCIA) of the World Council of Churches (WCC).

For his contribution as a servant leader; tireless pursuit of justice, peace, conflict resolution and reconciliation; establishing the architecture of democratic governance in a post-apartheid state; developing and promoting the vision of the African Renaissance and consistently placing people at the centre of socio-economic development, it is an honour for Nelson Mandela University to confer the degree of Doctor of Philosophy (*honoris causa*) on **Reverend Frank Chikane**.





# Agent of change

**Born in the Eastern Cape, Dr Vuyo Mahlati's passion for alternatives to apartheid's oppressive education and political systems sprung from her childhood experiences at farm and missionary boarding schools.**

She obtained her PhD from the University of Stellenbosch and trained as a policy specialist at the London School of Economics.

Dr Mahlati's activism was enabled by education. She started her career as a disability, children and women's issues researcher and later mentored at the Small Business Development Agency (SBDA). This led to involvement in South Africa's constitution-making process and UNICEF's first report on the status of women and children in South Africa.

A visit to Zimbabwe and disability activist, Joshua Malinga – then mayor of Bulawayo – inspired her to focus on redress and change, which led to opening a consultancy to frame and drive this agenda.

In the mid-2000s, Dr Mahlati convened the team that facilitated the launch of the India Brazil South Africa (IBSA) Women's Forum, premised on the call for "an inclusive macroeconomic framework". This culminated in the signing of a Memorandum of Understanding in India in 2008.

In 2009, she was a South African delegate and Technical Advisor for the Presidency to the United Nations Commission on the Status of Women, where she addressed the financial crisis theme.

A year later, Dr Mahlati was appointed by the President as an inaugural member of South Africa's National Planning Commission. In September 2018, she became Chair of the Advisory Panel on Land Reform and Agriculture.

Her many directorships include previously chairing the South African Post Office, terms as International Women's Forum (IWF) South Africa chair and various financial board

positions. She is currently global director of the IWF Board and Co-Chair of the IWF Presidents' Council.

Dr Mahlati has wide-ranging entrepreneurial experience and owns Africa's first indigenous goats' cashmere processing plant in Butterworth, Eastern Cape – a venture which has revived the clothing and textile industry using inclusive rural value chains.

She is President of the African Farmers Association of South Africa (AFASA) and an IDC Agroprocessing Competitiveness Fund member.

She has received the Black Management Forum Presidential Award, the Black Business Executive/ABSA Kaelo (guidance and wisdom) Award and the Mail and Guardian, Southern Africa Trust Individual Award for Drivers of Change.

For her contribution to driving the global call for inclusive economic growth and development, and her scholarship and praxis of entrepreneurship and economic development, particularly in marginal rural economies, it is an honour for Nelson Mandela University to confer the degree of Doctor of Philosophy (*honoris causa*) on

**Dr Vuyo Mahlati.**



# The dedicated doctor

**Professor Mohambry (Morgan) N Chetty has been at the helm of patient-centred family medicine for about 40 years, committed to promoting access to quality healthcare, with a focus on the poor.**

Prof Chetty obtained his MBChB from the University of Natal and holds several medical qualifications from South African and American institutions.

His impact on the country's healthcare is monumental. Before his intervention, private sector healthcare was in chaos – ethically divided, poorly coordinated and focused on the system, health professional and hospital.

In 1998, he single-handedly raised funds to start the first truly democratic doctors' organisation, the South African Managed Care organisation. He is still Vice-Chairperson today. He was also instrumental in the erection of Mount Edgecombe Hospital, one of the first post-apartheid, black-owned hospitals in Durban.

Prof Chetty led the establishment of an umbrella organisation, the Independent Practitioners Association of South Africa. This turning point saw doctors unite for the common purpose of caring for patients, managing scarce resources and striving for quality outcomes.

Prof Chetty is the Chairman of the IPA Foundation of SA (Independent Practitioners Association) and Chairman of the regional IPA – The KZN Doctors Healthcare Coalition.

Awarded the Faculty of Family Practitioners Fellowship by the College of Medicine in SA for outstanding work amongst family practitioners, he won a Fulbright Humphrey Fellowship to the USA in 1993, obtaining a Master's in Public Health.

Prof Chetty has written prolifically on healthcare and gives regular media interviews. He has authored two books on "Managed Health Care".

He organised the Africa Healthcare Congress in SA for several years and recently helped organise the Africa

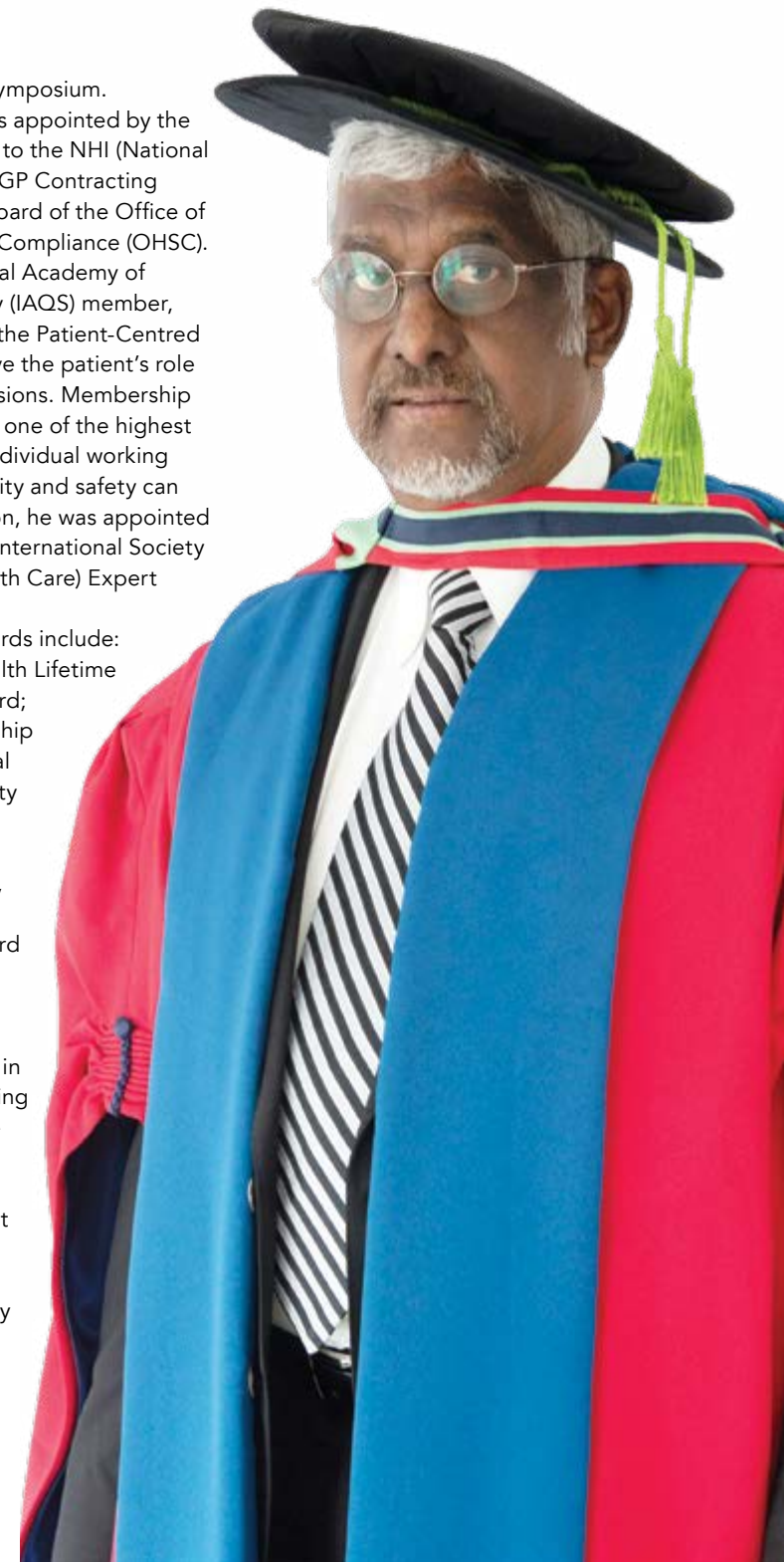
Health Business Symposium.

In 2018, he was appointed by the Minister of Health to the NHI (National Health Insurance) GP Contracting Committee and Board of the Office of Health Standards Compliance (OHSC).

An International Academy of Quality and Safety (IAQS) member, he also serves on the Patient-Centred Committee to drive the patient's role in healthcare decisions. Membership of the Academy is one of the highest honours that an individual working in the area of quality and safety can achieve. In addition, he was appointed as an ISQua (The International Society for Quality in Health Care) Expert Member.

His recent awards include: the Discovery Health Lifetime Achievement Award; Lifetime Membership to the International Academy of Quality and Safety (IAQS) and the Dr Humphrey Zokufa, Titanium Lifetime Achievement Award (BHF).

For his contribution to upskilling doctors in South Africa, leading 5000 primary care doctors and the empowerment of patients on patient rights, it is an honour for Nelson Mandela University to confer the degree of Doctor of Philosophy (*honoris causa*) on **Professor Morgan Chetty.**





# A passion for people

From an early age, Sibongile (Bongi) Mkhabela focused on service to others, first as a student activist and social worker, and later as the driving force behind two of Nelson Mandela's lasting legacies.

Mkhabela is Chief Executive Officer of the Nelson Mandela Children's Fund and the Nelson Mandela Children's Hospital Trust.

Her first steps as an activist were intuitive rather than political; as a child, she questioned the indignities that shaped black lives and was instrumental in the student revolt on 16 June, 1976 – a turning point in South Africa's anti-apartheid struggle.

Charged at the "Soweto 11" Trial for sedition, together with 10 other students, she was only released from prison in 1981. This resolved her commitment to fighting for the dignity of black citizens and a strengthened position for African women.

Mkhabela later founded the Zola Advice Office, offering practical, social and paralegal help to those affected by apartheid, and established the National Advice Centre's association advocating for women's rights.

After graduating, Mkhabela ran the Development Resources Centre, which drove research on creating an enabling environment for civil society. This work contributed to the formation of the SA Non-Governmental Organisations Council and the National Development Agency.

Mkhabela's civic-minded focus saw her work in several top-level governmental and global positions.

As Nelson Mandela Children's Fund CEO, Mkhabela is devoted to giving children access to world-class tertiary healthcare and institutions.

She led the Nelson Mandela Children's Hospital Trust's R1-billion capital campaign for building and equipping the Nelson Mandela Children's Hospital, which provides tertiary paediatric care and aims to improve the quality of paediatric research and training in Sub-Saharan Africa.

A University of Zululand graduate,

she is also a Joel L. Fleishman Civil Society Policy Fellow at Duke University in North Carolina, USA, and completed her postgraduate business management studies with the University of the Witwatersrand Business School. In 2017, Mkhabela was awarded a Rockefeller Foundation Fellowship in Italy, a residency to reflect and write on her experiences and the future of social justice movements.

Last year, Mkhabela was awarded The National Order of Luthuli (Silver) by South African President Cyril Ramaphosa. She serves on various boards, including Senegal-based Trust Africa and the USA-based Global Philanthropy Alliance.

Her novel *Open Earth and Black Roses* (Skotaville Press, 2001) recounts the ordinary and extraordinary tales of black families in apartheid South Africa.

In recognition of her fight against apartheid, her continued work in social justice and for her excellent contribution to the well-being of South Africa's children, it is an honour for Nelson Mandela University to confer the degree of Doctor of Philosophy (*honoris causa*) on **Sibongile Mkhabela**.



# A woman of substance

Entrepreneur and philanthropist Judy Dlamini was born to parents who taught her the merits of hard work – and the value of education as an escape from poverty.

As a child, Dr Dlamini knew she wanted to own property for capital appreciation and income – an example set by her father, who invested in building flats for rental income. Her teacher mother supplemented her income by running a tuck shop.

Dr Dlamini's dream was to become a doctor, which she did while married and raising her first child, earning her degree through the then University of Natal.

She became a family practitioner and later obtained a Diploma in Occupational Health from the University of the Free State, before embarking on a business career with an MBA from the University of the Witwatersrand.

Following a stint at the Hong Kong and Shanghai Banking Corporation (HSBC), she developed her entrepreneurial interests, holding board positions at various blue chip companies.

Dr Dlamini obtained a Doctorate in Business Leadership from UNISA in 2014 and a Stanford Innovation & Entrepreneurship Certificate in 2018.

Founder and Executive Chairman for Mbekani Group, an occupational health consulting company established in 1996, she has expanded the company into several sectors, including health, property and luxury fashion retail, boasting a 150-strong direct staff complement.

A non-executive director of SA SME Fund, an initiative between government and the private sector to create jobs and grow an inclusive economy, Dr Dlamini is also founder/trustee of social responsibility initiative Mkhiwa Trust and author of the best-selling *Equal but Different* (Sifiso, 2017).

Dr Dlamini holds several awards, including African Economy Builder Lifetime Achiever 2016 and the African Women Chartered Accountant

(AWCA) 2018 Woman of Substance award.

"I have learnt so many things," says Dr Dlamini. "It starts with having an ambition, pursuing excellence through investing in your education, staying focused and working hard."

"Failures are there to teach you something; learn from them. Giving up on your dreams is not an option. Achieving one dream is only a start; create more dreams and work hard at achieving them. Ethical and servant leadership is what the world needs to close the gaps that exist in societies."

For her passion in creating and adding value to society and humanity, and for setting a sterling example of the benefits of education and determination, it is an honour for Nelson Mandela University to confer the degree of Doctor of Philosophy (*honoris causa*) on **Judy Dlamini**.





Unique health programme for schools to expand into Africa

# Fast track to health

With incredible new technologies and instant everything, modern life propels us forward in many respects - but it costs us our health, writes Nicky Willemse.





**M**any people are not as active as they used to be, meals are not as nutritious and stress levels are higher than ever, putting millions at risk of disease and early death.

For developing schoolchildren, poor health impacts their ability to excel in the classroom and to reach their full potential, with children in the poorest schools most affected.

In an effort to get children active and healthy again, a unique practical programme is being piloted in eight disadvantaged primary schools in Nelson Mandela Bay – with an aim to roll it out to 300 schools across the Eastern Cape by next year, reaching 180 000 pupils.

From there, the plan is to expand it beyond our borders to other countries in Africa. The programme is also targeting teachers' health.

#### Positive partnership

The curriculum-aligned KaziKidz toolkit for children – which includes hundreds of lessons for Grade 1 to 7 pupils in four areas, namely physical education, moving-to-music, health and hygiene, and nutrition education – forms part of the overall KaziBantu programme, the result of a Swiss–South African partnership between Nelson Mandela University, the University of Basel in Switzerland, and the Swiss Tropical and Public Health Institute.

It is funded by the Novartis Foundation, and endorsed by the Eastern Cape departments of health and education.

KaziBantu, which means “active people” in Swahili and isiXhosa, has a second core programme called KaziHealth, which focuses on improving the health of teachers through high-tech testing and monitoring of their individual health risks, along with lifestyle coaching from experts in physical activity, nutrition and psychosocial health.

“This is probably the first study of its kind looking at the health of teachers at this depth,” says Nelson Mandela University’s Prof Cheryl Walter, the South African principal investigator of the KaziBantu project.



Children across Nelson Mandela Bay are getting active and healthy through the innovative KaziKidz programme, which falls under the broader KaziBantu project, which will soon be rolled out to 300 schools across the Eastern Cape before expanding into Africa.

She is working closely with Swiss principal investigator Prof Uwe Pühse from the University of Basel, who was recently awarded a UNESCO research chair on physical activity and health in educational settings, which will be “twinned” with Nelson Mandela University.

Pühse says the purpose of the Chair is to promote an integrated system of research, training,

information and documentation on physical activity and health in educational settings, especially in Africa.

“We have a challenge, a task, and a responsibility to make a difference to the health and well-being of children and teachers, particularly in disadvantaged settings.”

Says Prof Walter: “We are hoping this Chair will provide us

with the avenue for really expanding the project, now that we have an endorsement from UNESCO.”

#### Success story

KaziBantu sprang from the successes of an earlier Swiss–South African research study – the Disease, Activity and Schoolchildren’s Health (DASH) project – which started in 2014.

The two-year DASH study aimed

at improving the health and well-being of Grade 4 children in eight disadvantaged schools in Port Elizabeth’s township and northern areas, by implementing weekly physical activity and dancing-to-music lessons, health and hygiene lessons, nutritional supplementation and deworming.

“From the DASH study, we identified that there was a great need

out there for an intervention looking after the health and well-being of children, particularly in disadvantaged settings. Basic health and hygiene education is so important and it’s really been neglected in many schools, along with physical education,” says Prof Walter.

In 2017, the KaziBantu project was developed as a programme of practical, school-based interventions.



“KaziBantu builds on the findings of the DASH study and looks at consolidating physical literacy and healthy living in schoolchildren and teachers ... We are piloting KaziKids and KaziHealth in eight quintile 3 (no-fee) schools.”

The teaching material that has been developed for KaziKidz is linked to the existing Life Orientation programme within the CAPS curriculum.

“It’s a resource that teachers can use,” explains Prof Walter.



A Nelson Mandela University student researcher, Felicitas Nqweniso conducts the health risk assessment of Enkwenkwezini Public Primary School (Motherwell) teacher Tembeka Mantile participating in the KaziHealth programme.

## Looking ahead

In 2020, the KaziBantu project hopes to expand the project into 300 rural and urban schools across the province, conducting workshops and training to subject advisors and 1500 teachers in the KaziKidz programme, and 1000 teachers in the KaziHealth programme.

“The ultimate goal is to expand the KaziBantu project to other parts of the African continent and beyond. Discussions are currently underway with institutions and researchers from Tanzania, Ivory Coast, Namibia, Botswana, Mauritius and various European regions,” says Mandela University’s Prof Cheryl Walter.

A KaziBantu project workshop is also being planned at the BRICSCESS 2019 conference [the acronym standing for the BRICS (Brazil, Russia, India, China and South Africa) Council of Exercise and Sports Science] running in Cape Town from October 10–13.

### Benefits for all

KaziBantu’s second core programme, KaziHealth, is a teachers’ health promotion programme aimed at reducing cardiovascular disease risk, and improving physical activity and physical fitness, nutrition and diet, and psychosocial health.

“We are working at the same eight schools and are busy with baseline testing at the moment,” says Prof Walter.

KaziHealth is built on a five-step model that includes an individual health risk assessment, personal health risk profiling, lifestyle coaching, follow-up phases and the evaluation of goal achievement.

To conduct each teacher’s health risk assessment, the researchers test for cardiovascular risk – blood pressure, cholesterol and sugar – using very sophisticated tests. They also measure the teacher’s bone mineral density and body composition, and use accelerometers (worn by each teacher for a week) to determine their daily physical activity.

A dietician analyses their diet, and participants complete stress and sleep questionnaires to assess their psychosocial health.

“The battery of tests is really in-depth and sophisticated. The teachers

will get an accurate profile of their health status.”

Teachers will also receive a personal health risk profile in the form of a “traffic light” colour-coded system, with green indicating no-risk areas, orange being borderline, and red showing high-risk areas. This will lead to lifestyle coaching and goal-setting to reduce their risks.

KaziHealth also comes with a cellphone app, which provides teachers with tips on how to manage risk areas, and allows them to engage and interact with self-help tools around nutrition, physical activity and stress management, thus supporting and encouraging teachers to lead healthy active lives.

The KaziBantu team is also planning to develop Short Learning Programmes on KaziKidz and KaziHealth, linked to the continued professional development of teachers, to be rolled out to as many schools as possible next year in South Africa and further afield.

“Our modern lifestyle has changed the way people live. But going back to basics – looking at physical activity, nutrition, healthy eating, and health and hygiene practices – is important. With this programme, we are going back to those basics.”

# BongoHive’s Business Beat

BSc IT alumnus Lukonga Lindunda co-founded BongoHive, Zambia’s first-ever tech hub and start-up accelerator. Lindunda received the *Rising Star Alumni Award* from Nelson Mandela University in 2017. He was also named *Undergraduate Achiever of the Year in the Residences*, Faculty of Science, October 2003.



**W**hen 74% of your country’s 14 million people are under the age of 30, and you need to develop a young, entrepreneurial culture with no existing technology and innovation hub, you make a plan.

“We established BongoHive in Lusaka in May 2011. Itself a start-up, our goal was to provide a range of start-up and tech programmes and workshops that would assist other start-ups to get going,” says Lindunda, the executive director of BongoHive, along with co-founders and directors, Simunza Muyanga and Silumesii Maboshe.

“All of us are programmers and in the early stages it was stressful because a lot of people didn’t get what we wanted to do. We had to work against some discouraging responses, so we know exactly what it feels like to battle as a start-up.

“But eight years later, here we are with an amazing team and we no longer have to worry about whether we have enough money for power or rent. Our focus now is on how to change the innovation narrative for Zambia and Africa!”

Since 2016, over 500 start-ups and MSMEs (micro, small and medium enterprises) have participated in their programmes, “including 52.5% female participants.”

BongoHive also operates the Social Enterprise Academy (SEA) in Zambia through a social licence agreement ( [www.socialenterprise.academy/zambia/](http://www.socialenterprise.academy/zambia/)). Founded in Scotland, the SEA helps people to build social enterprises that achieve impact, make money and positively affect the lives of people and the environment.

### Media exposure and Prince Harry

BongoHive has been featured on CNN, BBC, Al Jazeera, VoA, TechCrunch, ITWeb Africa and the SABC, and was voted Zambia’s Best Entrepreneurship and Innovation Company of 2018 by the Economics Association of Zambia. Also in 2018, Britain’s Prince Harry visited BongoHive (above), which had been recommended as a business that develops young entrepreneurs.

“It’s a validation of the work that we are doing, but we still have a lot more to achieve; and really, it is the entrepreneurs who are the centre of our business, not the awards or visitors,” says Lindunda.

At any given hour, BongoHive is streaming with people. Inside and outside, there are workshops and events taking place, with 20 staff members coordinating the training



programmes, and start-ups operating from the premises as part of their initial business support. "Most of the prospective entrepreneurs who attend our programmes are younger, but some are in their fifties or sixties and that's wonderful."

Lindunda explains that "making money is such a complex field and 80–90% of all business ideas and start-ups fail. Because of this, we created a two-week programme called Discover PreAccelerator, where people explore the potential of their business idea and what makes for a successful business before diving in. This saves a whole lot of time and money on a business idea that is not going to fly, and at the same time educates people about what makes for a successful start-up."

"The 10 to 20% start-ups with promise progress to our six-month Launch Accelerator programme, which includes a three-month start-up programme and three months of additional business support."

"We've found that the people who succeed are those who listen to what works and are happy to adjust and change their strategy. Those who don't succeed are generally people who are very rigid and think they have 'arrived' and that their idea is the best in the world without researching what the market wants or listening and responding to what their customers are saying."



## Over 80 successful start-ups

To date, over 80 of BongoHive's start-up alumni have succeeded. Some of the notable alumni include Musanga Logistics, My Perfect Stitch, and ZPOS Outsource Now.

Lindunda describes Musanga Logistics as "the Uber of logistics". Using a tech platform, they source people with any form of transport – from a motorcycle to a truck – for customers who need things moved. Any business can register on the tech platform and even massive clients like Pepsi and Dangote use it. [www.musanga.com](http://www.musanga.com)

My Perfect Stitch is a custom furniture business and they reach their target market using social media. [www.myp perfectstitch.co.zm](http://www.myp perfectstitch.co.zm)

ZPOS offers an intelligent platform that enables shopkeepers to keep track of their inventory, with the added benefit of being able to have access to loans and credit facilities from financial services as a result of the track record they develop on the system. It runs off a phone that is connected to a point-of-sale device. The phone is used to scan items and the cost of the whole business package is far more affordable for someone wanting to run a shop. [www.zpos.co.zm](http://www.zpos.co.zm)



## Programmes for kids and students

"Over the past two years, we have widened our programme to include kids from nine to 12 years in our Spark programme, where they learn coding and robotics," says Lindunda.

"We have also established a student-focused entrepreneurship programme called BongoHive X to share knowledge, collaborate, and be the ultimate platform for young people to realise their entrepreneurial potential. We have trialled it with a number of universities and [several] corporates are interested in collaborating in order to tap the talent and ideas from university students."

"Regionally, we are scaling the southern African start-up ecosystem through our partnerships with other hubs like Injini and EdTech in South Africa, MHub in Malawi and TechVillage in Zimbabwe to form what we call the Southern Africa Venture Partnership (<https://www.savp.co/>)."

Scaling up to the next level, BongoHive has since diversified its business and established BongoHive Ventures – a funding vehicle mechanism for start-ups needing in the range of \$10 000 (R145 000) to \$250 000 (R3 600 000) – and BongoHive Consult (Tech Consulting Unit) with clients such as the World Bank, GIZ, UNICEF, Barclays Bank, ZANACO, Stanbic Bank, Facebook, GIZ and others contributing close to 50% of its current total revenue.

Visit [www.bongohive.co.zm](http://www.bongohive.co.zm)

## I loved the experience

"I decided to study at Nelson Mandela University because my brother-in-law, Alex Phiri, was studying there. This meant travelling from Ndola in Zambia where I grew up – it's about four hours north of Lusaka; a bus journey of about 50 hours."

"It was my first experience of a coastal city and the sea; this massive body of water. The weather was different, the city was different, the food was different, and I loved the experience and the diversity of so many nationalities at the university. The Eastern Cape also has such a deep history, with so many amazing people born in the province."

"My time there taught me a lot for what I do now, including becoming independent. I had such a good experience and my lecturers, especially my Computing Sciences lecturers, were so cool, like Professor Jean Greyling."

"I was also exposed to other sides of the city. I attended the Cornerstone Assemblies of God Family Church in Central and was part of the choir and youth ministry and a drummer in our gospel band."

"I would have liked to pursue postgraduate studies, but my family could not afford it. I also wanted to return to Zambia because my family is here, and I had been dating the person who is now my wife, Muntanga Lindunda for the whole time I was at university, maintaining a long-distance relationship over four years."







Homecoming: Celebrated Port Elizabeth artists (from left) Jennifer Ord, Graham Jones, Ruth Nesbit, Derrick Erasmus and David Jones. Photo: Eugene Coetzee

Twenty-five years after wowing Cape Town audiences with their creative talent, a group of Port Elizabeth Technikon (now Nelson Mandela University) alumnus gathered on home shores last month JUNE for a repeat performance.

The former School of Art and Design teachers – Ruth Nesbit, Graham Jones, Derrick Erasmus, Anton Momberg, David Jones, Jennifer Ord and Thys Cilliers – pooled their collective skills in a homecoming exhibition, titled 7-UP, at the GFI Art Gallery in Park Drive, Port Elizabeth.

That invitation to exhibit in Cape Town in 1994 would be a springboard for keeping in touch – and the coining of their group name, 7-UP, taken from an exhibition piece by Hunter Nesbit, Ruth's late husband.

The close-knit crew went their separate ways, becoming widely-known both nationally and internationally for their work in the art field.

Ruth and Hunter retired from the then Port Elizabeth Technikon to focus on their art studio and gained worldwide

recognition as South Africa's 'stained glass duo'. Hunter died in 2018.

Good friend and former colleague Derrick retired from the art school in 1994 and is a busy professional, focused on digital art and mask-themed paintings.

David is associated with the School of Music, Art and Design at Mandela University and also sculpts and draws, while Graham works as a part-time sculpture lecturer at the institution.

Jennifer is a writer and contributor to journals, catalogues, exhibitions and books, and exhibits as a visual artist both locally and abroad. Her work has attracted several awards.

Sculptor Anton, who has created sculptures for Nelson Mandela's home town of Qunu, is now based in Cape Town, as is Thys, who exhibits his paintings at exhibitions across the globe and has seen his work housed in both local and international private and corporate permanent collections.

# Alumni Association

## Mission

The association supports and enhances the realisation of the university's vision and mission through maintaining and expanding positive relationships with its members and through utilising and maximising their expertise, goodwill and influence in support of the university.



## The Association goals include

- Enhancing the image of the association both inside and outside the Nelson Mandela University community as an important stakeholder body and an asset to the university to support the realisation of the university's mission and goals.
- Fostering loyalty to and pride in Nelson Mandela University among members, through effective communication so that they may positively influence others.
- Fostering the provision of opportunities for Alumni to contribute in financial and other meaningful ways to the advancement of Nelson Mandela University.
- Providing Alumni opportunities to benefit from their relationship with the university.
- Promoting the ideals and purpose of the university to constituencies and stakeholders of the university.
- Promoting, protecting and maintaining the rights of the Alumni Association.

## Contact: Nelson Mandela University Alumni Relations

Further your studies • Update your information  
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