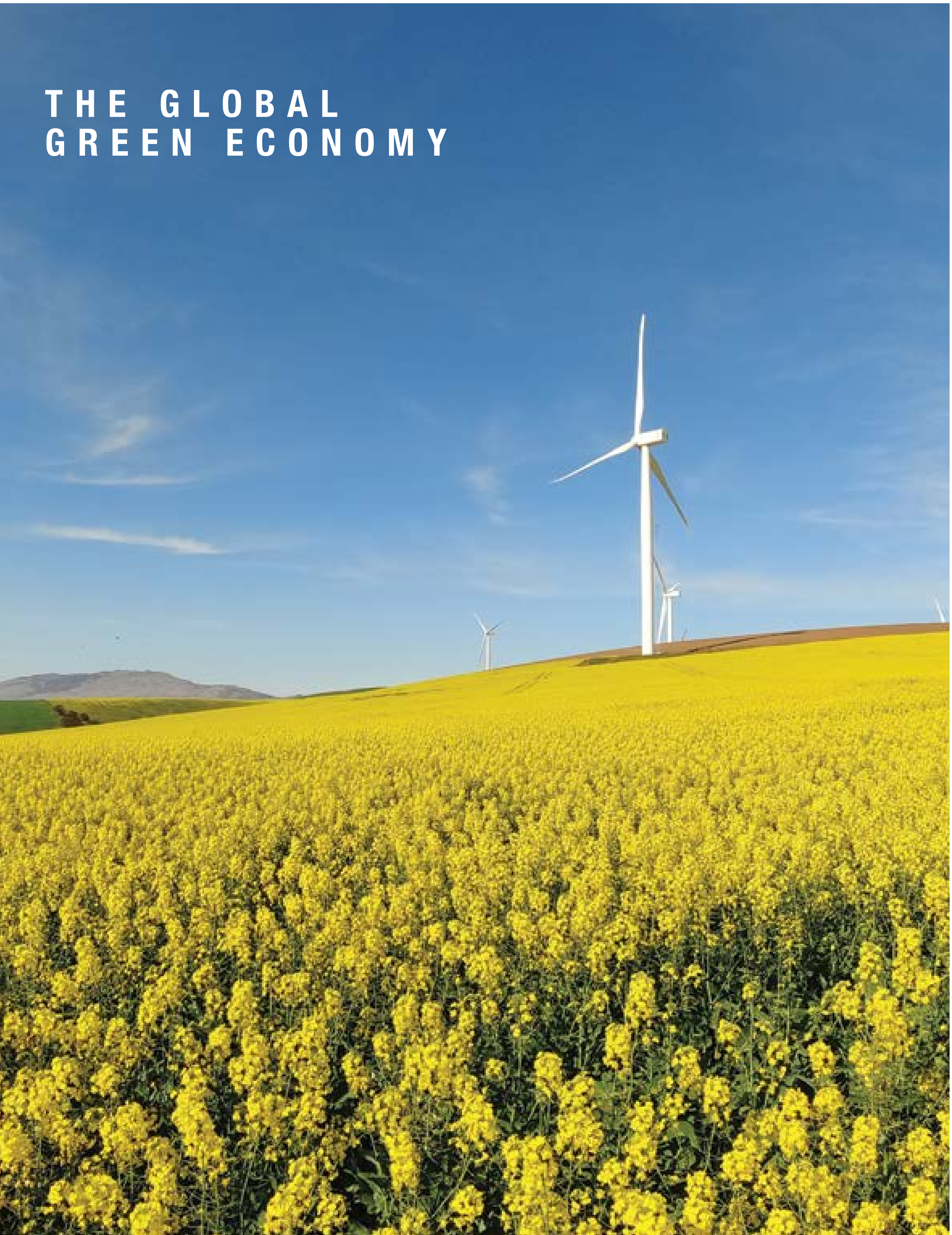
ISSUE 75
JAN-FEB 2021

Service

LEADERSHIP IN GOVERNMENT



THE GLOBAL GREEN ECONOMY

BUILDING BACK BETTER ON FOOD AND AGRICULTURE

IT INFRASTRUCTURE: THE PILLAR OF DIGITAL GOVERNMENT

GLOBAL CITIES: NEW PRIORITIES FOR A NEW WORLD

DRIVING INVESTMENT INTO OIL AND GAS

POST-COVID RECOVERY FOR AFRICAN CITIES

IN THIS ISSUE | SERVICE, ISSUE 75, JAN-FEB 2021

LOCAL TALENT, INTERNATIONAL IMPACT

Providing our customers with technical and in-depth industry knowledge, products and services they need to ensure streamlined operations, AR Jones Engineering provides solutions and equipment to a diverse range of sectors, including the steel, oil and gas and maritime industries and to municipalities in South Africa.

We specialise in the maintenance and repair of heavy-duty industrial equipment across sectors and source and supply premium OEM pumps and valves. We also advise companies on how to optimise processes in order to achieve energy efficiencies.

Our workforce includes industrial and engineering specialists, electricians, fitters and welders. The capability, dedication and commitment of our people ensures that we always deliver the highest quality services to our customers.

Maintenance and repairs of heavy-duty industrial equipment

Our technical knowledge and in-house experience ensure that we are well-equipped to assist industry and municipalities in meeting the maintenance and repair requirements of their critical assets. We are skilled at sourcing and managing maintenance and repair teams and conduct this work on site. We also offer welding services for the oil and gas industry and have industry welding procedures certification (ASME IX).

Source and supply premium OEM pumps and valves

We have trusted relationships with premium suppliers of quality pumps and valves, and can advise on, source and supply the equipment needed by our customers for their effective operations. We are the appointed agents for the German manufacturer Wangen Pumpen, manufacturers of standard and customised progressing cavity and twin-screw pumps for the biogas, food and beverage, agriculture and wastewater treatment markets.

Energy efficiency advisory services

We advise companies on how to optimise their energy consumption. Our in-depth understanding of energy technology and solutions and our experience in the power sector ensures that we are well-placed to advise our customers on meeting their energy requirements and on improving the energy efficiency of their operations. We offer energy assessments on behalf of the National Cleaner Production Centre South Africa.

info@arjones-engineering.com | www.arjones-engineering.com

AR Jones is a Level 1 B-BBEE company and is ISO9001 compliant

AR Jones Engineering was founded by Antonio Jones in 2016. Jones is a qualified chemical engineer (B.Eng, Stellenbosch) and a certified energy auditor, trained as a consultant for the National Cleaner Production Centre. He previously worked for Eskom and ArcelorMittal South Africa.

Having worked his way up from the factory floor to management after successfully completing his engineering degree, Jones now has longstanding trusted relationships in the industry. He is passionate about entrepreneurship and is a business mentor, assisting small businesses in his community to succeed.

AR JONES ENGINEERING

At your service

President Cyril Ramaphosa specified seven national priorities in his State of the Nation Address in 2019. These priorities include economic transformation; education, skills and health; consolidating social image through reliable and quality basic services; spatial integration, human settlement, local government; social cohesion and safe communities; capable ethical and developmental state, as well as a better Africa and world.

These seven national priorities are the pillars that structure the editorial content of *Service* magazine, a quarterly journal that provides a focused channel of communication to the government for the business community. We communicate to all levels of government, from local to provincial to national. We seek to catalyse the notion that working together, government and business has the power to heal this land and to revive the Democratic South African spirit we once shared. Thirty years ago, Nelson Mandela walked out of the gates of Victor Verster Prison – and filled this country with pride, dignity and most of all – a united hope for a bright future.

Just under a year after SONA 2019, the world changed its priorities – and the people's priorities were penalised by a pandemic. In March 2020, President Ramaphosa announced lockdown in South Africa for 21 days. At the time of writing, the country's only armour is our face mask and the knowledge that South Africa has had 921 922 Covid-19 recorded cases to date.

The Black Death killed almost 40% of Europe's population and within 200 years, cities had, on average, returned to their former population levels.

Throughout history, cities devastated by disease and damaged from disaster have persisted and have lived to the test of time. The value of a city is irreplaceable.

And the decisions and actions that cities make today will forever transform their trajectory (page 26). The world's coronavirus response will have a long-lasting impact on the energy transition path. Read more about the global green recovery (page 6). An African approach to green industrialisation is about an all-inclusive modernisation of economic transactions, smart urban regulation and the juncture of land-use planning and infrastructure investment (page 14).

Food systems that must give daily sustenance to all humans on the planet are under threat from the pandemic. We need to transform our food security for a more resilient and equitable future (page 16).

Service's objective is to support government leaders as they plan and take the action needed for our communities, districts, provinces and the nation.

And each one of the seven national priorities lies at the foundation of the reason and recovery for our communities, our cities, our country, our planet. The pandemic has given rise to a second chance, an opportunity to build it back better. So, leaders of both the public and private sectors, let's pause to ponder the possibilities – of what could be in our nation as we enter 2021.

Alexis Knipe
Editor

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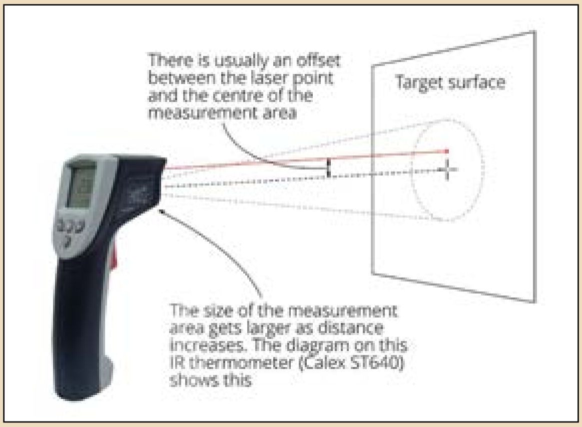
GlobalAfrica NETWORK

Infrared thermometers for 2021

The National Metrology Institute of South Africa, (NMISA) is contracted by the government to maintain South Africa's National Measurement Standards and ensure they remain internationally equivalent.



Infrared thermometers have an optical lens, just like a video camera, but instead of an optical detector on the inside, they have a thermopile which converts the infrared radiation into electrical energy. The thermopile gets hotter as it absorbs more and more infrared energy. The electrical output can then be translated into the temperature of the object.

Reliable measurements for testing is not foremost in the minds of South African citizens. However, the Covid-19 pandemic has brought the measurement of temperature into our daily lives. Most citizens have had their forehead temperature measured employing a non-contact, infrared thermometer as a preliminary Covid-19 screening intervention. Clinically speaking, if a person's core temperature is around 37°C, it would be considered normal and the person healthy and Covid-19 asymptomatic. However, a core temperature measurement result of 38°C or higher would be considered an indicator of possible Covid-19 infection.

A body infrared thermometer is an optoelectronic instrument that is capable of non-contact infrared temperature measurement when placed at a certain distance from the subject's body surface. Most of the body infrared thermometers can display the body core temperature inferred from the skin temperature they measure. However, the accuracy of the IR thermometer is significant and what matters.

If the measurement is higher than the person's actual temperature, there is a risk that time, effort and medical resources will be wasted until the test result comes back negative. These resources could have been better spent on an infected person. Cases of Covid-19 infection could go undetected and a potentially infected person sent back into society where they could infect others. S

WHERE CAN YOU GO IF YOU DOUBT THE OUTCOME OF YOUR COVID-19 SCREENING BASED ON YOUR FOREHEAD TEMPERATURE?

- Kindly visit the NMISA website and social media pages, where we share ample information.
- Website: **www.nmisa.org**
- Facebook: **www.facebook.com/NMISouthAfrica**
- Twitter: **www.twitter.com/NMISouthAfrica**
- Instagram: **www.instagram.com/nmisouthafrica**
- Linkedin: **www.linkedin.com/company/national-metrology-institute-of-south-africa**

nmisa
National Metrology Institute of South Africa

SERVE AND DELIVER

NAMA KHOI MUNICIPALITY IN THE SPOTLIGHT

The 140MW Kangnas wind farm in the Northern Cape has successfully reached commercial operations. This marks the completion of all five wind farms in a Lekela-led consortium across South Africa. Together, these total over 600MW and will provide clean, cost-effective power for up to 485 000 South African homes over the next 20 years. Lekela is a renewable power generation company that delivers utility-scale projects across Africa.

The Kangnas wind farm is situated just over 50km east of the town of Springbok in the Nama Khoi Local Municipality of the Northern Cape. Construction for the project began in 2018 and has been achieved with 50% of construction content manufactured locally in South Africa, including the site's two transformers. Kangnas wind farm also committed to drive local job creation on top of manufacturing, providing over 550 jobs at the height of the project's construction. Long-term operations and maintenance jobs will also be supported while the 61 Siemens SWT-2.3-108 wind turbines generate electricity for 20 years.

FREE STATE LAUNCHES YES4YOUTH PROGRAMME

The Free State has introduced yet another innovative and ambitious programme as part of its arsenal to fight unemployment, poverty and inequality. Working with Standard Bank, the Free State Department of Economic, Small Business Development, Tourism and Environmental Affairs (DESTEA) announced the Yes4Youth programme which will provide unemployed youth with work experience and introduce them to the world of business.

"We cannot grow the economy with the generation of job seekers. As we change the lives of these young people we have to place them at the heart of the business so that they can demonstrate their talent and play a meaningful role as we create our own economy," says DESTEA MEC Makalo Mohale.

Working with SMMEs that benefited from DESTEA's enterprise support programme, 60 young people with skills in electronics, accounting, business management, economics, food and waste sectors among others, have been identified and will be placed in several SMMEs throughout the province.

PROTECTION OF PERSONAL INFORMATION

Information security and data privacy are at the core of the Protection of Personal Information Act (POPIA). Companies that prioritise the safeguarding of their proprietary and customer data will benefit from better business resilience in the face of increased cybercrime while simultaneously complying with the Act.

The elements required to protect personal information are the very same elements needed for the protection of other valuable information in a business. CIOs and IT managers should address the confidentiality, integrity and availability of data, and cover both the cyber and physical security aspects of information protection. A proactive approach to information security now will help companies to ensure that their houses are in order, and done cost-effectively, before the POPIA grace period ends in June 2021.

– AVeS Cyber Security

Kangnas wind farm has committed to drive local job creation on top of manufacturing by providing over 550 jobs at the height of the project's construction.

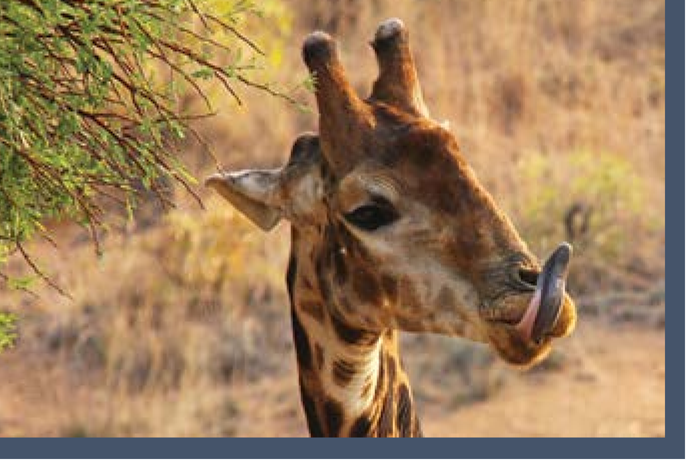
SA GOVERNMENT CALLS FOR TECH IDEAS FOR TOURISM SECTOR

The government is calling on entrepreneurs in the hard-hit tourism sector to apply for funding for their new tech startups.

The Department of Tourism in collaboration with the Technology Innovation Agency is embarking on joint implementation of the Tourism Technology Grassroots Innovation Incubation Programme.

The programme aims to stimulate entrepreneurship and new start-up enterprises in the tourism industry, underpinned by technology, innovation and new business ideas that have potential to enhance services and experiences in tourism.

– BereaMail



PRESIDENTIAL PERFORMANCE TARGETS

President Cyril Ramaphosa has set performance targets for his ministers in a move to increase their accountability between now and 2024. Most ministers are expected to ensure there is 100% elimination of wasteful and fruitless expenditure, 75% reduction of irregular expenditure and maintain unqualified audit opinion by 2024.

Transport Minister Fikile Mbalula is tasked to upgrade, refurbish and ensure maintenance of approximately 20 000km of road network and ensure 10% of road freight is transferred to rail by 2024.

Social Development Minister Lindiwe Zulu is mandated to ensure improved coverage of social grants for vulnerable children through the extended child social grants. Zulu has until 2021 to come up with legislation and regulation.

Public Works and Infrastructure Minister Patricia de Lille is tasked to create jobs through Job Summit commitments, Operation Phakisa and other public sector employment programmes. She has been given a target of five-million Expanded Public Works Programme work opportunities to be created by 2024.

De Lille, along with Finance Minister Tito Mboweni, has to ensure that the R100-billion Infrastructure Fund is established and operationalised by 2024. De Lille will also lead the process for the establishment of the New City in South Africa along with Cooperative Governance and Traditional Affairs Minister Nkosazana Dlamini Zuma.

Health Minister Zweli Mkhize has been assigned to ensure that the National Health Insurance fund is established as a public entity and operational in 2021-22.

Mboweni's targets include capacitating SARS through the establishment of an Illicit Economy Unit.

COGTA Minister Nkosazana Dlamini Zuma together with Communications Minister Stella Ndabeni-Abrahams is tasked to lead and coordinate the refurbishment and transformation of identified cities into smart cities.

Also among Dlamini Zuma's targets is supporting adequate municipal spending on the Municipal Infrastructure Grant fund to address infrastructure backlogs. She must also support National Treasury incentives and support for municipalities to increase expenditure on repairs and maintenance as well as oversee the implementation of Municipal Public Accounts structures.

Communications Minister Stella Ndabeni-Abrahams has been mandated to ensure 5G spectrum licensing and commencement of rollout by March 2024. She is expected to issue policy direction for 5G by December 2021 and ensure 80% of the population have access to the Internet by 2024.

– iol

20 YEARS OF DEMOCRATIC LOCAL GOVERNMENT IN SA

Panel discussions from the South African Local Government Association (SALGA) National Members Assembly (NMA) saw representatives of national, provincial and local government, and other key policymakers and practitioners reflect on the last 20 years of democratic local government in South Africa.

In his welcome address, President Cyril Ramaphosa urged members to use the occasion as an opportunity for new thinking on how to enhance local democracy.

Prof Thuli Madonsela, former Public Protector, shed light on what was meant by the adage of local government is the closest sphere of government to the community. She said: "The truth is it's the most important. It is the integrator. It is the only place where Gogo Dlamini can see the link between her day-to-day life and the promises in the Constitution, which are to heal the divisions of the past and establish a society based on democratic government, social justice."

– Cape Talk

GOVERNMENT TO TAX PROPERTY MORE

Deputy President David Mabuza says that government plans to introduce the Municipal Fiscal Powers and Functions Amendment Bill, which will allow municipalities to boost their revenue by recovering costs for all land development projects. Mabuza said that the proposed legislation forms part of new government measures which aim to mitigate the negative impact of the reprioritisation of funds on local government to ensure that access to services is not impacted.

Development charges are a once-off fee levied by a municipality on a landowner as a condition for approving land development application and enable municipalities to provide infrastructure in a timely and sufficient manner thereby supporting economic development.

– Businesstech

The proposed legislation forms part of new government measures which aim to mitigate the negative impact of the reprioritisation of funds on local government to ensure that access to services is not impacted.

TRANSFORMING THE AGRICULTURAL INDUSTRY

For over a decade, the collaborative efforts of Amadlelo Agri have been at the forefront of transforming the agricultural industry and unlocking the land potential in communities in the Eastern Cape and KwaZulu-Natal.

Today, Amadlelo Agri has expanded its footprint within the agriculture sector to include fruits and agro-processing and is involved in nine projects as an operator, investor or both. These projects comprise six dairies, the Ncera Macademia project, the Fort Hare Piggery and the Coega Dairy project. It has also pioneered other milestones that are indicative of the success that Amadlelo Agri has enjoyed in South Africa's agriculture sector:

- Amadlelo Agri's tried-and-tested model has been replicated and is being used in five dairy enterprises which are located in rural areas and on communal land.
- A testament to its healthy relationship-building and trust ethos, Amadlelo Agri continues to leverage successful rural community partnerships, inclusive of a dynamic network of successful commercial farmers.

The global green recovery

The pandemic is the first crisis of its kind with unusual implications for the energy industry. A sharp drop in carbon emissions has revealed the size of the climate change challenge.

Klipheuwel Wind Farm

Covid-19 and the oil shock have jointly disrupted the global transition to green energy. Businesses that had been establishing their position in a low-carbon world are now fixated on short-term stability. As the industry begins to look forward, the game rules have changed, and old strategies need re-examination. Players that understand the impact of their strategies and are agile to adapt will be the winners in the transition race.

DEMAND FOR ENERGY TOOK A DRAMATIC TURN

The pandemic illuminated the challenge to achieve climate change goals. The global lockdowns reduced daily carbon emissions by 17% compared with the 2019 average, indicating a potential total annual emissions decline of 4-7% – the largest reduction in history (Figure 1). This drop accompanied an unprecedented global economic paralysis along with a massive and rapid shift in consumers' behaviours.

To achieve climate targets and keep global warming below 1.5°C, global emissions need to drop by about 7.6% annually until 2030. Achieving this target in an economically sustainable way is a Herculean task.

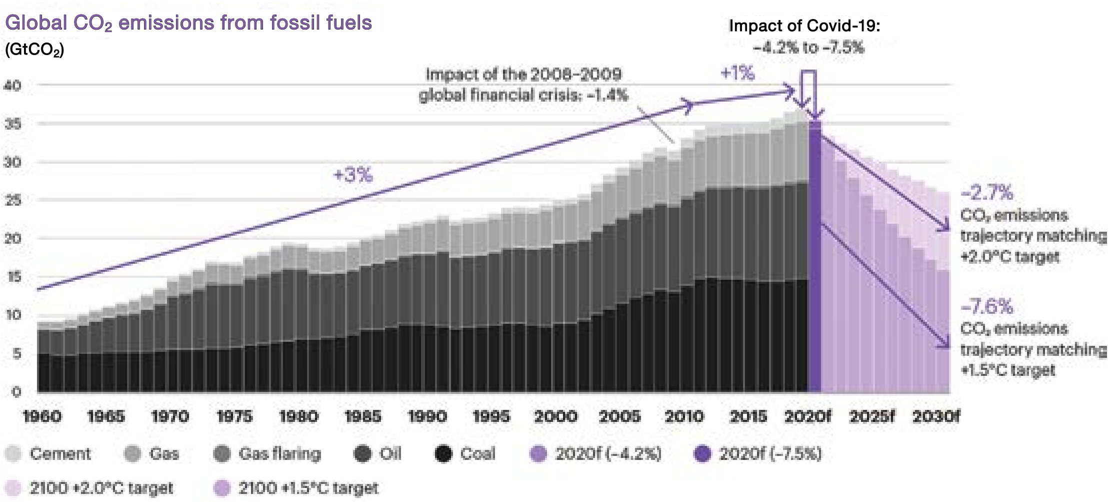
The rapid spread of Covid-19 triggered an unparalleled change in the demand for energy as the world came to a halt. Three trends quickly disrupted the world's energy markets:

As the industry begins to look forward, the game rules have changed, and old strategies need re-examination.

www.kearney.com

Figure 1
Pandemic-related lockdowns caused carbon emissions to drop

NOTE: Additional CO_2 emissions from land-use change and forestry are not included. Assuming that CO_2 emissions from other sources and other greenhouse gases, such as methane, will follow the same reduction trends as CO_2 emissions from fossil fuels. Scenarios presented correspond to 66% probability.



Source: Global Carbon Project; Nature Climate Change, 18 May 2020; UN Environment Program, Emissions Gap Report 2019; International Energy Agency; CO_2 Emissions from Fuel Combustion 2019; Kearney analysis

Effect of the pandemic on energy transition

MACRO TRENDS	TRENDS
Transformation of the power mix	– Decarbonising energy generation – Decentralising energy – Aggregation of services
Improvement of mobility solutions	– Alternative fuels for aviation and shipping – Increased hydrocarbon fuel efficiency – Transition to electric vehicles
Change in urbanisation models	– Decarbonisation of cities (energy and transport infrastructure)
Impact of responsible finance	– Sustainability-driven investments: capital directed to low-carbon technology – Financial instruments to support decarbonisation efforts (including use of CO_2 certificates and carbon credits)
Raw materials demand shift	– Circular economy, product end-of-life, and product carbon footprint – Migration away from plastics – Growing demand for clean energy raw materials
Covid-19 behavioural shift	– New ways of work (digitisation and remote working)

Source: Kearney analysis

Disorder in the supply chain. The crisis immediately impacted supply chains and companies' ability to deliver their offerings affected their ability to generate revenues.
A liquidity squeeze. As companies shut down and more people stayed home, the sharp decline in energy consumption put enormous strain on corporate revenues, creating challenges with cash reserves, operational and debt management, and access to credit. This sudden swing in liquidity made short-term stability a top priority – requiring companies to redirect funds to critical activities and press pause on non-essential projects, impacting the energy transition.
Rise of renewable competitiveness. Various factors exacerbated by the pandemic reduced the profitability of oil and gas while simultaneously creating benefits for renewable investments in more stable and regulated markets. Due to travel restrictions, the energy industry saw the biggest decline in oil demand in 25 years – down 10% in March and 30% in April. Crude oil prices collapsed, worsened by the Saudi Arabia/Russia price war. Oil prices turned negative for the first time when the West Texas Intermediate (WTI) hit –$38 a barrel on 20 April.

Governments and industries alike are incorporating environmental commitments into their long-term plans for an economic recovery.

The International Energy Agency reports that renewable energy was the most resilient power source amid the lockdowns. Energy demand declined 18-25% each week (depending on a country's lockdown intensity) and by 2.5% globally for the first quarter of 2020. Renewable electricity demand rose 1.5% in the first quarter of the year compared to 2019.[5]

The world's dramatic coronavirus response will have a long-lasting impact on the energy transition path. Two questions need to be considered:

- How will Covid-19 impact the energy transition?
- How should companies respond?

6 MAJOR SHIFTS (MACRO-TRENDS) RESHAPING THE ENERGY INDUSTRY

FINANCE
- A preference for low-carbon investments

PRODUCE
- Transformation of the energy mix
- A shift in raw materials

CONSUME
- Changes in urbanisation models
- A shift of mobility solutions
- Product demand shift

IMPACT ON ENERGY TRANSITION

The destination is the same, but the pace has changed. As Covid-19 spread globally, energy-sector stakeholders shifted gears to respond to the crisis (above left). To understand the exact impact of the pandemic, management consulting firm, Kearney, conducted expert market analysis across nine sectors: oil and gas, utilities, aviation, consumer goods, automotive, private equity, chemicals, infrastructure and mining.

Indications show that climate and energy will be essential topics for governments, businesses and consumers alike. The emerging energy-sector stakeholders' decisions provide positive signs for a long-term acceleration of the energy transition, revealing new ways of financing, producing and consuming energy. Six macro-trends in three areas characterise the impact.

If consumers or regulators start making decisions about what they buy based on the overall carbon impact, entire value chains will be quickly impacted.

FINANCE: Growing interest in low-carbon assets. A complex issue is that socio-economic pressures are changing the way markets prioritise their investments. Governments and industries alike are incorporating environmental commitments into their long-term plans for an economic recovery. The International Monetary Fund has urged governments to tie post-Covid stimulus packages to their climate goals, promoting emergency loans for green technology and scrapping fossil fuel subsidies. Consequently, investors are shifting away from traditional investments in favour of low-carbon assets.

As investors seek long-term stability during the volatility, preliminary signs indicate that Covid-19 could be a galvanising force for energy transition infrastructure investments in the long term. Capital-intensive generation and infrastructure categories could capture a larger share of the investment wallet.

PRODUCE: A power mix transformation makes strategic sense. As recovery plans reinforce long-term support for the energy transition, the magnifying lens hovers over commitments to reduce Scope 3 emissions, which cover all direct and indirect emissions from sources that a company does not own or control, such as transportation, use of sold products, and end-of-life product treatment. The lifetime carbon impact of products and services is now coming to light. If consumers or regulators start making decisions about what they buy based on the overall carbon impact, entire value chains will be quickly impacted.

CONSUME: Consumer behaviour changes are driving product demand shifts and decarbonisation – the pace and nature of these changes vary by country and city. Covid-19 has triggered large-scale changes that should permanently impact urbanisation models. Over 85% of organisations encourage or mandate employees to work from home. Road traffic in major cities around the world has plummeted by more than 40%. As more work has gone virtual, digital collaboration tools have enjoyed a major popularity surge. For example, on 31 March 2020, Microsoft Teams set a daily record of 2.7-billion meeting minutes – 200% higher than the week before. Global companies are saying that these remote ways of working will be the new normal. Twitter CEO Jack Dorsey announced that its employees will work from home forever, and Barclays CEO Jes Staley expects Covid-19 to make big offices a thing of the past.

Governments are adapting mobility regulations in some cities to become more efficient and reduce pollution. The UK has accelerated its trial launch of e-scooters to alleviate pressure on public travel modes without increasing carbon emissions. London mayor, Sadiq Khan, announced "one of the biggest car-free initiatives of any city in the world" in a pedestrianisation campaign of certain city roads. Paris' mayor revised the city's street map during the lockdown, dedicating paths on some roads for bicycles and closing traffic on major routes such as Rue de Rivoli (near the Louvre Museum).

Consumer sentiment is often the most poorly understood driver of change, yet it has the potential to rapidly shift a market, product demand and/or its supply chains. The pandemic behavioural shifts reveal the power of consumers. Where energy transition trends have typically been catalysed by regulation and technology, consumers will likely become a major influence. This is not a new phenomenon: the "Blue Planet effect" ignited a global war on plastic, and the ensuing rapid-fire regulatory, operational and product changes required supply chains and logistics to rapidly pivot. With consumers leading this push, some markets have struggled to keep up, creating an impact on both top and bottom line.

HOW SHOULD COMPANIES RESPOND?

Never let a crisis go to waste. Currently, most businesses are focused on survival. When Covid-19 cases start dissipating, leaders must prepare for what comes next: to adapt to the new normal and become agile enough to respond to future trends – building business models, products and services fit for an energy transition future.

Tailor a global strategy to local conditions. Transition enablers are well-known: switching from high- to low-emission generation, electrifying applications, developing multiple forms of storage and improving energy efficiency. This shift will not occur uniformly across the globe, as a multitude of local factors is in play.

Technology is borderless; adoption is local. Strategy must take into account at least four dimensions: regulation, technology economics, technology constraints and consumers' acceptance and demand. When reassessing and prioritising in the wake of Covid-19, local market conditions may have changed – creating both threats and opportunities that need to be re-examined. In making decisions, it is crucial to take an end-to-end view on the

The coronavirus has triggered large-scale changes that should permanently impact urbanisation models.

necessary investments, ecosystem partnering requirements and potential moves from other companies, to ensure sustainable business models and assets.

Don't miss the green recovery funding. Energy companies' focus is gradually switching from addressing the immediate implications of Covid-19 to navigating the inevitable downturn that the pandemic has triggered. Government stimulus packages are being prepared, and financial support for the energy transition seems to be central to many government strategies. Leaders are poised to capitalise on the opportunity to accelerate a business model transition when government support materialises. The history of the energy transition is punctuated with rapid developments in technologies and infrastructure – stimulated by government subsidies.

With the success of the energy transition, fundamental to so many companies, bold moves and rapid action will be needed to get on board the green recovery funds when they appear on the horizon.

Drive an agenda with M&A opportunities and strategic partnerships. Cheap finance, publicly stated ambitions and broad awareness of the impact of the energy transition created a period of high activity across the market pre-Covid-19. The liquidity squeeze will increase scrutiny of investments, placing small and large businesses in a unique position to explore radical moves absent from the table before the crisis.

A key feature of the energy transition is the convergence of multiple sectors onto the same customer base. No one business has all the capabilities to win across the energy transition: a combination of service, consumer platform and geographical footprint undoubtedly holds the key.

Reset supply chains for post-pandemic demand while leaping for decarbonisation. Covid-19 has forced a

PUBLIC-PRIVATE PARTNERSHIPS

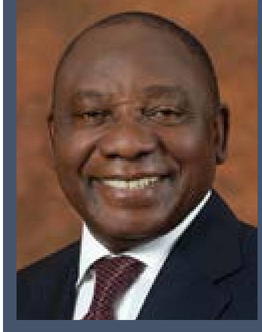
Public-private partnerships (PPPs) are mechanisms that use public policies, regulations or financing to leverage private-sector financing. The main characteristics of PPPs for financing EE projects include:

- A contractual relationship (or less formal agreement) between a public entity and a private organisation;
- The allocation of risks between the public and private partners consistent with their willingness and ability to mitigate risks, in order to encourage the private partner to mobilise financing;
- The mobilisation of increased financing for EE; and
- Payments to the private sector for delivering services to the public sector.

An example of a PPP is where the private partner may operate and maintain energy systems or facilities, such as street lighting, under a service or lease agreement with a municipality, which serves as the public partner. *Source: IEA, 2011*

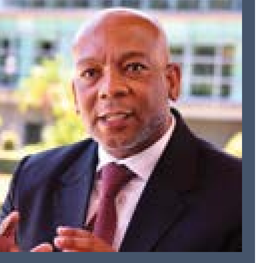
SUSTAINABLE INFRASTRUCTURE DEVELOPMENT

In June 2020, Sustainable Infrastructure Development for South Africa (SIDSSA) was unveiled. The infrastructure project pipeline brings critical role-players in the investment space to collaborate in building back a better, robust socio-economic nation. www.sidssa.org.za



"We are institutionalising the SIDS methodology as a new way of packaging and preparing projects for funding. This methodology will determine three pathways for project funding: commercial funding, blended financing and fiscal allocation. We look forward to an enduring relationship that will help propel our economic recovery effort and bring hope to the country."
President Cyril Ramaphosa

"Now, for the first time, South Africa's public and private sectors have come together to advance a common infrastructure development agenda, namely the creation of a reliable, robust infrastructure project pipeline.



"The public and private sectors share major points of intersection and significant commonalities that, together with the planned infrastructure projects, will help drive South Africa out of its current economic distress, now exacerbated by the Covid-19 pandemic.

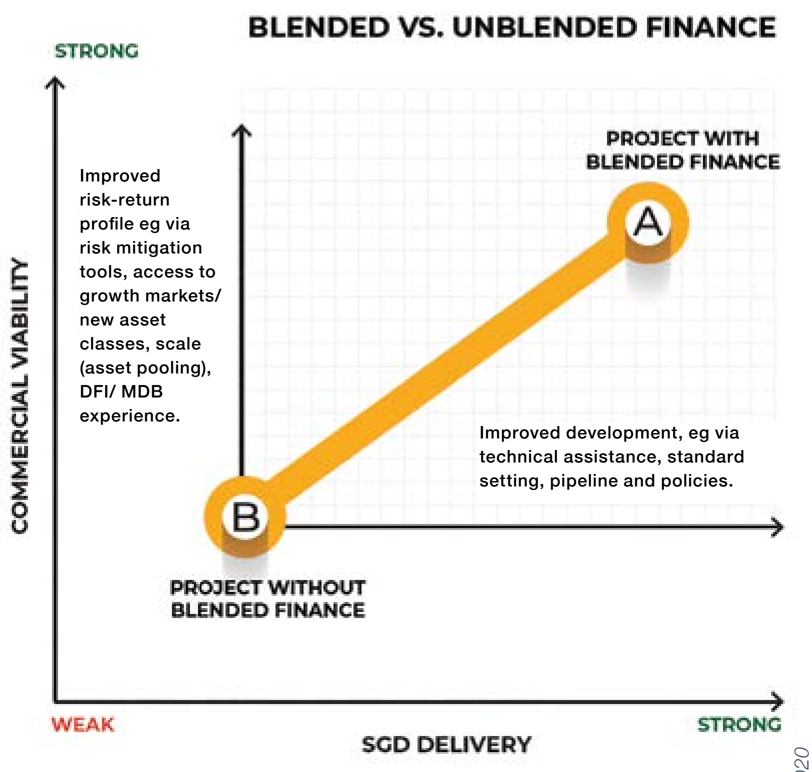
"We are aiming for a fundamental alteration of the economic relations of society towards a shared future in which everyone must participate. Inclusivity and transformation are key ingredients to the South Africa that we want to construct."
Dr Kgosientso Ramokgopa, Head of the Investment and Infrastructure, Office in the Presidency

resetting of supply chains. Management trends are laser-focused on business continuity in the short term. While addressing resilience, this restructuring has highlighted the opportunities for improvement and future aspirations. "As Covid-19 impacts every aspect of our work and life, we have seen two years' worth of digital transformation in two months," Microsoft CEO Satya Nadella reports. BASF CEO Martin Brudermüller attests, "There's much more you can do via increased digitalisation. This is all further potential to bring costs down, also in the years to come. It's a positive aspect." These digitisation opportunities are central to readjusting cost bases in the short term.

Amid all of the social impact, market turbulence and stimulus packages, it is important to keep track of the least understood driver of change: consumer sentiment.

Corporate emissions targets are positive for the energy transition, but we have yet to see the full force of government regulation and consumer buying power demanding this shift. It is not inconceivable that Scope 3 or some form of end-to-end carbon pricing becomes embedded into the cost of producing and selling globally.

Keep an eye on a low-carbon future so you are prepared for the market shifts that seem increasingly likely in the mid-term. Embedding decarbonisation strategy is a must-have that requires new and deeper capabilities across the business.



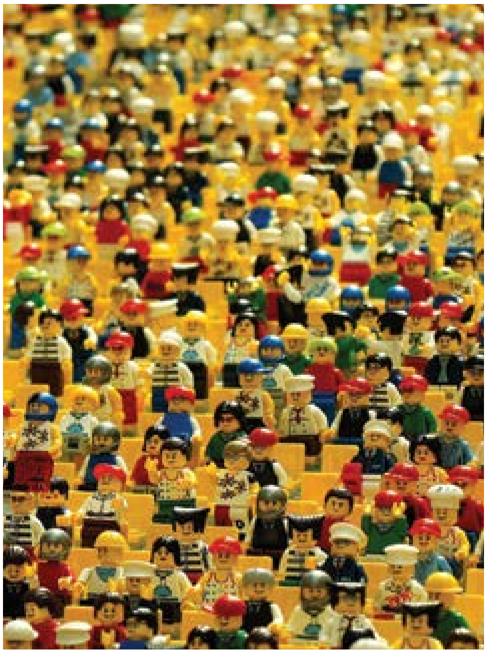
BLENDED FINANCE is the use of capital designated for projects or programmes with developmental outcomes, to reduce the perceived risk and attract commercial capital from private investors who would otherwise not have participated.

Source: SIDSSA 2020

CHALLENGES OF MUNICIPAL ENERGY EFFICIENT PROJECT IMPLEMENTATION

Awareness and Incentives	Implementation Capacity	Access to Financing
Limited awareness • Low priority attached to energy issues • Lack of awareness of EE potential • Inadequate information on energy use and costs **Incentive incompatibility** • Split incentives (between ownership and financing) • Energy prices below the costs of supply • Failure to price negative externalities of energy use • Uncertain regulatory framework	**Low levels of capacity** • Limited municipality technical capacity • Limited financier technical capacity • Lack of familiarity with EE technologies **Nature of municipal projects** • Restrictive public procurement rules • Need to work across multiple municipalities	**Restrictions on municipal funding** • Inadequate revenue base • Limited revenue-raising powers • Limited borrowing powers • Restriction on use of funds **Barriers to commercial financing** • Requirements for collateral and recourse • Assessing creditworthiness • Absence of 'hard' cash flows • High transaction costs

Source: Financing Municipal Energy Efficient Projects



Watch out for sudden and seismic consumer shifts. Leaders will find a credible way to track, understand and be agile in response to the consumer shifts that will impact their operations. Geopolitical, pandemic and social forces will likely trigger the next consumer-led shift soon.

Spurring the energy transition. With stretched short-term investments across the board, energy transition technologies could receive a larger budget allocation in the long term, and the pace of change should quicken as economies recover. With stimulus packages and a plethora of partnering and acquisition opportunities, the pandemic-related downturn poses both challenges and opportunities.

Many companies continue to battle with the energy transition – essential to their future strategies. At this time of massive change, not taking the risks of an acquisition or a bold move to latch onto a regulation or stimulus alterations should reflect the consequences of inaction or a competitor taking the ground.

The long-term energy transition winners will be shaped over the next few years. This decade is a crucial time to address climate change. Early movers are likely to see the biggest rewards. Agility and bold leadership are vital at this important crossroad. Amid the social impact, market turbulence and stimulus packages, it is vital to monitor the least understood driver of change: consumer sentiment.

ENERGY SAVINGS PERFORMANCE CONTRACTS

Many municipalities have limited technical capacity to design, develop and implement viable energy efficiency (EE) projects. Without such capabilities, accessing commercial financing for EE projects can be challenging. In assessing potential financing mechanisms, municipalities should consider how energy service providers, such as energy service companies (ESCOs), operating under energy savings performance contracts (ESPCs) can help in project implementation and provide access to financing.

ESCO services generally consist of three components: integration of a wide range of project services (for example audit, design, engineering, equipment procurement, construction and installation, measurement and verification of savings), facilitation of financing, and guarantee of project performance.

While ESCOs may help mobilise financing from financial institutions, their involvement cannot deliver financing that would otherwise be unavailable to a municipality. An ESCO's ability to raise financing from lenders is dependent on the ultimate quality of its projects and the creditworthiness of its clients. If a municipality is not sufficiently creditworthy to borrow commercially, an ESCO dependent on that municipality to pay its bills also may not be creditworthy.

ESCOs should complement the financing mechanisms rather than substitute them. In some cases, public funding and support may be provided to municipalities via ESCOs who also bring the technical capacity to deliver projects. In others, municipalities may receive funding and contract ESCOs for help in project implementation.

Using an ESPC for water loss reduction and energy savings in Emfuleni, South Africa

The municipal water utility of Emfuleni distributes water to 70 000 households in part of the city. However, due to deteriorating infrastructure, about 80% of potable water was leaking through broken pipes and failed plumbing fixtures. A technical investigation determined that adopting advanced pressure management measures in the distribution network could cut water loss dramatically and also lower pumping costs.

The utility lacked the technical expertise to prepare and implement the project and was short of funds to finance the investment. A shared savings ESPC could help address both issues. The city government engaged an external technical advisor to help the utility design and prepare the project, as well as procure engineering services, and monitor and verify savings.

Through a competitive bidding process, the utility signed a water and energy performance contract with a local ESCO under a Build-Own-Operate-Transfer arrangement for a period of five years. The project was designed to operate for at least 20 years under the scheme. The ESCO provided turnkey services while underwriting all performance and financial risks. Third-party project financing was arranged by the ESCO from Standard Bank (South Africa).

The project achieved impressive results of seven- to eight-million m^3 annual water savings and 14 250MWh annual electricity savings. Monetary savings exceeded US$3.8-million per year.

The ESCO recovered the capital cost of its investments in one year with a total return to the ESCO that represented four times the ESCO's initial investment. Nonetheless, the lion's share of the benefit stayed with Emfuleni Municipality.

Source: Financing Municipal Energy Efficiency Projects

Transforming the oil and gas sector

Petroleum Agency SA is the State's regulator for oil and gas. Service Magazine speaks to the woman at the helm of the Agency, Dr Masangane, CEO of PASA.

Please tell us about yourself and your professional achievements?
In my career, I have worked very closely with private companies implementing capital-intensive projects including deal structuring, modelling project economics, and ensuring bankability. On the other hand, being in a state-owned company, part of my responsibilities included supporting the government to develop policies and regulations that create an enabling environment for private investments in energy projects. So joining PASA at a time when the country is developing a domestic gas market anchored on indigenous gas production is something I am looking forward to and can draw on my experience to contribute towards achieving.

You are the first formally appointed female CEO of PASA. Please share with us some of your ideas in terms of plans and strategies to grow and improve PASA.
South Africa has a good petroleum resource potential which remains unexplored. Pre-1994 we didn't have international oil companies in the country due to the political sanctions. All exploration activities for oil and gas in South Africa were undertaken by the then state-owned company, Soekor (pre-cursor of PetroSA).

Oil and gas exploration is a highly capital intensive and high-risk business that cannot be left to a national oil company to do alone. In the democratic era, we have attracted several international companies including the majors like Shell, Total and ExxonMobil and have seen a number of our blocks being licensed. Significant exploration activity in terms of 2D and 3D seismic data collection has taken place since then, mainly by IOCs.

Where we are, is that we need to enter the next phase in terms of exploration – that of significant drilling activities. This is what we need to move to prove the resources we have. That would be the game-changer for South Africa's upstream oil and gas industry. The recent discovery by Total and its JV partners in Block 11B/12B (Brulpadda) is the first giant step in that direction. My role is to work with industry and the department to fast-track these developments including finalising the Upstream Resource Development Bill. As we enter this phase in our industrial development, we want to ensure that it is an inclusive and diversified industry in terms of race, gender and participation of SMEs.

What are your visions for the agency in terms of transformation?
PASA as an institution is sufficiently transformed. What keeps we awake at night is the transformation of the participants in upstream oil and gas which is dominated by the large multinationals which play a pivotal role. From our side, the question is – how do these IOCs bring in the small and medium local companies, especially those that are black-, female- and youth-owned to meaningfully participate in the industry? How do we achieve meaningful skills development and transfer?

Do you think being a woman in leadership in the energy sector will make a different impact on the company's business?
Women are naturally long-term visionaries and PASA is an important institution in the South African energy landscape. For the country to properly regulate the industry that is about to burst into the next phase of increased production, I am looking at the long-term sustainability of PASA as well as PASA's capability to grow in tandem with the anticipated growth of the upstream oil and gas industry in South Africa.

How do you intend to make a difference in the energy sector in general?

For some time the sector did not have the required industry long-term plans. Some of these plans have since been finalised. My role is to ensure that PASA partners with the private sector and other organs of the state to deliver on the government's commitment to ensure the security of energy for the country. The only difference I can make is to deliver tangible results.

What is PASA's purpose in the South African energy sector?

The Agency's purpose is to facilitate and regulate oil and gas exploration to achieve production of indigenous oil and gas. This will ensure energy security and bolster economic growth, and play a strong role in addressing the eradication of poverty in South Africa. Our mission is to promote, facili-tate and regulate exploration and sustainable development of oil and gas contributing to energy security in South Africa. We envision and are working towards a diverse upstream industry that contributes to energy security through sustainable growth in exploration and development of oil and gas.

This rewriting of the legislation governing oil and gas exploration and production gives South Africa a chance to address the requirements of the industry.

Where is the agency at in terms of its position in the market?

The Agency's competitors are similar organisations in Africa, and beyond, attempting to attract oil and gas exploration investment to their countries. For a long time, South Africa has not been seen as a destination for such investment, paling into insignificance to countries such as Angola and Nigeria, both rich in oil, and even more recently Mozambique with its enormous gas discoveries. However, our political stability, relatively advanced development, independent courts and equitable terms have always been our strong hand.

The recent world-class Brulpadda discovery and South Africa's potential for shale gas are helping to change the perception and the upcoming stand-alone oil and gas legislation will further strengthen our position. Current opportunities lie in the development of the stand-alone Upstream Petroleum Resources Development Act and its accompanying regulations. This rewriting of the legislation governing oil and gas exploration and production gives South Africa a chance to address the requirements of the industry (as above) while also ensuring an equitable deal for the South African state and meaningful participation of South Africans in the industry.

Please elaborate on the meaning of your tagline, Explore South Africa.

The oil and gas exploration industry has always been extremely volatile, being subject to global economic forces and highly dependent on the fluctuating oil price. Also, oil and gas exploration is exceptionally risky in terms of initial, upfront capital investment with long periods before any return on investment and profit generation.

To counter this, oil and gas exploration companies require equitable terms, and especially long-term stability and consistency in contractual terms together with political and independent judicial stability. Coupled with this would be a government that is committed to the easing of doing business and to facilitating entry into the upstream space.

Local expertise in servicing the industry's requirements in terms of human resources and services is also a strong advantage. A developed industrial economy offering opportunities for local monetisation of gas discoveries would also assist. One of the key roles of PASA is to promote the country's petroleum resource prospectives. In summary, we are saying to the world "explore South Africa". Our country has good petroleum resources that can drive this economy. Come and partner with us to mutually benefit from these resources.

Is there anything else you would like to share with our readers?

The next phase of drilling off the South Coast starts in September 2020. It is in deep waters, deeper than 1 400m, similar to the depths where the Rovuma gas finds in Mozambique were made. S

Follow PASA on Twitter – @sa_petroleum.

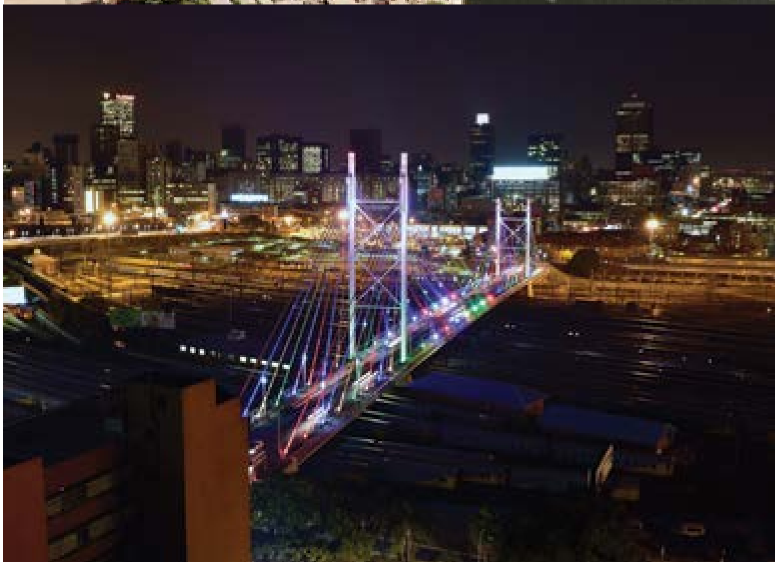
Dr Phindile C Masangane:
PhD Chemistry, MBA, BSc (Mathematics & Chemistry)

Dr Masangane was appointed as the Chief Executive Officer of the South African upstream oil and gas regulatory authority, Petroleum Agency South Africa (PASA), in May 2020. Before then, Dr Masangane was an executive at the South African state-owned energy company, CEF (SOC) Ltd, which is the holding company of PASA.

Dr Masangane was responsible for clean, renewable and alternative energy projects. In part-nership with private companies, she led the development of energy projects including the deal structuring, project economic modelling and financing on behalf of the CEF Group of Companies.

Her responsibilities also include supporting the national government in developing energy policy and regu-lations for diversifying the country's energy mix. In 2019, Dr Masangane was Head of Strategy for the CEF Group of Companies where she led the develop-ment of the Group's long-term strategic plan, Vision 2040+ as well as the Group's gas strategy. Between 2010 and 2013, Dr Masangane was a partner and director at KPMG responsible for the Energy Advisory Division. In this capacity, she successfully led the capital raising of $2-billion for the Zimbabwe power utility, ZESA/ZPC's hydro and coal power plants expansion programmes.

Below: *Dr Phindile Masangane, CEO of PASA*



Post-Covid recovery for African cities

It is known that the *de facto* urban development model in most African cities is deeply unsustainable and fundamentally unjust. Current policy and governance models are unable to address large-scale precarity associated with informal employment and slum living conditions.

By Professor Carlos Lopes and Professor Edgar Pieterse, University of Cape Town

The Covid pandemic has exposed how these pre-existing conditions make the urban anchor points of African economies extremely vulnerable to the impacts of enforced lockdowns, social-distancing measures and large-scale emergency responses.

Since most urban dwellers rely on modest daily incomes in the nooks and crannies of the informal economy, not being able to trade, move about, socially interact and exchange is effectively a sentence to destitution. Years of steady progress on various socio-economic indicators can be reversed in a blink of an eye.

Policy discussions on post-Covid-19 recovery offer an opportunity to review this course and, critically, transition toward sustainability. It is an opportune moment for city leaders, civic movements, enlightened firms, think tanks and allies in national governments to advance a green urban agenda that can address spatial inequality and social cohesion. Such a movement should be part of a structural transformation policy aiming for green industrialisation, based on renewable energy production and investment in sustainable infrastructure. What does this mean practically?

Widespread energy access through renewables

The most severe binding constraint on African economic development is the lack of access to electricity. More than 60% of African households do not have access to reliable and affordable electricity. Many African governments remain wedded to fossil fuels through exports of crude, which represent 40% of the total continental exports, and a byzantine tax system that subsidises oil in the pump. There is an unprecedented opportunity to switch to renewable energy sources and construct value chains that are entirely rooted in African soil and oceans.

With the leadership of the African Development Bank and the United Nations Economic Commission on Africa (UNECA), development finance institutions are gearing up, but we need stronger demand from African governments and cities, supported by coalitions capable of directing the enormous demographic and urban pressure building up towards a low-carbon economy. Covid-19 offers a unique opportunity to scrap subsidies for fossil fuel consumption and drives home the need to urgently replace commodity dependence in this field.

A post-Covid-19 recovery agenda will give priority to health and equity concerns that call for the establishment of truly integrated, affordable, safe and predictable options.

Large-scale investment in ICT infrastructure, with widespread accessibility, is a vital enabling system for inclusive transitions in other infrastructure sectors.

The Nile River flows past Cairo's modern business district (left); bustling Johannesburg at night (below left); Nairobi, Kenya (below); Cape Town (bottom)

Safer, greener, affordable mobility

Transaction costs are inordinately high in most African cities due to congestion, poor road infrastructures, limited formal public transport and badly regulated and unsubsidised semi-formal systems that ferry the majority of urban residents.

Mobility systems are unsafe, inconvenient, expensive and a major contributor to air pollution. It also reinforces spatial inequalities because limited investments in ring roads and highways tend to privilege the connectivity needs of the middle class and large businesses. A post-Covid-19 recovery agenda will give priority to health and equity concerns that call for the establishment of truly integrated, affordable, safe and predictable options. This means public investment in semi-formal systems to optimise the possibility of smart regulation through sensors, while creating business models that allow the current owners and operators of informal systems to upscale their enterprises.

Enhancing transport through the use of mass transit opportunities can coincide with massive road repair and maintenance programmes. This will contribute to economic recovery, generate much-needed employment and promote the use of waste materials such as plastic and rubble, while the incorporation of cheap sensors can ensure more efficient regulation.

Economic opportunity in water and sanitation

In a study conducted by the Water Research Commission in partnership with the Toilet Board Coalition, a circular economy framework has been applied to develop an African approach to solving this issue as part of a green industrialisation strategy. They propose that the massive backlogs in access to safe and affordable water and sanitation services should be seen as an opportunity to grow tens of thousands of social enterprises that can run decentralised systems, enable a plethora of micro-businesses, and contribute to a new industrial sector.

Social enterprises work best when they are anchored in a locality, a neighbourhood or community and when their economic purpose also contributes to fostering social cohesion.

An inclusive, sustainable and jobs-rich Africa

An African approach to green industrialisation is about a comprehensive modernisation of economic transactions, making them more formal, responsive to the pressing needs of our younger population and led by cities. It is about smart urban regulation at the intersection of land-use planning and infrastructure investment.

Social enterprises work best when they are anchored in a locality, a neighbourhood or community and when their economic purpose also contributes to fostering social cohesion, which has been shaken by the current crisis. Social enterprises that operate renewable energy mini-grids and new businesses using digital platforms are already showing the opportunities.

The widespread adoption of electronic money systems in East Africa has enhanced the capacity for social mobilisation and communication during the pandemic. Large-scale investment in ICT infrastructure, with widespread accessibility, is a vital enabling system for inclusive transitions in other infrastructure sectors.

These examples suggest that a post-Covid-19 recovery agenda can be radically inclusive, just and sustainable. However, the elephant in the room is the resistance by national governments to get serious about democratic decentralisation. For the longest time, African governments have been treating local government as an unwanted stepchild. There is grudging familial acceptance, but it is coupled with habitual undermining and fiscal neglect.

This antiquated approach to multi-level governmental relations has been thoroughly exposed by the impacts of the Covid-19 pandemic. Paradoxically, the same pandemic could provide the impetus for a new multi-scale, multi-institutional, multi-vocal movement for a jobs-rich green industrialisation strategy anchored by Africa's cities and regions. S

C40 Knowledge Hub | C40 Cities

Building back better on food and agriculture

The Food and Agriculture Organisation of the United Nations has elaborated a comprehensive response and recovery programme to overcome the impacts of Covid-19 through upscaled and robust international collaboration.

By Qu Dongyu, Director-General of Food and Agriculture Organisation (FAO) of the United Nations

As the impacts of Covid-19 take their toll on human health and wellbeing around the world, the imperative of producing and ensuring access to healthy food for every one of us must not be overlooked. The food systems that must give daily sustenance to all humans on this planet are under threat by the pandemic. If we want to avoid what could be the worst food crisis in modern history, we need robust and strategic international cooperation at an extraordinary scale.

Even before the pandemic, global food systems and food security were strained by many factors, including pests, poverty, conflicts and the impacts of climate change. According to a recent FAO report, *The State of Food Security and Nutrition in the World*, in 2019 close to 690-million – or nearly one in 10 people in the world – were hungry.

The Covid-19 pandemic could push an additional 130-million people worldwide into chronic hunger by the end of 2020. Furthermore, in 2019 three-billion people did not have access to healthy diets and suffered from other forms of malnutrition.

Due to the pandemic and related containment measures, we have already experienced disruptions in global food supply chains, labour shortages and lost harvests. Now, we are seeing a delayed planting season. Around 4.5-billion people depend on food systems for their jobs and livelihoods, working to produce, collect, store, process, transport and distribute food to consumers, as well as to feed themselves and their families. The pandemic has put 35% of food system employment at risk, impacting women at an even higher rate.

The Covid-19 pandemic could push an additional 130-million people worldwide into chronic hunger by the end of 2020.

The prevention of future animal-to-human disease outbreaks requires coordination between stakeholders from all relevant sectors.

The impacts of this reality are both immediate and far-reaching. Together we can limit Covid-19's damaging effects on food security and nutrition. Simultaneously, we need to transform our food systems for a more resilient and equitable future. To build back better.

From the very beginning of the pandemic, FAO has actively supported countries and farmers to work on scalable and sustainable solutions to help ensure nutritious food for all. This forms the basis of the comprehensive FAO Covid-19 Response and Recovery Programme, which identifies seven priority areas for action.

However, to catalyse and build upon these solutions, a business-as-usual approach will not suffice. The following three strategic shifts must guide our collective response.

We need better data for better decision-making. Timely and effective responses to the impact of Covid-19 depend upon knowing exactly where and when support is needed, as well as how that support can be implemented best. This means upscaling work on data, information and analysis, and taking a bottom-up approach.

FAO is rapidly adapting and enhancing data-collection methods at country, regional and global levels. Data-collection processes have been disrupted by physical-distancing measures to contain the pandemic. The FAO Data Lab has been released to bring real-time data on food prices and sentiment analysis. It has also developed the Hand-in-Hand Geospatial Platform which brings more than one-million geospatial layers to help prioritise interventions within countries. These make visual datasets available to provide global early-warnings on possible hotspots that may be affected by adverse weather conditions, and how they evolve.

We must dramatically increase the synergy of our collective actions. The Covid-19 crisis calls for us to act in unison like never before. Pooling all available data, efforts and resources for synergistic action will be paramount for a holistic response and recovery, as will collaboration on promoting economic inclusion, agricultural trade, sustainable and resilient food systems, preventing future animal-to-human disease outbreaks and ensuring coordinated humanitarian action.

The pandemic is already generating an unprecedented impact on global and regional trade, with world merchandise trade in 2020 expected to fall by as much as 32%. Unlike any other food or health crisis in modern times, the impacts of Covid-19 are causing supply and demand shocks at a national, regional and global level, leading to immediate and longer-term risks for food production and availability. We need to ensure the compliance of trade requirements and improve efficiency in moving goods across borders. FAO aims to facilitate and increase international agricultural and food trade, with a focus on intraregional trade.

Also, the prevention of future animal-to-human disease outbreaks requires coordination between stakeholders from all relevant sectors. This includes the health sector, as well as national and local natural resource management and rural development, to address potential outbreaks in high-risk hotspots.

To respond to these needs, FAO and the World Health Organization (WHO) have recently amalgamated an FAO/WHO centre, which hosts the Codex Alimentarius Commission and unites expertise on zoonotic diseases from FAO, WHO and other global partners and coordination mechanisms, to build national capacities to predict, prevent and control zoonotic threats.

Effective food and agricultural response to the pandemic also calls for joint humanitarian action, particularly to improve the livelihoods of vulnerable smallholder and family farmers.

We must thoughtfully and adequately increase collaboration and partnerships among and between United Nations' entities, the private sector, civil society and key local actors. It is only if we all work together for greater coherence and efficiency that we will achieve success on the ground.

The prevention of food crises cannot wait until the health crisis is over, nor can we simply aim to return to the unacceptable levels of hunger and food insecurity witnessed before the pandemic.

We must accelerate innovation. New investment strategies, digital technology and infrastructure innovation are essential to obtaining better data, increasing efficiency in food production and providing market access. In this regard, there are many solutions from the private sector that could be of great use to governments and international organisations, which can fine-tune their methods based on the private sector's innovation-centric, results-oriented approach.

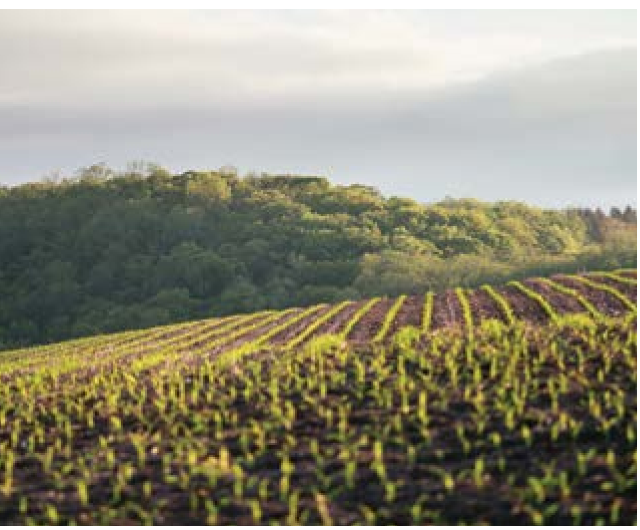
The prevention of food crises cannot wait until the health crisis is over, nor can we simply aim to return to the unacceptable levels of hunger and food insecurity witnessed before the pandemic. FAO is placing its convening power, real-time data, early warning systems and technical expertise at the world's disposal. Together, we can help the most vulnerable, prevent further crises, increase resilience to shocks and accelerate the rebuilding of our food systems.

Together we can ensure a future in which everyone is well nourished. I invite you to join us and be part of the solution. S

Together, growing South Africa from the land up

Amadlelo Agri is a diverse majority black-owned agribusiness established in 2004 with the main objective of transforming dormant and under-utilised land into profitable and sustainable agribusinesses.

For over a decade, the collaborative efforts of Amadlelo Agri have been at the forefront of transforming the agricultural industry and unlocking the land potential in communities in the Eastern Cape and KwaZulu-Natal.



Today, Amadlelo Agri has expanded its footprint within the agriculture sector to include fruits and agro-processing and is involved in nine projects as an operator, investor or both. These projects comprise six dairies, the Ncera Macademia project, the Fort Hare Piggery and the Coega Dairy project.

It has also pioneered other milestones that are indicative of the success that Amadlelo Agri has enjoyed in South Africa's agriculture sector:

- Amadlelo Agri's tried-and-tested model has been replicated and is being used in five dairy enterprises which are located in rural areas and on communal land.
- A testament to its healthy relationship-building and trust ethos, Amadlelo Agri continues to leverage successful rural community partnerships, inclusive of a dynamic network of successful commercial farmers.

The business is governed by a board of directors which provides oversight to the management's implementation of the strategy.

Amadlelo Agri is a 72% black-owned agribusiness with a broad representation

AMADLELO AGRI BOARD PROFILE

Board Chairperson
BULELANI NGCUKA
Ngcuka is a founding member and executive chairman of the investment company, Vuwa Investments, which has interests ranging from retail, health, construction, mining supplies and aviation.

Deputy Chairman
CHARLES DAVIES
Davies is the Deputy Chairman of the Amadlelo Agri Board and serves as a director for various agriculture companies including Sovereign Food Investment Ltd.

Chief Executive Officer
SIMPIWE SOMDYALA
Somdyala is the current Chief Executive Officer of Amadlelo Agri and has over 20 years of experience in senior leadership and management positions in the public and private sectors.

Amadlelo Agri's tried-and-tested model has been replicated and is being used in five dairy enterprises which are located in rural areas and on communal land.

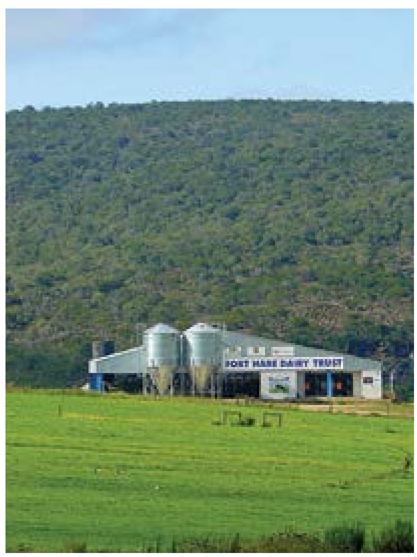
OWNERSHIP STRUCTURE

26.8% **Amadlelo Milk Producers Investment Company (AMPIC) (Pty) Ltd**
50 commercial dairy farmers from KwaZulu-Natal and the Eastern Cape

18.8% **Vuwa Investments (Pty) Ltd**
100% black-owned investment company

8% **Amadlelo Empowerment Trust**
500 labourers of the AMPIC farmers

46.4% **Tulsacap (Pty) Ltd**
A group of eight black professionals and business people who pooled their resources to invest in Amadlelo. S



AmadleloAgri

IT infrastructure: The pillar of digital government

Nearly every government in the world needs to go digital – to automate processes, service delivery and improve lives. IT enhances institutional connections within the government, increasing transparency and accountability for public services, and creating stronger social equity and hence sustainable development.[1]

A CITIZEN-CENTRIC CAPABILITY MODEL

All government departments have a common customer: citizens. But the services those departments provide and the activities they conduct differ. By using an operating model based on coordination, individual departments can make in-house decisions related to their line-of-business applications while transferring decisions about commodity IT infrastructure and enterprise applications to a shared entity.

Centralised portals provide personalised access to all stakeholders from citizens and businesses to other governments. An integration hub centralises online systems for authentication, participation, voting, petitions, content management and business intelligence. It offers unified registers and databases of information about citizens and vehicles and has a technical component containing applications and data for system interoperability. Centralised infrastructure and enterprise applications allow cost optimisation, build scalability, and agility for new services.

VIRUS ALERT: Covid-19 has triggered changing work patterns with remote working or a hybrid of office and home. The defined perimeter of an organisation is expanding, which opens additional vulnerabilities.

On average attackers sit on a network for 60-130 days without being detected.

BEST-IN-CLASS INFRASTRUCTURE

Consumers expect a technological ecosystem rather than a disconnected set of websites and offices. In the private sector, companies have improved customer experience with cloud technologies that reduce operating costs and limit the need for expensive processing centres. Cost transparency is a crucial non-technical requirement for IT service consumers in both the public and private sectors. The right operating model to enable best-in-class IT infrastructure services is key. Three elements are vital:

1. A central agency oversees IT infrastructure and manages the complex relationships across departments and suppliers

While external market players can more efficiently deliver commodity IT services, including IT infrastructure and enterprise applications, a central agency can serve as something of a broker between individual departments and suppliers. The agency can lead the consolidation and develop government-wide standards for IT applications, data sharing and infrastructure, integrated service management, supplier and contract management, and ownership of the integration layer. Without a central agency, coordinating these activities will be difficult.

Governments would be wise to choose external suppliers for these services, addressing security and privacy concerns with them, and then giving departments the flexibility to choose the services they want. Depending on the situation and the mandates the government enforces, the central agency takes on one of three levels of value addition:

THE BYTE OF COVID

44% of companies did not provide cybersecurity training focused on the potential threats of working from home. 44%

55% 55% of company leaders cited the need to train employees on how to securely work at home as the top challenge.

– Malwarebytes 2020 survey | techrepublic.com

50% of the human population uses the Internet right now. 50%

A new cyberattack happens every 39 seconds. 39sec

1 in 4 people are potential targets of cybercrime, including businesses. 1in4

– Maeson Maherry CEO, LAWTrust

MALICIOUS DISASTER

There was a tenfold increase in attacks on digital networks after the National State of Disaster announcement by President Rhamaposa.

South Africa ranks eighth in the world in recipients of malicious emails. This has turned cyber insurance into a necessity in the coronavirus pandemic. – *Source: AVeS Cyber Security*

Engager. The central agency manages IT sourcing processes and negotiates contracts on behalf of departments and is also responsible for managing vendor relationships.

Manager. The agency adopts several roles, developing overall information and communications technology (ICT) strategy, ensuring compliance with government standards, maintaining accountability of service levels with departments through all vendors, forecasting demand, and tracking technology innovation. Among these three central-agency models, this one is often the best choice, as it optimises the level of control and value addition.

Integrator. Service management is integrated across vendors and IT services; it also is accountable for delivering key services such as security. South Africa's State Information Technology Agency plays this role, providing a mix of mandatory and non-mandatory services to agencies.[2] While it oversees IT procurement, elective services include application development and maintenance, infrastructure maintenance, and consulting and training.

2. Guide the transition to the central agency model

The biggest challenge governments face when pursuing centralisation is getting buy-in from departments and agencies, which often fear losing flexibility and control and prefer to pursue what suits their own needs. Another barrier is many departments' lack of funding for a transition, coupled with a general perception that new suppliers may cost less initially but will be more expensive – and harder to leave – in the long term.

Picking the right transition model, based on existing government structure and an agency's level of mandate, helps manage these challenges and ensures the desired level of supplier competition and department flexibility for provisioning IT infrastructure services. There are three primary transition models:

Central agency-driven. The central agency determines the timeline and which departments will adopt the new delivery model and provides transition support specific to each department. The agency chooses a limited number of suppliers to ensure scale efficiencies and lower costs, and departments can only opt for an alternative if a specific service is available from the chosen set of suppliers. While the government's mandate brings departments on board, it still must balance departments' supplier choices with giving each supplier enough business to achieve their minimum threshold scale. Although management overhead is high with this type of transition, the IT transformation is coordinated across the government and suppliers also share some of the implementation risk.

The typical objective of sourcing IT infrastructure services is effective service delivery at a reduced cost of ownership.

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3 data centre trends will impact future digital economy

Reports show that data traffic in Africa has risen by 20% since the arrival of Covid-19. In the new normal, there is an urgent need to manage, store and protect these escalating volumes of data. On top of the surge in data traffic amid the global pandemic, recent forecasts confirm longer-term dramatic growth in data traffic – boosted by technologies like 5G, IoT and an ever-increasing number of wireless connections.

1. With the pandemic accelerating digitisation, demand drivers remain strong.

Investments in data centres have risen as the South African market has seen the arrival of AWS, Microsoft and Huawei over the last five years. Further, Gartner suggested that South Africa would finish 2020 as the fourth fastest-growing major IT market in the world. With the African data centre market expected to grow at a CAGR of over 12% to 2025, data centre owners will continue to weigh innovative technology with the opportunity for cost savings and operational efficiency.

2. The next wave of Internet build-out is underway – with much more at the edge.

Bandwidth, costs and latency are among the reasons why more edge capacity is needed. The demand for edge computing is being driven by new applications coming to the market that require low latency, and cloud and colocation data centre providers will lead the shift. Don't expect the edge to replace the cloud, rather they will complement one another.

3. Data centre energy use is straining the grid in places.

Internet traffic growth in South Africa is expected to grow to 31 Petabytes of Internet traffic per day in 2021. To stay protected, increase operational efficiency and lower energy usage, data centres will continue to seek new and innovative ways to guarantee success for themselves and their customers. This in turn is driving the demand for new technology solutions that provide more control, flexibility, reliability and added security to manage and protect massive amounts of data.

Gartner suggested that South Africa would finish 2020 as the fourth fastest-growing major IT market in the world.

8 TOP TECHNOLOGIES TO TRANSFORM YOUR BUSINESS

PwC recently analysed the top 250 emerging technologies, and eight of these were predicted to be the most disruptive to organisations in the next three to five years.

1_**Artificial Intelligence (AI)**
2_**Augmented reality**
3_**Blockchain**
4_**Internet of Things (IoT)**
5_**3D printing**
6_**Virtual reality**
7_**Robotics**
8_**Drone technology**

Supplier-driven. Suppliers chosen by the government work directly with individual departments to bring them on board and provide transition support when required. There is no government mandate; rather, price competitiveness and suppliers' ability to significantly lower costs motivate departments to make the switch. For this to work well, the central agency designates a few suppliers per service tower.[3] The agency balances the risk of limited suppliers by allowing each to achieve threshold scale and lower costs. This model is easier to implement. Suppliers bear most of the implementation risk.

CYBER CIRCLE: It's impossible to completely eradicate cyber risk or the potential consequential damage to reputation resulting from a cyber incident. The risk is pervasive. But resilience is possible for organisations that contemplate a circular approach, which Aon terms **The Cyber Loop**.

Department-driven. This transition is often the least effective. After a cross-government entity chooses a panel of suppliers to deliver IT services, each department chooses the suppliers and services that best fit its needs. The primary goals for departments are simple – lower overall costs or new capabilities. Although the agency-driven transition often proves most effective, it may not have the authority to require departments to get on board. Thus, a supplier-driven transition is easier to implement. However, it can create more complexity because of the large number of suppliers and the absence of a government-wide coordinated approach.

3. Source services by buying market-ready packages and maintaining supply-side competition

When sourcing IT infrastructure services, consider the move from two perspectives: the supply side (how the market provides these services) and the demand side (how departments consume the services).

Supply. There are three affinities within IT infrastructure services on the supply side. The first centres on processing and storage for hosting services, the second on the end-user, and the third on the network.[4] While hosting services are self-contained, end-user and network services are bought in multiple variants.

For example, some elements in the end-user service tower are purchased separately for some users, including desktop offering (with no custom enterprise applications, including all licence costs), email (Google's enterprise offering), and productivity products (Office 365). Unified communications such as voice-over-Internet-protocol (VoIP) telephony and desktop integration is a specialised service that is bought separately from suppliers with a communications pedigree.

THE CYBER LOOP
Organisations enter the loop at different points, then continuously cycle through the loop to obtain better outcomes.

Network services have a strong affinity for data carriage and voice services typically bought from telecommunication providers. Some elements of wide-area network services are bought as part of the data carriage, which may include a managed router, network monitoring, and cross-site network service management.

The typical objective of sourcing IT infrastructure services is effective service delivery at a reduced cost of ownership. Encouraging supplier competition is one of the best ways to meet this goal. In IT infrastructure procurement, there are two ways to achieve this: standardised services (such as cloud) that have competition built-in or customised services from multiple suppliers.

Buying standardised services in the cloud (data as a service, IaaS, PaaS, and to an extent, SaaS) opens numerous options. When demand is strong, suppliers tend to innovate rapidly to compete on pricing or enhanced services,

THE INSTITUTE OF INFORMATION TECHNOLOGY PROFESSIONALS SOUTH AFRICA (IITPSA)

Thabo Mashegoane, President and Board Chairperson, IITPSA

IITPSA President Thabo Mashegoane recently highlighted the need for the development of ICT professionals and an ICT skills pipeline for the country, as well as to extend digital access to all sectors of society.

"ICT access is becoming a human right, and without it, millions of people cannot access education, jobs, vital information and services," says Mashegoane. "As ICT professionals, we cannot simply be torch-bearers for ICT – we need to assume greater responsibility for helping build this critical infrastructure. We need to ensure equitable access for everyone."

Mashegoane called for industry to advocate for policy that favours the majority.

"ICT needs to be talking to the government and forming partnerships across policy formulation and implementation. We need to be working together to create digital education platforms that are free or low cost, coordinated and transparent.

"The foundation for skilled or employable youth is access to training and education, so we have to create policies that give all young people equal access," he says.

"We cannot simply be torch-bearers for ICT." – Mashegoane

both of which benefit customers. There is low entrenchment, so switching suppliers is easier. Comparability leads to better benchmarking and automatic price adjustment in the market. Custom requirements will not be met in many cases, which could push costs into more expensive areas of the stack to achieve application remediation. For non-standard services, where much of the legacy platform would be, competitiveness is best encouraged through multiple suppliers in each service tower. Benchmarking is used to manage supplier performance, but effectiveness is limited by comparability issues in the customer service offering. Obtaining services from multiple suppliers should be done with care as it could lead to lingering problems such as poor service delivery due to lack of coordination, higher integration, governance and operational costs.

Demand. On the demand side, the prices for IT infrastructure services that a central agency publishes may differ from those available in the market. Department-facing services are often acquired as part of a bundle, or because of a transformation where the agency owns the financial risk. Departments may be less interested in supply-side unit costs and more interested in per-user IT costs and matching IT costs to business outcomes.

A well-planned agency approach that works effectively within the government structure and has a clear transition plan produces results within a couple of years.

All service unit costs should be attributable to one or more departments. This is straightforward when there is a one-to-one matching between users and the services consumed but when platforms are shared or some services underpin other user-facing services, this clarity is lost. The packages must ensure an allocation of service-tower costs for shared elements.

BEGIN WITH THE END IN MIND

After transforming current-state services for IT infrastructure, the next challenge is articulating future-state services. Instead of defining these services, central agencies should focus on articulating high-level target-state requirements. They highlight the relative prioritisation of emerging technology trends, as well as the change in user segments and their needs.

This may seem to contradict the traditional advice of locking down service definitions as early as possible. While definitions are key in addressing current services, they are needlessly time-consuming and distracting when it comes to target-state services. Predicting the direction of technical services is difficult, especially in a multi-stakeholder environment, with a high risk of locking into technologies that might be inefficient in the long term, and the greater proliferation of technical silos.

A more effective strategy is to focus on target-state requirements to help suppliers understand the direction the central agency is heading and to signal a business-outcomes focus. Short-term service needs, such as logical next steps for current and ongoing projects, should be clearly articulated. These needs should be positioned as directional, using the breadth of market capabilities to bring a fresh perspective to the business problems that these technical solutions are attempting to solve.

THE JOURNEY TO DIGITAL GOVERNMENT

To function with technology that is as seamless as citizens are accustomed to in the commercial world, governments must take a service-centric approach. Smartly providing IT services helps governments overcome slim capital resources, sluggish economies, and the reticence of sceptical departments and agencies to create a more cohesive system.

A well-planned agency approach that works effectively within the government structure and has a clear transition plan produces results within a couple of years. Understanding the market by using collaborative procurement models and competitive service contracts with vendors should allow for flexibility as technology and the government's specific technology needs evolve – to create a digital government that serves a country, province or municipality well for years to come. S

REFERENCES
1 United Nations E-Government Survey 2012: E-Government for the People
2 http://www.sita.co.za/; http://www.cisco.com/web/strategy/docs/gov/Sita.pdf
3 A service tower is a logical grouping of services. For example, a tower of end-user services includes desktop management, printer management, email, and collaboration tools.
4 Processing: server, middleware, as well as security and data centre management. Storage: various management forms (storage area network, network-attached or direct-attached storage) and backup and recovery. End-user: desktop management and collaboration, including email, video conferencing, and messaging. Network: local area network, wide area network, or a metropolitan area network management.

4 THREATS LINKED TO DISRUPTIVE TECHNOLOGIES

State-funded cyber warfare includes public sector and corporate espionage as well as hacking. Geopolitics is currently playing out in the cyber arena. State-sponsored hackers have been breaking into shipbuilding facilities looking for ice-breaker ship technology/schematics in their race for the Arctic, while other players have been targeting Covid-19 vaccination research. There are continued attacks between India and Pakistan from a cyber-warfare perspective. In South Africa, cyber hacking of high-profile politically exposed individuals remains is a major threat.

Organised crime is managed by profit-driven corporations who set up specialised divisions for malware software development, distribution networks and money collection. Operations are expanded by identifying channel partners to distribute their malware for a share of the proceeds (of the total return of investment – 400%).

Activists hacking examples are Blueleaks who leaked the personal information of 700 000 law enforcement officers; Anonymous hacked 485 Chinese government websites to protest citizen harassment (2012); the Arab Spring cyber-attacks against the SABC for not airing country-wide protests (2016) and attacks on the 2014 football World Cup sponsors by those against Brazil hosting the event.

Insiders (employees and third-party service providers) for personal gain, revenge or by recruitment. A growing segment is "accidental" insiders who unwittingly expose data and/or back doors into their systems. Intellectual property (IP) theft is on the rise by executives leaving organisations. There has been an increase in Anton Piller orders relating to IP theft (a court order that requires the defendant to permit the plaintiff to enter the defendant's premises to obtain evidence essential to the plaintiff's case).

Global cities: New priorities for a new world

The 2020 Global Cities Report provides a snapshot of where cities stood as they entered the Covid-19 crisis. Recognising Covid-19 as a definitive turning point, its impact has radically altered global cities and the future they now face.

The crisis has fuelled many trends already creating a tremendous strain on cities, from growing fiscal pressure and economic inequality to the effects of increasing deglobalisation and environmental disruption. Meeting these challenges will require city leaders to reconsider many long-standing assumptions and priorities. To emerge from the current crisis stronger and more resilient, city leaders will need to reimagine what is next for their cities. In particular, they must drive progress in the following three key areas:

Urban value creation. To remain relevant and competitive in a post-pandemic world, global cities will have to deepen their focus on creating public value – that is, value centred on the common good across all sectors and segments of society. By doing this, city leaders have an opportunity to reverse trends that have undermined cities' stability, equity and value creation for decades.

Cities create value in ways that can't be recreated elsewhere. However, their ability to do so is now in jeopardy. This is particularly true for global cities.

Global city connectedness. The international flows of goods, ideas and people that are so central to global cities are under threat from both the near-term fallout from the pandemic and the long-term trend away from a globalised international order. To sustain these vital flows in increasingly challenging conditions, city leaders must revitalise and expand their cities' global connectedness in a variety of ways.

The transformation of urban space. City leaders have a responsibility to address the many challenges tied to physical space that have been so starkly revealed by the pandemic. They range from how to restart economies safely while complying with the need for social distancing, to addressing the environmental inequalities linked to poor health outcomes in lower-income neighbourhoods.

THE TOP 10 CITIES

1_New York
2_London
3_Paris
4_Tokyo
5_Beijing
6_Hong Kong
7_Los Angeles
8_Chicago
9_Singapore
10_Washington DC

2020 Global Cities Index

The overall aim should be to reimagine city planning in a way that makes the lived environment more sustainable, resilient and inclusive.

THE COVID EFFECT

Depending on where you are in the world, we're now anywhere from six months to almost a year into the Covid-19 pandemic, and cities are at various stages of response and recovery. As they have begun to emerge from the depths of the crisis, the future of cities has become the subject of intense debate. Indeed, with pundits feverishly suggesting that the pandemic is "killing the attraction of megacities" and that they are "losing their allure", many have begun to question whether the city can survive as a primary locus of economic and social activity. While these reactions are extreme, so too are the impacts global cities have already witnessed.

Emptied city centres

There's no denying that many cities are much quieter places than before. Analysis from the *New York Times* found that roughly 5% of the city's residents left it in the early months of the emergency, while cell-phone data from the Paris metro area shows the population shrank by nearly 20%. And as millions have abandoned shared working spaces for their living and dining rooms, the future of the office has become increasingly unclear. A recent survey from Gartner reports that 82% of company leaders intend to

City leaders should also take note of the recent shift to long-encouraged behaviours such as cycling and walking, and take advantage of the momentum in alternative forms of transport to make their cities more accessible and sustainable.

DESIGN FOR RESILIENCE

While 2020 has revealed the extent of uncertainty facing cities, one thing is certain: Covid-19 will not be the last crisis they come up against. In an increasingly volatile environment, it's crucial for city leaders to plan and prepare for a wide array of potential disruptions and cater for these in the way they plan and develop urban spaces. This essentially means prioritising adaptability – so that spaces can be used in diverse ways or retrofitted quickly when needed. Throughout the pandemic, there have been many creative and ingenious responses.

For example, an architect in Rotterdam designed a micro-market that could be set up in any public square, allowing residents to shop locally and at a safe distance. But by planning ahead and designing flexibility into city features such as parks, stadiums, and even roadways upfront, cities will be able to act more quickly in times of need, making them more resilient in the long run.

permit remote working of some kind as employees return to work, and nearly half (47%) will allow it full time.

For all cities, the full ramifications of the pandemic will only be understood in the coming years, but key questions are already being raised. If jobs become less directly linked to cities, and increasingly move online or to the suburbs, will residents follow? What will become of once vibrant city centres if they are no longer considered safe to host major cultural events or as centres of employment? What does the future of consumer spending look like if cities are drained of international visitors and daily foot traffic? And what will be the extent of the economic "scar tissue" left behind?

While these developments pose significant challenges in their own right, they are by no means the only forces of change facing city leaders. The net effect of these structural shifts, with the pandemic acting as an accelerant, is a new level of pressure on cities to evolve rapidly or risk losing relevance on the world stage.

UNDER PRESSURE: NEW CHALLENGES

Taking into account the cumulative effects of the pandemic, we see the major topics of concern for city leaders now falling into five categories, all of which have added urgency and complexity to the task of formulating an effective response.

The cost of proximity. Covid-19 has altered the actual and perceived risk of precisely the kind of physical proximity and demographic concentration that defines cities. At the same time, as virtual interaction and remote working models become more viable, the balance of costs and benefits associated with urban life for residents and companies alike has shifted.

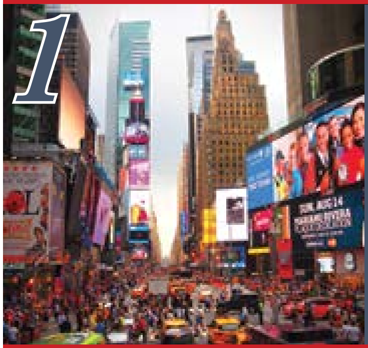
The choices cities make today will shape their trajectories for decades to come – and there's limited time to deliberate over the right course of action.

Fiscal breaking points. The economic dislocation wrought by the crisis has also placed tremendous budgetary pressure on many cities, adding to debt burdens that could constrain the power of city and local governments for years in many cases.

Global fragmentation. With trends toward localisation and economic nationalism already gaining momentum before the virus began its deadly assault, the crisis has brought on a whole new set of barriers to global flows of commerce, investment, people, ideas, data and technology. The premiums on self-sufficiency and strategic autonomy are now at an all-time high – as we saw when the need for medical equipment and resources soared in the face of broken supply chains and severe shortages. As international cooperation erodes, several of the central means by which global cities create value are also crumbling.

Urban divides. Cities are facing a set of longer-term challenges made more complex by the pandemic. First is the persistent issue of social and economic inequality, now exacerbated by levels

2020 GLOBAL CITIES INDEX
TOP 5 CITIES



NEW YORK CITY widened its lead over other cities on the Index slightly, receiving its highest score in human capital due to strong performance in number of international schools, international student population and the new medical universities metric. **Leader: Business activity and human capital**

LONDON, while still in second place, has had a falling score on the Index since 2017. Though the sharp drop-off in economic activity predicted after the Brexit vote has yet to materialise, so too have any new rules surrounding trade, which have not yet become clear. **Leader: Culture experience**

PARIS' consistent performance in information exchange (in which it leads the ranking), cultural experience and political engagement ensured the city's solid hold on the No 3 position this year. **Leader: Information exchange**

TOKYO continued its slow but steady improvement on the Index, demonstrating strong year-on-year performance in the business activity dimension. What will happen in the aftermath of Prime Minister Shinzo Abe's exit from government remains to be seen.

BEIJING'S new position reflects higher scores across most metrics. It ranked second in the business activity dimension, partly thanks to a No 2 spot on the new unicorn companies metric. Investments in education and the city's rising status as a cultural centre also led to a large jump in the human capital dimension.

of unemployment not seen in many parts of the world for some 70 years. With automation on the increase, cities – once centres of economic opportunity – have to wrestle with its impact on employment, education and training programmes.

Environmental pressure. A pressing topic is the ever-growing peril of climate change. Pollution, water scarcity and exposure to frequent extreme weather events will demand that cities find new ways to become secure, resilient and healthy places to live and work.

CREATING WHAT'S NEXT

City leaders will need to make strategic choices and investments, which are likely to look very different from years past, if they are to emerge stronger and more resilient, while each city will necessarily adapt in its way to cater for variations in geography, demography and industrial strength, among other factors.

THE FUTURE OF URBAN VALUE CREATION

Cities play a central role in advancing human progress and accelerating economic growth. At the core of their power are the benefits that emerge from clustering diverse groups of individuals, organisations and resources (also known as economies of agglomeration). In cities, human and financial capital are concentrated, infrastructure is readily accessible, and deep specialisation is possible, all of which enhance productivity. Innovation is also fuelled by this proximity, and the ways in which it facilitates flow and exchange of ideas and gives residents a wide array of opportunities for participation, engagement and commerce. To the extent that these benefits outweigh the costs of city living – such as higher rents, congestion and other inconveniences – cities create value in ways that can't be recreated elsewhere. However, their ability to do so is now in jeopardy. This is particularly true for global cities.

Global cities must not only renew but expand upon their unique value propositions – or their specific offering that attracts residents and businesses. This will require a deeper focus on creating public value – that is, value centred on the common good. Leaders have the opportunity to reverse trends that have undermined the stability, equity and value creation possibilities of cities for decades. Trends include the swing toward short-term, reactive decision-making at the expense of long-term vision and investment, capturing policy processes by interest groups, public administrations driven by personal agendas, and the tendency to consider value in financial terms.

Given the openness to change that the current crisis has generated, there is now a rare chance to make the shift from fixing near-term problems to creating long-lasting public value.

3 VITAL AREAS TO DRIVE INNOVATIVE PROGRESS

1_Urban value creation. Structurally renew how cities create value for residents, businesses and communities.

2_Global city connectedness. Find new means of securing global flows of trade, investment, ideas and people in a fragmented world.

3_The transformation of urban space. Reimagine urban planning, using physical space and technology to make the environment more sustainable, resilient and inclusive.

ORDER OF BUSINESS

Redesigning the urban value proposition. The first step is for public officials, residents and local businesses to candidly assess the current situation, identifying immediate problems and long-term strategic challenges, and identifying the trends that will most affect the city. Based on this assessment, city leaders must drive a process of collaborative innovation to redesign the city's value proposition in ways that are robust with respect to future uncertainty and compellingly reflective of the interests and aspirations of all stakeholders. With a shared vision established, and the size and scale of the task determined, challenges can be prioritised and an action plan developed. If this effort is genuine, practical and transparent, commitment, investment and momentum will follow.

Investing in future-oriented recovery. While there is no doubt that immediate public support is required to get citizens, businesses and communities back on their feet, the large-scale, ad hoc relief efforts that have prevailed throughout 2020 are not sustainable, nor are they sufficient to achieve full recovery in the months and years ahead. In addition, with previous cases of emergency economic relief having been accused of benefitting the few at the expense of the many, the entire topic is now under heightened scrutiny.

While conditional recovery aid is becoming more common, it can often be, in many ways, punitive and past-oriented. Now, rather than focusing on past

Satellite image of New York at night.

Now, rather than focusing on past behaviours, recovery plans and programmes should focus on the future, and align the conditions for relief with cities' long-term strategic goals in ways that benefit society as a whole.

behaviours, recovery plans and programmes should focus on the future, and align the conditions for relief with cities' long-term strategic goals in ways that benefit society as a whole. City leaders need to determine which businesses, sectors or mini clusters face the most severe threat, and how they fit into the city's future value proposition. Support programmes should be tied to business practices or models that steer toward this, while providing transition support to those that do not.

Creating markets that generate public value. While the central role markets play in value creation is well understood, government's role in building markets that directly address public challenges in ways that create both public and private value is often overlooked. With resources and budgets under duress, city leaders will have to look for opportunities to fulfill this vital function wherever they can. Doing so will require collaborative input from all stakeholder groups to come up with new ideas to tackle the city's most urgent needs and significant long-term challenges. Once these have been prioritised in line with the city's future value proposition, city leaders, in partnership with the private sector, can design markets to address them.

Fostering civic capital. Restoring trust – among residents and between them and institutions – is another priority. This plays a crucial role in building civic capital – the values and beliefs that enable cooperation among societies, which has been proven to boost economic performance. A recent study found that exposure to epidemics reduces confidence in political institutions and leaders, especially among the 18 to 25 age group – a fact that highlights the urgency of the need to build civic capital.

Among the wide range of evidence-based approaches to building civic capital are proactively cultivating open discussion and ensuring decision-making processes are transparent and inclusive. Technology tools are designed to build trust in electronic transactions, while online reputation systems add credibility to shared social platforms and communities.

ENABLE UNIVERSAL DIGITAL CONNECTIVITY

There are no two ways about it: for cities to remain viable in the post-Covid world, they must invest in digital infrastructure, making sure neither income nor location are obstacles to access. This is equally true for rural areas, which can also help relieve stress on urban centres. Seoul is perhaps the closest to achieving universal connectivity; 99.2 % of its residents have Internet speeds more than four times faster than the world average.

However, this was not an overnight job: it took decades of dedicated, long-term investment in infrastructure and R&D. If other cities can follow suit and, importantly, educate their populations about the importance of cyber safety and security, they will set themselves up for future innovation and opportunities, and be in a better position to respond to future challenges.

ENSURING GLOBAL CONNECTEDNESS

Since 2008, the world has been on a path of "slowbalisation", with international trade on the retreat for the first time since World War II. Covid-19 has dramatically accelerated this trend and diminished the cross-border flow of people. If multilateral cooperation continues to deteriorate, the very connections global cities rely on, which are central to economic performance and the ability to respond in times of crisis, will be increasingly threatened. What's more, the pandemic has made it abundantly clear that cities will continue to be on the front lines when large-scale disruptions strike, leaving city leaders to drive the local response – often with tight resource constraints and uncertain national support. Protecting cities' global connectedness is vital if they are to combat their most significant challenges and create public value in a de-globalising world.

Restoring trust – among residents and between them and institutions – is another priority.

ORDER OF BUSINESS

A first requirement is ensuring the continuity of the existing international networks and flows from which cities benefit, including the passage of goods, ideas and people. In some cases, these will look and feel different, at least in the near term, having been altered to fit a new physically distant reality. Cities must also remain accommodating and attractive places to live and work for potential residents from all backgrounds, which means preserving their distinct local character, and giving careful consideration to the physical layout. Finally, many modern threats including Covid-19, climate change and mass migration have a universal reach, but impact different locations in different ways, and at different times. This shows the importance of maintaining global dialogue and influence if city and local leaders are to advocate effectively for their own constituencies, have a say in crucial decisions, and gain access to broader support when crisis strikes. To make progress in this area, city leaders should focus on:

Deepening engagement in global networks. Becoming more deeply embedded in global city networks is perhaps the most practical and pragmatic way for cities to maintain essential global links. While there are a variety of different networks in terms of primary objectives, they all aim to enable city leaders to coordinate on important topics and drive change in their local contexts. Two primary types of networks are most valuable for global city leaders. Data and best-practice sharing networks centre on pooling knowledge and experiences, sometimes by creating a dialogue on a specific topic, and exchanging insights and practices related to common challenges. As cities become smarter and more digitally enabled, they will be even better equipped to find global solutions that can be applied in their own areas. Elsewhere, global advocacy networks amplify important city-level issues that can only be solved with broader input, for example where city leaders lack the political authority to make necessary decisions. The ICLEI (Local Governments for Sustainability) is one such city network. It and other networks like it have access to decision-makers at a range of international authorities and organisations such as the United Nations, giving cities a voice they would otherwise lack at a global level. This enables city leaders to help garner global-level resources for challenges of a global scale that are experienced at a local level.

Forging international economic partnerships. Complementary economic partnerships between cities also deliver mutual advantages that augment traditional ways of generating economic value. Rather than traditional sister city relationships, which tend to be bound by political or cultural ties, partnerships based on economic well-being can help cities develop new specialisations, spark market opportunities, attract foreign investment, support industry collaboration, and become more visible on the world stage, even where national flows are faltering around them. Arrangements such as these open up partner cities as gateways for foreign investment, supporting key local industries and workers, and boost their standing in global markets and industry value chains.

Guiding the transformation of urban space. As we have seen, the latest pandemic has triggered widespread changes in behaviour and accelerated several pre-existing urban trends. People are spending more time online than ever, and remote working looks set to stay. The untethering of work from the office has led some to worry about the suburban sprawl that city planners have spent so long combatting.

The Covid experience has also highlighted some of the deep-rooted inequalities in urban centres, pointing to how they must change. Overwhelmingly, the people carrying out "essential services", who are at greater risk from the virus, are of low-income and minority groups. They also live in more cramped conditions than wealthier residents, and are more likely to suffer from chronic health conditions related to lack of access to clean water or poor air quality.


Marina Bay, Singapore

REBUILD TRUST IN PUBLIC TRANSIT

While rebalancing population density is a long-term effort, cities need economic relief now, and that means getting residents moving more freely again. To do that, they will have to rebuild trust in public transport, and give people the confidence it is safe to use. Many cities have already taken action: in Paris, artificial intelligence has been deployed to measure compliance with the requirement to wear masks, and employers in New York City have been asked to allow flexible start times to reduce travel during peak hours.

The next frontier will be real-time mapping platforms with comprehensive travel information, to help citizens minimise wait times and avoid crowds, and give providers and authorities the information they need to make transit systems even more flexible and resilient over time. The Transit app aims to do just this, and is already available in 200 cities, where those with contactless payment systems provide valuable data to feed the system.

With the fabric of cities having unravelled so decidedly during the crisis, and unlikely to resume its former shape, leaders now have a compelling reason and unique opportunity to transform the urban environment into something more sustainable, more resilient and more equal. With strategic investment of capital and political will in key areas, progress could be accelerated in a way that has not been seen before, by binding urban planning more closely with economic and social needs, and long-term trends such as climate change. However, city leaders must act quickly as the window of opportunity is narrow.

WHERE TO NEXT?

For global cities, the current crisis and emerging future demand significant adaptive change. Some of the fundamental factors that have historically enabled them to create value have been painfully disrupted, many of the connections between them are teetering on a knife's edge, and the ways in which they use and allocate space require an urgent rethink. However, not only do the tools for tackling this new environment exist, but the pandemic and its aftermath have also created a rare openness to doing things differently. Seizing this opportunity won't be easy, or a short-term affair. But if we can be certain of anything, it's that cities will adapt and evolve, and that they have the potential to come back stronger. The proposals outlined in this report are intended to help city leaders take the concrete, practical action needed to create what is next for their cities and define what a global city now looks like.

The Foundation of Economic Recovery and Sustainability

Following the unprecedented challenges of 2020, SMMEs will be the crucial drivers of economic recovery

SMME VIRTUAL ROADSHOW

The SMME Roadshow, supporting developing businesses since 2014, is being relaunched by Global Africa Network in a virtual format in 2021.

- Focus Hubs will cover key topics covered including:
- Access to funding
- Access to markets
- Covid-19 relief
- Training and skills development
- Compliance and regulatory
- Business and technology support

Regional Hubs will provide provincially-specific support and information
Virtual rooms allow organisations to present their offerings to the SMME community.

The SMME Virtual Roadshow will be an important driver of economic growth and job creation

WHY A VIRTUAL EVENT?

- **Increased flexibility and access**
- **Greater opportunity for interaction**
- **Monitoring and recording of attendance and interaction**

GlobalAfrica NETWORK

Contact info@gan.co.za for further information on participation (for SMMEs) and sponsorship opportunities (for organisations providing support to SMMEs)

Pride of the workers

The National Fund for Municipal Workers, established in 1997, has grown to be the largest retirement fund in the Local Government industry with more than 52 000 active members employed at 214 municipalities throughout South Africa. *Service* spoke to the Fund's CEO, Leslie Ndawana

Mr Ndawana, you were appointed in August 2020 as Principal Executive Officer and Chief Executive Officer of the Fund. Please share your journey that led to this point in your career.

I have been in the South African retirement funds industry for more than a decade. I have experience in functioning as a decision-maker, as an advisor and as a compliance professional – all these facets require a critical understanding for a person in the position such as the National Fund for Municipal Workers (NFMW) Principal Officer and Chief Executive Officer.

I have been with the NFMW since 2017 when I was appointed as the Deputy Principal Officer; in this role, I was mainly responsible for fund governance and Board-related matters.

What are your aspirations for the National Fund for Municipal Workers (NFMW)?

I want the Fund to be a recognised participant in the dialogue on issues of national importance such as sustainable socio-economic development of our nation, transformation, equality, and justice, among others. The retirement assets/savings managed by the NFMW and other retirement funds should also contribute to creating an environment that is conducive to live in, such that our members benefit from the Fund's assets not only at retirement but also during their working life.

From an operational perspective, I want to see the NFMW with an integrated and seamless system such that it should take less than one working day to process and pay a claim (subject to tax processes). The current three-day standard is too long! Lastly, I would want the NFMW to develop into the most trusted custodian within local government, growing our members' investments and keeping them informed along the way to a secure retirement.

The Fund's purpose of existence is to financially secure our members' future. This becomes relevant given the current economic environment and the continuously widening fiscal gap

What are the main objectives of the Fund?

The Fund's purpose of existence is to financially secure our members' future. This becomes relevant given the current economic environment and the continuously widening fiscal gap. It may be argued that if this trajectory continues, the government may not afford to provide an adequate social safety net for vulnerable citizens, but the future of our members will be secured.

The Fund's primary objective is to provide benefits for its members on their retirement and for their dependents or nominees in the event of the death of a member. We keep our members informed about what is happening in the Fund; educate them so they understand the benefits they enjoy as members and guide and provide them with the necessary tools through ongoing interaction.

What makes the NFMW the fund of choice?

Our members are at the centre of what we do, our decisions, our behaviours and the strategies that we employ in the management of the Fund. We pride ourselves in providing excellent service and our administration cost is arguably the lowest in the industry, this translates to less of our members' contributions towards the cost and more towards retirement savings.

The NFMW's excellent long-term investment performance track record puts it on par with the best global balanced managed portfolios in South Africa and ahead of its peers in local government. Employees in the local government sector have realised the value of being an NFMW member and many who are not yet members due to the current restrictions, are waiting for the pension funds rationalisation exercise to liberalise the local government retirement funds industry for them to join the Fund of Excellence, NFMW.

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You also serve in the Financial Sector Transformation Council's Retirement Funds Scorecard Review Sub Committee. Please outline what the Council does.

The Sub-Committee in which I am serving is currently reviewing the transformation matrix for retirements funds and related industries. The underlying purpose being the transformation of the financial services sector, which largely remains untransformed, although much progress has been made in this regard.

Please share some of the Fund's recent successes.

The NFMW has won numerous IRFA Best Practices Awards:

- 2018 Overall winner Communication strategy
- 2019 Financial management and reporting, Governance, Investment practices, and a Gold standard award
- 2020 Best in class – Investment practices
  - Best in class – Governance
  - Best practices in Transformation
  - Best practices in Financial management & reporting
  - Best practices in Stakeholder engagement & education

These awards are a testament to the Fund's compliance with all regulatory and other statutory requirements and above all, recognition for setting the benchmark of excellence in Local Government.