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**THE 2021 AFRICA
BILLIONAIRES LIST**
Some Big Winners
And What's Missing
This Year

Elon Musk The Richest Man On Earth?

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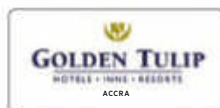


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Pargo Leads The Way To A Sustainable South African Logistics Industry



Stroll down any street in South Africa and you'll find them in every corner, clinging to trees, spreading across fences and filling up gutters. They are plastic bags and they are here to stay — but not if Pargo, South Africa's leading smart logistics company, has their way.

Pargo is taking a firm stand against plastic by introducing new environmentally-friendly paper packaging to last-mile delivery and is inviting you to join them.

This new range of packaging promises to offer the same quality, durability, and security consumers and retailers have come to expect from the industry disruptors but with the added benefit of leaving minimal impact on the environment. By demonstrating that order fulfilment strategies can be environmentally sustainable, Pargo aims to inspire green thinking and permanent change in the logistics industry.

There is no denying it, single-use plastics are not sustainable. Besides being an eyesore, plastic packaging clog sewers, fill streams, threaten wildlife and the majority end up suffocating our oceans, prompting a worldwide outcry. In 2019, a United Nations resolution was signed by 170 countries pledging to reduce plastic consumption by 2030 with some signatories like Kenya already banning single-use plastic carrier bags altogether.

This sentiment is shared among many South African consumers who are becoming increasingly environmentally conscious and dissatisfied with plastic serving as the default material in packaging. According to a recent survey conducted by Pargo, over 90% of South

African consumers prefer paper packaging over plastic — signalling the need for a mass intervention.

In South Africa alone, over 8 billion plastic bags get discarded every year. Sadly, the logistics industry also contributes to this mass wastefulness by using plastic mailing bags to ship their products, but, as Pargo aims to prove through their paper packaging alternatives, they don't have to.

“While most single-use plastic items are only used for a few minutes, they outlive their users by hundreds of years. As industry disruptors in the logistics field, Pargo is in the privileged position to address this pressing concern, set new sustainability standards for the industry and inspire others in the process. The positive response from customers and retail partners has been overwhelming so far,” says Michaela Gabriel, Head of Marketing at Pargo, the driving force behind Pargo's transition to eco-friendly packaging.

Pargo has spent over a year developing and piloting their new sustainable paper packaging range, including mailing bags, C4 envelopes and packaging tape, to ensure each is as tough, tamperproof and trusted as their plastic counterparts.

Due to the lack of locally manufactured sustainable packaging options for the logistics industry, their new mailing bag had to be purposefully developed with fellow eco-warrior and leading local packaging company, Detpak. Made from the same wet strength paper used in the cement bag industry, the bag achieves superior tensile strength and water resistance.

The logistics company highlights working

with South African manufacturers as pivotal to the development process because it allows them to further save on energy, lower greenhouse gas emissions and benefit local economies along the way. The result is a durable range of fully biodegradable packaging made locally from sustainably sourced recycled paper.

Mr Price, Loot.co.za and Wellness Warehouse are some of Pargo's many retail partners who have eagerly welcomed the logistics company's sustainable packaging for their last-mile deliveries.

“As a strong supporter of sustainable businesses practices, we were delighted to hear about Pargo's new eco-friendly packaging. This decision will ensure that the distribution of our products to Pargo pickup points across the country will be done with minimal environmental impact,” says Michele Hughes, Online Store Manager at Wellness Warehouse.

By adding sustainable paper packaging to their product offering, Pargo hopes to change the environmental impact of the logistics industry forever. As a key enabler of Ecommerce growth in Africa, it is their mission to create access for anybody in Africa without leaving anyone or anything behind.

If you would like to bring sustainability to the last-mile leg of your fulfilment strategy, visit Pargo's website.

Should you need any further information, please contact:

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2021, Please Be Kinder

THE *ANNUS HORRIBILIS* THAT WAS 2020, the year of the mask, is not behind us, yet. For global economies, mostly, there is a sentence the world uses on Zoom every day that could be applied to describe their predicament – ‘You are on mute’.

When can we unmute, unmask, unwind?

While a virulent pest proved to be a business-breaker, it was also one of the greatest accelerators in history for new ideas and future-proof pivots, as the intrepid survived, unflinching, guns blazing, with overhauled or original enterprise.

Despite the antipathy and aversion to a year that scarred mankind and blighted growth, the battle-hardened did not give up, and not just in the hallowed hallways of capitalism.

The warriors in the cold Covid wards of Africa soldier on in blue scrubs, their only arsenal is water and willpower, and hope that they will walk out of those wards every day – if at all – without taking home an invisible enemy and a maelstrom of emotions.

Death lurks in the loud silences of the long dark corridors, and the shadows rear their ugly spiked heads, but there is no one else the worried and weary can turn to in these times, but the men and women of science who don't have the luxury of inhabiting virtual worlds like the rest of us still cocooned in our WFH paradigm.

Their fight is bloody, visceral and in the macabre theater of life.

On their frail shoulders, frail economies rest.

I was moved to tears reading about one of these medical warriors, who we feature in an entire special on ‘Women in Science’ in this issue. She has gone without family contact for weeks at a time, only to pause outside the door of her home, longing for the warmth and security she once knew.

“I would get home, sit in my car, and cry from how exhausted I was,” she relates. Yet another healer in the same feature talks about “ambiguous loss, because we don't know when this will end and who it will come for next”.

A close friend of mine calls me and says: “We should continue to keep checking in on friends, colleagues and family, ask how they are, as times are uncertain.”


A humble cup of coffee with a friend is both prohibitive and priceless in this nebulous present.

Social caution has become the antithesis of daily life.

The vaccine and the jabs are on all our minds. South Africa crossed a million Covid-19 infections in December, just as the country was putting away its Christmas lights.

Yet, there is much to celebrate. Amid ‘moonshot’ Covid vaccines and plans to send a woman to the moon by 2024, we have Elon Musk, looking to inhabit the Red Planet and the multiverse. These are future-thinkers looking beyond the problems of today. So, we look at Musk and a blizzard of African billionaires in this issue.

With rising public debts, GDP downsides and weaker world trade growth, the coronavirus crisis will continue to have negative effects on world output. With the interruption to business, there could be a lost generation of young startups and with that, a demoralized young talent pool.

Let's hope there will be renewed resurgence on the youngest continent on earth. There is no other way to quell 2021. 

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Photo by Motlabana Monnagotla

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THE JOURNEY TO SUSTAINABILITY AND HAVING A BROADER IMPACT

BY RAKESH WAHI, FOUNDER AND PUBLISHER, FORBES AFRICA

A SUBLIME REALITY OF being human is that we all have divergent points of view; we may arrive at the same destination but many of us like taking the scenic route since we prefer learning from our own experiences and sometimes, mistakes. However, the world has unwittingly united around one truth; that we live in uncertain times and even the wisest won't harbor a guess at what 2021 holds in store. Using the oxymoron 'cautiously optimistic' is fashionable but personifies cluelessness. Talking about truths, I reflected a great deal on the words of the Dalai Lama as he described the four noble truths in his book, *The Middle Way*, which is "faith grounded in reason". I had received a personal copy from His Holiness in 2018 and have referred to it whenever I have wanted to introspect. The four noble truths are i) suffering; ii) the cause of suffering; iii) the cessation of suffering; and iv) the path to be cultivated to eradicate suffering. This is a very profound discourse as every situation in life can basically be encapsulated in these four truths; some may want to replace the word 'suffering' with 'challenge'.

The real solution to any problem lies in the path that we choose to pursue. My introspection over the last three months focused first on being brutally critical of myself as a means for self-improvement and for defining and perhaps redefining the things that are important for me. What do I really want to do in this final phase, who do I want to spend my time with and what impact do I want to make. These answers now form my resolution, not just for 2021 but also for the proverbial last mile. There is no time for rancor; the past cannot be changed. The



focus must be on the future and how we can continuously improve and make an impact irrespective of the magnitude.

The opportunity also gave me a lot of time to reflect on what we have been doing as a business for the last two decades. What was gratifying was recognition that I truly enjoy what I do at work and there is nothing I would want to be doing different if I had a choice of being completely free or if my life depended on it. This alignment was very important as a lot of my decisions could impact the lives of many others who depend on me. This was timely intervention because amongst many other activities, the last quarter is always focused on reviewing strategy, validating goals, course correction where necessary, laying out the battle plans for the

coming year and most importantly planning resources including human capital.

As I was reviewing the data dump that is accompanied with year-end reviews, I sadly realized that given all the vicissitudes in various businesses and industries, our vision and mission statements needed to be looked through a very different lens. In fact, some parts of the business needed a complete overhaul as circumstances have changed so much that to remain relevant, we have to go back to rebuilding our business model from scratch. This is perhaps something that almost every business leader, in the knowledge of uncertainty, must most certainly be doing right now. A key question that we have to objectively ask ourselves is our purpose; what is the vision of the kaleidoscopic future that we are trying to achieve. The retrospective ‘why’ of every business has evolved through time and we have adapted to changing paradigms as we saw relevant. A lot of actions to build shareholder value were tactical adjustments or managing variables like product, pricing, positioning, cost controls, consolidation etc. that are largely reactive and do not ensure sustainability. We tend to shy away from proactively dealing with the underlying incongruity that grows with changing time until it becomes the proverbial ‘elephant in the room’ and cannot be ignored.

The first thing that I do when I sense uncertainty is to huddle with my core team; senior leadership whose goals are aligned, have similar values and in fact have knitted the fabric of our existence and are the conscience of our business. In one business group, we began the age-old SWOT analysis and found that while we have been feeling the need for change, we have simply been procrastinating; the outcome of a gradual decay caused by the irritating gnawing of external factors. Whether it was being in a comfort zone or just ‘kicking the can down the road’, we recognized that since sustainability is not a single dimensional value, we had to change the matrix and apply eroding catalysts that demonstrated the vulnerability of our future. We may resist change but if inaction threatens survival, the response from the human race reinstates confidence on why, as omnivores, we are at the top of the food chain. There was resounding acceptance of the ‘suffering’ and overwhelming support to what is needed to be done. We are now embarking on an organization-wide brainstorming exercise to start rebuilding and refocusing our education business with a renewed purpose.

As I was going through this exercise, a few other realities dawned mainly because an argument could be made that these ‘airy-fairy’ conversations are great once you have made money


and are secure or that these are matters that only large businesses must consider. It made me go back to 1989 when I left the military to become an entrepreneur. My immediate goal then was to provide a decent livelihood to my small family. However, there were cardinal rules that were ingrained in my being: honesty, integrity and ethics. So it was never a value that money had to be made at any cost or that material wealth was a benchmark of success. While money is important, the journey to sustainability and having a broader impact is far more important. Those who have worked with me for the last 20 years know that we have always aspired for more than just a quick return; we have looked at our business plans and corporate development with a 25- to 30-year time horizon.

Perspective was put on our practice when Dan Adkins, our CEO in Dubai, over Christmas, gifted me a book by Simon Sinek – *The Infinite Game*. The book is a reflective read as the author focused on a few important aspects: i) Advance a just cause; ii) courageous leaders; iii) build trusting teams; iv) worthy rivals; and v) existential flexibility. Unconsciously, most leaders charter a path towards a cause that remains engrained in the people that grow with them and carry forward the baton in an unending relay. This is nothing but a vision of infinity; to

continue doing what you are doing for all times to come. This thinking does not stop when you achieve a target but is all about “staying in the game forever” like a proverbial perpetual motion machine that can work indefinitely without stopping.

The reason I am writing about this seemingly idealistic exercise, is that this needs to be introspected and implemented by everyone. We have learned so much in the last nine months and if we are serious about enriching our lives, it’s time to really sit down and see what is important for us and by extension for the vocation that we are in.

‘Suffering’ is a great leveler; the pandemic taught us that economic status does not create distinction or overlook you. Whether it’s in government, public, private or not-for-profit players, there has to be a close examination of the first noble truth articulated by His Holiness the Dalai Lama.

Our lives have to follow a cause that is higher than physiological needs; something that propels us voluntarily towards a vision of the future that we want our future generations to inherit. 

“

If we are serious about enriching our lives, it’s time to really sit down and see what is important for us and by extension for the vocation that we are in.

”

WHAT'S
NEW

FRONTRUNNER

WHO'S
NEXT

I Strictly South African I

STRICTLY COME DANCING ON THE BBC IS arguably one of the biggest shows in the United Kingdom. And 2020 saw, for the first time since the ballroom and Latin dancing show started in 2004, back-to-back wins for a South African contestant.

Pretoria-born Oti Mabuse took home the Glitter Ball trophy for the second time in December 2020 making her the first professional on the show to win a back-to-back title. What made the win more significant was the dancer was paired with 56-year-old English comedian, actor, and musician, Bill Bailey, the oldest-ever winner Strictly has seen in its 18 seasons. A win that everyone said could not happen in week one of the competition.

"You don't know this but in the UK they take a vote," Mabuse trills from her home in London in a recent interview with FORBES AFRICA. "And they will tell you who they think the first person to go out will be. And we were voted the first couple to go out... And that motivated me and I said 'fine I will show you all, we will show you all!'"

And show she did, during the nine-week-competition.

What further drove the 30-year-old ballroom and Latin dancing exponent to want to win was the love for her job and the fact that she was representing her home country, South Africa.

"It's in my DNA. I always say it's because of where I come from that I am the way I am. I look at how my mom literally raised us. From the Winnie Mandelas and the Sarafinas, women in our country are just strong. We are fighters," she explains.

"I have never met a South African woman who is just like 'meh'"

Mabuse has been dancing on Strictly since 2015 and won for the first time in 2019 with English actor and racing driver, Kelvin Fletcher. The format of the show, unfortunately, had to change in 2020, to a smaller crew, fewer couples, and no live audience.

The win feels more special to Mabuse because it was during a difficult time, so having something positive happen does feel "amazing" to her.

"In the last couple of weeks, I think it's soaked in slowly but I think that's only because we're in lockdown. But you know, people at home don't really get to see what it meant to people other than us. We did the show, and we were kind of isolated in our own small bubble. So, you didn't get to see other than the cast and crew and what their reaction was. It's just been absolutely unbelievable," Mabuse says. **F**

– Watch the full interview on forbesafrica.com



SPRINGBOK WOMEN GEAR UP FOR RUGBY WORLD CUP

With the Rugby World Cup kicking off in New Zealand in a little over eight months, the Springbok Women are at a training camp in Stellenbosch in the Western Cape province of South Africa, for the Rugby World Cup that will be hosted from September 18 to October 16 this year; 24 players have joined Springbok Women's coach Stan Raubenheimer and his management team for the first stretch of a two-and-a-half-month training camp.

The Springbok Women will face England, France and debutantes Fiji in Pool C of the 2021 Rugby World Cup, which will play out in Auckland and Whangarei.

The squad includes Springbok Women's captain Nolusindiso Boo (lock), Babalwa Latsha (prop), 2019 Women's Achiever of the Year Aseza Hele (No 8), Zenay Jordaan (flyhalf) and Tayla Kinsey (scrumhalf), amongst others – many of whom participated in the Rugby Africa Women's Cup in 2019 in Brakpan, which served as the qualifier for the 2021 RWC.

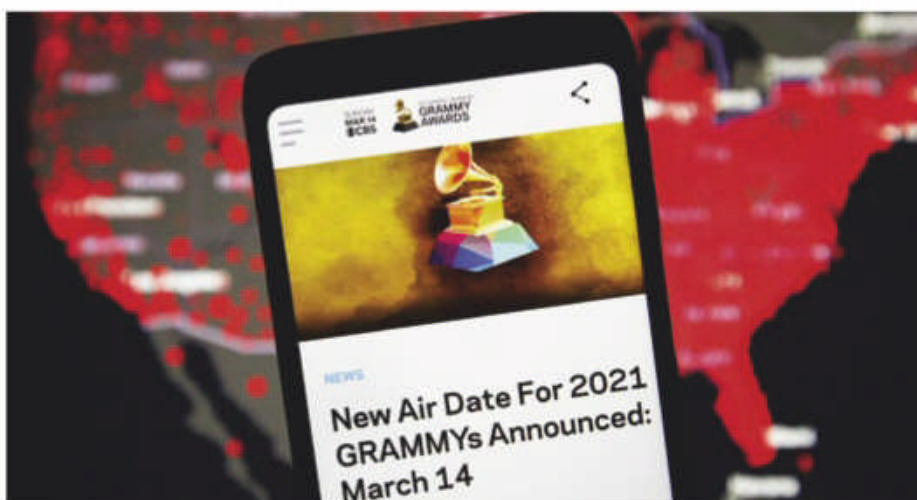
Four players, namely Boo, Kinsey, Jordaan and Asithandile Ntoyanto (prop), are capped Rugby World Cup players.

Trevor Noah's turn at the Grammys in March

Looks like South African comedian, Trevor Noah, will have to wait for over a month to play Mr Funny Guy at the Grammys. The biggest night in music, which was scheduled to take place at the end of January, will now happen on March 14.

"The deteriorating COVID situation in Los Angeles, with hospital services being overwhelmed, ICUs having reached capacity, and new guidance from state and local governments have all led us to conclude that postponing our show was the right thing to do," the Recording Academy said in a statement.

Though there were some questions on whether or not Noah would still be hosting the event, *The Daily Show* host did confirm to *Rolling Stone* magazine that he will remain the host.



NETFLIX SHARES NAB NEW \$30 BILLION HIGH

Netflix's stock is skyrocketing to 16% even though the broader market is only ticking up to about 1%, according to *Forbes*. This pushes the streaming platforms' market capitalization up more than \$30 billion to an all-time high of roughly \$255 billion. However, *Forbes* further notes that Netflix is not the only one whose shares are doing well. Shares of Apple and Alphabet are also seeing new all-time highs, climbing 3% and 6%, respectively, while Amazon and Microsoft jumped 4% each.

CHINA'S PANDEMIC-RELIEF TO THE DRC

China has granted some debt relief to the Democratic Republic of the Congo (DRC) to help it overcome economic fallout from the coronavirus pandemic, the Congolese foreign ministry said on January 6.

Al Jazeera reported that as a result, the country will not have to repay its interest-free loans from China that grew at the end of last year. It is unclear how much this amounted to.

China has extended debt relief worth over \$2 billion to developing countries under a Group of 20 (G20) framework. This framework is aimed at giving to those who suffered from the Covid-19 crisis, and in turn, offer them some financial breathing space.





Covid's effects on African classrooms

The UNICEF released a report in November last year titled *COVID-19: A Catastrophe for Children in Sub-Saharan Africa*, stating that prolonged school closures due to Covid-19 have presented multiple problems in the sub-Saharan African region. There is now a higher rate of teenage pregnancy, poor nutrition, and permanent dropouts from school.

Furthermore, the report read: "School closures have caused the number of children and adolescents not going to school to rise from around 100 million before the pandemic to 350 million." A classroom report of different countries:

NIGERIA

Despite the fact that Nigeria is battling with the second wave of the pandemic, learners returned to school on January 18 this year. However, the House of Representatives asked the government to postpone the reopening by three months, due to the increasing number of Covid-19 deaths.

SOUTH AFRICA

The government announced on January 15 that schools will remain closed until February 15. This is due to concerns around the country's more serious second Covid-19 wave. Teachers will report to schools at the beginning of February.

KENYA

Schools in Kenya reopened at the beginning of the year after being closed since March 2020. *VOA News* reported that Kenya has yet to contain the pandemic and there are concerns among teachers and parents about being exposed to the infection.

ZIMBABWE

At the end of last year, the country announced it would postpone the date schools reopen. Originally, learners were to return on January 4, but a new date would be announced in due course. This, however, is not only due to the pandemic but also coupled with the threat of flooding posed by Cyclone Chalane.

eSWATINI

After eSwatini strengthened its lockdown regulations on January 7, with a spike in Covid-19 cases, Deputy Prime Minister Themba Masuku announced that schools would remain closed indefinitely.

According to the *SABC*, the President of the Swaziland National Association of Teachers in eSwatini, Mbongwa Dlamini, commended the government for postponing the reopening of schools.

"As a trade union of teachers, we are saying that the government should make sure that before schools are open, the schools should be safe for teaching and learning. So if the schools are not safe for teaching and learning, it is best for the government to wait."



FAMINE IN 2021?

The United Nations (UN) published the *Global Humanitarian Overview 2021* which warns that up to 235 million people will need humanitarian assistance next year – a 40% increase on the number at the start of 2020.

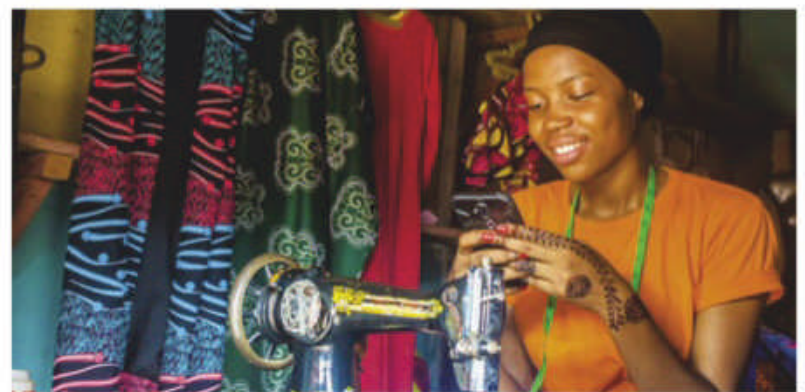
Concern Worldwide is calling for an urgent international response to meet the needs of millions of people and avert multiple humanitarian crises including famine in 2021. The UN estimates that the global humanitarian response for 2021 will cost \$35 billion.

By the end of 2020, there are likely to be 270 million people who are acutely food insecure, and famines looming in the Sahel region, north-eastern Nigeria, South Sudan and Yemen.

MORE TAX TO FUND VACCINES

Business Day reported on January 18 that South Africa's National Treasury is considering raising taxes as one of several possible mechanisms to fund the vaccination drive against Covid-19. This is due to the department of health estimating that to vaccinate the entire country would cost R20 billion (\$1.3 billion).

It is reported that South Africa is due to get nine million doses of the vaccine from Johnson & Johnson; an additional 1.5 million shots of the AstraZeneca vaccine, 12 million through Covax, and 12.25 million from the African Vaccine Acquisition Task Team.



AFRICA ON TOP GLOBALLY FOR WOMEN BUSINESS OWNERS

Research shows Covid-19 has left a disproportionate impact on women entrepreneurs around the world. In the fourth edition of the Mastercard Index of Women Entrepreneurs (MIWE), which examines progress in 58 economies, representing 80% of the world's female workforce, Africa claims the top three spots for highest concentration of women businesses owners in the world.

Uganda leads the MIWE benchmark indicator, whilst Botswana moves into the runner-up spot and Ghana now comes in third.

The Mastercard index highlights the vast socio-economic contribution of women entrepreneurs around the world, as well as provides insights on the factors driving and inhibiting their advancement.

The report also demonstrates a high regard for risk-taking, innovativeness, individuality and creativeness in entrepreneurship is prevalent in Uganda, Nigeria and Angola.

SUB-SAHARAN AFRICA'S 2020 M&A TRANSACTIONS AND DEALS

Refinitiv, a global provider of financial market data and infrastructure, stated in their report that an estimated \$523.7 million worth of investment banking fees was earned in sub-Saharan Africa during 2020. This is down 15% from 2019 and the lowest annual total in six years. Sub-Saharan Africa M&A transactions totaled \$25.7 billion in 2020.

Furthermore, sub-Saharan African equity and equity-related issuance reached \$2.5 billion last year. The number of deals recorded increased 19% from 2019 but was lower than any other yearly tally since 2012. One initial public offering was recorded during 2020, compared to three in 2019.



BOOSTING SUDAN'S WOMEN ENTREPRENEURSHIP

The African Development Bank has approved financing for a \$14.96 million project to help women in Sudan access finance and grow their businesses. The Accelerating Women's Entrepreneurship and Access to Finance project will address capacity, financing, and knowledge gaps for Sudan's women entrepreneurs.

The project aims to help women to access quality business development services and financing as well as improving the quality of services provided by financial institutions serving women entrepreneurs in Sudan's Khartoum and Red Sea states.

Under the project, 570 micro, small and medium enterprises owned or led by women are expected to receive high quality technical and business development training and a finance pot of up to \$11 million.

The new financing is expected to lead to an average 10% growth in business revenue for the women business owners and the creation of 1,200 full-time equivalent jobs, especially for young women.



'LIFT LIKE A GIRL'

Egyptian filmmaker Mayye Zayed was inspired to shine the spotlight on women's success in the male-dominated sport of weight-lifting, after walking through the busy streets of the Egyptian city of Alexandria. Here, she saw an open-air training camp for female weight-lifters, which motivated her to film the documentary *Lift Like A Girl* which follows the journey of a young female weight-lifter.

In a statement released by the Thomson Reuters Foundation, Zayed said she hoped her film would raise awareness about weight-lifting among women and girls, and encourage more to follow their dreams, even if that means challenging gender stereotypes in socially conservative countries like Egypt.

"Usually the term 'lift like



a girl' has a negative meaning, but our documentary is bringing a whole new meaning to the term - an empowering meaning aimed at inspiring current and future generations," Zayed said. The documentary, which premiered at the Toronto International Film Festival in September, has already won three awards, including an audience award (at the 42nd Cairo International Film Festival), in December.



Nigeria's Burna Boy on presidential playlist

United States President Joe Biden and Vice President Kamala Harris dropped a playlist as a way to ensure that people celebrated the inauguration from home.

The inauguration of Biden and Harris took place on January 20, and the playlist featured 46 songs from artists from across the music spectrum to honor the 46th president taking the oath of office.

One of them was *Destiny* by Nigerian-born music artiste, Burna Boy. Other artistes included Mary J Blige and Dua Lipa. The playlist is available on major platforms such as Apple Music, Spotify, and YouTube.

- Compiled by Chanel Retief



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Virus, Vaccine And Viability

Understanding the successful storage, supply chain and distribution of the Covid-19 vaccine and what Africa needs to do to get it right.

BY SIMONE SRIBRATH

THERE WAS PERSONAL DILIGENCE IN conducting the research for this story, as this writer too tested positive for Covid-19 at the end of December, in South Africa, a country that recorded a million coronavirus infections that same week.

Following the story and the world's quest for an effective cure, this article now focuses on the concomitant issue of

vaccine distribution across Africa even as the continent grapples with a deadly second wave of the pandemic.

Different countries have taken different approaches to securing their supply of vaccines. In North Africa, for example, Morocco has secured over 65 million doses, some of which has come from China's Sinopharm and Britain's AstraZeneca and Oxford supplies. The country aims to have at least 80% of its population vaccinated with this supply.

South Africa, having joined the COVAX coalition, has secured 20 million doses thus far. The country's government is using a phased approach with healthcare workers being the first to receive the vaccine, and the continent's second largest economy aims to have 60% of the overall population vaccinated to initiate herd immunity.

Other countries look to their alliances with China and



“

Vaccine storage at the recommended temperatures in Africa is not easy to achieve.

– Eckart Zollner

Russia to provide vaccine doses. While countries have had to ensure the security of their supply first, other issues around the vaccine are also to be considered which in turn plays a deciding role in the type of Covid-19 vaccine a country needs.

One such issue is storage. The current vaccines that have been approved as a result of their high efficacy rates pose a difficult challenge when it comes to shipping and storage. There are certain conditions that have to be met to ensure that a vaccine is stored successfully and still viable for use after being shipped.

This is where the vaccine cold chain comes in. The cold chain is the network of cold storage facilities that are used through every key stage of the vaccines' journey; from the manufacturing line to their eventual use in a syringe. Proper storage and handling of vaccines during the cold chain process ensures that no part of the vaccine being transported degrades and becomes unusable for treatment.

Part of the cold chain process is also temperature regulation and includes all equipment and procedures required during the transportation and storage process (see box).

Africa faces a unique challenge in the area of storage. With vaccines requiring resilience in being able to travel across great distances and many facilities, particularly in rural areas not reaching the requirements for long-term storage, certain vaccines have had to be ruled out.

There are enough examples now of businesses and services in this critical area.

iKhaya Automation Solutions is a temperature monitoring specialist based in Pietermaritzburg, a

town in the province of KwaZulu-Natal in South Africa. The company has received accreditation from the World Health Organization which is critical in the roll-out and storage of vaccines on the African continent.

Eckart Zollner, the sales and marketing executive of iKhaya, says the accreditation could not have come at a more critical juncture. “The temperature of every vaccine (and indeed all temperature-sensitive pharmaceuticals) must be kept as advised by the manufacturers during transport and storage to preserve the vaccine’s effectiveness and safety once administered,” says Zollner.

Temperature monitoring systems such as the ones provided by iKhaya are a key component to ensuring that the viability of a vaccine is maintained throughout the cold chain process. Devices manufactured by iKhaya have been deployed at a number of different storage facilities and laboratories that have been involved in the vaccine process.

“Vaccine storage at the recommended temperatures in Africa is not easy to achieve,” says Zollner.

In order for the accreditation to be achieved, a number of compliances and regulations had to be met. The criteria included a thorough examination of the devices and quality of technology being used in its mechanisms for measurement. There were also strict regulations on how the devices interacted with the environment and the alert systems in place should the temperature and condition of the vaccine face being compromised.

Zollner elaborates on the importance of data analysis and data storage systems that were also in place and part of the





approval of the accreditation process as “it has been quite an intricate and rigorous process in ensuring our data systems matched the criteria set out by WHO”.

Given that the storage of the vaccine is determined by the specific temperature range, the devices created have to ensure that the temperature regulation processes can be monitored in real time and breaches can be controlled immediately.

“The alerts have a three-level hierarchy to ensure that personnel are able to act accordingly and before temperatures reach a critical juncture and the vaccine is compromised,” says Zollner.

In Africa, there are also other issues in the cold chain process. One of them, power.

“

Electricity supplies have proven to be unstable in some parts of Africa, which is not ideal for temperature regulation devices; the consistent maintenance of electricity, particularly in rural areas is needed for vaccines to maintain their efficacy.

“Electricity supplies have proven to be unstable in some parts of Africa, which is not ideal for temperature regulation devices; the consistent maintenance of electricity, particularly in rural areas is needed for vaccines to maintain their efficacy,” adds Zollner.

Training is also of importance as personnel need to be well-versed in the temperature regulation measures needed for the storage of a particular vaccine. Zollner also mentions the lack of qualified staff in certain regions.

Another critical issue is the actual distribution of the vaccine within an African context.

The distribution of Covid-19 vaccines also comes with a subset of issues. Dr John Sargent, one of the co-founders of BroadReach Healthcare, spoke to FORBES AFRICA on some of the issues in Africa.

Sargent explains that the model of distribution for the Covid-19 vaccine is a complex one.

“When you think about from when a vaccine gets into a country to when it gets put into someone’s arm, especially those that require two doses, there are literally a thousand steps that need to happen first,” notes Sargent.

One of the first things that need to happen in each country is regulatory approval.

The second consideration, once approval has been granted, is budget.

“The cost of the actual vaccine is only part of the cost, the cost for the vaccine process needs to be taken into account, this includes costs for syringes, alcohol swabs, personnel to administer the vaccine, and it just continues from there.”

“

When you think about from when a vaccine gets into a country to when it gets put into someone’s arm, especially those that require two doses, there are literally a thousand steps that need to happen first.

The third area, according to Sargent, is supply chain logistics which he foresees as being a challenge, especially due to the cold chain process. He reasons that this can be overcome by explaining that “in many of the countries I have been in sub-Saharan Africa, I could get ice cream”. By this, he means partnering with industries and companies in the private sector and using their facilities as an innovation within the cold chain process.


Apart from the technicalities around distribution, Sargent mentions more intrinsic social issues such as community awareness and adherence as potential concerns.

Sargent feels education needs to happen through communication strategies and exploring avenues such as social media campaigns and community programs.

The last thing Sargent feels is needed is effective project management.

By this, he refers to technical nuances such as an effective data management system or how vaccine candidates are being catalogued and the logistics around key facilities that would offer vaccination.

Understanding the supply chain in distributing the vaccine is going to be instrumental in ensuring that the vaccination process is as widespread as it needs to be.

With different countries adopting different approaches in how the vaccine is distributed, only time will tell which has been the most effective in making Covid-19 a thing of the past. 



Storage conditions of the vaccines currently available: Currently, there are at least five vaccines that have approval and are being rolled out in different parts of the globe. Each of these vaccines have different storage requirements in terms of the temperatures required to ensure they remain viable. The reason for this is due to the components of each vaccine and how they have been structured biologically.

BNT162b2 (Pfizer and BioNTech): This vaccine needs to be shipped and stored at temperatures between -60 to -80°C. It can be stored for up to five days in normal refrigerator conditions (2-8°C) before use and has a shelf life of up to six months under the right storage conditions.

mRNA-1273 (Moderna): This vaccine has easier conditions to meet than the Pfizer and BioNTech vaccine as it only needs to be shipped and stored at temperatures between -15 to -25°C, the average temperature of a freezer. It can also be stored in refrigerator conditions for up to 30 days and also has a shelf life of six months.

AZD1222 (AstraZeneca and Oxford): The vaccine created by AstraZeneca and Oxford has the easiest conditions in terms of storage as it can be stored and shipped at temperatures between 2-8°C, the average temperature of a refrigerator. It can also be stored at these temperatures for up to six months without use.

CoronaVac (Sinovac): This vaccine uses an inactivated vaccine approach and as such, can be stored at refrigerator temperatures (between 2-8°C) for extended periods of time.

Sputnik V (Gamaleya): Using a viral vector approach, the viral vector vaccine can be stored at refrigerator temperatures when in dry mass form, and at temperatures of around -18.5°C in liquid form.



Heartbeat Of The Global Economy?

The largest free trade area in the world, with a combined GDP of \$3.3 trillion, came into effect on the first day of 2021. A look at what exactly implementation of a deal of this magnitude means.

BY PAULA SLIER AND SASHA STAR

AFRICA'S TRADE RELATIONSHIPS HAVE BEEN irreversibly affected by three events – the Covid-19 pandemic and two important trade agreements.

At midnight on 31 January 2020, the withdrawal of the United Kingdom (UK) from the European Union (EU) officially came into force. The decision – Brexit – made by 52% of the British population resulted in the EU losing its second-largest economy and the Union Jack isolating itself in terms of trade, effectively quarantining in its own home. But for Africa, the move holds opportunities. Untapped export potential to the UK is large as is untapped UK export to Africa; the latter is worth more than \$8 billion.

Yet, it is the new trade agreement implemented in Africa

where interest should really be directed; 54 of the 55 African Union states on the continent have signed up for the African Continental Free Trade Area agreement (AfCFTA) which came into effect on the first day of 2021. Eritrea is the only country that chose to sit out – and there are various explanations as to why, not unconnected to power and politics.

By creating the largest free trade area in the world, 1.3 billion people are now set to benefit from the elimination of tariffs on most goods, the liberalization trade of key services and the address of non-tariff obstacles to intraregional trade. The AfCFTA is estimated to bring Africa annual income gains of more than \$130 billion per year.

The deal could not have come at a better time, though this



Photo via Getty Images

“

We’re talking about a continent with a consumer market as large as China but with a superior mineral and natural resources concentration.

was hardly factored in when the agreement was originally brokered in March 2018. Covid-19 has substantially impacted Africa’s tourism sector that accounts for much of its revenue — particularly for smaller nations — while the trade of goods, oil, and even food has also declined significantly as a result of the novel coronavirus.

“The pandemic has presented an historic opportunity to build a better future,” says the African Department of the International Monetary Fund (IMF). It stresses that “trade integration, along with domestic reforms to improve revenue mobilization, digitalization, competition, social safety nets and climate-change mitigation, will be critical for the region’s resilience, growth and job creation”.

An extensive reduction of tariffs is the first step towards this. With 90% of taxed intraregional trade flows being contracted under the AfCFTA, current flows are due to increase by around 16%, or \$16 billion.

“The AfCFTA, if implemented as laid out in papers, would usher an economic progression that would make China’s remarkable economic transformation look basic,” claims Ibrahim Anoba, the Managing Editor of AfricanLiberty.org.

“We’re talking about a continent with a consumer market as large as China but with a superior mineral and

natural resources concentration.”


The potential of the AfCFTA is enormous, but, as Anoba points out, this all depends on the players in the game. “The different thing about the AfCFTA is that it would take an absolute commitment from as many signatory states as possible to be efficient,” he says. “The first phase is the conceiving of the idea. The second is implementation; proper implementation. This is where we’re at. We cannot move further unless we do this right.”

What exactly does implementation of a deal of this magnitude mean, though?

With so many players involved, it is understandable that the AfCFTA will be enforced in stages. The instruments that are already operational include the regulations and administrative rulings applied by governments to determine the source of goods, services and investments known as the rules of origin; the monitoring and elimination of non-tariff barriers; as well as the schedule of tariff concessions and other specific commitments.

“Long term, the AfCFTA faces a Brexit type of threat from the larger economies which may feel like they are giving up too much autonomy by being part of the agreement,” warns Jamie Mighti, a South Africa-based political analyst. “This risk is higher in Africa than in the European Union because of increased economic disparities between states and Afrophobic attitudes.” Mighti believes that there are substantial levels of antipathy to the business presence of Africans from other states in the large African economies and that this could present a massive challenge to the success of the AfCFTA.

It is not all doom and gloom, however. Mighti is of the opinion that better inclusion of the youth on the continent is an excellent way to ensure that the agreement will thrive, and that more focus should be placed on aiding small and medium-sized businesses, as opposed to large entities. The IMF also feels that tariff reductions should be complemented by policies to reduce non-tariff bottlenecks to trade, and that agriculture-based and less diversified countries should combine trade policies with structural reforms that boost agricultural productivity to better leverage existing comparative advantages.

Overall, the AfCFTA has been packaged as an opportunity to lead Africa down a path of prosperity, or fall into greater economic depravity that will take decades to equalize. As Anoba sums up, “If things go according to plan, we can finally expect Africa to emerge as the global economy’s heartbeat a decade from now.” 

The Silent Pandemic



The impact of Covid-19 on mental health is also proving deadly, particularly in Africa.

BY PAULA SLIER AND SASHA STAR

PHYSICAL HEALTH HAS BEEN BROUGHT INTO sharp focus over the last year as people watch for any sign of irregular temperature, loss of breath, or a tickle at the back of their throat. Yet, the impact of Covid-19 on mental health is also proving deadly, particularly in Africa where health services were facing a financial struggle long before there was a viral pandemic.

The World Health Organization in 2020 reported that 15 African countries are among the top 30 in the world for suicide per 100,000 people. Mental health is a silent problem when it comes to the continent.

While awareness of such issues may be on the rise globally, cultural and traditional practices in Africa have prevented conditions such as depression and anxiety receiving the attention they deserve, according to Miyoba Muloongo, a licensed counselor working with Zambia's Ministry of Health.

"People relate mental health to witchcraft or superstition because there is less awareness about what the illness really is," Muloongo says. "There is a stigma related to people who have mental health issues. And sometimes people have mental health issues, but they are not aware; or they may be aware, but are not willing to come forth because of the stigma attached to it."

Even when those dealing with mental health issues do choose to voice their burden, the disclosure is not always met with encouragement. "I would say the biggest issue is ignorance," states Kenyan business developer, Andrew Njoroge. "In Africa, people say, 'How can you be sad? Be happy. Smile!' That doesn't solve the issue. You cannot force someone to be happy."

Njoroge believes that both community members and policy-makers need to get involved to combat the ignorance.

"There needs to be a hybrid solution whereby it's top down and bottom up and they meet in the middle," he says, while suggesting that the community takes a hands-on approach and the government


provides funding and adapts legislature. "Government needs to work on its incentives and community programs, whereas community workers themselves must rally up. You need people on the ground engaging to see who needs help and who is battling mental health. There needs to be a two-pronged approach."

Community initiatives seem to be the most effective way to assist those afflicted with mental illness, especially in poverty-stricken areas. "We have foundations which are offering appropriate therapy or psychotherapy to people who might be in need but cannot afford to go the private way," Muloongo says. Volunteers have been trained to listen to adolescents who may not have

ventured to clinics but are now able to share their concerns free of charge, while wellness gatherings have been established for men to normalize discussing issues that they would not have spoken about previously. The African concept of an extended family dynamic, where everyone is seen as a relative, is one of the age-old ideologies that is also being adopted to tackle mental health.

"The issue is culture-specific interventions which need to be addressed from the community level, because that's where it all

starts from," believes Muloongo. "That's where we have the coping mechanisms which we have always used. We would sit around the fire and be told stories on how to cope in general from our grandparents. These methods can still work even this time around."

Njoroge admits to having anxiety himself and concurs that sharing one's experience with mental health is the correct way to approach the matter, using the renowned adage 'a problem shared is a problem halved'. "What I see is more and more people finally speaking out in this day and age of social media and I feel like in the next five years, there will be more and more people speaking up about their problems," he says. "I'm speaking my truth so that someone else hears it and it inspires someone else to do so." 

The World Health Organization reports that 15 African countries are among the top 30 in the world for suicide per 100,000 people.

Human Assets Are Instrumental In Protecting Your Virtual And Physical Assets

BY CANNINAH MAPENA, MANAGING DIRECTOR,
ROCKWELL AUTOMATION AFRICA



While digital transformation and the move to the Connected Enterprise offer brilliant benefits to organisations – improved visualisation, better and faster data acquisition and processing, remote support, and informed decision-making – there is industry-wide concern that the “smart” enterprise is increasingly vulnerable. More connected technology may mean more opportunities for cyber-attack. Add to the mix remote work, where employees are potentially working on their home or personal computers with insufficient anti-virus software, and the concern increases.

Bringing this into a manufacturing, process or mining environment, the threats presented by cyber-attacks go beyond malware, denial of service or ransomware and towards debilitating bugs and downtime. In a process operations context, risks include costly production stoppages and the potential for human harm. One harrowing example was reported by the New York Times in 2018, where a petrochemical plant in Saudi Arabia was hit by a new kind of cyber-assault that was not designed to simply destroy data or shut down the plant. Investigators believe it was meant to sabotage the firm’s operations and trigger an explosion. Luckily, the attack was prevented by an error in the attacker’s coding.

While this is a rather drastic example, the message is clear: the risks are very real. So how can we go about pro-

tecting our Connected Enterprise?

The obvious option is to have trusted, high-quality, plant-wide industrial cybersecurity. However, there is another element to consider when protecting your virtual and physical assets: your human assets. While many cybersecurity firms classify the “human aspect of cybersecurity” as a weakness or security threat due to the subjectivity of human behaviour, I am not a fan of this definition. It suggests that your own people are working against you, or don’t have company success in mind.

While it’s not impossible that deliberately malicious actors may exist within a company, logic would argue that an organisation’s own people surely prevent more attacks than they cause. Think about it: whenever someone ignores a phishing email, they keep a network secure. When your colleague locks their computer screen before taking their lunch break, they prevent potential unauthorised access. When a staff member closes a website following a security warning, they are keeping your network secure.

At Rockwell Automation, we believe that your people can be your biggest defence. Humans have a unique ability to actively prevent attacks – it might just take some training and awareness. While digital skills are not particularly abundant in South Africa, in many cases this can be easily rectified with some basic in-house training and perhaps annual cybersecurity workshops. This will go a long way in empowering your team to protect your company’s assets. It is worth investing

some resources in upskilling and creating awareness in your team, as it will lead to improved business continuity and more resilient technological infrastructure, ensuring you maintain your company’s cutting edge.

Here are my five top tips when it comes to training your staff:

1. Ensure your training initiatives are engaging; blunt lectures aren’t memorable and won’t stick.
2. Use practical examples to reinforce best practice.
3. Hold regular refresher courses that explain new trends in cyber-attacks.
4. Implement an incident-response policy so that staff are never in doubt about what to do in an attack scenario.
5. Be the kind of manager your staff can approach if they have made a mistake and exposed your business to risk.

As connected smart devices are introduced into the plant floor, having a comprehensive cybersecurity strategy that protects your operational technology and information technology is critical now more than ever before – and people are key in this strategy. To be successful in your organisation’s journey to a Connected Enterprise, remember that your people are integral in this journey. Failing to consider their importance in keeping your environment secure and operational may see your company name in the next cyber-attack news headline.

AFRICA'S

RICHEST

2021

BY KERRY A. DOLAN

ALTOGETHER, THE 18 BILLIONAIRES FROM AFRICA ARE WORTH \$73.8 BILLION, SLIGHTLY MORE THAN THE \$73.4 BILLION AGGREGATE WORTH OF THE 20 BILLIONAIRES ON LAST YEAR'S LIST OF AFRICA'S RICHEST PEOPLE. AND NO WOMEN FEATURE ON THE LIST THIS YEAR.



TURNS OUT THAT in Africa – as elsewhere in the world – it doesn't hurt to be a billionaire during a global pandemic. As a group, the

continent's 18 billionaires are on average worth \$4.1 billion, 12% more than a year ago, partially driven by Nigeria's surging stock market.

For the tenth year in a row, Aliko Dangote of Nigeria is the continent's richest person, worth \$12.1 billion, up by \$2 billion from last year's list thanks to a roughly 30% rise in the share price of Dangote Cement, by far his most valuable asset.

The biggest gainer this year is another Nigerian cement tycoon, Abdulsamad Rabiou. Remarkably, shares of his BUA Cement PLC, which listed on the Nigeria Stock Exchange in January

For the tenth year in a row, Aliko Dangote of Nigeria is the continent's richest person, worth \$12.1 billion.

2020, have doubled in value in the past year. That pushed Rabiou's fortune up by an extraordinary 77%, to \$5.5 billion. One thing to note: Rabiou and his son together own about 97% of the company, giving the company a tiny public float. The Nigerian Stock Exchange requires that either 20% or more of a company's shares to be floated to the public, or that the floated shares are worth at least 20 billion naira – about \$50 million. A spokesman for the Nigerian Stock Exchange told *Forbes* that BUA Cement meets the second requirement. (*Forbes* discounts the value of stakes when the public float of a

company is less than 5%.)

While some got richer by the billions, two dropped below the \$1 billion mark.

In fact, the only two women billionaires from Africa have both fallen off the list. *Forbes* calculates that the fortune of Folorunsho Alakija of Nigeria, who owns an oil exploration company, dropped below \$1 billion due to lower oil prices.

And Isabel dos Santos, who since 2013 has been the richest woman in Africa, was knocked from her perch by a series of court decisions freezing her assets in both Angola and Portugal.

In January 2020, the attorney general of Angola charged Dos Santos with embezzlement and money laundering. The Angolan court claimed that actions taken by Dos Santos, her husband Sindika

Dokolo (who died in October 2020, reportedly in a scuba diving accident) and one other associate caused the Angolan government losses of at least \$1.14

billion. *Forbes* now values Dos Santos' frozen assets at zero. A spokesperson for Isabel dos Santos did not respond to a request for comment.

Altogether, the 18 billionaires from Africa hail from seven different countries.

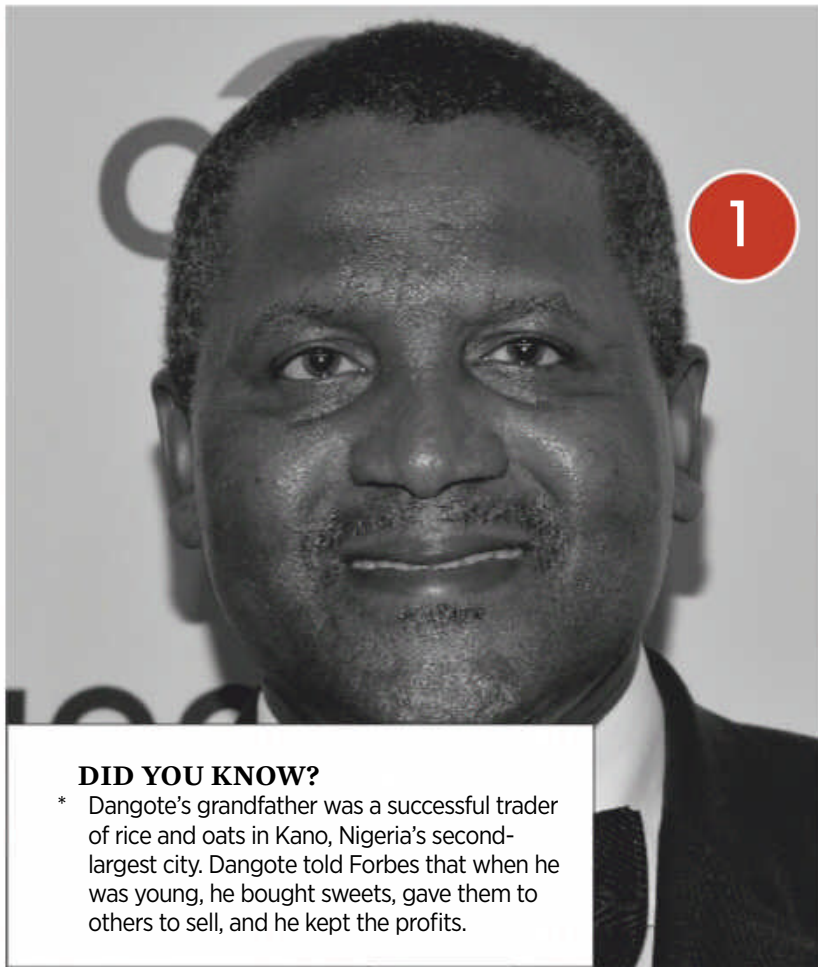
South Africa and Egypt each have five billionaires, followed by Nigeria with three and Morocco with two. Altogether, they are worth \$73.8 billion, slightly more than the \$73.4 billion aggregate worth of the 20 billionaires on last year's list of Africa's richest people. 



METHODOLOGY

Our list tracks the wealth of African billionaires who reside in Africa or have their primary businesses there, thus excluding Sudanese-born billionaire Mo Ibrahim, who is a U.K. citizen, and billionaire London resident Mohamed Al-Fayed, an Egyptian citizen. (Strive Masiyiwa, a citizen of Zimbabwe and a London resident, appears on the list due to his telecom holdings in Africa.) We calculated net worths using stock prices and currency exchange rates from the close of business on Friday, January 8, 2021.

To value privately held businesses, we take estimates of revenues or profits with prevailing price-to-sale or price-to-earnings ratios for similar public companies. Some list members grow richer or poorer within weeks — or days — of our measurement date.



DID YOU KNOW?

* Dangote's grandfather was a successful trader of rice and oats in Kano, Nigeria's second-largest city. Dangote told Forbes that when he was young, he bought sweets, gave them to others to sell, and he kept the profits.

ALIKO DANGOTE

Net worth: \$12.1 billion

Rank in 2020: 1

Net worth in 2020: \$10.1 billion

Self-made

Origin of wealth: Cement, sugar

Industry: Manufacturing

Age: 63

Country: Nigeria

Residence: Lagos

Education: Al-Azhar University, Bachelor of Arts/Science

Aliko Dangote, Africa's richest person, founded and chairs Dangote Cement, the continent's largest cement producer. He owns 85% of publicly-traded Dangote Cement through a holding company. Dangote Cement produces 45.6 million metric tons annually and has operations in 10 countries across Africa. Dangote also owns stakes in publicly-traded salt and sugar manufacturing companies. Dangote Refinery has been under construction since 2016 and is expected to be one of the world's largest oil refineries once complete.

NASSEF SAWIRIS

Net worth: \$8.5 billion

Rank in 2020: 2

Net worth in 2020: \$8 billion

Origin of wealth: Construction, chemicals

Industry: Construction and engineering

Age: 59

Country: Egypt

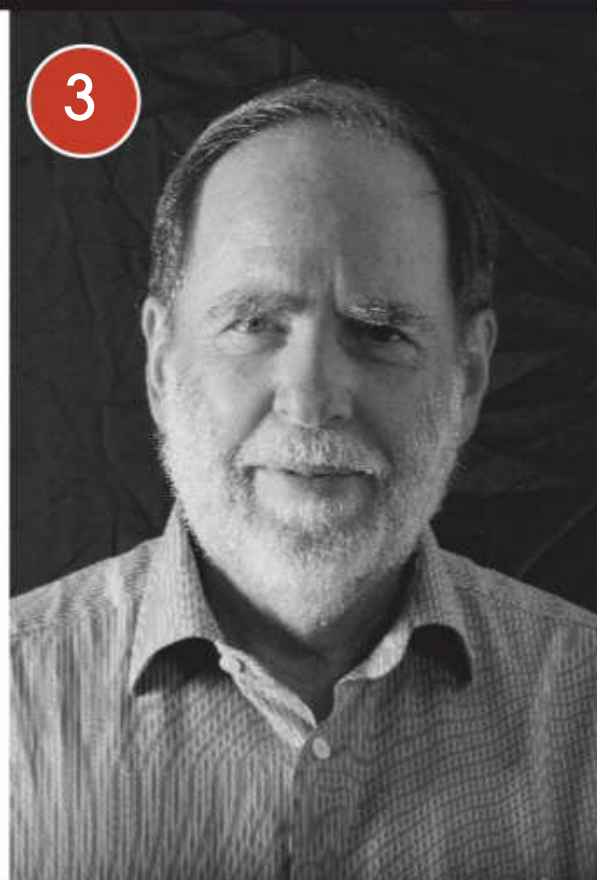
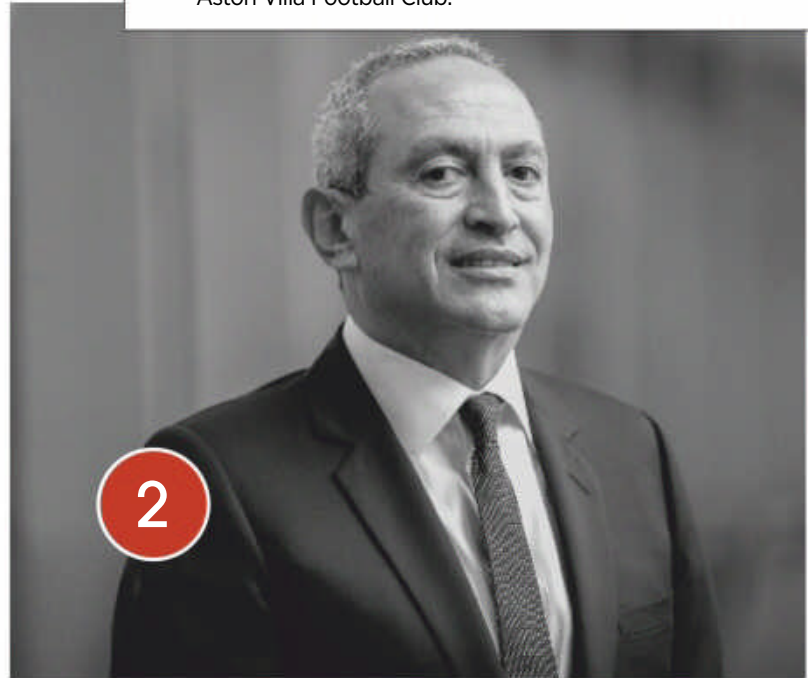
Residence: Cairo

Education: University of Chicago

Nassef Sawiris is a scion of Egypt's wealthiest family. His brother Naguib is also a billionaire. Sawiris split Orascom Construction Industries into two entities in 2015: OCI and Orascom Construction. He runs OCI, one of the world's largest nitrogen fertilizer producers, with plants in Texas and Iowa; it trades on the Euronext Amsterdam exchange. Orascom Construction, an engineering and building firm, trades on the Cairo exchange and Nasdaq Dubai. His holdings include stakes in cement giant Lafarge Holcim and Adidas; he sits on the supervisory board of Adidas.

DID YOU KNOW?

* A University of Chicago graduate, he donated \$24.1 million to the school in 2019 to aid Egyptian students and fund an executive education program. Nassef Sawiris teamed up with Fortress Investment Group's Wes Edens to purchase Aston Villa Football Club.



NICKY OPPENHEIMER & FAMILY

Net worth: \$8 billion

Rank in 2020: 3

Net worth in 2020: \$7.7 billion

Origin of wealth: Diamonds

Industry: Metals and mining

Age: 75

Country: South Africa

Residence: Johannesburg

Education: Oxford University Christ Church, Master of Arts/Science

Oppenheimer, heir to his family's fortune, sold his 40% stake in diamond firm De Beers to mining group Anglo American for \$5.1 billion in cash in 2012. He was the third generation of his family to run De Beers, and took the company private in 2001. For 85 years until 2012, the Oppenheimer family occupied a controlling spot in the world's diamond trade. In

2014, Oppenheimer started Fireblade Aviation in Johannesburg, which operates chartered flights with its fleet of three planes and two helicopters. He owns at least 720 square miles of conservation land across South Africa, Botswana and Zimbabwe.

DID YOU KNOW?

* Oppenheimer owns Tswalu Kalahari Reserve, the largest private game reserve in South Africa. Oppenheimer is a sports fan and plays squash, golf and cricket. Notepads in his office read: "Things I must do before cricket."

4

JOHANN RUPERT & FAMILY

Net worth: \$7.2 billion

Rank in 2020: 5

Net worth in 2020: \$6.5 billion

Origin of wealth: Luxury goods

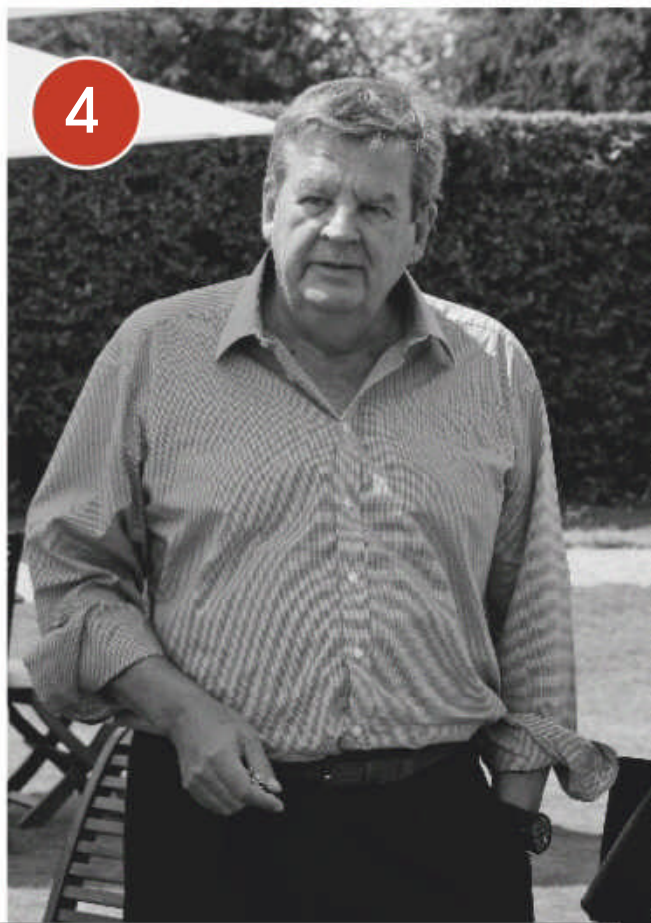
Industry: Fashion and retail

Age: 70

Country: South Africa

Residence: Cape Town

Johann Rupert is chairman of Swiss luxury goods firm Compagnie Financiere Richemont. The company is best known for the brands Cartier and Montblanc. It was formed in 1998 through a spinoff of assets owned by Rembrandt Group Limited (now Remgro Limited), which his father Anton formed in the 1940s. He owns a 7% stake in diversified investment firm Remgro, which he chairs, as well as 25% of Reinet, an investment holding co. based in Luxembourg. In recent years, Rupert has been a vocal opponent of plans to allow fracking in the Karoo, a region of South Africa where he owns land.



DID YOU KNOW?

- * He also owns part of the Saracens English rugby team and Anthonij Rupert Wines, named after his deceased brother. Rupert says his biggest regret was not buying half of Gucci when he had the opportunity to do so for just \$175 million.

5



MIKE ADENUGA

Net worth: \$6.3 billion

Rank in 2020: 3

Net worth in 2020: \$7.7 billion

Self-made

Origin of wealth: Telecom, oil

Industry: Diversified

Age: 67

Country: Nigeria

Residence: Lagos

Education: Pace University, Master of Business Administration

Adenuga, Nigeria's second richest man, built his fortune in telecom and oil production. His mobile phone network, Globacom, is the third largest operator in Nigeria, with 55 million subscribers. His oil exploration outfit, Conoil Producing, operates six oil blocks in the Niger Delta. Adenuga got an MBA at Pace University in New York, supporting himself as a student by working as a taxi driver. He made his first million at age 26 selling lace and distributing soft drinks.

6



ABDULSAMAD RABIU

Net worth: \$5.5 billion

Rank in 2020: 8

Net worth in 2020: \$3.1 billion

Origin of wealth: Cement, sugar

Industry: Diversified

Age: 60

Country: Nigeria

Residence: Lagos

Abdulsamad Rabiú is the founder of BUA Group, a Nigerian conglomerate active in cement production, sugar refining and real estate. In early January 2020, Rabiú merged his privately-owned Obu Cement company with listed firm Cement Co. of Northern Nigeria, which he controlled. The combined firm, called BUA Cement Plc, trades on the Nigerian Stock Exchange; Rabiú owns 98.5% of it. Rabiú, the son of a businessman, inherited land from his father. He set up his own business in 1988 importing iron, steel and chemicals.



“
We [Algerians] have great potential; we can make up for lost time.
—

ISSAD REBRAB & FAMILY

Net worth: \$4.8 billion
Rank in 2020: 6
Net worth in 2020: \$4.4 billion
Self-made
Origin of wealth: Food
Age: 77
Country: Algeria
Residence: Algiers

Issad Rebrab is the founder and CEO of Cevital, Algeria's biggest privately-held company. Cevital owns one of the largest sugar refineries in the world, with the capacity to produce 2 million tons a year. Cevital owns European companies, including French home appliances maker Groupe Brandt, an Italian steel mill and a German water purification company. After serving eight months in jail on charges of corruption, Rebrab was released on January 1, 2020. He denies any wrongdoing.

DID YOU KNOW?

* Rebrab is the son of militants who fought for Algeria's independence from France. Cevital helped finance a biopic on Algerian resistance hero Larbi Ben M'hidi, who was executed by the French in 1957.



NAGUIB SAWIRIS

Net worth: \$3.2 billion
Rank in 2020: 9
Net worth in 2020: \$3 billion
Origin of wealth: Telecom
Industry: Telecom
Age: 66
Country: Egypt
Residence: Cairo
Education: Swiss Federal Polytechnical Institute, Master of Science; Swiss Federal Polytechnical Institute, Bachelor of Arts/Science

Naguib Sawiris is a scion of Egypt's wealthiest family. His brother Nassef is also a billionaire. He built a fortune in telecom, selling Orascom Telecom in 2011 to Russian telecom firm VimpelCom (now Veon) in a multibillion-dollar transaction. He is chairman of Orascom TMT Investments, which has stakes in an asset manager in Egypt and Italian internet company Italiaonline, among others. Through his Media Globe Holdings, Sawiris owns 88% of pan-European pay TV and video news network Euronews. He also developed a luxury resort called Silversands on the Caribbean island of Grenada.

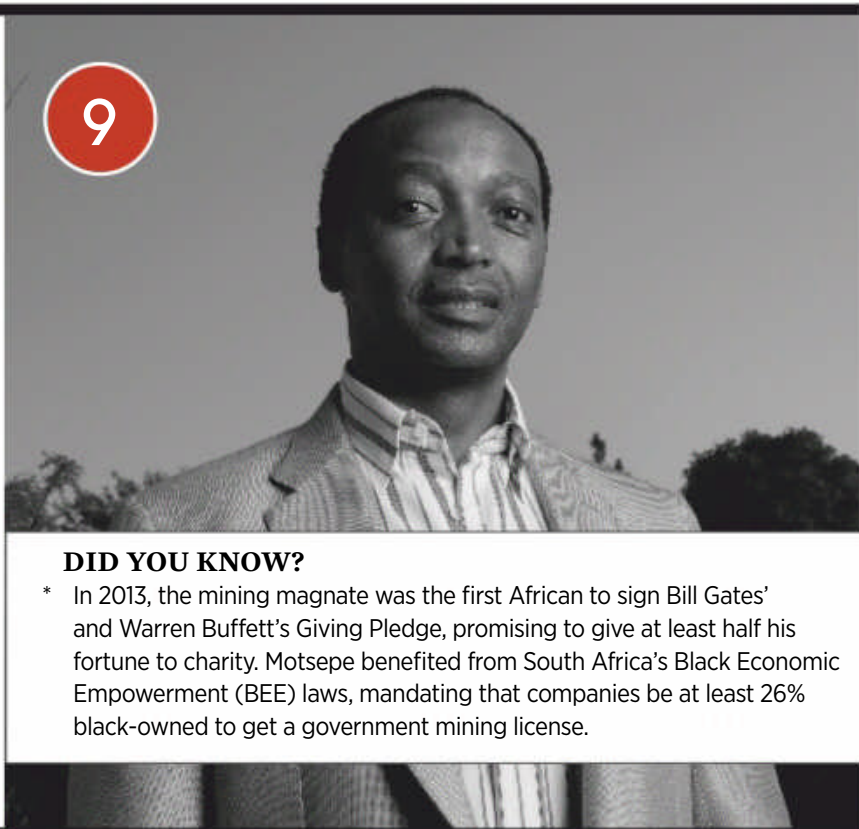
DID YOU KNOW?

* Sawiris helped found The Free Egyptians, a liberal political party, at the onset of Egypt's uprisings in 2011. In 2015, he offered to buy a Greek or Italian island to house Syrian refugees, but Greece and Italy turned him down.

PATRICE MOTSEPE

Net worth: \$3 billion
Rank in 2020: 10
Net worth in 2020: \$2.6 billion
Self-made
Origin of wealth: Mining
Industry: Metals and mining
Age: 58
Country: South Africa
Residence: Johannesburg

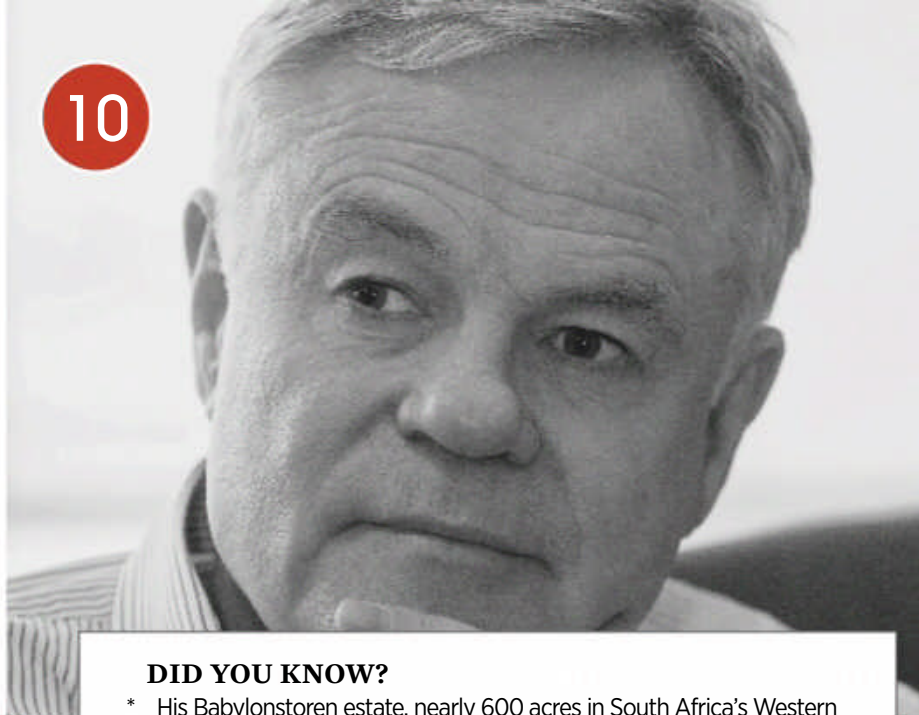
Patrice Motsepe, the founder and chairman of African Rainbow Minerals, became a billionaire in 2008 – the first black African on the *Forbes* list. In 2016, he launched a new private equity firm, African Rainbow Capital, focused on investing in Africa. Motsepe also has a stake in Sanlam, a listed financial services firm, and is the president and owner of the Mamelodi Sundowns Football Club. In 1994, he became the first black partner at law firm Bowman Gilfillan in Johannesburg, and then started a contracting business doing mine scut work. In 1997, he bought low-producing gold mine shafts and later turned them profitable.



DID YOU KNOW?

* In 2013, the mining magnate was the first African to sign Bill Gates' and Warren Buffett's Giving Pledge, promising to give at least half his fortune to charity. Motsepe benefited from South Africa's Black Economic Empowerment (BEE) laws, mandating that companies be at least 26% black-owned to get a government mining license.

10

**DID YOU KNOW?**

- * His Babylonstoren estate, nearly 600 acres in South Africa's Western Cape region, features architecture dating back to 1690, a farm, orchard and vineyard and more. Over the summer of 2015, he sold more than 70% of his Naspers shares.

KOOS BEKKER**Net worth:** \$2.8 billion**Rank in 2020:** 11**Net worth in 2020:** \$2.5 billion**Self-made****Origin of wealth:** Media, investments**Industry:** Media and entertainment**Age:** 68**Country:** South Africa**Residence:** Cape Town**Education:** Columbia Business School, Master of Business Administration; University of the Witwatersrand, LLB

Koos Bekker is revered for transforming South African newspaper publisher Naspers into an ecommerce investor and cable TV powerhouse. He led Naspers to invest in Chinese Internet and media firm Tencent in 2001 -- by far the most profitable of the bets he made on companies elsewhere. In 2019, Naspers put some assets into two publicly-traded companies, entertainment firm MultiChoice Group and Prosus, which contains the Tencent stake. It sold a 2% stake in Tencent in March 2018, its first time reducing its holding, but stated at the time it would not sell again for three years. Bekker, who retired as the CEO of Naspers in March 2014, returned as chairman in April 2015.

MOHAMED MANSOUR**Net worth:** \$2.5 billion**Rank in 2020:** 7**Net worth in 2020:** \$3.3 billion**Self-made****Origin of wealth:** Diversified**Industry:** Diversified**Age:** 72**Country:** Egypt**Residence:** Cairo**Education:** Auburn University, Master of Business Administration

Mohamed Mansour oversees family conglomerate Mansour Group, which was founded by his father Loutfy (D.1976) in 1952 and has 60,000 employees. Mansour established General Motors dealerships in Egypt in 1975, later becoming one of GM's biggest distributors worldwide. Mansour Group also has exclusive distribution rights for Caterpillar equipment in Egypt and seven other African countries. He served as Egypt's Minister of Transportation from 2006 to 2009 under the Hosni Mubarak regime. His brothers Yasseen and Youssef, who share ownership in the family group, are also billionaires; his son Loutfy heads private equity arm Man Capital.



11



Empowering best in class management teams is the only way to transform a local player into a diversified conglomerate with multinational exposure.

AZIZ AKHANNOUCH & FAMILY**Net worth:** \$2 billion**Rank in 2020:** 15**Net worth in 2020:** \$1.7 billion**Origin of wealth:** Petroleum, diversified**Age:** 60**Country:** Morocco**Residence:** Casablanca**Education:** Universite de Sherbrooke, Master of Business Administration

Aziz Akhannouch is the majority owner of Akwa Group, a multibillion-dollar conglomerate founded by his father and a partner, Ahmed Wakrim, in 1932. It has interests in petroleum, gas and chemicals through publicly-traded Afriquia Gaz and Maghreb Oxygene. Akhannouch is Morocco's Minister of Agriculture and Fisheries and the president of a royalist political party.

12

**DID YOU KNOW?**

- * His wife Salwa Idrissi runs her own company, which has franchises for Gap, Gucci and Ralph Lauren in Morocco.

13



MOHAMMED DEWJI

Net worth: \$1.6 billion
Rank in 2020: 16
Net worth in 2020: \$1.6 billion
Origin of wealth: Diversified
Industry: Diversified
Age: 45
Country: Tanzania
Residence: Dar es Salaam

Mohammed Dewji is the CEO of MeTL, a Tanzanian conglomerate founded by his father in the 1970s. MeTL is active in textile manufacturing, flour milling, beverages and edible oils in eastern, southern and central Africa. MeTL operates in at least six African countries and has ambitions to expand to several more. Dewji, Tanzania's only billionaire, signed the Giving Pledge in 2016, promising to donate at least half his fortune to philanthropic causes. Dewji was reportedly kidnapped at gunpoint in Dar es Salaam, Tanzania, in October 2018 and released after nine days.

DID YOU KNOW?

- * Dewji retired from Tanzania's parliament in early 2015 after completing two terms. Dewji, who is known as Mo (short for Mohammed), launched Mo Cola several years ago to compete with Coca-Cola.

YOUSSEF MANSOUR

Net worth: \$1.5 billion
Rank in 2020: 14
Net worth in 2020: \$1.9 billion
Self-made
Origin of wealth: Diversified
Industry: Diversified
Age: 75
Country: Egypt
Residence: Cairo
Education: Auburn University, Master of Business Administration; North Carolina State University, Bachelor of Science in Engineering

Youssef Mansour is chairman of family-owned conglomerate Mansour Group, which was founded by his father Loutfy (d.1976) in 1952. Mansour Group is the exclusive distributor of GM vehicles and Caterpillar equipment in Egypt and several other countries. He oversees the consumer goods division, which includes supermarket chain Metro, and sole distribution rights for L'Oreal in Egypt. Younger brothers Mohamed and Yasseen are also billionaires and part owners of Mansour Group.

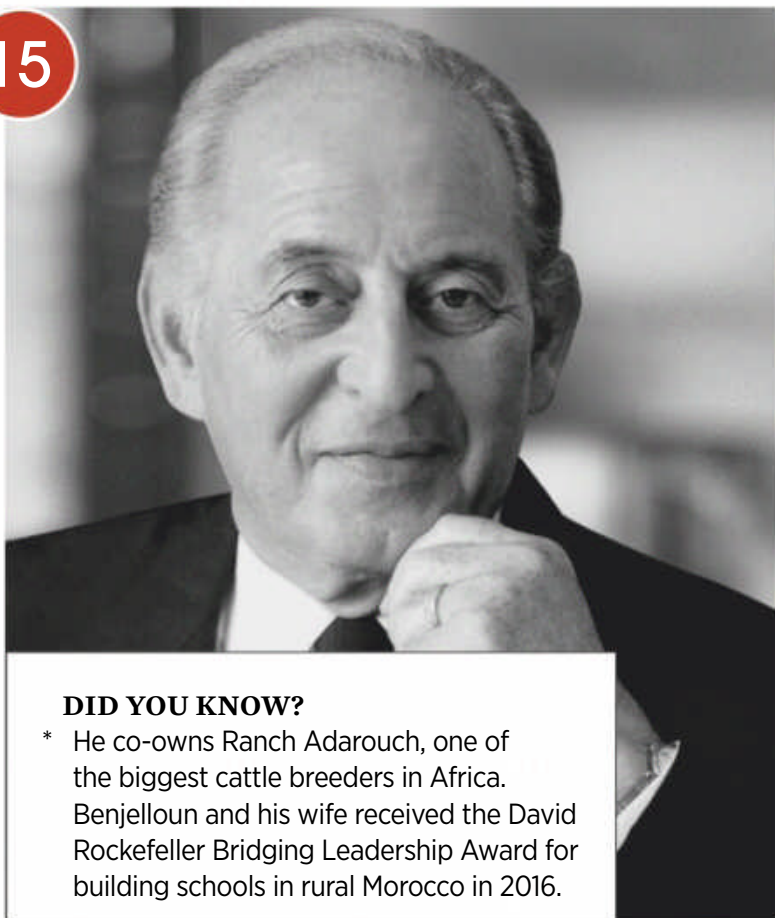


14

DID YOU KNOW?

- * Former Egypt President Gamal Abdel Nasser nationalized his father's original cotton trading business. Mansour is a founding member of the American Egyptian Chamber of Commerce.

15



DID YOU KNOW?

- * He co-owns Ranch Adarouch, one of the biggest cattle breeders in Africa. Benjelloun and his wife received the David Rockefeller Bridging Leadership Award for building schools in rural Morocco in 2016.

OTHMAN BENJELLOUN & FAMILY

Net worth: \$1.3 billion
Rank in 2020: 17
Net worth in 2020: \$1.4 billion
Origin of wealth: Banking, insurance
Industry: Finance and investments
Age: 88
Country: Morocco
Residence: Casablanca
Education: Ecole Polytechnique de Lausanne, Diploma

Othman Benjelloun is CEO of BMCE Bank of Africa, which has a presence in more than 20 African countries. His father was a shareholder in RMA, a Moroccan insurance company; Benjelloun built it into a leading insurer. Through his holding company FinanceCom, he has a stake in the Moroccan arm of French telecom firm Orange. He inaugurated in 2014 a \$500 million plan to build the 55-story Mohammed VI Tower in Rabat. It will be one of the tallest buildings in Africa. FinanceCom is part of a project to develop a multibillion-dollar tech city in Tangiers that is expected to host 200 Chinese companies.

MICHEL LE ROUX

Net worth: \$1.2 billion

Rank in 2020: 18

Net worth in 2020: \$1.3 billion

Self-made

Origin of wealth: Banking

Industry: Finance and investments

Age: 71

Country: South Africa

Residence: Stellenbosch

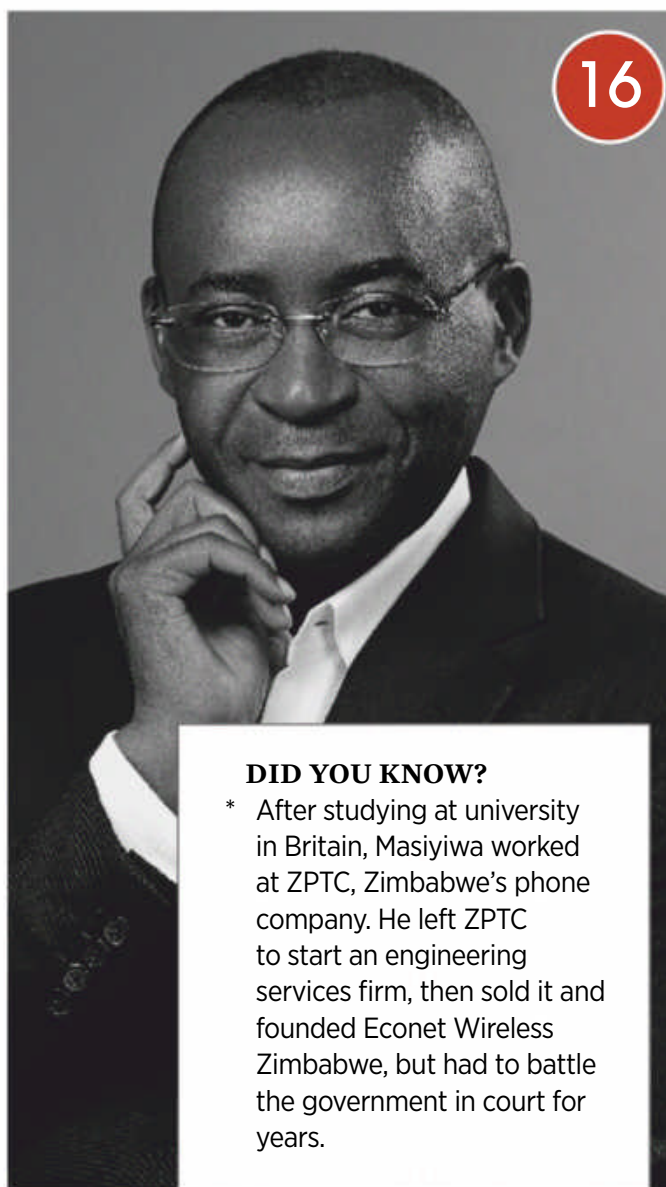
Michiel Le Roux of South Africa founded Capitec Bank in 2001 and owns about an 11% stake. The bank, which trades on the Johannesburg Stock Exchange, targets South Africa's emerging middle class. He served as chairman of the board of Capitec from 2007 to 2016 and has continued on as a board member. Le Roux previously ran Boland Bank, a small regional bank in Cape Town's hinterland.



16

DID YOU KNOW?

- * The bank has more than 800 branches and over 13,000 employees. Fellow South African Jannie Mouton's PSG Group owns a 30% stake in Capitec Bank.



16

STRIVE MASIYIWA

Net worth: \$1.2 billion

Rank in 2020: 19

Net worth in 2020: \$1.1 billion

Self-made

Origin of wealth: Telecom

Industry: Telecom

Age: 59

Country: Zimbabwe

Residence: London

Education: University of Wales, Bachelor of Engineering

DID YOU KNOW?

- * After studying at university in Britain, Masiyiwa worked at ZPTC, Zimbabwe's phone company. He left ZPTC to start an engineering services firm, then sold it and founded Econet Wireless Zimbabwe, but had to battle the government in court for years.

Strive Masiyiwa overcame protracted government opposition to launch mobile phone network Econet Wireless Zimbabwe in his country of birth in 1998. He owns just over 50% of the publicly-traded Econet Wireless Zimbabwe, which is one part of his larger Econet Group. Masiyiwa also owns just over half of private company Liquid Telecom, which provides fiber optic and satellite services to telecom firms across Africa. His other assets include stakes in mobile phone networks in Burundi and Lesotho, and investments in fintech and power distribution firms in Africa. He and his wife Tsitsi founded the Higherlife Foundation, which supports orphaned and poor children in Zimbabwe, South Africa, Burundi and Lesotho.

YASSEEN MANSOUR

Net worth: \$1.1 billion

Rank in 2020: 12

Net worth in 2020: \$2.3 billion

Self-made

Origin of wealth: Diversified

Industry: Diversified

Age: 59

Country: Egypt

Residence: Cairo

Education: George Washington University, Bachelor of Arts/Science



18

Yasseen Mansour is a shareholder in family-owned conglomerate Mansour Group, which was founded by his father Loutfy (d.1976) in 1952. Mansour Group is the exclusive distributor of GM vehicles and Caterpillar equipment in Egypt and several other countries. His brothers Mohamed and Youssef are also billionaires and part owners of Mansour Group. He's chairman of Palm Hills Developments, one of Egypt's biggest real estate developers.

DID YOU KNOW?

- * Mansour Group is the sole franchisee of McDonald's in Egypt, as well as the distributor of Gauloises cigarettes.

Rockets To Riches:

South African-born, billionaire technology and space entrepreneur, Elon Musk, made history at the start of 2021, overtaking Amazon's Jeff Bezos to become the richest man on Earth. While his fortune was made on this planet, his dreams to venture to the final frontier remain. FORBES AFRICA takes a look at his journey to becoming one of the world's most celebrated innovators and one of the wealthiest men alive.

The Rise And Rise Of Elon Musk

BY MARIE SHABAYA

THE MAN WHO FAMOUSLY SAID THAT HE WOULDN'T BE HAPPY UNTIL WE WERE ALL LIVING ON MARS, IS NOW ONE OF THE RICHEST MEN ON EARTH.

WHILE ELON MUSK'S PLANS TO BE BURIED IN A GALAXY FAR, FAR AWAY REMAIN UNCHANGED, HE'S STILL GOT MUCH TO CELEBRATE IN THE HERE AND NOW.

On January 8 this year, at approximately 11.30AM on the American East Coast, Musk, known for founding some of the world's most progressive tech companies, along with his unrelenting space-age ambitions, made yet another historical leap.

His net worth soared by \$12.5 billion, to \$189.7 billion, making him, for a time, the wealthiest person on the planet, according to *Forbes*, who broke the news. For the first time, Amazon founder, Jeff Bezos, who had held the top spot for a record four years, came second with a cumulative net worth of \$185 billion.

However, in a twist of fate, stock in his electric car company, Tesla, fell by 8%, denting his personal wealth by a hefty \$14 billion, overnight. But like the man himself, Musk's wealth wouldn't be down for long.

Days later, with the swift rebound of Tesla shares by 4.7%, he wrestled the top spot from Bezos with an impressive recovery of \$7.8 billion bringing his total net worth to \$183.8 billion against the Amazon founder's, marginal, but impressive, \$182.4 billion.

At the time of going to press, the yo-yo action continued. Tesla's stock volatility returned Bezos to the top spot, making him the world's richest by just \$200 million, with Musk making a close second. The game is set to continue for much of the year, but it won't do much to change the fact that both billionaires are still over \$30 billion richer than their nearest competitor; the third person on the list, French luxury tycoon, Bernard Arnault,

according to *Forbes* estimates.

Musk's dizzying ascent is quite an achievement given that, in 2014, he ranked 47th on the U.S. Rich List, compiled by *Forbes*, with his personal net worth hovering at the \$9.4 billion mark, at contemporary rates.

Notwithstanding his meteoric rise, most studies of Musk begin at SpaceX, his landmark aerospace manufacturing outfit, launched in 2002 with plans to make space travel more affordable and meet its founder's often parodied mandate to catalyze humanity's colonization of Mars.

"I'd like to go to Mars. I suppose it depends on how old I am when I get there... But it's not about me going to Mars. We're developing new technologies to enable a large number of people to go to Mars and be able to develop a self-sustaining city on Mars," he told *Forbes* in 2014.

Inter-planetary ambitions aside, Musk's ideas often overshadow the story of his origins which are rooted in a very down-to-earth Pretoria suburb, a few miles north of Johannesburg, in South Africa. Born in 1971 to a Canadian



“

Elon's aim is to save the planet and he also loves the thought of going to Mars.... I get very excited every step of the way. We all do. Kimbal and Tosca [Elon's siblings] and I go to the main [SpaceX] launches, we can't go to all the launches, as he has launched, how many now... 50 rockets? I'm not sure. I lose track. But we go to the main ones, and we are anxious beforehand and excited afterwards and we are very proud of him and support him with all this. He just feels that we should be inter-planetary, starting with Mars. Mars seems to be the most friendly [planet], and that is what he would like to explore.

– Elon Musk's mother **Maye Musk**, in an interview from Los Angeles with FORBES AFRICA last year about her memoir, *A Woman Makes A Plan*, released by Jonathan Ball Publishers

Musk gestures while introducing the all-electric battery-powered Tesla Cybertruck at the Tesla Design Center



mother and a South African father, it was clear that Musk was unique from the start.

“The kind of things he would come up with as a youngster was always surprising. When he was very small, he would ask me, ‘where is the whole world?’, when he was three or four. It was these sorts of questions that made me realize that he was a little different,” his father, Errol Musk, noted in a 2012 interview with FORBES AFRICA.

Eccentricities aside, the young Musk was equally academically gifted.

“We called Elon ‘The Encyclopedia’ because he had read the *Encyclopaedia Britannica* and *Collier’s Encyclopedia*, and remembered everything. That’s also why we called him ‘Genius Boy’. We could ask him anything. Remember, this was before the internet. I guess now we would call him ‘The Internet,’” his mother, Maye Musk, recalls in her 2019 autobiography, *A Woman Makes a Plan*.

Attending Pretoria Boys High School (PBHS), often considered one of the most prestigious schools in South Africa, a teenage Musk kept to himself but found plenty of company in computers. He taught himself how to program using an old manual and eventually sold a space-themed video game that he wrote called *Blastar*, to a computing magazine in 1984, reportedly for \$500, arguably the earliest of his tech ventures.

“My impression is that Elon kept to himself and was relatively quiet and reserved. I believe he was involved

with the computer club at school, but otherwise was not really visible in mainstream activities,” Gavin Ehlers, head-boy at PBHS in 1988, the same year Musk graduated, told FORBES AFRICA in 2012.

Yet, despite his remarkable talent and comfortable upbringing, Musk’s childhood was blighted with peculiar challenges. As the shortest, smallest, and smartest kid in the class, he was an easy target for bullies, who tormented him until he was 15 years old.

“I was a late bloomer. So I was the youngest and the smallest kid in class for years and years... The gangs at school would hunt me down – literally hunt me down,” Musk told *Rolling Stone* magazine in 2017.

At home, things weren’t easier. His parents divorced in 1980.

The tumult of his early life did much to shape the man that Musk would later become. Even as a youngster, he held strong to his principles. At the time, in apartheid South Africa, a mandatory two-year military service was in force for all white males who had completed their secondary school or tertiary-level education. In his objection, Musk said he didn’t prescribe to what the state was doing to its citizens.

“I don’t have an issue with serving in the military per se, but serving in the South African army suppressing black people just didn’t seem like a really good way to spend time,” he explained in the 2007

“

If somebody else is working 50 hours and you're working a 100, you'll get twice as much done in the course of the year as the other company.

book, *Rocketeers*, by Michael Belfiore.

At 17, Musk relocated to Canada to attend university in 1989. After a number of transfers, he graduated from the University of Pennsylvania, part of the prominent Ivy League in the United States, with a dual degree in Economics and Physics, setting him firmly on the path of a tech entrepreneur. Like all the greats, he dropped out of his PhD program at Stanford, instead establishing his first startup, against the euphoria of the dot-com boom of the nineties. He founded the company, Zip2, with his younger brother, Kimbal – who has been a keen business partner to Musk throughout his entrepreneurial career – in 1995.

“When my brother and I were starting our first company, instead of getting an apartment we rented a small office and slept on the couch. We were so hard-up we had just one computer so the website was up during the day and I was coding at night. Seven days a week... all the time. I briefly had a girlfriend during that period and in order to be with me she had to sleep at the office,” he said with a smile, during a 2014 Commencement Speech at the University of Southern California (USC).

Hard work is a cornerstone of Musk's entrepreneurial ethos. His constant refrain to anyone who inquires on his success is to outwork the competition, where possible, to get that all important edge.

“If somebody else is working 50 hours and you're working a 100, you'll get twice as much done in the course of the year as the other company,” he told the audience at USC.

Clearly, the hard work has paid off for Musk who joined the five-man centi-billionaires club; all with a net worth over \$100 billion, in August 2020.

Members include Facebook's Mark Zuckerberg and veteran tech titan, Bill Gates.

However, it hasn't been an easy ride to the top. In 2018, Tesla was in dire straits, the company was struggling to build a viable product and was hemorrhaging cash almost daily. Musk had already sunk a bulk of his early fortune in the business, some of which came from the \$165 million sale of his stake in PayPal, the online payments pioneer, after his exit as CEO.

Leading the company during that time took a toll. In a very personal interview with *The New York Times*, Musk revealed that he was losing sleep and had spent most of his birthday working on the factory floor, where he was also spending most of his days and nights. The work had taken over to the point of almost missing Kimbal's wedding, where he was the best man. A disheveled Musk admitted that while he regretted the havoc it wreaked on his life, he had no regrets about being so determined to pull Tesla from the brink of collapse.

“The worst is over from a Tesla operational standpoint. But from a personal pain standpoint... the worst is yet to come,” he told *The New York Times*.

Musk's passion is evident in almost everything



“

Elon Musk is an engineer and a leader who dreams big and uses scientific knowledge to achieve those dreams. He is a generalist who is able to work across different domains at the same time, in aerospace, renewable energy, automotive as well as artificial intelligence.

– Dr Tshilidzi Marwala, Vice-Chancellor and Principal of the University of Johannesburg, South Africa



Musk at an awards ceremony

he has done, and in every business he has built. After leaving PayPal, and selling his stake in the company, he used a bulk of the \$165 million fortune to found the companies that would make his name – SpaceX and Tesla. Any seasoned entrepreneur would have considered the move a risky one but Musk was quite adamant about his ambitions and making them a reality.

“I think there was like literally one week where I actually worked 120 hours and just didn’t leave the factory. I didn’t even go outside,” Musk told American television news magazine program, *60 Minutes*, in 2018.

His intense work ethic has not only worked to transform Tesla but has inspired a number of other young entrepreneurs to build the electric car industry, and get rich in the process.


For example, William Li, who founded electric car maker, Nio, in 2014, was 12 times richer in 2020 thanks to his shares in the U.S.-listed carmaker. In fact, he’s now among the world’s 500 richest people, according to the Bloomberg Billionaires

Index. Chinese entrepreneur, He Xiaopeng, chairman of XPeng Motors, has also seen his wealth jump more than 600%. Overall, fortunes of the handful of people tracked by the Bloomberg index in the electric vehicle industry have gone up by over \$140 billion including Musk’s \$111 billion surge.

However, far removed from his status on the global billionaire league tables, which have come to form the foundation of his popularity, Musk maintains his very own niche but loyal following, all devoted to his Twitter feed; his preferred mode of communication. Muskians, as they are known, see him as an eclectic superhero figure of the modern age where he is at once a conscientious technology entrepreneur and demi-god.

However, in 2020, following statements made on the impact the Trump administration’s Covid-19 policy responses had on his business, Musk received heavy backlash from the mainstream and even managed to alienate some of his loyal fans. But all is forgotten now that the South African-born entrepreneur is among the world’s richest men.

While his wealth may be a relentless conversation starter, globally, it’s hard to ignore Musk’s legacy in the business arena. The journey from a quiet, intelligent and passionate young entrepreneur to an influential manufacturing magnate has been driven not just by a belief in hard work but by an ability to settle for dreams beyond the stars.

For generations to come, his place in time will always be confirmed by his commitment to not only conjure up ‘moonshot’ ideas but to actively pursue them; to Mars and back. 



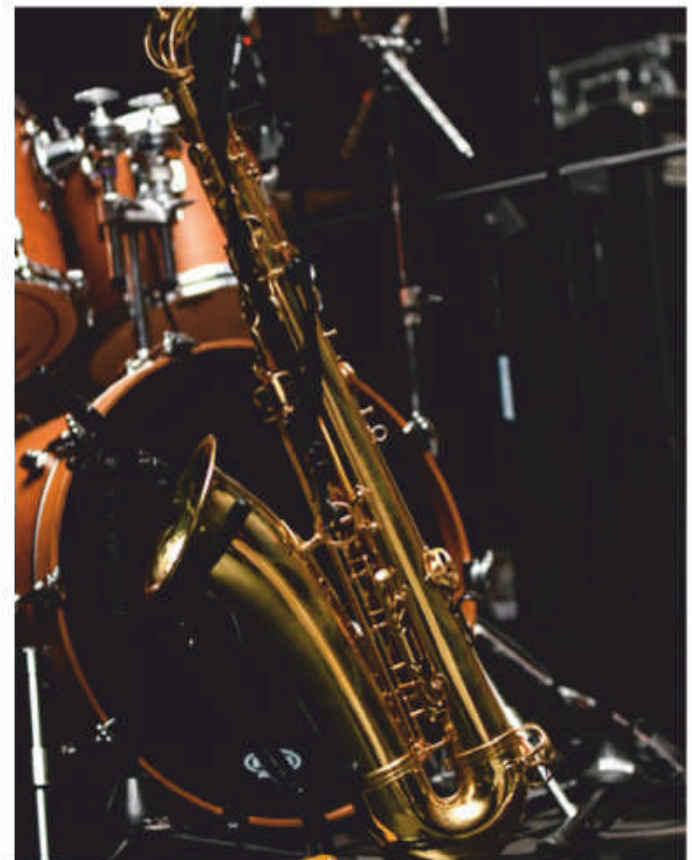
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Given that as a South African, he has managed to conquer the industry he’s in should be an inspiration to us and to Africa, in general. There are many sides to him... But let us draw inspiration from him because he is a product of the public school system in South Africa.

– Fred Khumalo, author and journalist, South Africa



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THE LIST

Women In Science

Africa Reloaded:

The Power Of The Collective In Science And Health

AT A TIME WHEN **SCIENCE** REMAINS THE ONLY **HOPE FOR HUMANITY** AGAINST A VINDICTIVE VIRUS, THE SPOTLIGHT CONTINUES TO BE ON THOSE WORKING TIRELESSLY ON THE **FRONTLINE**. AS THE WORLD OBSERVES INTERNATIONAL WOMEN'S DAY ON MARCH 8, FORBES AFRICA EXAMINES SOME OF THESE INTREPID **WOMEN LEADING THE CHARGE** WITH THEIR SERVICES AND SOLUTIONS, COMBATING DARK NIGHTS AND EVEN DARKER DAYS THROUGH THE COVID-19 PANDEMIC.

BY CHANEL RETIEF AND SIMONE SRIBRATH

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WITHOUT DOUBT, COVID-19 HAS EXACERBATED gender inequalities and deepened the chasm for women, as they continue to be disproportionately affected by the pandemic. These unprecedented times have highlighted raging issues around poverty, gender-based violence and femicide.

But these disruptive times have also brought into sharp focus the pioneering work of women in science, medicine, technology and healthcare. A 2019 World Health Organization (WHO) report, *Delivered by Women, Led by Men*, states that 70% of people working in global health are women, yet only 25% hold senior roles. We believe that they all need to be celebrated.

FORBES AFRICA sat down with some of these resolute women who have been powering through health crises, unwavering, even before the days of Covid-19, and continue to contribute in their own unique way to quell the effects of the pandemic. *The list on the following pages is in no particular order.* 📌

METHODOLOGY

Relevance in 2020

We looked at significant issues that had an impact on science over the last year, particularly related to Covid-19 pandemic. We reviewed women across industries in both the public and private sectors. We cross-checked our nominees by their contributions and the impact they have had in science. We also reviewed professions that tend to be overlooked either for being too female-dominated or for not being known traditionally to employ women. We interviewed a single individual as a representative or subset of these professions across Africa to gauge their experiences. Several women are still doing ground-breaking work in science and technology, and their unsung contributions will continue to be featured on the pages of this magazine in the issues to come. Some of them work silently on the sidelines, trying to better the lives of others or coming up with solutions to save the planet.



Professor Quarraisha Abdool Karim, Virologist

Professor Quarraisha Abdool Karim has been at the forefront of health crises since the beginning of her career.

“My career in science has never taken the usual trajectory. I chose the career I did because I wanted to wake up every morning knowing that I was doing something I loved and knowing that I would be helping people in the process,” explains Abdool Karim.

Her contribution to science has seen awareness going to deserving causes. She began by raising awareness for Beta Thalassemia in the Durban community in KwaZulu-Natal, South Africa. Her screening ensured parents with the genetic mutation were aware of the malformations it could cause in their children.

“Working at a population level showed me that science also had a social justice component to it and this is where I would find my calling,” says Abdool Karim.

Spurred on by this epiphany, Abdool Karim then went on to study epidemiology and this is where she found her passion as a scientist. This year, she has been at the forefront of the Covid-19 pandemic while still ensuring endemic diseases such as HIV are not forgotten. Her efforts were recognized by Christophe and Rodolphe Mérieux Foundation as she received the prestigious 2020 Christophe Mérieux Prize.

Professor Abdool Karim currently serves as chair of the South African National AIDS Council (SANAC) prevention technical task team, Vice President of the African Academy of Science, Southern Africa, and Foreign Associate Member of the Institute of Medicine (IoM) of the National Academies.

“I’ve always been single-minded when it comes to doing something and will do whatever it takes to get it done. This was the attitude I needed to have when it came to my study of HIV in southern Africa,” she adds.

The studies she conducted in the early 1990s pioneered awareness around the vulnerabilities of young women in contracting HIV and AIDS. Abdool Karim recalls how she spoke to vulnerable populations that had never been understood before and picked up on the gender inequities that existed in studying diseases.

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Working at a population level showed me that science also had a social justice component.

“Seeing how much higher the rate of infection was in women than in men of a certain age group shocked me and I knew I had to do more,” explains Abdool Karim.

The organization she co-founded with her husband, Professor Salim Abdool Karim, who’s called ‘South Africa’s Anthony Fauci’, has run several clinical trials that have centered on HIV/AIDS and TB prevention. The most significant, of which she was the principal researcher, centered on the coital application of tenofovir gel.

“It was the first time anything had worked for women and it was a motivation for the studies to come,” Abdool Karim says.

She has been a trailblazer in the HIV field, delved into topics that were not deemed appropriate for women at the time, and continues to be a vocal advocate in the world of science.



Casey Moodley, Surgical Nurse

2020 has highlighted the importance of nursing staff more than ever before. A profession that mainly employs women, nursing and nurses have been at the receiving end of the chaos and devastation brought on by the Covid-19 pandemic. With hospitals overwhelmed even as numbers surged and beds ran out, the nurse-to-patient ratio has been at the highest it has ever been on a global scale.

Across Africa, nurses have selflessly dedicated themselves to Covid wards, making patients on ventilators comfortable or fighting to save the lives of those ebbing away.

Like other frontline workers, nurses too have had to sacrifice time with their families and loved ones. There have also been tearful losses in their own fraternity as the profession has experienced the highest rate of infections and death since the beginning of the pandemic in South Africa.

KwaZulu-Natal has been one of the hardest-hit provinces in South

Africa. From March last year to mid-January 2021, it has seen over 7,000 health workers become infected, a majority of these nursing staff. Surgical nurse Casey Moodley relates to us what it is like working in a Covid-19 ward and the fear she too encountered when she tested positive for the virus.

What influenced your decision to go into nursing?

I've been in the nursing profession for 11 years now. Growing up, if anything was wrong, it would be the nurse in the family who was asked what to do. This is what I wanted to be as I found myself drawn to caring for people and nursing allowed for me to do that while exploring all the possible specializations the medical field had to offer.

What have your experiences over the last year been?

It has been nothing short of a total nightmare with no end in sight so far. When Covid-19 first started, we had no idea it would be this bad and I don't know if it will ever be the same. It has been mentally, emotionally, and physically exhausting and we know that there's no end in sight to feeling this way.

It forced a change in our daily routine and the care we can provide. To reduce our risk of exposure, methods of care have had to become extremely impersonal and right now, I can't picture being able to do my job without

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I would get home, sit in my car, and cry from how exhausted I was.

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my personal protective gear. Added to this is how reliant patients have become on us as we have become the only link they have to their families and their only source of communication.

It has been extremely isolating as well, as I went from having colleagues and being able to go home and spending time with my family to experiencing no human contact for weeks at a time out of fear of infecting my family. I would get home, sit in my car, and cry from how exhausted I was.

What was testing positive like for you?

It was one of the scariest and most stressful experiences. Seeing what happened to patients and what it can do made me fearful of passing it on to my family. I insisted on taking care of myself until I eventually felt better and it wasn't contagious anymore.



**Dr. Sinead Delany-Moretlwe,
Research Director of the Wits
Reproductive Health and HIV Institute**

Passionate about women's rights, particularly HIV/AIDS and sexual and reproductive health, Dr. Sinead Delany-Moretlwe has had recent success too with the work her team did with the *HPTN 084* (HIV Prevention Trials Network) study.

As of 2019, there are over 38 million people across the globe who are HIV-positive; and HIV/AIDS-related illnesses have claimed the lives of over 690,000 in 2019 and seen 1.7 million new infections.

The HIV prevention and treatment network collaborated with the Witwatersrand University Reproductive Health and HIV Institute in South Africa on a method that has proven to be successful in HIV prevention in women. With over 20 years of experience in the field of reproductive health and HIV prevention, it was Delany-Moretlwe and her team who came up with the findings giving women in Africa hope about keeping their HIV status negative.

“As a young doctor, I trained and graduated and my early experiences were sort of at the height of when HIV was becoming widespread,” she explains. “So my clinical experience was having a lot of people who did have HIV in our wards, and we didn't have antiretrovirals. Many people were tested, and there was not much that could be done for them. And I think that kind of solidified my desire to do something around HIV.”

Delany-Moretlwe adds that the notion of being an African woman has given her the confidence to “trust her voice”.

“I remember recognizing that at one point in my career,” she adds. “I kept comparing myself to men and [thinking] I fell short. Because I wanted to have kids and that I had kids and was trying to kind of be a scientist. And then I started to think about the people who are like me... All the women I know are incredibly impressive and capable.”

“

I started to think about the people who are like me... All the women I know are incredibly impressive and capable.

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Dr. Matshidiso Moeti, WHO Regional Director for Africa

At the center of the Covid-19 global pandemic is the World Health Organization (WHO), and representing the WHO's Africa region is Matshidiso Moeti, who has been working in public health for 40 years.

“When I reflect on how I entered this field, it seems strange to remember that public health is a career I rather stumbled into rather than one I’d intentionally sought out from the beginning,” she says.

Born in South Africa, Moeti tells FORBES AFRICA how she was always influenced by her parents who were both medical doctors. Before WHO, her introduction to disease prevention and control was when she worked in a Tuberculosis ward in a district hospital. Later, Moeti found herself managing the HIV/AIDS program in Botswana when the country had the highest HIV prevalence in the world.

“We got through it by convincing decision-makers to adjust policies so that access to treatment could expand, and today, Botswana is one of a few countries in the WHO African region to have achieved the global 90-90-90 targets for HIV control,” Moeti says. “Achievements like these encouraged me to continue this public health career path and work to help people on a large scale.” She tells us more:

What was it like being a woman in the medical field in Botswana?

I think being a female medical professional and essentially a minority in a man’s world helped me learn fast how to be diplomatic, but also encouraged me to speak up and advocate for women and other vulnerable people. When I was the

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In choosing a woman to lead WHO in Africa for the first time, it was apparent that the ministers who elected me were hoping for a new vision and transformative change.

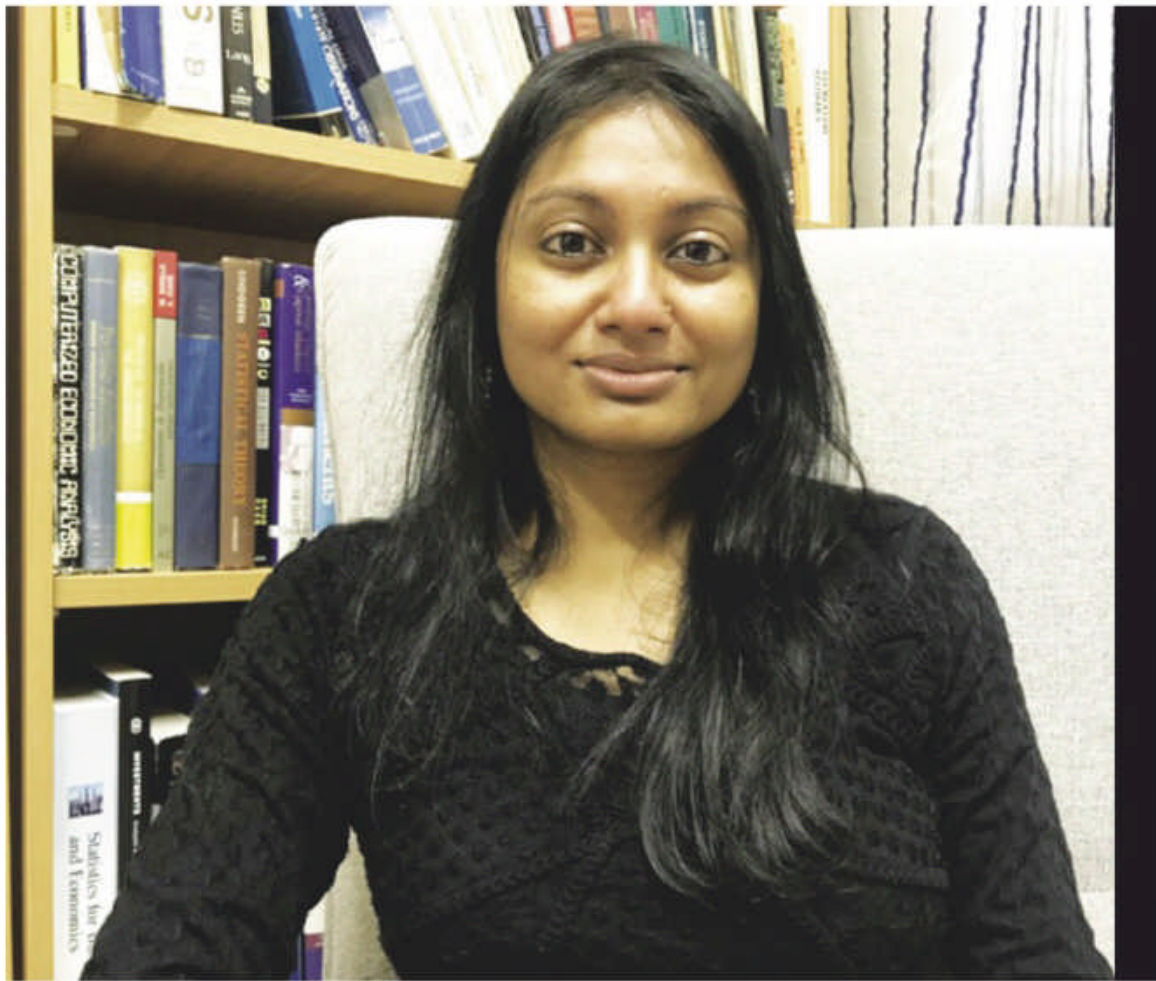
HIV program manager in Botswana, I remember looking outside my window and seeing young couples as they flirted with each other. I could see the young woman looking downward shyly as the young man started touching her hand or face. I would think – just say no! Don’t give in and have sex before you are ready and if you do, insist on using a condom. To ensure young women became more assertive, I took to the radio waves and became notorious for talking about sex and safety. Until then, this was a taboo topic, but I think being a woman, I saw things needed to change and we would only defeat AIDS if we were ready to have an open discussion. I was following in my mother’s infamous footsteps as she used to speak about family planning to communities and in public spaces such as the radio.

What has your experience as WHO regional director been like in the African context?

When I assumed this post six years ago, we were at a critical global moment with the Ebola outbreak and it was clear we couldn’t carry out business as usual. In choosing a woman to lead WHO in Africa for the first time, it was apparent that the ministers who elected me were hoping for a new vision and transformative change. Now, again, we are at a major inflection point with Covid-19. What has remained consistent since the beginning is the focus on results, transparency and accountability at the heart of our decision-making process.

How has the role changed over the past year during the Covid-19 pandemic?

Since Covid-19 is a new disease and its evolution hasn’t always been as expected, we have had to constantly fine-tune our response. I think one initial surprise has been how Africa has done relatively better than other regions. For example, the African region has about 14% of the world’s population, but as of early January, accounts for about 2% of global cumulative cases and 4% of deaths. Only the Western Pacific region has fewer cases and deaths.



Professor Sheetal P. Silal, Data Scientist

Typically, men outnumber women majoring in most STEM (science, tech, engineering and math) disciplines, but 2020 proved that the projections and mathematical modeling that have shaped our understanding and possible outcomes of the Covid-19 virus have been conceptualized by both men and women alike.

Mathematicians and data scientists have been at the heart of the response to the Covid-19 pandemic as they have assisted with understanding underlying trends, mapping possible risk factors, and determining the possible rate of virus spread.

Professor Sheetal P. Silal has a PhD in the mathematical modeling of infectious diseases.

“I have always had a passion for helping people and the African continent has always been plagued by endemic, highly contagious diseases; being in the field that I am has allowed me to study this closely and contribute [in whatever way] I can to combat these diseases,” she says.

She has been part of the South African Covid-19 modeling consortium and of the team that has created a dashboard to map the underlying risks associated with the pandemic. This allows for alerting the public of infection levels and provides an analysis of second waves at a district and provincial level.

Silal, however, is no stranger to mapping out infectious diseases as her research into malaria has taken her across Africa.

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The African continent has always been plagued by endemic, highly contagious diseases.

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She attributes her success to the encouragement she has received from her parents and mentors.

“At home, there was never a time when I was told I couldn’t do something or achieve something just because I was a girl,” says Silal.

Now as a lecturer at the University of Cape Town in South Africa, she attempts to provide the same encouragement to her mentees. “I had a supervisor who was always supportive and now with the students I mentor and supervise, I try to be there for them in the same way and encourage their ideas and ambitions.”

She believes that to attract more women to the sciences, they need to be encouraged to explore it at a primary level and programs need to be created for more awareness on the options available to them.

The motto that she swears by? “It’s impossible until it’s done!”

Dr. Melinda Suchard,
Head of the Centre for Vaccines
and Immunology, National
Institute for Communicable
Diseases (NICD)

“**I** matriculated at the end of 1993 and all I knew after that was that I liked Biology,” laughs Melinda Suchard. Appointed the Head of the Centre for Vaccines and Immunology at the National Institute for Communicable Diseases (NICD) in South Africa in 2013, what ultimately shaped her choice to embark on a journey in medicine was that both her parents had endured medical conditions.

“I think what interested me further in [the field of] immunology was the commonality between the sort of unanswered questions. My

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Doctors have felt worried about bringing the infection home to their families...

mother had a stroke and my father had a heart attack. My mother’s stroke was put down to an autoimmune condition involving autoantibodies. And I think I’ve always been searching for the underlying cause of that,” she explains.

In addition to working at the NICD, Suchard is also a lecturer in the Faculty of Health Sciences at the University of the Witwatersrand (Wits) in Johannesburg.

Working at Wits and the NICD is of equal importance to Suchard, especially at this time.

“For myself, the research and the lecturing are the same aspects because it is part of the academics,” Suchard says. “But I do enjoy teaching. We have developed a master’s course in vaccinology that has been very exciting because



we have seen our second-years helping out and volunteering at the Covid vaccine trial sites and watching vaccines being developed in real-time.”

Suchard admits to underestimating how enormous the pandemic would be when at the end of 2019, Wuhan reported a mysterious virus and then eventually when South Africa reported its first case in March.

But that quickly changed.

“I downplayed the media reports a lot because I think there was quite a lot of media sensationalism, and there still is,” Suchard says. “The biggest challenge I think on a personal level that I have seen now [is that] doctors have felt worried about bringing the infection home to their families, elderly relatives, and so on. So I think that’s a big one. I think the practicality of working in PPEs (personal protective equipment) is very difficult. And the constraints of managing patients under containment without their relatives, and really having to deal with a lot of aspects over and above just treating the symptoms of the patient, takes a toll.”



Thandi Mvakali, Psychotherapist and Founder of Pure Life Wellness

Born in the East Rand, Gauteng, a province in South Africa, it has always been about “the mind” for Thandi Mvakali, the founder of Pure Life Wellness located in Sandton, Johannesburg. “I always saw myself as a healer,” she says, remembering the time she left the corporate world, to pursue her passion for helping people.

“
**I always
saw myself
as a healer.**”

is an instance of being a human being,” Mvakali says.

“And clinical, obviously, you may deal with people who are slightly more disturbed or not coping whereas in an organization, it is people you’re helping to optimize their performance.”

Mvakali admits that when she started as a

young psychologist, she did not realize how “unready” she was, more specifically, looking at how she was taught such a “western model” of psychology but when practically being on the ground, that model would not work.

Another formidable challenge in the mental health space is that not everyone is willing to pay.

“People are not always willing to invest and pay for their wellness. So you find a lot of people wanting us to do what we do for free.

“During this time of Covid, we received a lot of requests like that. However, what we did try to do during this time is offer mental health services at a reduced rate,” she says.

This past year when anxiety has been all-pervasive, Mvakali has had to help many patients deal with grief and loss.

“We call it an ambiguous loss,” she explains.

“Because we don’t know when the thing [Covid-19] is going to end and who it will come for next. And so there’s a lot of ambiguity.”

Which is why her advice to people, more specifically women, entering the mental health space is: “You need to be willing to work on your own healing and your own wellness.”

Nolukhanyo ‘Khanya’ Bovula, Traditional Healer

“**T**his is not something you necessarily choose, it’s a calling,” says traditional healer Nolukhanyo ‘Khanya’ Bovula to FORBES AFRICA. Born in the small town of Alice, situated in the Eastern Cape province of South Africa, Bovula says that ever since she was a little girl, her family would always tell her that she has “the calling”.

“I just never understood what that meant.”

Traditional healing as a concept is not something unfamiliar to people in Africa but it’s also not something that is completely understood.

In a 2015 academic paper, *Understanding Traditional African Healing*, by Maboe G Mokgobi, it is argued that traditional healers play a pivotal role in many spheres of people’s lives since they are “medical knowledge storehouses”.

“Traditional healers serve many roles which include but not limited to custodians of the traditional African religion and customs, educators about culture, counselors, social workers, and psychologists,” Mokgobi stated.

After spending 18 years in the corporate world, Bovula realized there was more to understand when it came to becoming a traditional healer. She tells us more:

What has your spiritual journey looked like thus far?

I started my spiritual training in 2011. After that, I did start doing some work as a diviner but still had a full-time job [in corporate]. But I wasn’t paying much attention to my spiritual work, I was more focused on the corporate side of life. And then at some point, I was told that it will come to an end if I didn’t start focusing on my spiritual work. Then in 2017, it became obvious that my employer and I could no longer work together so I started formalizing things... I put up my Facebook page, created my YouTube channel.

And I was then approached by SA Psychics, an online platform for psychic advisors. The owner of the platform asked me to join them and I was like, ‘but I’m only a sangoma, I’m not even a



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Sometimes science does not fix everything.

psychic’. He was like, ‘trust me’ because I had given him a reading. Well, I was like, ‘okay, let’s go for it’. Then I joined them and at the time, I was the only African advisor. And it went very well, I was making good money. So in addition to running my own practice, I advise them as well.

Has business during the present time been flourishing?

There is economic depression, people are getting retrenched. Plus, there is Covid and people are working from home. So there are a lot of people suffering from anxiety. And that’s where we come in as psychics.

What I do is mainly counseling, in the sense that I help people get through whatever situations they are going through. It’s mostly about facing reality. Because what I find is a lot of people that come to psychics, come thinking that there’s probably a magic answer to their questions. And I find that usually, the answers you are seeking as a person are within.

I think what I do is becoming a movement, you know, there’s a shift, basically now. Spiritual people or traditional healers are becoming more accessible. I think it’s because of technology and understanding. Sometimes science does not fix everything.

Beth Koigi, Founder of Majik Water

What inspired entrepreneur Beth Koigi to found Majik Water was watching her own communities struggle for clean water. A Kenyan innovator, she has become a renowned advocate of the cause, turning condensation or moisture into clean drinkable water for low-income households.

Her solution is especially relevant now when the world has a new hygiene awareness program that water is a big part of, in combating Covid-19.

“I first became aware of the water troubles some parts of Kenya had when I went to university. I visited a region that had been struggling to get access to water and this is when

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This is when it hit me that water was not as accessible as I thought.

it hit me that water was not as accessible as I thought,” says Koigi. Looking at how arid Kenya is and the water shortages that arose as a result inspired her to try and come up with a solution. Her first startup looked at providing water filters as a means of preventing diseases that are communicable through unsafe water sources.

A drought in 2016 inspired her decision as “we would go up to eight months without access to water and it was like nothing I had ever experienced, helpless on that level”.

It was this eye-opening experience that led to the inception of Majik Water.

In 2020, she advocated for clean water on a global scale as she appeared in the Netflix documentary, *Brave Blue World: Racing to Solve Our Water Crisis*, alongside the likes of A-list Hollywood actors Matt Damon and Liam Neeson.

“I didn’t expect for it to be as big as it was, I agreed to the experience as I saw it as a necessary showcase of the sustainable solutions for water

access and wanted to do my part in representing Africa and what we are trying to do with accessible solutions for water,” says Koigi.

The documentary focused on innovations being made across the world in providing easy access to clean water.

Majik Water featured and contributed to the possibility of a sustainable future.

Now, more than ever, clean water is a basic need and the need for hygienic sanitization is significant as one of the key methods of preventing the spread of Covid-19, and Koigi believes that “for clean water to become a sustainable resource that is freely available, the solution has to occur at every level and the gaps in water resource management need to be addressed as a matter of urgency”.

Her message to other innovators is simple: “This is the time women are receiving more support, and having the right support system will see you uplifted rather than put out of view.”



Professor Rudo Mathivha, Head of Intensive Care Services, Chris Hani Baragwanath Academic Hospital

To be able to lead as a woman in any field, the best advice Professor Rudo Mathivha can give is to remember your core principles. This is something she had to reiterate to herself when she became Head of Intensive Care Services at Chris Hani Baragwanath Academic Hospital in Johannesburg. It wasn't easy, she admits, being a black female head of department in the largest hospital in Africa.

"There were such nasty, discouraging remarks being passed such as 'oh, there goes the intensive care unit, and no, she can't control the departmental funds, she doesn't understand finance, or she's going to pilfer funds'. People were basically just disrespecting me," she says.

But what motivated Mathivha, who also happens to be "the first black South African woman to study Critical Care Medicine", were the lessons she learned from her father.

"At first, I was on the phone every evening, sobbing to my father. And my father said to me, 'what are you?' So I said, 'I'm an intensive care specialist'. So, he said to me, 'then show them that they are not specialists in your field'. And I remember his words, and he said, 'you stick to the correct principles and nobody can argue with you and nobody can trip you,'" Mathivha recalls as she sits in the boardroom with her mask on at Chris Hani.

And after that conversation with her father, there was nothing Mathivha felt she could not try to conquer. She has been an important part of the fight against Covid-19 and on the frontline of the pandemic. She speaks to FORBES AFRICA:

What were some of the biggest challenges you think doctors have faced in trying to treat patients who have tested positive and still trying to curb the spread of infection?

When Covid arrived and presented a challenge, we all worked together here at the hospital as heads of departments to establish a Covid ICU. Because we still needed to maintain the non-Covid ICU, we worked out a system, and the ICUs have both run seamlessly. However, as doctors, Covid was frustrating because we didn't know what was happening.

And because there was so much to stress about, I wasn't getting a lot of sleep in the beginning. Because I was worried about the staff in the Covid and non-Covid ICU wards. And when you stress and don't get enough sleep, your immune system takes a knock and then you yourself get Covid. Which



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The whole time, I just said I'm going to beat this thing and it's not going to get me down.

is what happened to me. I was in ICU for six days. And even after I was out, I was still so tired. My thing is that I am so used to being driven, this is not me. So the whole time, I just said I'm going to beat this thing and it's not going to get me down.

What are some of your key takeaways from the pandemic?

Four things! Number one, is not to panic when you face an unknown and catastrophic situation. I think as a country, we did reasonably well. Number two is to learn to think on your feet. Number three is to try and teach society to cooperate with each other. And number four, to not adopt a very patriarchal approach, but also not to be too soft. Sometimes, hard decisions have to be made.

What has your experience been like as a woman in the medical field and voicing your opinion on matters around the pandemic?

It's not that we [women] were absent, there is still a lot of male dominance in medicine, especially in the higher positions. And there is still that male preference when people go to seek special expertise or information. I think because of our societal patterns, people would rather receive news from a man than from a woman. And yet, we have the same expertise. So I think in that regard, raising our opinions, we get left out when we should be brought to the forefront. South Africa pays a lot of lip service to gender equality and to promoting women in high positions and we're not seeing it happen. And that is the one thing that I would like to push. So, it is not like we don't have those women experts, we have a lot of them!

– Watch some of these women relate stories of their trials, tribulations and triumphs at the 2021 FORBES WOMAN AFRICA Leading Women Summit from March 8-9. Visit leadingwomensummit.co.za for more.

What The World Needs At This Crucial Hour

Siddharth Chatterjee is the United Nations' (UN) new Resident Coordinator in China. Most recently, he served as the UN's Resident Coordinator in Kenya. With more than 25 years in international development and cooperation, in this interview with FORBES AFRICA from Nairobi in December, he speaks about his new job in the world's second largest economy, implementing the Sustainable Development Goals (SDGs) and placing human rights at the center of Covid-19 recovery efforts. A decorated officer in the Indian Army before joining the UN in 1997, he has also worked towards furthering gender equality in the countries he has served, including some of the world's most conflict-ridden regions.

Q : YOU'RE GOING TO BE LEADING THE UN IN supporting China to better recover from the Covid-19 pandemic through the SDGs; do tell us more...

A: What the pandemic has essentially done is it has been like rain falling over the roof. And we've suddenly realized there are so many leaks on that roof. Regardless of which country, what it has shown is unless we invest in universal health coverage and robust health systems, nobody is going to be safe...

The pandemic has reminded us that unless we get health right, we are not going to get any of the other SDG goals right... To me, China is a global multilateral player, and its ambitions, in many ways, transcend the global economic governance and extend to the environment as well... Now, China has a population of about 1.3 billion, while in terms of purchasing power parity, is perhaps the single largest contributor to world growth in the last 11 years. Despite its location and politics, it has shifted to a centrist market-based kind of multilateralism. China achieved the Millennium Development Goals by 2015 and is almost moving on track, and perhaps many of the SDG goals have been met. And how remarkable it is that in a matter of 20 to 30 years, here is one single country that has lifted 850 million people out of poverty. This has been contributed to particularly by progressive policy... In which multi-sectoral collaboration and innovation play a key role and puts health at the center of the country's entire policy-making machinery... These achievements offer also key opportunities for learning. And in particular, I see the role of the UN family working with China and looking at countries which are still working their way up in improving health systems, improving livelihoods, improving access to food security, and enhancing South to South cooperation. And to me, China is also a major contributor to peace. For example, it is the third-largest contributor to the UN, after the US and Japan. And the second-largest contributor to the UN peace-keeping budget, and the largest contributor of peace-keeping troops from amongst the permanent



five of the UN, and its commitment towards diplomatic and peaceful solutions to conflict. Now, in addition, the Chinese government has increasingly promoted the important One Belt One Road initiative... I think we all need to improve infrastructure throughout the world because those are the possibilities that unravel in advancing trade and commerce. This is something extremely important for the entire international community to converge around, because ultimately, when we invest in infrastructure, we invest in jobs, we enhance trade and commerce. This needs to remain a principal focus. And finally, I would say China is a country of incredible promise in terms of global leadership... As the UN Resident Coordinator, it is an honor that the UN Secretary-General Antonio Guterres has selected me, and the government of China has approved that selection. So, I will work with China to not only help China achieve the SDGs, and leapfrog the SDGs, but also work with China with a particular focus on Africa and in the Horn of Africa, where I've had extensive experience working. I see this as a massive opportunity for collaboration, multilateralism, and public-private partnerships.

Photo sourced from twitter.com

Q: In all your years of working in Africa, and especially during the pandemic, how have you seen the resurgence of the community and public participation? How did the various societal actors pull together?


A: I was honored when I became the UN Resident Coordinator to Kenya in 2016... I have seen in this country the impossible happen, and let me tell you a story. I was then head of United Nations Population Fund (UNFPA) in 2014, when Kenya was amongst the 10 most dangerous places for a woman to give birth in. And we realized the maternal mortality ratios were so high, about 500 deaths per 100,000 live births... The MDG requirement was 170 deaths or less. I was able to sit down with the government's very strong leadership at the highest level; President Kenyatta, and his wife, Margaret Kenyatta, really driving this agenda. And what I did was build an ecosystem around that time. So when UNFPA came in, I was able to unlock about \$15 million and brought UNICEF and WHO together. But surprisingly, six companies from the private sector joined [from various countries]... In a matter of two and half years, we were able to use technology, innovation, and good public policy combined with political will to reduce maternal mortality ratios in Kenya counties by one-third. And what it essentially did was it suddenly brought recognition that actually public-private partnerships work... Kenya has really been a hotbed of innovation and technology. It has a government that encourages what I term as the unorthodox approach to doing things. As a result of this initiative, we got invited to the World Economic Forum in 2017, which then took us to the UN General Assembly where Amina Mohamed [foreign affairs] of Kenya launched the first public-private partnership platform. So what happened with these six companies I mentioned earlier, has grown into an ecosystem of around 70 companies, where the UN in Kenya, in concert with the government of Kenya, is the convener, connector, and catalyzer of new forms of financing and of blended financing initiatives. And what we are trying to do is achieve scale. So my view is, after six years in this country, Africa is the future and Kenya is a microcosm of that African future. There will be 2.3 billion people in this continent by 2050. This is where the future consumers and producers are going to be. Now, imagine if China, India, the Asian Tigers, the European Union, the US, Canada all come together, our private sectors come together and the UN helping to converge all this; the impact we can have, because we have to invest in human capital, good health, education, access to clean water; and do away with the challenges of communicable and non-communicable diseases. We would then be ring-fencing ourselves, not only to prevent a future pandemic but also ensure we have positioned ourselves for meteoric economic progress.

Q: Perhaps now's the opportunity to build an equal world. But what do you think the world needs at this critical hour?

A: We need to strengthen multilateralism; that is a sincere clarion call by the UN Secretary-General, reminding the world that without multilateralism, without the world committee coming together, we will not be safe. This is the crucial need of the hour. The UN Deputy Secretary-General Amina J. Mohammed reminds every one of the 130

resident coordinators everywhere in the world that we have to flip the orthodoxy and reposition the UN as a real partner to government in advancing the SDGs. As I said, that's our direction; that is our North Star, we have to get around it, bring our partners together and have impact because the private sector benefits, people benefit, governments benefit. But also, the Secretary-General is very clear: our role as the UN is the prevention agenda, the triple nexus of peace, humanitarian action, and development needs to come together... After all, a lot of the conflicts are related to deprivation... It's about water, it's about pastures. These are things that are very easily overcome. And I see the positioning of the UN family, the UN system, and particularly with the drive and energy and dexterity that the UN Secretary-General is providing, I think this is the time, perhaps 2021, should be that moment, where we see it as an inflection point in the entire UN Security Council, and the entire General Assembly gets behind the Secretary-General and says, 'all right, we are behind you, proceed'. We need to get to 2030 as a prosperous committee, humanity, and collaboration as nation states.

Q: The pandemic has affected women more disproportionately, and deepened the chasm of inequality. What further must be done for Africa to realize its full human potential?

A: It's important to kind of put this in a very personal context because I call myself a feminist like the UN Secretary-General Antonio Guterres, who is a feminist... In my own home, my grandmother was married at the age of 11. She had 10 children, of which nine survived. So you know that child marriage is pretty common [in India], even to this day. And I saw the toll it took on her. And then, while I was in service [in the Indian Army], I had seen in combat situations, how vulnerable women and girls were to the entire environment. And that's when I swore to myself I would actually stand up on issues of women's rights. Gender equality and women's empowerment is going to be crucial for human development... There is overwhelming scientific evidence that speaks to the strong, gender-transformative perspective, which is going to be the key driver to sustainable development. And that's why we have an SDG 5, it was well thought through by the entire committee of nations. And this is something that must remain at the center of our focus. I am a persistent and constant advocate of women's sexual reproductive health and rights... Many experts argue that investing in women's reproductive health will significantly impact the world's global economy. I mean, women invest 90% of their income into their families compared to men, which is about 30% to 40%, we have real evidence of that. Now, this alone is likely to make an impact on children's health, their schools, their attendance, their nutrition... We must concretely move towards, as Natalia Kanem, the executive director of UNFPA said, achieving the three zeros: zero maternal deaths, no woman should be denied access to reproductive services, and zero gender-based violence. Now's the time that as men, we need to be loud and outspoken about really pushing this agenda and the reality is, we cannot advance as human society, as a race, if you are going to keep half of humanity behind. 

– Interviewed by Renuka Methil;
for the full interview, visit forbesafrica.com

BIOTECH'S BARNUM AND HIS COVID CURES

Billionaire Patrick Soon-Shiong's radical cancer treatments made him one of the wealthiest physicians on earth. Now the master of medical marketing believes his drug therapies could defeat the "crisis of our time" — and there are plenty of reasons to think he'll deliver more Hippocrates than hype.

BY ALEX KNAPP



PATRICK SOON-SHIONG KNOWS when he realized that the Covid-19 pandemic was going to pose a serious threat. It was February 24, 2020, and the part-owner of the L.A. Lakers was at the Staples Center in Los Angeles for Kobe Bryant's memorial service.

With sudden, untimely demise on his mind, he found himself thinking about the emerging pandemic.

Even though Covid-19 hadn't yet caused a single reported death in the United States, Soon-Shiong was worried. He recalls turning around to California Governor Gavin Newsom and telling him, "We're in trouble."

His sense of urgency hasn't gone away. "If I thought I was scared on February 24," he says, "I'm more scared now." The reason, he explains, is that "what we've learned is that this virus acts like cancer." He says he has left his house only once since Bryant's memorial, and that was to film a video about the coronavirus for the *Los Angeles Times*, which he bought, along with *The San Diego Union-Tribune*, for \$600 million two years ago. "I shut myself off from the world," he says.

And so one of the planet's richest medical doctors, who made a \$6.7 billion fortune developing breakthrough treatments for cancer and diabetes, seeks to battle the pandemic. The weapons in his arsenal: the cancer treatments he has spent the past decade and a half developing. He's aiming them at all aspects of the coronavirus, from a vaccine to treatments for mild cases to therapies targeted toward patients on ventilators.

It's an enormously ambitious plan from a man who has often been accused of being a hype artist.

In an earlier incarnation, Soon-Shiong was a respected surgeon and professor at UCLA Medical School, but throughout his wildly successful entrepreneurial second act, he has been derided as more showman than scientist, thought guilty of overinflating results and taking undue credit. A few years ago, for example, he boasted about using a breast cancer drug to treat a patient with cervical cancer —

but other groups were already seeing similar successes. As we wrote in a 2014 cover story, "While he's undeniably brilliant, Soon-Shiong is equally undeniably a blowhard."

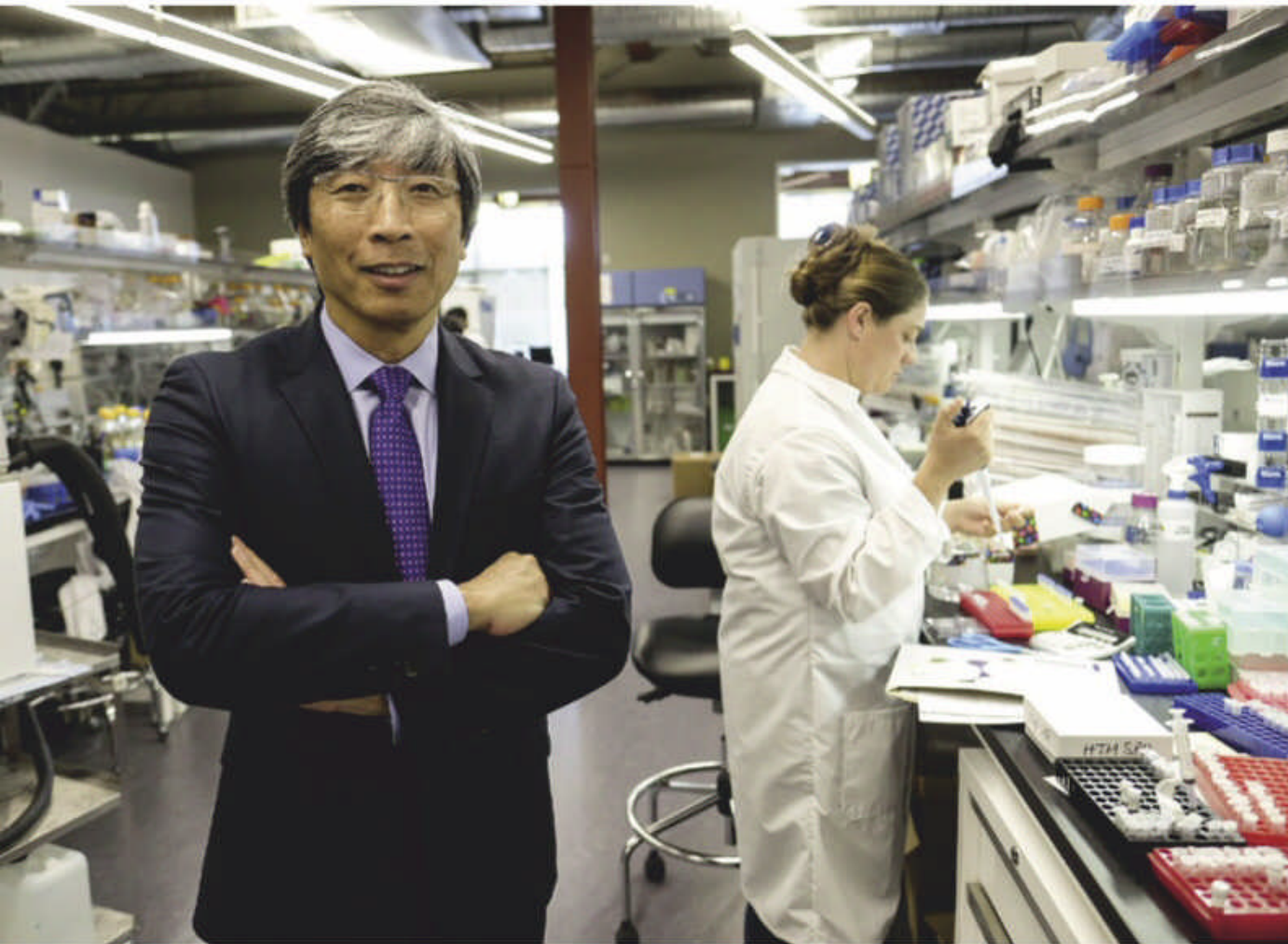
But he also has fierce defenders of his approach to both cancer and Covid-19, including former Senate majority leader Harry Reid, who says the 68-year-old South Africa-born doctor "saved my life" in 2019 by providing an experimental treatment for his stage IV pancreatic cancer. Researchers say his methods are conceptually grounded in good science, though the verdict on his work will ultimately depend on results.

"We've been tracking and seeing an increase in the number of these cell-based therapies, whether they're being repurposed from oncology or even other disease conditions," says Esther Krofah, a senior analyst who monitors the clinical development pipeline for Covid-19 vaccines and therapies for the Milken Institute. A number of them — from large pharmaceuticals and small biotech startups alike — are going into clinical trials. For many of the latter, the pandemic offers a chance to show what their treatments can do in a shorter time frame than cancer drugs typically require. "For small companies, it's a worthwhile exercise to see if it's successful," Krofah says.

It may seem counterintuitive, but advances in knowledge about the immune system, and how it might help kill cancer, have real applications for infectious diseases. "To me, a cancer cell and a virus-infected cell are one and the same," says Dr. Wayne Marasco, an immunologist at Harvard Medical School who is currently researching coronavirus treatments. The immune system, he adds, seems to think the same way.

Which is a good reason to take Patrick Soon-Shiong seriously.

Born in Port Elizabeth, South Africa, in 1952, Soon-Shiong is no stranger to the intersection of the immune system, cancer and infectious disease. Having graduated from medical school at age 22, he focused his early surgical career on transplants and cancer, both of which involve a complex pas de deux with the immune system.



Medical Maestro

Soon-Shiong at Nant's Los Angeles headquarters in 2017. "I see [the complexity of the immune system] like an orchestra, but the challenge is to separate the violin from the cello from the drums."

approach to both cancer and the coronavirus with qualifiers about the results of pending studies, carefully avoiding seeming to overpromise.

Soon-Shiong has multiple interrelated businesses organized in a complex corporate structure that would have puzzled the Byzantines. But his Covid-19 efforts come from the two companies he founded that work on developing cancer immunotherapies: NantKwest, a publicly traded outfit based in

Crossing disciplines, he says, led him to look at the "body as a system, not a single little cell. We are a biological system."

Such interdisciplinary thinking may be what led to the medicine that made his fortune: Abraxane, which took an existing chemotherapy drug, Taxol, but wrapped it in protein that made it easier to deliver to tumors. It's now used to treat advanced cases of lung, breast and pancreatic cancer. In 1998, to develop Abraxane, he purchased Fujisawa, a small, publicly traded business that sold injectable generic drugs.

Soon-Shiong used its revenues to quickly move Abraxane through the regulatory process. The FDA approved it in 2005, and in 2007 Soon-Shiong split the business in two, spinning out a company called Abraxis that focused on the new cancer drug. He sold the generics business to Fresenius in 2008 for \$4.6 billion. Two years later, he sold Abraxis to Celgene for \$4.5 billion. Celgene, itself acquired by Bristol Myers Squibb in November 2019, reports that sales of Abraxane exceed \$1 billion annually.

The complex business deals that went into Abraxane, however, left Soon-Shiong with "a reputation as more of a wheeler-dealer than a scientist," as we noted in 2014. Back then, he posted to Twitter under the grandiose handle @solvehealthcare, but today he simply uses his name. Over several recent Zoom conversations, he evinces very little showmanship. He's visibly tired, exhibiting the most excitement when he starts talking about intricate scientific details. "I'm burning out a little bit," he candidly admits, adding that he's been getting only about four to six hours of sleep a night since February. Over that time, he says, his companies have concentrated on both continuing to develop his cancer treatments and working to employ them against Covid-19. He peppers his statements about his company's

San Diego, and the privately held ImmunityBio.

Cancer immunotherapy is based on the notion that the body's own immune system can be stimulated to treat the disease. That idea dates to the 19th century, when scientists first observed tumors getting smaller after patients developed a type of skin infection. This led to some of the first experiments in which the immune system of cancer patients was stimulated.

Early efforts proved difficult to reproduce, though, and the field got sidetracked by advances in chemotherapy and radiation. Interest spiked anew in 1959, when a paper showed that the tuberculosis vaccine inhibited tumor growth in mice. After decades of intense research, the first cancer immunotherapy was approved by the FDA in 1986.

Other types of immunotherapies followed, ranging from purified antibodies that attack cancer to drugs that turn off the chemical switches that let tumor cells hide from the immune system.

The latest advances involve CAR-T cell therapy, which first gained FDA approval in 2017 and involves genetically engineering immune cells from patients so that they attack certain targets found in tumor cells.

Founded in 2002, Soon-Shiong's company NantKwest focuses on developing so-called "natural killer" (NK) cells, which the immune system uses to destroy virally infected cells as well as early-stage tumors. The company has been working to develop a line of "off-the-shelf" NK cells called NK-92, which can be used to treat certain cancers as well as viral infections.

The company, which has yet to post any meaningful

revenue, has lost nearly \$400 million since it went public at \$25 a share (a \$2.6 billion market cap) in 2015. The stock has recently traded in the \$10.50 range, off a bottom of around \$1 a share in 2019. One reason for the stock's surge, says Jefferies analyst Biren Amin, is the company's reported research into the coronavirus pandemic. The second, he suggests, involves former Senator Reid's cancer treatment, which made use of the company's products.

Harry Reid, who represented Nevada in the upper chamber from 1987 to 2017, was diagnosed with pancreatic cancer in 2018 and started chemotherapy that July. He didn't respond well. "I was so sick they stopped the chemo" that October, he says. In July 2019, a scan of his liver showed that the cancer had spread. That meant his only option was more chemotherapy. Around the same time, Joe Kiani, founder and CEO of Irvine, California-based health IT company Masimo, met with Soon-Shiong to discuss acquiring \$50 million worth of assets from NantHealth. During that initial meeting, the conversation turned to Soon-Shiong's other projects, which later led Kiani to phone the former senator. "I called up Harry and I said, 'Look, I just left this meeting. This person could have the cure. I don't know if he does, but what do you have to lose? Reach out to him and see what happens,'" Kiani recalls.

Two weeks later, Soon-Shiong and a doctor from NantKwest named Leonard Sender were working with Reid, using treatments from NantKwest as well as Soon-Shiong's ImmunityBio. Those treatments aren't yet officially approved but were permitted under the FDA's compassionate-use rules. Reid was treated with a combination of Abraxane, NantKwest's natural killer cells and a drug from ImmunityBio called N-803, which stimulates the immune system to produce its own killer cells. Soon-Shiong compares it to the "triangle offense" often employed by the Lakers. In November 2019, Reid reported that his scans were completely clear, showing no signs of cancer. "I admire Dr. Soon-Shiong a great deal," he tells *Forbes*. "Both for what he's done for me personally and what he's done for the health-care delivery system in this country?"

Reid's is an extraordinary story, as pancreatic cancer remains one of the deadliest forms of the disease. Within five years of diagnosis, it kills some 90% of patients, accounting for 7% of cancer deaths globally. *Jeopardy!* host Alex Trebek, who also suffers from pancreatic cancer, has received the same treatment, as have two other unidentified patients. But Sender cautions against declaring a cure. "It's too early to tell, because this is a very nasty form of cancer," he says.

That's why NantKwest is now focused on a new randomized clinical trial, he adds, which is looking to recruit nearly 300 pancreatic cancer patients with advanced forms of the disease. Those who sign up will be given a course of treatment similar to the one Reid received.

As part of these treatments' development, Soon-Shiong has spent

the past five years working with the National Cancer Institute. His companies have a collaborative agreement with the NCI involving several types of treatments, including NK-92 and N-803, as well as some vaccines against two kinds of tumors. Dr. Jeffrey Schlom, chief of the NCI's laboratory of tumor immunology and biology, recalls being in sync with Soon-Shiong from the start.

"At our first official creative meeting, we presented our slides of our approach," he says. "And then he got up and presented his approach, and they were almost identical." Schlom's group has since published in peer-reviewed journals 15 papers regarding Soon-Shiong's treatments, in both preclinical and clinical settings.

Since February 2020, NantKwest and ImmunityBio have redirected some of their attention toward the coronavirus pandemic, using a number of weapons in their collective arsenal. The first is a vaccine, based on the system Soon-Shiong's companies are developing for cancer, that has

already shown positive results against Covid-19 in a study involving mice. It's also being studied in monkeys as a part of the federal government's "Operation Warp Speed."

As for human trials, Soon-Shiong says he's ready to go. "My timeline is now dependent on the FDA letting me get out of the gate," he says. "I'm in the gate, the bell hasn't rung and the racehorse is frothing at the mouth."

This vaccine is delivered to the body in a common cold virus called an adenovirus that has been stripped of all the parts that can cause harm to people or trigger the body to attack it. That modified virus contains two individual segments of the Covid-19 coronavirus: the spike protein, the surface protein on the virus that triggers an antibody response; and a nucleocapsid protein, which is found in the center of the virus. Most of the more than 100 vaccines that are currently in clinical development for Covid-19 focus on the spike protein to generate an immune response. Soon-Shiong thinks that won't be enough, though, which is why he's including the nucleocapsid protein. "My concern is that the spike protein mutates," he says. "It's mutated even through this pandemic."

Beyond potential mutations, another concern about merely eliciting an antibody response is that from the data seen so far, antibodies to the Covid-19 virus just don't last very long. Levels of antibodies in the

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My timeline is now dependent on the FDA. I'm in the gate, the bell hasn't rung and the racehorse is frothing at the mouth.

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All Clear

Former Senator Harry Reid, pictured the same month he began treatment for pancreatic cancer with Soon-Shiong, says being in remission a few months later was “kind of like a miracle.”

blood are “really low after a few months,” says Marasco, who’s not associated with Soon-Shiong’s companies or their vaccine research.

“I think it’s uncertain how long immunity will remain after successful vaccination.” Using the nucleocapsid protein “couldn’t hurt,” he adds, and it could elicit not only antibodies but viruskilling T-cells as well.

The second weapon is the application of NantKwest’s NK-92 and ImmunityBio’s N-803 against Covid-19. NK-92 is being adapted to directly attack virus-infected cells, while the N-803 stimulates the patient’s immune system to produce its own natural killer cells against the virus. The treatments might be used either together or separately depending on the particular patient, Soon-Shiong says. Human trials of these treatments have already begun. “It’s a fantastic thing that they’re applying them to infectious disease to see how patients fare,” says Gigi Gronvall, an immunologist at Johns Hopkins Center for Health Security, who is not involved in the research. “The concept is great,” she adds, cautiously, “but we need to see what the data says.”

The third weapon NantKwest and ImmunityBio are developing to combat Covid-19 involves the use of mesenchymal stem cells, which are derived from bone marrow. This type of stem cell has been investigated over the past decade for diseases — like Covid-19 — that can cause the body’s immune system to go into overdrive and attack itself. This treatment would be for the most severely

“**Billions of dollars are going to companies that have billions [in] revenues.**”

sick Covid-19 patients, who are experiencing a “cytokine storm,” in which the immune system overreacts.

Small-scale studies have suggested this might be an effective treatment, and several companies, including Melbourne, Australia-based Mesoblast, are already in late-stage clinical trials for severe Covid-19 patients. Soon-Shiong’s companies are working with hospitals to recruit patients for human trials.

If Soon-Shiong’s approaches to Covid-19 bear fruit in clinical trials, the next step may prove harder still: getting those treatments to needy patients. This is especially so

for the vaccine, because at the moment neither NantKwest nor ImmunityBio has the resources to scale up manufacturing. “I’m now behind the eight ball,” Soon-Shiong admits, “because there’s no way I could have 100 million doses unless somebody supports me. Maybe I have a million doses or 2 million doses.”

He expresses some frustration at the government: “Billions of dollars are going to companies that have billions [in] revenues.” He’s not wrong about that. In July, pharma giant Pfizer (2019 revenue: \$51.8 billion) received a \$2 billion federal

contract to manufacture a vaccine it’s developing.

Things are brighter for the companies’ N-803 and NK-92 products, as NantKwest has the ability to manufacture at scale, but these treatments will face certain competition from others being developed by a number of pharmaceutical companies.

“I think there are a lot of alternatives that are more practical than a cellular therapy for an acute infectious disease,” Marasco says, though he does acknowledge that the companies’ plans to use stem cells against the more severe cases of disease have potential.

Despite his frustrations, Soon-Shiong appears determined to do his part in the health-care industry’s war against the coronavirus. “This is the crisis of our time,” he says. “It’s almost existential. The United States could have 20 to 30 million infected. You could have a million deaths — this is not a joke.”

Geriatric Game-Changer

Chika Madubuko is using technology to connect the at-home elderly to trained care-givers in Nigeria.

BY PEACE HYDE

THE GLOBAL DIGITAL HEALTH MARKET IS growing by leaps and bounds and billions, and Chika Madubuko, the CEO and Founder of Greymate Care, is wanting to make the most of it whilst creating impact.

With money not the only objective, it was the opportunity to serve those who needed quality healthcare the most that guided her.

Born in the northern region of Nigeria, Madubuko attended the Nnamdi Azikiwe University in Anambra State, where she studied microbiology, before progressing to biotechnology and bioengineering at the University of Hertfordshire in the United Kingdom (UK).

“All I wanted to do at the time is solve problems with bio-tech, with everyday biological systems, creating drugs and industrial solutions,” says Madubuko.

After graduating, the third-born child in a family of five children, decided to take a leaf out of her entrepreneurial parents’ handbook and venture into business development and sales in the UK before relocating to Nigeria to continue as a business development manager at Novus Agro, a multisided platform that organizes smallholder farmers into accessible groups for all those who want to transact with them.

By that stage, Madubuko had already caught the entrepreneurial bug and was looking for new direction.

“When I was about to leave the UK, I toyed with the idea of creating a homecare startup and I was a certified care-giver but I wasn’t sure what I wanted to do with it. Given my success in business development, I decided to give it a try and some people told me this was a real problem Nigerians were facing.”

The cultural norm in Nigeria is that when a loved one is sick, other members of the family take care of the person. Traditionally, this role was reserved for wives or mothers who stayed at home. However, with the significant gender shift in recent years and more women employed or entrepreneurial and no longer staying at home 24x7, this has led to challenges for the elderly who need round-the-clock home care.

This is where Greymate Care comes in. Born out of the personal pain Madubuko faced when looking for a care-giver for her grandmother in the village, she based her service offering around providing trained professionals to care for vulnerable family members.

“Greymate Care is an online platform that connects the elderly to vetted care-givers right [in] the comfort of their homes... In Nigeria, there is no database where you can simply go and find a care-giver or someone who has been trained and background-checked. Greymate Care solves that problem by training people who want to become care-



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All I wanted to do at the time is solve problems with bio-tech.

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givers and making sure they have guarantors and they are available to be deployed to your home. We reduce the turnaround time of finding a care-giver from about two months to let’s say an hour or maximum 48 hours.”


Each care-giver on the platform has to provide two references who act as guarantors for the individual and those references have to be in senior positions in credible organizations to qualify. That extra check has made Greymate Care a trusted provider in Nigeria, says Madubuko.

A recent article by Deloitte estimates that sub-Saharan Africa is forecast to become the fastest-growing region in the world in the area of e-health.

The proliferation of these services is mainly driven by rapid adaptation of mobile technology as well as the internet.

Deloitte estimates the mobile penetration rate for the continent is close to exceeding 80% with a large number of the population utilizing mobile phones for not only communication but also integrating business services.

Greymate Care is hoping to tap into this growing trend to provide access to health information and curb the shortage of good healthcare professionals especially in remote areas.

For Madubuko, a major impetus for her new healthcare company is to provide employment through working with global agencies such as the United Nations Development Programme to train youth to become care-givers, an initiative that has created over 1,000 jobs on the e-health platform thus far. 



Tory Burch's Survival Sketchbook

Amid a luxury fashion apocalypse, one of the century's greatest entrepreneurial retailers (and one of America's richest self-made women) brought us deep inside the battle to save her brand.

BY DENIZ CAM

AFTER SEVEN LONG DAYS AND sleepless nights in March, Tory Burch's impeccably decorated library in her red-brick home in the Hamptons officially became a war room. Pierre-Yves Roussel, her husband and the chief executive of her eponymous fashion company, claimed the patterned green couch. Across from him, Burch — the company chairman, clad in leggings — took the desk by the window overlooking their seven acres. The couple barely stepped outside the room for three weeks.

"One day went into the next, and one week went into the next," says Burch, who left her Park Avenue apartment with a small suitcase on March 6, thinking a quarantine would not last long. "I don't think we had a break for a solid month. It was a very scary time — 2008 happened, and we saw our business change overnight. But this was nothing like 2008. This was much, much worse."

Luxury fashion is fickle even in the best of times. The coronavirus has been an especially virulent pest. Stores around the globe shut

down amid stay-at-home regulations. Chinese travelers — whose purchases account for some 30% of luxury-goods sales in Europe and North America — put away their travel bags. J.Crew, Neiman Marcus and Brooks Brothers all filed for bankruptcy. Revenues at Gucci parent Kering and LVMH, Roussel's former employer, fell around 40% in the second quarter. Ralph Lauren sales tumbled by two-thirds.

Burch and Roussel realized quickly how dire the situation was. Within weeks, they were closing many of their 315 Tory Burch stores across the globe, furloughing most of their retail employees and shelving expansion plans, and coping with a longtime employee's death from Covid-19. They then began formulating new plans to make sure Tory Burch LLC didn't unravel.

Throughout this disruptive moment for the world, for business and for retail, Burch and Roussel let Forbes ride along on their eight-month navigation of this apocalypse. They've had to improvise, shutting stores, rerouting supplies and revamping e-commerce efforts, all in the

hope that the business, which generated almost \$1.5 billion in revenue in 2019, with a profit margin Forbes estimated at 11%, could survive. “We didn’t know how we would be able to pivot and be agile,” Burch says. “The unknown was so difficult.”

But jumping into the unknown also offers lessons, both good and bad, on how to pilot through a monsoon, at a time when shoppers are wary of leaving home and the threat of deadly disease lurks in every public space.

Burch had a fairy-tale childhood growing up in a grand old home in Valley Forge, Pennsylvania, the daughter of a former actress and a financier, both of whom prized dressing well. Upon graduating from the University of Pennsylvania in 1988 with a degree in art history, Burch moved to New York with a passion for fashion. She worked for Zoran, a Yugoslavian designer who was her mother’s favorite, then had public-relations and editorial stints at Harper’s Bazaar, Ralph Lauren and Vera Wang.

After she married investor Chris Burch in 1996, the couple built a portfolio of investments that not only helped them financially but also gained them a spot in New York high society.

The first Tory Burch boutique opened in February 2004 in Manhattan’s Nolita neighborhood, run by the couple and based on her idea for an affordable luxury and lifestyle brand. In 2005, the day after she appeared on Oprah Winfrey’s show, the Tory Burch website got 8 million hits. Retail riches followed: That year, the brand hit \$17 million in revenue. Two years later it grew to \$113 million, its gold T logo inching its way onto the exclusive global list of luxury badges.

Then came troubles at home. In 2006, Burch initiated the end of her marriage; the divorce was finalized two years later. Legal trouble arrived in 2012, when Chris started his own fashion company,

C. Wonder, which Burch claimed was informed too much by the premise of the brand they had launched together. They settled in early 2013, when Tory Burch LLC had \$800 million in sales and 54 stores — and Forbes first declared her a billionaire. Chris stepped down as a director and sold most of his 28% stake to new minority investors General Atlantic and BDT Capital for \$650 million. Burch describes her very public divorce as one of the toughest periods in her life.

The next year she began dating Roussel, who as chief executive of LVMH’s fashion group oversaw global brands such as Céline, Givenchy, Kenzo and Marc Jacobs, and was a special advisor to LVMH’s billionaire founder, Bernard Arnault. Burch had met Roussel in 2012, when LVMH briefly expressed interest in investing in her company. For about four years,

Roussel split his time between New York and Paris. The couple wed in December 2018 at Burch’s home in Antigua, a renovated estate that once belonged to heiress, horticulturist and fashion icon Bunny Mellon. “We got married, we wanted to live together and wanted to be in the same country,” Burch says. So she approached Roussel with a plan: What if he became the next CEO of Tory Burch? It took a bit of convincing, but he agreed. “Even before the pandemic, working together was a question mark,” Roussel says. “Obviously, I come from a different world, different culture, different continent.”

“I know [Roussel] was very hesitant at the beginning,” says Vogue editor in chief Anna Wintour, who over the years built a close relationship with Roussel through his work in the industry. “Working with your wife could be a little bit challenging at times, so he took a little time to be persuaded.” Less than two weeks after their wedding, Burch announced Roussel as the new CEO of her company; he officially started in January 2019, and she took a more creative role as executive chairman. The new partnership would soon be put to the test.

The Covid-19 crisis arrived amid a career high. Burch, 54, says her 16-year-old business, with stores in 35 countries, had its best month ever in January. Soon after, she decided not to do to a runway show at the September 2020 New York Fashion Week — an endeavor that costs millions of dollars and that some in the industry believe to be a waste of money. Instead, she planned to throw a big block party on Mercer Street in Manhattan, where she would be opening a new boutique.

On January 28, McDonald’s and Starbucks closed some locations in China; that same day, Tory Burch LLC began shuttering its 29 stores in mainland China, including the 9,600-square-foot store in Shanghai, its largest in the world. Soon after, shutdown-related delays in Asia and Europe began to interrupt manufacturing of some Tory Burch products. The first shock hit her supply chain. “You have one thing that comes from Italy, and it’s a button, and then Italy is closed,” Burch explains. “So that button on that sweater prevents the whole piece from being able to get made.”

When certain items couldn’t come together due to production delays, her team either changed their design or got rid of them entirely. Among the casualties: two embroidered dresses from India and Eastern Europe and shoes from Italy. In some cases, they reused and repurposed fabrics in inventory from previous seasons, and moved production from places hit early by Covid-19, such as Europe and Asia, to Brazil.

Quality problems soon emerged. “Some of the products

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We didn’t know how we would be able to pivot and be agile... The unknown was so difficult.

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that we got as samples we were not so happy with,” Roussel says. So again, they either killed items or redesigned around the remaining parts. At one point, Burch canceled an entire jewelry collection from Brazil that had run into production problems and didn’t meet her approval.

Next up: moving inventory to wherever it would sell. After analysing real-time data and evaluating where stores were reopening and where consumer appetite was strongest, Roussel had items shipped from the rest of Asia to China, from Europe to the U.S., and from some U.S. retail stores to the company’s online distribution center in Atlanta. Roussel says he reduced orders of seasonal products and focused on year-round favorites such as bags and sneakers.

Salvaging the product was just the first step. Figuring out where to sell proved equally vexing. As the world locked down, Burch’s huge physical footprint meant it was bleeding cash. By mid-March, Burch and Roussel had shut more than half of Burch’s 315 stores, including some of the 38 in greater China, 111 in the U.S., six in Canada and 13 in Europe. (It

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No one’s prepared for having all the stores closed and not knowing when they’ll reopen... I think it’s the ultimate test for a company.

had begun reopening some stores in China in late February.) The company then furloughed most U.S. sales staff and the majority of its retail personnel in Europe — it won’t say how many of its 5,000 employees worldwide overall — while continuing to pay for health insurance for U.S. workers. “If you’re not able to protect what you have built,” says Burch of those decisions, “it becomes, obviously, a very hard, emotional journey.”

As with millions of entrepreneurs who saw their business upended, the balance between emotion and the need for cold logic amid the

Curveball

“[Covid-19] has been a huge learning curve, but it’s been almost a reinvention and a reset as well,” Burch says. “We often say . . . never waste a good crisis.”



Power Couple

"Having [Rousell] during this crisis was a godsend for me personally and for our company as well," Burch says of her husband, who joined Tory Burch LLC as CEO in January 2019, shortly after their wedding.

maelstrom proved a constant tension. Rousell had built an entire growth strategy around Asia, with at least 20 new stores planned in China through 2022. As spring turned to summer, the executive duo tried mightily to hold on to the plan, deferring as many openings as possible toward the end of their time frame, with just two stores opened this year and two more slated for December. "No one's prepared for having all the stores closed and not knowing when they'll reopen," Rousell says. "I think it's the ultimate test for a company."

Similar streamlining followed with product selection for the 2021 line, which will be 20% smaller (Burch says a culling was already in motion before the pandemic). Going forward, collections will include more shoes (the Tory Charm loafer and Tory sneakers are this fall's top sellers) and bags, items shoppers consider to be longer-term buys, or "investments," less likely to go out of style. The product mix won't change much otherwise, a spokesperson says, pointing out that it was already selling an array of casual, sporty and more dressy options.

While customers still mostly gravitate to the brand for its

colorful sandals and tiny handbags, Tory Sport, the luxury sportswear collection it launched in 2015, has emerged as a bright spot.

The company gave the line more prominent placement on its homepage, added a Loungewear Shop to the website and increased the frequency of emails about it. Online sales of Tory Sport have grown by "more than 30%" since the beginning of the pandemic, the company says.

To finish the new, smaller collection, Burch had a truck deliver the partly completed dresses to her home in the Hamptons, and shifted her office from the library to the more spacious dining room. Out went the rugs and the furniture, replaced by glossy fabric samples and clothing racks. The lithe fashion icon fitted her new designs on two employees who, she says, were "a little more fit-model appropriate" than she is. Compared to the world she knew just a few months earlier, it was a surreal, wrenching process, made worse when a friend and coworker of 14 years succumbed to Covid-19 (Burch wouldn't share any more details, citing her friend's privacy). "It was awful," she says. "It was very hard, and it still is, and it will be for a very long time."

The pandemic has proven to be one of the greatest accelerants in business history. As retailers — big-box stores and mom-and-pop shops alike — are forced to reinvent themselves on the fly, the winners have figured out how to implement e-commerce strategies today that were perhaps on the drawing board for five years down the road.

So too at Tory Burch. Shifting focus from physical stores, Rousell repurposed much of that spending toward e-commerce infrastructure and online campaigns, beginning in China, the Middle East and Japan.

Pre-pandemic, especially within Japan's \$31 billion luxury market, online purchases were largely a nonfactor. Luxury customers wanted to see, to touch, to smell their indulgent purchases before throwing down the credit card. As the coronavirus caused habits to shift, Rousell began selling some items on Tmall, Alibaba's retail site. In lockstep, he revamped and expanded Burch's global website network. In June, he launched sites in Arabic and English serving Kuwait, Saudi Arabia and the United Arab Emirates. There were ongoing improvements and adjustments, as well as new hires in July and August. All Tory Burch sites, which now number 12, were optimized for mobile while incorporating artificial intelligence to generate personalized product recommendations.

Burch also introduced virtual styling, which enables

customers to make private video appointments to see different items in the store. Top clients get even higher touch. In late August, Burch — who has been actively engaging with Tory Burch fans on Instagram (she asks them to send her direct messages with ideas) — joined 35 customers on a Zoom call and chatted with them about why they love the brand. The company is offering more private appointments, even outside normal business hours, and a styling concierge service that sends buyers a personal package of items to try on at home.

These moves couldn't come fast enough. As lockdowns began to be lifted around the world, Burch and Roussel started reopening stores, bringing back most, but not all, furloughed employees. By early June, almost all 315 outlets were back — but customers weren't. Foot traffic remains down 45%, Burch says.

On a recent Saturday afternoon at the Tory Burch store in Manhattan's Meatpacking District, at what one employee said was the busiest hour of the day, a grand total of three customers were perusing \$225 Tory sneakers and new \$700 Eleanor bags. When customers do show up, however, Burch says they are younger and more likely to make a purchase than the average pre-Covid customer.

"I've been working pretty severe hours for the last 15 years to build a company and do it in a way that really thinks about the long term," Burch says. "We wanted to be strong, have grace under pressure, pivot and do what we could to salvage our business, and we did."

It almost certainly helped that she had been disciplined in the past. "[Burch] was very costconscious," recalls Brigitte Kleine, the president of Tory Burch from 2005 to 2016. "When you start out that way and keep that as part of your culture, it pays dividends — literally and figuratively." The numbers offer some hope.

Data from Second Measure, a company that analyzes anonymized credit-card transactions from retail stores and online, reveal how dire things were in the spring, with Tory Burch's direct U.S. sales down 67% in April year-over-year, and then 41% in May. But those same figures also indicate that Burch and Roussel weathered the storm.

In August, the year-over-year drop was just 4%. (A spokesperson for Tory Burch LLC says the Second Measure numbers are directionally correct but don't include purchases using cash, PayPal or Apple Pay.) Overall, Burch and Roussel predict that Tory Burch

revenue will fall by roughly 20% this year, to around \$1.2 billion. "Certainly, we're not where we were," Burch admits.

Tellingly, neither will say whether Tory Burch is still profitable — or how much of a loss it has incurred. According to Roussel, the company carries "reasonable debt." The sales reduction, along with lesser valuations among publicly traded competitors, has lowered Forbes' estimated value of Burch's 28.3% stake to \$500 million, down from \$800 million in 2019. We estimate that Burch, who has roughly a quarter-billion dollars in other assets, including cash and real estate, is worth \$750 million, good for No. 26 on Forbes' list of America's Richest Self-Made Women. Forbes deemed Burch a billionaire from 2013 through 2015, before she fell from the ranks as valuations of publicly traded fashion brands dropped.


But she's still in business, and the moves she and Roussel

have made augur well for the long term. Roussel says the company is more prepared for future shutdowns and will continue to adapt its supply chain as necessary. While the pandemic has accelerated broader trends toward casual apparel, Burch says she still sees women wanting to dress up and experience joy in tough times. Adds Roussel: "We have iconic investment products, products that are timeless. You buy it, you know you can wear it anytime. [That] is how you get out of the crisis." To underscore it, Roussel and Burch are

expanding their footprint again, albeit more cautiously, with plans to open three new stores in Canada as well as one in Australia and two in China before the end of the year. In early 2021, the company will launch a website for customers in China, and do the same for Hong Kong, Singapore, Australia and Brazil in the second half of next year.

"Would you buy into Goldman Sachs on the eve of the financial crisis in 2008 or 2009? The answer would be no, probably not, if you had a crystal ball," says Byron Trott, founder of investment and advisory firm BDT Capital Partners, a minority shareholder.

"But going through the pandemic, going through the cycles that have occurred in the last eight years of our investment, Tory's business has been really resilient from a financial perspective."

That resilience, though, now comes paired with battle-hardened perspective. "If the crisis had lasted longer, with all our stores closed, it would have been a different story, obviously," Roussel says. "We're still in the middle of it, and who knows what's around the corner." 

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We have iconic investment products, products that are timeless. You buy it, you know you can wear it anytime. [That] is how you get out of the crisis.

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Survivors And Thrivers

Small businesses that saw opportunity in the Covid-19 pandemic and are making it work.

BY CHANEL RETIEF



C OVID-19 MAY HAVE taken a toll on the economy but some entrepreneurs sought to see the silver lining in dark clouds, turning ideas into viable businesses with small teams and bigger dreams. They are local and proud, creating products relevant for today. In one of the most disruptive times in history, they chose risky paths and pandemic-proof products that will possibly outlive Covid-19. 

KYALLI SKIN**Launch:** June 2020

Touching on a childhood spent traveling with her father, the Nigerian-born, 31-year-old founder of KYALLI SKIN, Charis Udeh, tells the story of how she was inspired by the luminosity of the Hausa-Fulani women of sub-Saharan Africa. Based in London, Udeh makes skin products mostly consisting of the West African Yakuwa plant extract known as an anti-ageing potion.

“I spent my childhood in Lagos and moved to London when I was 16. When I moved here, that was my proper first experience with different types of weather conditions. I grew up with bad acne,” Udeh begins.

“It became worse when I moved because I started getting itchy skin [and] dry patches. But as usual, when I had an issue, I would go to the shops, buy whatever fixes the problem and that was it.”

When nothing seemed to work, Udeh came up with the idea of creating a product that could help all people with skin problems. At the time, Udeh was a consultant at Ernst & Young. It was in the kitchen of her home in London where her mother introduced her to a recipe created and used by both her and her mother.

“She showed me what to do, I used it. And it was a miracle.”

With Covid-19, business suffered a slow start but Udeh was determined that there was nothing else she would rather be doing than creating products beneficial for the skin and that do not contain harmful ingredients.

“Now we’re in a bear market but that doesn’t mean we’re never going to recover. So you can’t plan to expect to not recover, the economy will still boost itself, we’re laying our foundations... As we grow, we will be evolving...” Udeh says with utmost hope.

According to *Stats SA*, more than 2.3 million people lost their jobs in South Africa between March and April 2020. By November 2020, over 11 million working-age South Africans were unemployed.



“**You can’t plan to expect to not recover, the economy will still boost itself.**”

ConnectEd

Launch: October 2020

One of the biggest knocks of Covid-19 has been on education. Schools and colleges were forced to shut temporarily and eventually move classes online. Some schools will only reopen now, as in Kenya where institutions have been shut since March last year.

It was in these turbulent times that ConnectED was born, with independent Johannesburg school, Bridge House, and ed-tech company, Digemy, joining forces.

As Kobus Louw, CEO of Digemy, explains: “The adaptive learning approach provided by Digemy and utilized by ConnectEd addresses both of these issues. The ConnectEd platform is powered by neuroscientific algorithms that identify each student’s knowledge gaps and adapt

the repetition of questions and content accordingly, providing a tailored and effective personalized learning plan. The result: a decrease in time spent learning and an increase in retention.”

Passionate about education, Louw says that Covid-19 has presented an opportunity, especially in Africa, to transform education so that it is more accessible to people even in remote parts of the world.

“The biggest issue we have currently in education is that there’s a lot of content out there. If you have four math classes that are matric, I have to be in the same classroom over and over and over again, right? And that’s not the optimal use of time. So the teachers are spending time on things they shouldn’t be spending on because now, they’re not automating that process,” Louw states, hoping there will be plentiful innovations in the world of education.



“**Neuroscientific algorithms that identify each student’s knowledge gaps and adapt the repetition of questions and content accordingly.**”



The Complexion Company

Launch: March 2020

The Complexion Company, an “eco-luxury African wellness and clean beauty solutions company”, was founded by South African-born Nomshado Michelle Baca. Heavily influenced by her childhood in Johannesburg, the London-based Baca’s brand is inspired by African-native historical and cultural rituals, paired with the use of indigenous ingredients to enhance wellness.

“In my opinion, African heritage beauty is not a sort of an isolated experience, it’s a shared experience. Bringing that element of community back to beauty was important. And that was the

part which would help people connect and feel recognized and not tokenized or fetishized, or abused in any way, but deserve to be genuinely seen,” Baca says.

Starting a business at the start of a global pandemic proved to be very “quiet and difficult”, as Baca did not have much of a budget, to begin with.

“Having to go to a predominantly white male financial world and ask for money for black female-owned business was impossible,” Baca says. “I sat in 60 meetings and kept being told no. And to be honest, I do feel like we are measured more harshly...”

But due to her emphasis on being black-owned during the time of movements such as #BlackLivesMatter, her business model attracted influencers, customers and funders.

“There just seems to be what I say a black woman-shaped space within premium beauty, which has not been filled. I am glad to play a part in filling it,” Baca says.

“**Bringing that element of community back to beauty was important.**”

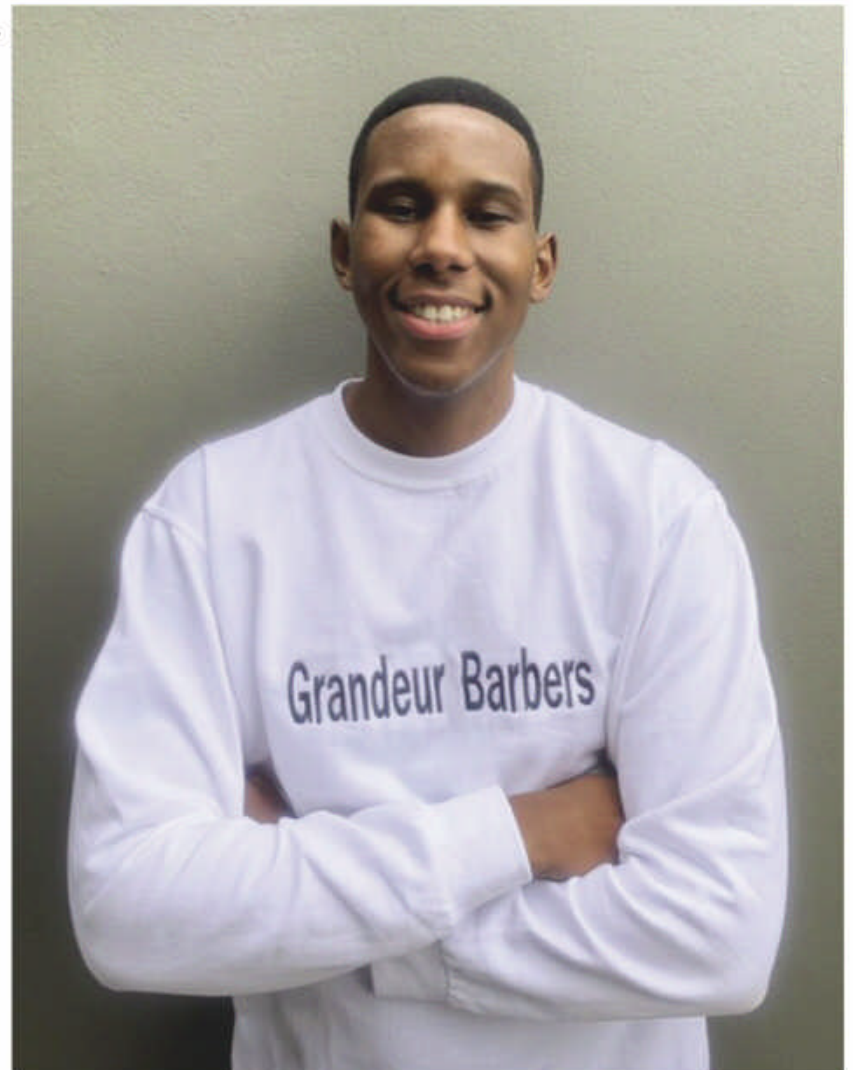
reOS**Launch:** September 2020

ReOS is a South African prop-tech startup with a management platform for rental professionals to help ease the hassles of their work. Harnessing the latest technologies, reOS automates two-thirds of monthly tasks, including invoicing, collections, payments, communications, reporting, and asset performance updates, amongst others. This is all done securely with banking grade encryption and a comprehensive audit trail, supported by a robust private blockchain.

Founder Craig Buckley further explains that though intermediaries have an essential role to play, the technology available to them hasn't fundamentally evolved over the past decade to accommodate that role, even with the major leaps in fintech capabilities across other industries.

"This has resulted in professional rental companies tending to reach a 'growth ceiling', constraining the experience of their customers and the prospects for their business," Buckley explains.

"With the reOS solution, we're looking to truly break the shackles and shift the professionally managed market share from 30% to upwards of 50%."

**Grandeur Barbers****Launch:** September 2020

Ever since the advent of Covid-19, the idea of visiting your local salon has not been as compelling or appealing as before. But what if the salon came to you at home? Enter Grandeur Barbers, a mobile barber shop, designed for that very purpose. A risky move, but one that made the cut.

Its founder, Johannesburg-based Iviwe Dabula, says: "We knew that Covid was going to be around for a while. And on top of that, it is changing people behavior. So even when things settle down, we will still be providing a service that people want because a lot of people are going to be concerned about hygiene and will be placing a lot of emphasis on that."

What started as a conversation between a man and his favorite barber, Adam Shabangu, turned into a business model that they say could even outlast Covid-19.

"We spoke about it for about three to four years every time I went for a haircut," Dabula adds. "Then, when the lockdown started, we started, we tried it out with friends and family. And yes, it took time, energy, and my capital. But I have always believed in what we're trying to do."

FloatPays

Launch: February 2020

“Did you know that 77% of South Africans are struggling financially due to the impact of the Covid-19 crisis?” says FloatPays founder Simon Ward.

Ward adds that 86% of consumers are concerned about their ability to pay their current bills and loans. From that percentage, 21% are planning to borrow the money from family and friends, 8% opting to take out a personal loan, and 19% have no idea how they will pay.

“Ninety-nine percent of the people we were speaking to through our research, were saying they were struggling with things as simple as putting food on the table or paying for unexpected school fees. Education was a big thing within that or paying for transport to get to work. So really, basic life essentials. And so

very sad stories coming out,” Ward says.

Enter FloatPays, which he says is an all-in-one solution for employees’ financial wellbeing and inclusion. Through early access to earned wages, financial literacy training, and budget planning tools, employees gain control of their finances, learn how to plan for expenses, and get bills paid on time.

The app is also available on Apple and Android cellphones.

“While employers might consider providing financial assistance to help their employees climb out of the debt hole, this can lead to harming employee relations and have potential cost ramifications should the employee be unreliable with repayments, or worse, disappear with the money,” Ward explains.

“We aim to create positive change by lifting individuals from their current debt spirals toward better financial solutions and ultimately the freedom to build a wealthier, healthier future.”



“**Create positive change by lifting individuals from their current debt spirals toward better financial solutions.**”



“**I’m the marketer, the distributor, the social media manager, I am essentially everything.**”

LBK Collections

Launch: August 2020

Though social media has always been a powerful tool for promoting businesses and products, the year of the pandemic also paved the way for online retail riches. This led to software changes to applications to make them more convenient for consumers to access products. In May 2020, Instagram launched Instagram Shops on its platform as a way of helping businesses shift their models during the Covid-19 crisis.

Many entrepreneurs were using Instagram Shops to allow their businesses and products to thrive. One of them was LBK Collections, which sells magnetic eye-lashes and eyeliners. Its Diepkloof-based founder Khwezi Bovula says that using social media to sell her products has proven to be most effective, especially during the lockdown.

“I’m currently the only team I have

and social media, together with the online store, have allowed me to do so. I am the marketer, the distributor, the social media manager, I am essentially everything. It’s overwhelming, yes, but the tools Facebook/Instagram Shops offer are so helpful for businesses that I highly recommend using them,” she says.

Using the social media shops during lockdown was helpful especially since Bovula needed another stream of income and saw a gap in the market for easy application eye-lashes.

“These lashes are very popular in the UK and USA but they’re not attainable in South Africa,” Bovula says. “These lashes go for almost R500 (\$33) and that doesn’t even include shipping. So I wanted people to have access to them for a more affordable price. And I feel like here in South Africa, the beauty industry is continuously growing and now especially, is the perfect time to be part of that growth.”



LBB Skin

First big sale: July 2020

Born in Nigeria, Nnenna Onuba spent 16 years as an investment banker before deciding to embark on a journey of entrepreneurship just before the Covid-19 pandemic took over the world.

“LBB [was born] during the time I was a banker. I had the hobby of recreating spas [at home] for myself using products with African ingredients to [help me] relax,” Onuba says.

LBB Skin, meaning ‘Life is Beautiful in Balance’, was designed to help women on-the-go, consisting of portable products, prebiotic wipes and a moisturizing stick to hydrate and illuminate dry skin. This was created for travelers who couldn’t access sinks or even a bathroom. However, when Covid struck, there was apprehension the brand would not do well as traveling was either limited or banned globally.

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When lockdown happened, more than anything, the importance of beauty and self-care came up.

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“March, in particular, was supposed to be a significant moment for us,” Onuba says. “My products are meant for people who live their lives to the fullest and are out and about. But what we saw was this was not just about traveling, it was about products that fit easily into your life, even during a stressful time.”

The black-owned “holistic” business found that people used the product more from home as it had ingredients that could relieve stress and anxiety.

“When lockdown happened, more than anything, the importance of beauty and self-care came up and people were using things like an oil, which is indulgent, and we’re all washing our hands a lot more,” she adds.

Joy Des Fountain, co-CEO and founder of myFanPark



CELEBS TO THE RESCUE

It’s not always a company chooses happiness as a currency.

When a young couple had their wedding canceled due to the pandemic, to cheer them up, myFanPark garnered together local celebrities such as singer Kurt Darren and rugby players Bryan Habana and Jean de Villiers, to send them celebratory messages.

myFanPark is a platform that allows people to connect with those they admire, like sports stars, singers, actors, or influencers, through personalized video messages. Launched in 2019, Covid allowed this platform to “put smiles on people’s faces” in a different way.

“With Covid, it has made physical interaction almost illegal,” says Joy Des Fountain, co-CEO and founder of myFanPark to FORBES AFRICA. “We’ve allowed people to connect with talent in a real way. But more so, with Covid, the digital era has really opened up the world.”



The Plant, The Planet And A Plan

Nicola Kavhu is serving up a new menu of realities and possibilities in the 21st century African diet, promoting healthy eating while respecting and protecting the creatures that share our planet.

BY ALASTAIR HAGGER



AFRICANS LOVE THEIR MEAT. AT LEAST that's the reductive, persistent narrative, even when the data tells a more complicated story: according to the United Nations' Food and Agriculture Organization (FAO), average meat consumption in African countries per capita is around 20kg annually, compared to approximately 70kg in South America, Europe and the United States, and a staggering 100kg or more in Australia.

On a planet where the mass of animals raised for slaughter outweighs wildlife by a factor of 15 to 1, associated FAO data also reminds us of the environmental impact of these industries and the related threat to the ecosystems of developing countries: meat and dairy production now accounts for 14.5% of greenhouse gas emissions worldwide.

One young African chef is serving up an appetizing alternative: a new menu of realities and possibilities in the 21st century African diet, a way of promoting healthy eating while respecting and

Akashinga rangers with Nicola Kavhu aka Chef Cola (right)



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It is about unlearning and re-educating people, especially about their myths and beliefs when it comes to veganism.

protecting the creatures that share our world.

Nicola Kavhu, aka Chef Cola, is the creator and owner of African Vegan on a Budget, a brand based in Zimbabwe and South Africa that “focuses on spreading the word on veganism through entrepreneurial projects, collaborations and content creation”.

A Zimbabwean raised in the heart of New York – “my palate danced when I was growing up!” – Cola then trained at the renowned PLANT café in Cape Town, South Africa, where she rose to become head chef before striking out on her own

to create African Vegan on a Budget in 2016.

“The idea was to actively promote the reality that people can thrive on a healthy plant-based diet on a budget,” she says.

“To prove that a nutritious plant-based meal could feed an average family for less. Over three years, I repeatedly showcased this by hosting dinners in Harare and Cape Town for twenty to thirty people, with three courses and dessert, on a budget of between two and three hundred US dollars. This became my business model. It is about unlearning and re-educating people, especially about their myths and beliefs when it comes to veganism.”

The Instagram-nourished success of these suppers caught the attention of Damien Mander, founder of the International Anti-Poaching Foundation (IAPF), and its all-female vegan anti-poaching unit Akashinga (“The Brave Ones”).

Cola and Mander subsequently established the Back to Black Roots Kitchen and Garden, which provides three vegan meals a day to over 170 rangers stationed in the IAPF camp in Nyamakati, Zimbabwe.

“So first day, walking into the kitchen, change was not really wanted,” Cola says.

“But I didn’t give up. It took me about a year and a half to balance the reason why I was there as a trained chef, and the reason why I was there for them. Our job is to fuel the rangers so that they are able to do their job effectively. They prefer eating indigenous ingredients, so I made an effort to find out what ingredients are available in their community at that particular season, and made sure we incorporate that into their diet.”

This patience and co-operative vision is beginning to pay dividends, and developing



into a rubric that similar organizations might be encouraged to emulate.

“We have a lot of work to do yet, but we’re getting there,” she says.

“I have a team of six chefs, all trained by African Vegan on a Budget on how to prepare plant-based nutritious meals. The project we are creating is a business model I feel you should follow if you are in the anti-poaching industry. It’s contradictory to go and protect animals in the bush the whole day and night and then come back to the camp and eat one.”


Like those of the bulk of the food service industry, her other ambitions have had to become adaptive and agile in this pandemic-ravaged economic climate.

“It’s changed my operations in ways I didn’t realize I would experience at this stage of my business,” she says.

“It’s made me think like a large business owner, and see how they are still managing to operate during the pandemic. African Vegan on a Budget has managed to stay afloat as a private limited company, and that’s by juggling different aspects of the business: we have our new line of chef jackets, we have clients who want dinners privately (pandemic restrictions allowing), and we have our work with the IAPF, so thank God things have been okay.”

This enforced reflection has also reinforced her determination to value and nurture the team that has joined her on this transformative journey.

“Operations and plans change every day. I’m literally on my toes, still trying to build a team, and take care of them,” she says.

“So this pandemic has taught me to be selfless. In business! That’s so weird!” 

Piecing Africa Together

London-based Ghanaian entrepreneur and computer science specialist Patrick Adom is inducting children into the fascinating world of jigsaw puzzles teaching them African culture one piece at a time.

BY PEACE HYDE



Patrick Adom

A S COUNTRIES begin to grapple with the second wave of the coronavirus pandemic, rapid adoption of activities outside the traditional content-streaming platforms is now beginning to gain traction.

The puzzles market is one such.

Focusing on jigsaw and 3D puzzles as well as board games, it was estimated to be worth a staggering \$11.88 billion globally in 2019 and on track to grow at a compound annual growth rate of 18.6% from 2020 to 2027, according to Grand View Research.

The lockdowns implemented the world over spelled disaster for many who lost their jobs and livelihoods.

But Patrick Adom, a computer science specialist, saw a silver lining. Inspired by his daughter, the IT professional decided to see it as an opportunity and take a chunk of the lucrative puzzles market with his African-inspired creation, Very Puzzled.

Photos supplied



Known for its success in improved visual and enhanced cognitive skills, Adom wanted to create a jigsaw concept that not only helped people learn more about Africa and the African diaspora, but also something that was fun and engaging for the whole family.

“I wanted children to be able to also learn without realizing that they are learning anything, and [offer] something the family can do together and start a conversation and use that to do further exploration on their own,” says Adom.

After graduating from Kingston University in the United Kingdom (UK), where he studied Computer and Information Systems in 2000, Adom continued his further education with an MBA in general management from Liverpool University before working in various roles within the IT industry.

But throughout his career, the entrepreneurial bug which bit him when in secondary school, where he would buy and sell hip-hop posters to his fellow classmates, was always looking for an awakening.

“I saw that there were not a lot of things around my daughter that focused on her cultural heritage and I thought jigsaw puzzles were an innovative route that nobody was doing. I found an illustrator and it so happened that the illustrator had a map of Africa that was very bright and colorful that resonated with me and so I reached out and asked if it could be customized for me.

“They agreed and I paid them and they delivered the customization I wanted. I then looked on a platform called Alibaba and from there, I was able to secure a manufacturer in China. I made 100 pieces to test the market and reached out to black-owned shops in London to generate buzz about the products and also using Instagram and social media to let people know about the product,” says Adom.


His hard work paid off.

Very soon, the products were out and people were buying it.

Now, Adom has his eyes set on raising further investment and funding to expand the company’s unique offering. He has begun drilling down and creating puzzles for other countries like his hometown Ghana, South Africa and Jamaica.

“Africans are patriotic and want to pass down their heritage to their family. So, our sales have grown and we continue to add more stockists to our list and that helps grow the business as well. We reached the bold decision to approach a number of premiership clubs to make their own jigsaw puzzles for them featuring their intellectual property and we got licensing agreements with four premiership clubs so that was a huge

success for us,” says Adom.

The move comes at a cost as Adom has to pay a licensing fee to the clubs, a risky move but one he needs to make to help broaden the appeal to a wider pool of consumers, key to draw in the ever-elusive tranche of investors who will eventually help his business scale, and he can make his own indelible mark on the map of Africa. 

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Africans are patriotic and want to pass down their heritage to their family. So, our sales have grown..



World Vision is a Christian humanitarian organisation operating in nearly 100 countries and dedicated to helping the most vulnerable children overcome poverty and experience fullness of life.

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Inspiration From Where Life Happens

Anjali Borkhataria is trying to change the narrative of fashion in Tanzania with a local brand aimed at everyone.

BY INAARA GANGJI



Anjali Borkhataria

IT WAS ONE OF THOSE RARE OCCASIONS when bold neon colors, oversized white outdoor workwear and bright uncoordinated prints made their way on to the ramps of the annual Swahili Fashion Week in Tanzania.

Local fashion designer, Anjali Borkhataria's brand, EK AN TIK, its name inspired by Hindu scriptures, was a breath of fresh air in an industry that has been assumed to be set in its ways.

"I believe African fashion is not limited to the printed patterns or kitenge, but we have so much to work with... there can definitely be more diverse design, but still have that African signature," says Borkhataria to FORBES AFRICA.

Borkhataria won Innovative Designer of the Year at this year's fashion week and her brand has been worn by celebrities across the region and the African continent including Kenyan musician Tanasha Donna, Tanzanian celebrity Romy Jons and singer Mbosso, and has also

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There can definitely be more diverse design, but still have that African signature.

appeared in a music video by popular Tanzanian singer Diamond Platnumz, featuring Congolese singer Koffi Olomide.

But Borkhataria believes her brand is not made only for celebrities.

Her first collection is workwear inspired by regular businessmen, electricians and construction industry workers. It's also unisex, oversized and flowing.

And while she does not prefer comparing herself to other designers in the region because creativity is not a competition for her, she believes her designs inspired by local street culture set her apart.

"Because, life happens on the streets, the streets influence me more than anything. So, I try to imply that into my design," says the 23-year-old who has been a designer for the last three years.

However, despite having studied at the Cape Town College of Fashion Design in South Africa, when it comes to the creative process, she does not believe in doing things in one way or the other.

Her second collection, showcased at the latest edition of



the Swahili Fashion Week, was inspired by games.

Titled 'GameScape', the inspiration for it came from her father, who sells cars, batteries and tyres. It was also inspired by the Covid-19 pandemic as everybody sat at home and played games.

"I don't know what my creative process looks like because sometimes it's a movie, sometimes it's a piece of art, sometimes it's nothing," she exudes.

The tight timeframes involved in creating collections hinder the creative process too, with usually only five weeks between conception and production. She is not a fan of sketching either, as she goes with flow, not following a typical or organized process. This saves her time and sets realistic expectations, in her opinion.

Borkhataria also does all her production in-house and on her own. And she hopes that the independent career path she has taken by returning home to Tanzania from South Africa, inspires other young people in her country, no matter their background, to also be able to pursue fashion if they are so keen.

She also credits her success to her supportive parents.

All of this may make it seem like fashion is fun, and it is for her, but the industry is not free of challenges, she opines. She thinks brands create so many collections every year, but there aren't enough people who can afford to wear them.

"So, I wish fashion would go back a little bit. Today, everybody thinks that they know what fashion is, but they don't know the

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I don't know what my creative process looks like because sometimes it's a movie, sometimes it's a piece of art, sometimes it's nothing.”

main essence. For instance, I like music, but it's not like I'm going to actually make it. So, I don't like it when people buy a dress from H&M for cheap and they think, 'I know what fashion is'... I definitely want to change that," she adds.

This is the reason why she wants high-quality local brands to reach the most people and hopes to have a local store of her own, as she currently works and sells from home.

With all these aspirations, and while being a young, South Asian-origin female designer, doing everything on her own is not easy, she is humbled and inspired by being able to create fashion at home in Tanzania.

"It is challenging but like in one way, it has made me very open-minded. Because we are surrounded with mixed backgrounds... I think that has made me very open to different types of people. It just signifies there is hope," she says, with faith in her craft and optimism for the world. **F**



Can Empathy Be Automated?

The changing relationship between human beings and intelligent machines in the workplace.

BY TIANA CLINE

IT'S SIMPLE: BEING CONNECTED 24X7 BLURS WORK-life boundaries. And with so many employees working from home on a semi-permanent basis, remote work life in the time of the coronavirus pandemic has been a brilliant move for some corporates. Google, for example, are letting their employees work from home until the middle of 2021; yet, others are struggling to keep track of the productivity and wellbeing of their workforce. If anything, the pandemic has

exacerbated workplace mental health issues because it has propelled everyone's personal life into the spotlight, showing where and how people live as well as the challenges they face when working from home.

So the question remains – would you feel more comfortable sharing your personal, work-from-home issues to human resources or to a machine? A study by Oracle and Workplace Intelligence found that 68% of people would prefer to talk to a

robot over their manager about stress and anxiety at work and 80% of people are open to having a robot as a therapist or counsellor.

“People are no longer afraid of the robots. They have experienced how artificial intelligence and machine learning can improve the way they work in a very pragmatic way. And the more they use these technologies, the more excited they are about them,” says Emily He, Oracle’s Senior Vice President of the human capital management cloud business group.

Using technological advances like artificial intelligence (AI) to automate monotonous tasks and reduce stress can prevent burnout. According to Oracle, technology can also help to scale mental health support in the workplace, making organizations come across as more empathetic.

“Empathy is built into our prefrontal cortex. It’s an evolutionary skill and it’s within us as human beings,” explains Mimi Nicklin, a business strategist, empathy expert and author of *Softening the Edge: Empathy: How Humanity’s Oldest Leadership Trait is Changing Our World*.

“Technology can drive empathy in many ways. For example, virtual reality is an incredible tool that has allowed people to empathize with those that are nothing like them. Microsoft is using technology to create apps and interventions that allow us to connect with each other better, whether



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Empathy is built into our prefrontal cortex. It’s an evolutionary skill and it’s within us as human beings.

– Mimi Nicklin

68% of people would prefer to talk to a robot over their manager about stress and anxiety at work and 80% of people are open to having a robot as a therapist or counselor.

Research into artificial empathy (sometimes called computational empathy) is currently underway at MIT Media Lab with a project called Deep Empathy which uses AI to help people see things differently, contextually.

that’s people with special needs or apps like Microsoft Teams. In some ways, it makes us further apart but in other ways, you’re able to use those screens in the same way that you can if you were sitting next to that person in a cafe, making eye contact.”

Online communication is not always detrimental to empathy because empathy can influence the way we use technology, allowing us to more easily foster an emotional connection. Implementing softscaling, the empathic use of data, shows how technology can grow businesses when stakeholders apply data compassionately, making empathy a part of the business process.

In a remote workplace, where face-to-face conversations have been replaced by video, it is often difficult to read social cues. Research into artificial empathy (sometimes called computational empathy) is currently underway at MIT Media Lab with a project called Deep Empathy which uses AI to help people see things differently, contextually. The same way a human being learns empathy, AI can be taught to develop systems that are more intuitive. And in more human-centered workplaces, like the medical or personal robotics industry, this could be a game-changer.

“There’s never been a more important time for us to have this discussion around why we need higher empathy, higher connectivity between people and certainly within our businesses,” says Nicklin.

“As we look to rebuild our businesses in 2021, that need to create cohesive, connected, motivated teams is critical, especially as organisations try to balance going back to the office, reintegrating their teams, balancing home and office work... we know that in organizations where empathy is higher, when emotional intelligence is high, we see higher levels of output, improved performance, higher motivation. And we see higher levels of cognitive thinking so things like innovation, creativity, design, all of those facets go up in organizations that value and imbue empathy into their culture.”

COVID-Inspired Consumer Tech?

A preview of some of the cool gadgets being rolled out by global players this year.

BY NAFISA AKABOR

IN LIGHT OF THE PANDEMIC, THE WORLD'S LARGEST consumer electronics show held annually in Las Vegas, which saw well over 171,000 attendees in 2020 – went all digital this year.

At CES 2021, we saw a mix of interesting prototypes and products. Naturally, it included ways to combat Covid-19, such as body sensors from BioButton to detect flu-like symptoms; the MaskFone with built-in microphone for calls without removing a mask; and Alarm.com's touchless video doorbell to help reduce the transmission of bacteria.

As expected, there were plenty of robots but with UV lights to disinfect high-traffic areas such as the Coro-Bot, LG's CLOi and the Adibot.

Gaming hardware company Razer introduced a prototype N95 mask called Project Hazel that is waterproof, scratch-resistant and transparent, which supports RGB lights that shine on the mouth. It features voice projection and can filter 95% of airborne particles.

Interestingly, the Metropolitan Museum of Art went virtual through the launch of The Met Unframed. It is a free smartphone-only experience of a digitally rendered art gallery including iconic masterpieces and the ability to play augmented reality games. It runs until mid-February.

There were also rollable phone screens showcased by LG and TLC, both with displays that expand as needed. However, the hype at CES this year was around updated television screens.

TVs unveiled at CES 2021 included brighter OLED screens, 8K support, laser TVs, mini-LED and micro-LED. The main difference between mini and micro LED is that the former can have more packed together in the same area and is backlit, whereas the latter is even smaller but self-illuminating.

HiSense unveiled a TriChroma Laser projection TV that displays "purer colors", which is an improvement over RGB color and has brighter pixels, according to the company.

It also claims the technology offers 50% better color than cinemas, an industry that has been heavily impacted by the pandemic.

Meanwhile, Sony's 2021 TV line-up will feature 8K support, OLEDs and 4K LED models. Bravias will be powered by its new Cognitive Processor XR that can divide the screen into various zones to detect its focal point, and analyze sound positioning to match what appears on screen.

The company says that while conventional AI can only detect and analyze picture elements like color, contrast and detail individually, the

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For those working from home, LG's UltraFine Monitors are renowned for offering immersive viewing, but they also shine as productivity powerhouses, delivering a flexible workstation experience and easy setup.

new processor can cross-analyze an array of elements at once, like our brain does. Sony is also the first manufacturer to announce support for the new Google TV platform, the successor to Android TV.


LG, on the other hand, has been busy with NanoCell TVs, 4K OLED monitors, QNED mini LED and second-generation panels called OLED Evo. It also announced a futuristic concept transparent TV that can be used in the bedroom, as a restaurant partition or on public transport to display route information.

The company will bring most of the line-up to South Africa, including the top of the range 8K Z1, the GX Gallery OLED and the 48-inch C1 model that was previously not available in the region, which is best for movies, sports and gaming.

Lance Berger, sales head for home entertainment at LG Electronics South Africa, says its 4K OLED monitors are suited for productivity, entertainment and gaming. "For those working from home, LG's UltraFine Monitors are renowned for offering immersive viewing, but they also shine as productivity powerhouses, delivering a flexible workstation experience and easy setup."

Berger says a USB-C port allows a 4K video display, data transfer and laptop/mobile device charging all at the same time over a single cable, which helps reduce cord clutter and increase efficiency.

Late in 2020, LG announced an exclusive partnership with Microsoft's new Xbox Series X gaming console. This year, LG will offer a 'game optimizer' feature that fine-tunes the picture for consoles and PCs

Berger says the feature gives gamers fast access to tweaks one would be likely to use, such as lag reduction and variable refresh rate. "Gamers can enable AI-based sound tuning for specific genres – it will adjust for a first-person shooter, role-playing game or even a real-time strategy title." 

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PANDEMIC-PROOF

Valentine Dzvova, the CEO of African Equity Empowerment Investments, strategically navigated rough waters when Covid hit leading to financial growth at a challenging time.

BY SIMONE SRIBRATH

AFRICAN EQUITY EMPOWERMENT INVESTMENTS (AEEI), A listed black-owned investments holding company situated in southern Africa, faced a turbulent last quarter, but despite this, is probably one of the few companies in a pandemic-stricken year to have recorded growth.

The captain at its helm, Valentine Dzvova, took over as Chief Executive Officer of AEEI last year, and saw it grow by 44% (\$2.2 billion) and its basic earnings per share increase by 101.3%.

In an interview with FORBES AFRICA in December, Dzvova reveals that the strength of AEEI has been the diversity of its portfolio with companies within the sectors of fishing, Information Technology, tourism, health and beauty.

“Having diversity is absolutely vital to weather any storm, with the most recent example being the storm brought on by the Covid-19 pandemic,” says Dzvova.

From humble beginnings in Zimbabwe, her career has scaled new heights with the AEEI role.

Having come in when interim results were due and the company’s Chief Financial Officer was leaving, Dzvova dove straight in at the deep end.

“It also helps that I’m not a stranger to AEEI because during my years as an auditor clerk and auditor manager, AEEI was my client as well, so it was almost like rejoining family because they’ve known me from when my career began back in 2007,” she says.

Rising through the ranks at PKF International (a global network of accountancy firms) saw Dzvova familiarizing herself with the likes of AEEI as she was promoted to supervisor and then manager shortly after completing her articles.

Under her leadership in a challenging year, AEEI ensured no jobs were lost during the Covid-19-induced lockdown period as operational costs were streamlined and these practices were also encouraged amongst AEEI’s suppliers and partners.

Balancing her current role with home-life has been no easy task, as she states: “I have to be very strategic about how I spend my time, I have to work late at night because you know, during the day, I would have mini emergencies at home that would need my attention, so certainly it has been challenging.”

Dzvova was inspired by ‘career days’ in high school and seeing other girls pursuing accounting made her want to do the same. And soon, she



attained the right academic credentials for the profession.

Joining AEEI was the culmination of her determination and tenacity.

“The previous CEO and his team did a fantastic job so I joined with a very solid foundation already in place,” she says of her predecessor at AEEI.

And about the future, she says: “We are looking at offloading some of our smaller investments so we can really focus on the major ones which are Information Technology and fishing; these are the areas where we feel our strength lies.”

As Dzvova reflects on her growth strategy, she emphasizes the need for one thing – liquidity.

“Cash is king and there has never been a time that this has been more true than now. With lockdown, businesses weren’t able to trade as normal, so revenue wasn’t coming in but there were still employees and suppliers to pay, so if one didn’t have cash on hand, you were basically dead in the water which is why a lot of businesses closed.”

It is clear she brings the same enthusiasm for business to everything she believes in, namely gender equality.

“Certainly as women, we wear many different hats at the same time and as a result, there is so much more responsibility on us and we just have to work that much harder for everything to fall into place. As women, we have our focus pulled in different directions at different things and it takes a lot of hard work to master this and it’s all the nasty back-ends that no one else sees which is where all this hard work happens,” she says about juggling multiple roles. **F**



The World's New Sport

As the coronavirus turned the globe upside down sending everyone home, many turned to pandemic gaming as a way to get through the isolation and explore a world outside of their homes.

BY TIANA CLINE

“I SENT MY GIRLFRIEND A VIRTUAL love letter. I proposed and we had a full-on virtual *Animal Crossing* engagement – it took me months to put together.”

*“I couldn’t go down to Durban at the end of the year, so my friends and I met up in *Fortnite* instead.”*

*“Once a week, we fire up *PGA Tour* on the Xbox for a family four-ball.”*

Work? Remote. Sports? Cancelled. Travel? On hold. School? Virtual. As the coronavirus outbreak turned the world upside down sending everyone home, many people turned to pandemic gaming as a way to get through the isolation.

Google’s global 2020 gaming survey showed

that 92 million new players from emerging markets entered the ecosystem last year, most of them via their mobile phones. What’s more is that 40% of new gamers in the study said that they’re likely to keep playing once the pandemic is over. Online, via a console, computer or mobile phone, virtual worlds are what made self-quarantining bearable for millions. Interacting through video games became a much-needed social lifeline: “Gaming is inherently a social medium. Games like *Fortnite* and *Call of Duty* are designed with that as a core gameplay mechanic. A lot of people adopted free-to-play games. Discord and other gaming-related chat services became the fun place to hang out while Zoom was the workplace,” explains Grant Hinds, a



Grant Hinds

gaming content creator based in Cape Town, South Africa.

Live-streaming – where gamers broadcast their gameplay for others to see online – also picked up dramatically during the pandemic. Twitch, the largest live-streaming platform in the world, grew over 100% in 2020 – people watched 4.74 billion hours of gameplay on Twitch in the last quarter of last year.

“Even if they didn’t game, live-streaming was a way to participate with that person, sit around and chat and meet people online. I know people who cook while watching my live-stream, there’s a regular crowd,” adds Hinds.

“Even if it isn’t a community-driven game, pandemic gaming gave people a sense of purpose. It’s more than just reading a book or watching a movie, it’s a participatory experience. People bought big, open world role-playing games to explore a universe outside of their homes.”

Globally, both brands and businesses found innovative ways of tapping into this growing online audience.

Google’s global 2020 gaming survey showed that 92 million new players from emerging markets entered the ecosystem last year, most of them via their mobile phones.

People watched 4.74 billion hours of gameplay on Twitch in the last quarter of last year.


American rapper, Travis Scott, collaborated with Epic Games (the developer behind *Fortnite*) to put together a digital concert that over 12.3 million *Fortnite* players tuned into, at the same time, to watch a virtual performance. To combat Zoom fatigue, business executives took to open-world games like *Red Dead Redemption* and *Grand Theft Auto* to conduct meetings. Luxury Spanish fashion brand, Balenciaga, showcased their fall 2021 collection in a purpose-built video game called *Afterworld: The Age of Tomorrow*. Marc Jacobs, Valentino and Anna Sui all released signature in-game 2020 looks in *Animal Crossing: New Horizons*, a wildly-popular island life simulation that became Nintendo’s fastest-selling title for the Switch console last year.

While the fashion industry is no stranger to the world of gaming – those who play Electronic Art’s *The Sims* franchise have been downloading designer apparel since the series first released back in 2000 – it has sparked interest in other sectors, such as tourism, put on halt by the pandemic and looking for alternate ways to capture a locked-down audience.

Singapore’s Sentosa Development Corporation built *Sentosa Crossing* inside the world of *Animal Crossing*.

An experimental exercise in tourism marketing, players could take a virtual flight to a digital version of the resort island, hopefully becoming inspired to visit it in real life at a later stage.

More recently, the Singapore Tourism Board took to *Pokémon GO*, creating 300 new PokéStops at popular hotels, retailers and eating establishments throughout the country in an effort to (safely) rebuild tourism by giving gamers a reason to visit local businesses.

While many games offer an escape to an alternate universe, others replicate the real-world, simulating (and supplementing) everyday life experiences. For many, pandemic gaming is about creating shared experiences and Covid-19 lockdown measures saw those new to the medium seeking alternate ways to socialize while staying indoors. Despite widespread economic instability caused by Covid-19, the global video game industry is thriving, reminding companies (and sometimes even countries) that there’s still a growing market of highly-engaged consumers out there. 

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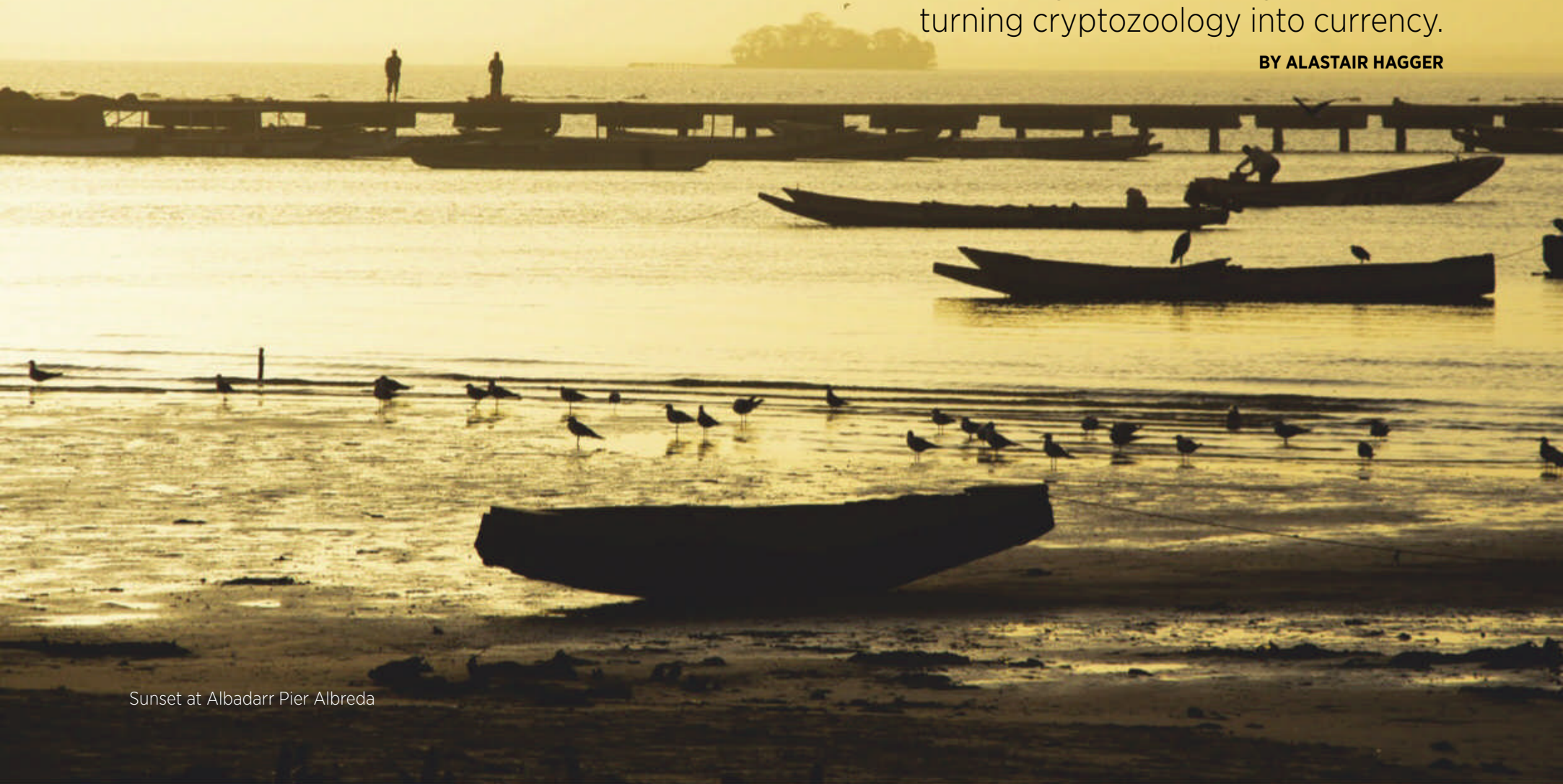
A lot of people adopted free-to-play games. Discord and other gaming-related chat services became the fun place to hang out while Zoom was the workplace.

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A RIVER, A MONSTER AND RESPONSIBLE TOURISM

An innovative Gambian initiative, several decades in the making, is at last ready to emerge from its long incubation, turning cryptozoology into currency.

BY ALASTAIR HAGGER



Sunset at Albadarr Pier Albreda

AS THE ROUGH BEAST THAT WAS 2020 slouches off into the past, a more benevolent creature is stirring. Some say it's a horned serpent, or a horse-giraffe-crocodile hybrid; others call it a fearsome dragon, or a rainbow-colored mystery that descends with the heavy rains.

It's the Ninki Nanka, and its powerful charisma could be a shot in the arm for the Gambian tourism industry in a post-Covid environment hungry for adventure with a conscience.

Tales of African cryptids are common across the continent:

the Congo River has its quasi-plesiosaur Mokélé-mbèmbé, Botswana has its village-stomping Kgogomodumo.

The swamp-dwelling Ninki Nanka of West African folklore is another frightening enigma, weaponized in the evening-stories of weary parents to deter curious children from venturing too far after dark.

There are still local fishermen who refuse to enter certain creeks, such is the Ninki Nanka's ancestral resonance. Some believe encounters spell certain death, unless the dragon is viewed in a mirror, but a scale recovered from its body unlocks a

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**If you know The Gambia,
it's nothing but its river. It's
us, really.**

– Adama Bah

magical wish for an adventurous survivor.

Now, in 2021, an innovative Gambian initiative, several decades in the making, is at last ready to emerge from its long incubation, turning cryptozoology into currency in a way that promises to deliver real-world benefits to local communities.

The idea of monetizing this myth into a creature-spotting ‘Ninki Nanka Trail’ began with the founders of Gambia River Excursions in the 1980s, and was introduced into the Gambia Tourism Board’s 2006 Master Plan by the current Chairman of the Institute of Travel and Tourism of The Gambia, Adama Bah.

“If you know The Gambia, it’s nothing but its river. It’s us, really,” he says.

“We’ve talked a lot about river-based tourism, but

never done it very well. The Gambia is known as a winter sun destination; what we have on the coast is mostly cheap leisure tourism, 10% or less of which will go upcountry. Many people nowadays want tourism which is more sensitive to culture and the environment. The way to make it beneficial to the population is to make sure tourists have another experience, where the product portfolio is diversified with ethno- and eco-tourism.”

Between 2010 and 2014, Commonwealth Scholarship funding allowed a group of Leeds Beckett University’s MSc in Responsible Tourism Management students to partner on the project with the University of the Gambia and the International Centre of Tourism West Africa. In 2013, Leeds Beckett staff, appointed by the Association of Small Scale Enterprises in Tourism, were able to begin a feasibility study, thanks to additional financial support from the World Bank, and in 2019, International Trade Centre funding for the Gambia Tourism Board and the Gambia Youth Empowerment Project pushed the plan into its crucial delivery phase.

“It’s been a lot more complicated than just putting together an itinerary,” says Leeds Beckett University’s Lucy McCombes, co-founder with Bah of the Ninki Nanka Encounters foundation, a charity supporting the development of community-based tourism in The Gambia. “It’s more about developing responsible



Ninki Nanka
Encounters boat trip

Photos by Ninki Nanka Encounters

tourism along the River Gambia, with all the partners involved. It's been very much a Gambian-led, organic process. What we have been trying to do is create an experience where tourists and local people can meet in a mutually beneficial way, learn about each other, and have a very positive cultural exchange, which is in contrast to a lot of the interaction that goes on in package holidays in resorts."

The Ninki Nanka Trail, officially launched by the Gambia Tourism Board in February 2020, is currently frozen in a kind of ready-for-purpose cryogenic suspension until the Covid-19 leviathan can finally be brought to its knees.

Once active again, it will feature visits to the Juffereh slavery museum at the birthplace of Kunta Kinte; cultural immersion experiences in the village of N'Demban; or exploration of the island of Janjanbureh, formerly Georgetown, and the UNESCO-recognized Wassu stone circles 25km to its north.

"The Gambians involved in this trail really wanted people to understand its diversity," says McCombes. "So we've carefully crafted the interpretation along the trail so that you can learn about the main ethnic groups that live in The Gambia, and the key characteristics of their culture. Tourists are going out into a more fragile environment in many ways. You want to make sure that you are encouraging more and more to go who do it right."

Travelers can choose to sleep in homestays along the route, or on specially-prepared boats under the mosquito nets and the stars; ornithologists will flock to the Bird Reserve in the Tanji National Park, an area famed for its 500 species of birds (and a rumored favorite haunt of the Ninki Nanka).

All of these offerings are tied into a broader vision which empowers local people, and gives them ownership of their incomes, as well as their folklore.

"If you start community-based tourism projects, you also

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We've carefully crafted the interpretation along the trail so that you can learn about the main ethnic groups that live in The Gambia, and the key characteristics of their culture. Tourists are going out into a more fragile environment in many ways.

– Lucy McCombes



Ndemban village tour

have to help those communities," says Bah.

"To help them develop their products, to get training, to build their capacity, and where necessary provide finances for projects they want to do that will also have an impact on the Ninki Nanka Trail."

Might the trail serve as a rubric, a template for other 'monster'-branded tourism initiatives elsewhere?

"That process of developing community-based tourism, of developing products and a trail to link it together, using a 'dragon', could be replicated," says McCombes.

"Wouldn't it be great to have a few of these across the world?" 



Juffereh Slavery Museum



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Look Out Of Your Office Window As A Cricket Game Is Playing In Front Of You?

A burning issue being debated by many sports team owners across the world is how to better utilize their assets and stadium infrastructure.

BY NICK SAID



Newlands Cricket Ground
Development

NEWLANDS CRICKET GROUND IN CAPE TOWN, South Africa, is one of the most iconic venues in global sport with its stunning backdrop and rich history that dates back more than 130 years, but like many stadiums has faced challenges around its financial sustainability for future generations.

Newlands on average hosts 35 days of cricket in a year, a small portion of that, international fixtures that are the real crowd-pullers and money generators.

But costs remain for the full 12 months and provide a burden for owners, the Western Province Cricket Association (WPCA).

It drains funds from projects that benefit the wider community, including the key mandate of developing young talent across the region.

This is not a unique problem for WPCA, in fact, it is a burning issue being debated by many sports team owners across the world, who are looking at how to better utilize their assets.

For WPCA that means generating more income out of Newlands, and their only real options for that are off the pitch.

A decade in the making, they have started a R800-million (\$53.5 million) redevelopment of the stadium to add a commercial



element that includes office space, retail outlets and a tertiary education campus.

It is a project that has been established in partnership with financial services group Sanlam, who will own 51% of the project, with WPCA holding 37% and Cricket South Africa the balance of 12%. The first tenants are set to take occupancy from July 1, 2021.

“We initially tried to understand how we could better utilize the space we have at the stadium – some 25,000sqm that was previously parking space, tennis courts and so on,” WPCA interim Chief Executive Officer Tennyson Botes tells FORBES AFRICA.

“Initially, we were looking at a hotel for the project, but later we started exploring how there could be a synergy between commercial space, education and sport.

“Initially, it will mostly be education tenants, we have the Cape Peninsula [University] of Technology and also Varsity College, who come in at just under 50% of the leasing.”

WPCA believe they have something different to offer tenants from any other workplace in the country, the chance to sit in your office or boardroom and look out of the window as a cricket game is played in front of you.

But Chief Operations Officer Niel Cilliers admits that these are challenging times, and that the Covid-19 pandemic and its potential impact on the demand for commercial space has been a blow.

“There were various models considered and it did take some time to find the right one that would fit the need of sustainability. This is what the whole project is

about, it is about sustainability for cricket. How much income could we generate in the future,” he says.

“We have to recognize that Covid has affected the property market. It is tough out there. But I firmly believe we have some of the most unique office space in the country. Imagine sitting in your office looking out at the pitch literally while a test match is on.

“Obviously the need for office space is looking different to what it was eight or 10 months ago when we had a very different view. But based on our calculations, it should be generating income as soon as three or four years down the line, when it should start giving cashflows back.”

Cilliers says the issues WPCA are facing are the same as owners of sports venues around the globe.

“Across the world, stadiums face a critical decision in terms of which way they are going. You are looking at such a finite number of days to make your stadium work (to generate income) and they are expensive places to run. Take your house maintenance and times it by 100.

“Something needs to change for all stadiums to make them sustainable, that is the decision we took. It is not a two- or four-year project, we are looking 50 years ahead. We said, ‘this place cannot sustain itself unless we do something different’.”

And Botes says the income that will eventually be generated from the project will be used for their core focus – to develop cricketers.

“It is trend-setting, and what will be coming back into cricket development down the line... you will now have the funds to develop the next generation of great cricketers. That needs a development line that is properly funded,” he said.

One of the key questions for many is how the development will impact the look and feel of a sporting venue that is globally famous because of its beauty – marrying the need for commercial space with maintaining Newlands’ charm.

“If I tell you how much time was spent on exactly that... it is a heritage site in the Western Cape and a very important one,” Cilliers says. “We work with consultants on an ongoing basis. Our first attempt was to not move one tree in the whole environment, but we had to fit everything in.

“We had to ask permission to move some of the trees, but we really tried to limit that impact. There was a drive to preserve what we have at Newlands.

“We did not want to change the look and feel... that probably took the longest, to maintain the heritage of Newlands.”

SCORING

• A •

Percy Tau had to wait a long time to realize his dream of playing in the English Premier League, but has become a shining example of perseverance and patience that will likely make him the outstanding South African footballer of his generation.

CHANCE

BY NICK SAID

PERCY TAU TOOK HIS BOW IN WHAT IS FOR MANY the best league in the world when he turned out for Brighton & Hove Albion against vaunted Manchester City in January, and immediately showed the class and quality that made the Seagulls so eager to recall him early from a loan at Anderlecht in Belgium.

Tau's journey in Europe has been a convoluted one, though through no fault of his own.

Tough work permit regulations in the United Kingdom (UK) prior to their exit from the European Union (EU) meant that, despite being signed by Brighton from Mamelodi Sundowns in July 2018, Tau could not play for the side.

Instead, he was loaned to Belgium on three occasions – first to second-tier Royale Union Saint Gilloise, then giants Club Brugge, where he won the league title last season, and finally, Anderlecht for this campaign.

But as soon as the UK exited the EU in January, regulations changed and Tau became eligible for a UK work permit. Brighton wasted no time in recalling him six months early from Belgium.

“I knew that I would not be able to play for Brighton straight away because I would not qualify for the stuff [documents] I needed,” Tau tells FORBES AFRICA. “But I was comfortable with that and how everything turned out.

“To be honest, it is maybe better that it happened that way



“

I often visualize things on the pitch, I get a lot of images in my mind and often they come out on the pitch. That is why I try things that are maybe seen as ‘different’.

because I was able to adjust to being in Europe first. I always put a lot of pressure on myself, so it was maybe good to go to an environment where there was less pressure from outside.

“It gave me the opportunity to ease into the football here and get used to living in Europe.”

It did not take long for Tau to catch the eye at St Gilloise, where he was voted the best player in the division after his first season in Europe.

One moment of magic in a Belgian Cup clash against St Gilloise’s great Brussels rivals, his future club Anderlecht, helped the team score a brilliant counter-attack goal in a 3-0 win, a first derby victory in 46 years for Tau’s team. It cemented his talent in the eyes of many in Europe.

“I see myself as a modern striker and that means assists are part of the package. It’s part of my game that has really improved over time and something I have added to my game.

“I often visualize things on the pitch, I get a lot of images in my mind and often they come out on the pitch. That is why I try things that are maybe seen as ‘different’.”

Having served his apprenticeship abroad, Tau is now ready for life in the hustle and bustle of the Premier League, where the pace of the game is much faster than almost anywhere else in Europe.

It makes it more difficult for skilful players such as Tau, who are given less time on the ball, and have fewer opportunities to show their artistry.

“I need to adjust to the team and the league. With time I will get better as I understand the way the coach [Graham Potter] wants me to play.”

One thing Tau is now used to is finding himself in a new environment, with new teammates and having to impress another set of fans.

He has now played for five clubs in three-and-a-half

seasons, and while much of that is down to circumstance, he will hope it is the end of what has been a nomadic period in his career.

“It’s important to integrate quickly with teammates and to see what is important to them and the team. We want to win games and with that being the case, we should all be moving in one direction.


“I just get on and do my best alongside the other players. It is important for me to be a team player and I think I have done that. It is important for me to keep on going in that direction.”

Potter believes that Tau can add something different to his side and an attack that has struggled this season in the Premier League.

Tau has that guile and creativity that is otherwise lacking in a more ‘direct’ forward unit that is based on physicality.

“His attributes are different to what we have,” Potter says. “He’s a left-footed attacker that can play in really tight spaces, really intelligent, runs in behind.

“His touch is very good, so he can evade defenders and then he brings his own personality to the group.”

There is no doubt the Premier League will be a big step up for Tau, and the biggest challenge of his career to date. But having come through all other hurdles placed in his path with flying colors, he has a happy knack of finding ways to be successful wherever he plays. 





BY TSHILIDZI MARWALA

The writer is the Vice-Chancellor and Principal of the University of Johannesburg, and author of the book: *Leading in the 21st Century: The Call for a New Type of African Leader*

The Critical Question: Will Superintelligence Harm Us?

mathematical terminology, these singular solutions are black holes. Gravitational singularity is a single point in the space-time continuum where the mass and gravitational force is infinite. In this regard, bodies that come close to this gravitational singularity point are swallowed by the infinite gravitational force.


In the 2014 book, *Superintelligence: Paths, Dangers, Strategies*, Nick Bostrom talks about superintelligence and the approaches to attain it. One way to attain superintelligence is the biological path. Here, developments in the biological space are used to enhance intelligence. In this regard, gene-editing developments have already proven successful in a twins experiment in China. The gene-edited twins have been found to have more memory than the average person.

Elon Musk's company Neuralink has developed a device inserted inside the scalp of the head. It reads brain activity, and the data collected is used to track limb movements. The next generation of these devices will have a controller that would be used to control the brain, thus taking away free will from people. These devices can be used to increase intelligence. Another path to superintelligence is AI, where algorithms are becoming so powerful that they will dwarf human capabilities.

Given all these developments, how do we control their implications? Specifically, as these technologies enter the superintelligence era, how do we control them so that they do not harm people? How do we ensure that these technologies act for the people's benefit and not their disadvantage? We need to design these AI systems so that they inherently do not harm people. We need to incorporate safety into AI goals. We need to develop enforceable AI ethical guidelines. The data used to train these AI models should be as comprehensive as possible, and these AI systems

should meet specific accuracy standards.

What is the likelihood of superintelligence and singularity happening in our lifetime? Several successes will have to be in place for superintelligence and singularity to emerge. One of these is vast computational capability. The limit to optimization, which is a mathematical technique necessary to teach intelligent machines, is computation. Gordon Moore came up with a law that specified that computational power doubles every year. Because of Moore's law, we have made impressive gains in AI. Such gains have been used to defeat a human champion in *Go*, a Chinese chess game that is more complicated than conventional chess. The other aspect is the development of algorithms that can capture the essence of intelligence. Algorithms, such as neural networks, do not capture general intelligence.

What are the leadership lessons we can draw from these developments in Africa? The first lesson we can learn is that as these technologies become more powerful, our leaders must increasingly understand these technologies. This means technological capability must become a requirement to lead in Africa. Secondly, we need to invest in education, and education must become the new religion in Africa. We need to send bright African students abroad to learn from the best in major learning centers in India, America, Europe, and China. Thirdly, we need to invest in digital and connectivity infrastructure. Fourthly, we need to ensure that the movement of people and knowledge within Africa is promoted. These measures are crucial to ensuring that we avert the potential downsides of the singularity and thrive in it and put an African mark on the advances being made in AI. This is one of the defining requirements of 21st-century African leadership. 

ARTIFICIAL Intelligence (AI) is changing the world around us. It plays better chess than the best human chess player and reads medical images better than expert radiologists. The current state of AI is good on specific tasks and bad at general duties. But the critical question we should answer is whether AI can exceed human intelligence and what the implications of this would be. When AI is more intelligent than a human being, this is called superintelligence. The epoch or era, when due to superintelligence AI can improve itself exponentially, is called the technological singularity.

The technological singularity concept was first introduced to the AI community by John von Neumann in 1958. It originates from Einstein's theory of general relativity. When general relativity is applied to cosmology, some solutions break down or become singular. In

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Time In Timbuktu

On the sandy streets of the mud-brick Mali city, this writer's thrill knew no bounds.

BY RAMDAS IYER

THE OLD ENGLISH ADAGE, 'AS HARD AS REACHING Timbuktu' is not uncommon in the Anglophone world. The successes of Victorian English conquests of Africa somehow did not materialize in Mali. Disease, harsh terrain and ruthless chieftains kept them from reaching the fabled city of Timbuktu until late 17th century. Hence this usage in the Anglophone world. My own sense of adventure was further heightened on reading the book *The Race for Timbuktu: In Search of Africa's City of Gold* by Frank T Kryza; an anthology of travails endured by western travelers.

The 1,100km-trip from Bamako, Mali's capital, was a road journey along the Niger River finally crossing it by barge near Timbuktu. While the Sahara starts on the eastern side of Timbuktu, the town itself benefits from the annual flooding of the Niger providing for some cultivation.

Followers of history may know that Timbuktu was a 13th century center of trans-Saharan trade and its many *madrassas* (Arabic word for educational institutions) produced scholarly Islamic works. Today, the Sankore Madrassa is a World Heritage Site where important astronomical observations were made in the 14th century.

As a center of gold, ivory and slave trade, its long reach influenced governments in the 16th century from Tripoli to Tunis and Cairo to Casablanca. Its original inhabitants were the Songhai people and the Empire of Songhai fell under the influence of Moroccan Berbers (Tuaregs) in the 15th century who now form the local majority.

The Tuareg are also known as the Indigo men of the Sahara as they are caparisoned in Indigo cloth, made with a natural dye extracted from a desert plant. The 1850's Levi's Blue jeans were originally made with this dye until it was later synthesized.

Despite the many goods traded there, salt was one of the most precious commodities. It has been remarked that salt was literally worth its weight in gold in West Africa. The landlocked Sahara region had no access to the seas and had to tap into the salt mines that were once part of an inland sea at Taoudenni 500 miles north of Timbuktu.

Walking on the sandy streets of an entirely mud-brick built city, my thrill knew no bounds when I was introduced to three handsome Tuareg men with curved knives cinched to their waists.

They had just returned from a 28-day trip to the salt mines with their train of 30 camels.

I accepted an invitation to their tent pitched at the edge of town. Prior to the visit, I picked some tender pieces of lamb, broiled in one of the many ovens found near the marketplace, wrapped in an old French newspaper. We walked to the Indigo men's tent where customary offerings of very sugary tea with dried camel cheese was the norm. While we picked very elegantly at the meat, a native cigar mounted on a silver holder was passed around. This was the closest I could get to dreaming of being my childhood hero, T.E. Lawrence, who spent time with the Bani Hashem tribes of the Wadi Rum desert in Jordan.

Brahim, the leader of the camel train, brought out a classic green tunic worn by the Tuaregs and an amulet from a trunk that had Koranic verses for protection from the Djinn of the desert, for sale. In the absence of many tourists, they try to augment their meager earnings selling items handcrafted by their women folk.


Today, the Timbuktu that I have described here has mostly slipped past the reach of travelers. Brahim and his salt caravans are slowly being relegated to history books as 4x4 trucks now make the return trip to the salt mines in four days. 

Photo by Ramdas Iyer

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