

# African Digital Transformation Speeding Ahead

## Technology, Connectivity, Security & Network Trends Report 2022

By Johann Pretorius – Africa Channel Manager, SD-WAN Solutions

Over 40 Independent sources were researched to create this 2022 trends report



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# SDWAN SOLUTIONS GLOBAL

## SD-WAN Solutions 5 key Technology Trends Report 2022

- Cloud Adoption Storming Ahead
- 2022 – the Year of SD-WAN
- Cyber Attacks, Security & SASE
- Increased Connectivity Driving Tech Adoption
- Smart Cities & The Land Of Opportunity



# Cloud Adoption Storming Ahead



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## Cloud Investment Increases From Trail Blazing African Nations

82% of South African businesses increased Cloud spend in 2021, Zimbabwe was next at 59%, then both Nigeria and Botswana at 50%. The increase is not only pandemic-driven but also due to improved connectivity, decreasing cost and data centre infrastructure.

## Burning Entrepreneurial Drive In African IT Sector

This entrepreneurial dynamism is creating an ever-growing demand for cloud-based services and solutions which are seen as cheaper, safer and deliver efficiency gains while decreasing susceptibility to cyber threats and attacks, which increase as fast as Africa digitally transforms.



## South Africa's Covid Cloud Silver Lining

A 2021 study by research trailblazers World Wide Worx, in partnership with F5, Dell Technologies, Digicloud Africa and Intel, discovered that 80% of business leaders believed cloud computing had made a significant contribution to SA government's COVID-19 management strategy.

### Cloud Drives African SME Innovation

Whilst the most impactful benefits of Cloud have been remote working, other benefits include communications and crisis co-ordination. For Africa-based SMEs Cloud has driven innovation and access to advanced IT technologies, that prior to Covid were only available to larger enterprises.



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“Cloud services are transforming Africa’s productive capacity, accelerating innovation and emerging as one of the most essential pillars of Africa’s digital transformation.”

## Rise Of The African Cloud Report – 2021

“Most sub-Saharan businesses are turning to the cloud to improve operational efficiency and COVID-19 has added fuel to the fire.”

## Cloud In Africa Report



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## The Great Shift

A 2020 Nutanix report revealed that 50% of businesses in South Africa have moved with speed to adopt hybrid cloud solutions.

## Hybrid Leads The Way

Nutanix reports (88%) local (SA) and (87%) of global businesses believe hybrid cloud is the optimal infrastructure model for their organisation.



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## Exponential Cloud Growth

In 2022, South African organisations' cloud maturity will grow exponentially. IDC research shows that 84% of South African C-suite executives are pursuing or planning hybrid cloud strategies.

## Multi & Hybrid Cloud Favoured

Multi-cloud strategies, incorporating public clouds from more than one cloud provider, and hybrid cloud strategies, using a mix of private, managed private and public cloud services are the favoured routes.



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“Africa is experiencing a digitisation boom. Combined with the disruptions of COVID-19, this is driving many organisations on the continent to seek out the benefits of cloud services.”

Wale Odeyemi, Executive Head of Strategic Marketing at Vodacom Business Africa.

“The Cloud infrastructure investment on African shores will continue, which is good news for business transformation. This investment will likely be driven by the hyperscalers and local vendors.”

ITWeb.co.za



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# 2022: Africa's Year of SD-WAN



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## The Year of SD-WAN: 2022

Itweb.co.za stated, in its article of 7th Dec 2021, that “*2022 will be the year of SD-WAN*” in Africa as SD-WAN solutions become increasingly popular in supporting long-term remote working strategies without compromising security, requiring significant infrastructure investment or high OPEX commitments.

## SD-WAN Will Connect Where MPLS Can't

SD-WAN has the ability to utilise 4G networks already widely available across many African nations, which MPLS simply can't. This will enable African businesses to level the global playing field in not only acquiring the latest network technology and security, such as SASE, but also further drive their digital transformation.



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## Multiple Connectivity a Key Demand

As connectivity options multiply, improve and become mainstream, African businesses are seeking network technologies that enable them to utilise these connectivity options at their very first opportunity. This readiness is driving connectivity suppliers to push into new and ripe territories, and driving SD-WAN adoption on the continent.

## Africa Digital Transformation Ready

There is a firm conviction from business leaders that only by having a future-ready network will their business achieve their digital transformation goals. These leaders are aware that SD-WAN enables infrastructure and connectivity upgrades, enhances agilities and underpins digital transformation across their entire business.



“Legacy networks can lead to exorbitant transport costs, poor end-user experience, security vulnerabilities and unsuitable management capabilities with limited visibility and control over network access. With data traffic sure to increase exponentially over time, having a future-ready network solution has become a business imperative. SD-WAN is an adaptable network solution that solves these problems and meets modern network requirements.”

[biztechafrika.com](http://biztechafrika.com)

“Traditional Wide Area Networks (WANs) are struggling to keep up with new technology disrupters. The transition of businesses to digital has been accelerated tenfold in a bid to mobilise their workforce to ensure business continuity moving forward.”

[Businessstech.co.za](http://Businessstech.co.za)



[www.sdwan-solutions.global/](http://www.sdwan-solutions.global/)



## C-Suites Increasing Comms Platform Budgets

Remote and hybrid working will continue to be of prime importance across Africa in 2022, driving investment in intelligent, integrated communications platforms and networks. C-suites are already allocating increased budgets in key technologies, such as SD-WAN.

## SD-WAN a Key Revenue Stream for Channel

Africa, Nigeria and South Africa have been named as key regions to dominate the SD-WAN optimisation markets, making SD-WAN a key objective for the channel in these nations in 2022. As the continent continues to digitise, other nations will soon follow.



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## Forbes Says, “MPLS Can’t, But SD-WAN Can”

Huge demand for futuristic networks is due to rising importance of applications, cloud-first approach, microservices and APIs, demand for voice and video and the proliferation of IoT endpoints. Forbes Technology Council’s September 2021 article stated, ‘it is easy to see why MPLS will be replaced by SD-WAN. MPLS cannot meet the radical change in demands. SD-WAN can.’

## “SD-WAN Unavoidable & Inevitable,” Say Forbes

Modernising the WAN infrastructure is unavoidable. Enterprises who embrace SD-WAN will find it easier to adopt connectivity solutions that are programmable, scalable, automated and affordable, extract more meaningful returns from cloud investments, empower remote workforces to remain highly productive and ensure exceptional end-user experience.



“it is estimated that by 2023, more than 90% of all WAN edge infrastructure refresh initiatives will be based on uCPE platforms or SD-WAN software/appliances.”

Gartner

Whilst these trends are shaping the global landscape, it is the time for South African organisations to look to connectivity products and solutions architected to fit local context.

iol.co.za



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## Don't Let Yourself Get Led Up The Garden Path about SD-WAN and SASE

For a long time now, I have been reading content online put out via major media channels, and by well-known thought leaders in the IT space, on the subject of SD-WAN, SASE or a comparison of them both. I have come away from these articles concerned for businesses who rely on this type of content to inform their IT strategy, as more often than not, these articles demonstrate a fundamental lack of understanding of both terms and why they exist. Here, I will set out some key points below for the reader to use as a litmus test for the quality of the article they are reading.

- SD-WAN is a technology, SASE is a concept, they are not directly comparable. Anyone who is purporting to compare SDWAN and SASE does not understand the terms well enough. SD-WAN is a technology, while SASE is a framework or methodology by which to design your network. Of which, SD-WAN can absolutely be a part.
- Beware of blanket statements being made about SD-WAN in totality. While SD-WAN is an applicable overarching term for the technology, the vendors in this space are all proprietary and as such have approached SD-WAN differently. It is impossible to make blanket statements about capability across the entire sector. A Fiat Panda and a Lamborghini Aventador are both cars, but to say they perform the same is just not true.
- SD-WAN's most prominent use case in the UK is cloud enablement. Complex traffic patterns mean that MPLS networks cannot keep pace with the demands of the cloud, the flexibility and intelligence of SD-WAN enable enterprises to leverage the cloud to its full effect. Anyone who says "SD-WAN only connects users back to the data centre" is displaying a fundamental lack of understanding of the technology.
- SDN and SD-WAN are not the same thing. Beware of people using the terms interchangeably, again highlighting a knowledge gap. SDN refers to infrastructure such as DC environments or IaaS, whereas SD-WAN is exclusively used when talking about Wide Area Networks or WAN.

By James Barker – Technical Consultant at SDWAN Solutions



# Cyber Security & SASE 2022

HACKED



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# African Threat Detection Top 700 Million 2020-21

From January 2020 to February 2021 An INTERPOL partner, Trend Micro, recorded hundreds of millions of threat detections across Africa :

Email: 679 million detections

Files: 8.2 million detections

Web: 14.3 million detections

## Cybercrime Reduced African-Wide GDP by 10%

Research from Kenyan IT cybersecurity company, Serianu, revealed that cybercrime in 2021 had actually reduced GDP across Africa by more than 10% collectively costing around 4.12 billion USD in 2021.



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## South Africa 3<sup>rd</sup> Globally in Cybercrime Victims

Accenture identified South Africa as having the third highest numbers of cybercrime victims worldwide costing R2.2 billion a year and a 100% increase in mobile banking application fraud and is estimated to be targeted by 577 malware attacks an hour.

## South Africa Top Target for Cyber Criminals in 2021

South Africa had 230 million threat detections, 219 million pertained to email threats. South Africa also had the highest targeted ransomware and BEC attempts, against Kenya's 72 million and Morocco's 71 million in total.



**“90% of African businesses are operating without the necessary cybersecurity protocols in place. Without these protocols, threat actors are able to exploit increasing vulnerabilities as they continue to invent new cyberattack vectors. This leads to significant financial loss.”**

**Interpol, African Cyberthreat Assessment Report 2021**

**In 2016, cybercrime cost the Kenyan economy about 36 million USD, the South African economy 573 million USD and the Nigerian economy 500 million USD. A research study from Deloitte indicated the financial loss for financial institutions in Kenya, Rwanda, Uganda, Tanzania, and Zambia since 2011 to be more than 245 million USD. In the past year, the COVID-19 pandemic has accelerated the cybercrime ecosystem with a persisting digital divide and increasing cybersecurity vulnerabilities across the region**

**Interpol, African Cyberthreat Assessment Report 2021**



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## Covid Crisis Driving Ransomware

61% of African businesses were affected by ransomware in 2020 alone. Attacks have grown exponentially since Covid-19, worryingly, during a global pandemic, cyber criminals targeted healthcare, critical infrastructure and, adding further concerns to supply chain disruption and maritime sectors. South Africa's Life Healthcare Group, that manages 66 health facilities, was targeted by an attack described by Interpol as "serious and sustained".

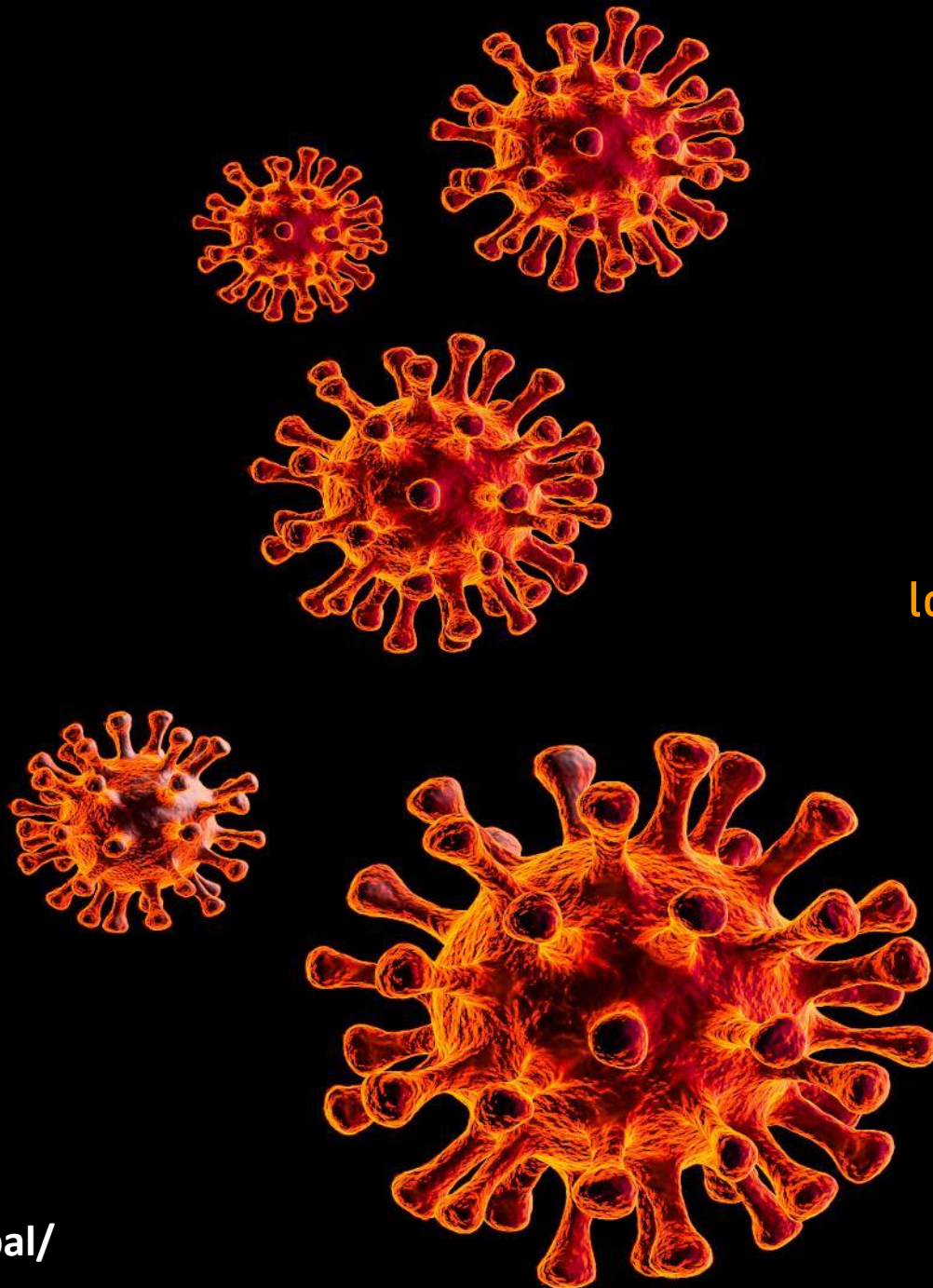
## South Africa, Tunisia and Egypt Key Targets

Kaspersky research states ransomware detections topped 1.5 million in 2020 across Africa. Q1 of 2021, showed that Egypt, South Africa, and Tunisia suffered the most with the highest detection counts across the continent, with Egypt alone accounting for almost 35%.



“Coupled with the COVID-19 pandemic and its impact on the cybercrime landscape, Africa saw a sustained increase in the volume of cyberattacks, 15 including the 238% rise in cyberattacks on online banking platforms in 2020.”

Institute for Security Studies, Africa



“60% of Africa’s population in 2020 is under 25 years old, this is driving strong growth in new technologies, but also an upsurge in Cybercrime, especially during the COVID-19 pandemic. The subsequent loss of jobs and low economic growth has opened up opportunities for criminal organizations.”

Tarek A. Sharif  
Executive Director  
AFRIPOL



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## Scammers Posing as Legitimate C-Suite Execs

Business Email Compromise (BEC) is a significant threat to the region where many businesses rely heavily on vulnerable wire transfer transactions. Since COVID-19 this threat has increased with South Africa, Tunisia, Morocco, Mauritius, Nigeria and Kenya being targeted the most.

## Crime-as-a-service Booming in Africa

Crime-as-a-Service has gone beyond the dark net. Threat actors in Africa are deploying Trojan information stealers such as Agent Tesla, Lokibot, Fareit, amongst others, to commit online scams. Cybercriminals now even offer online toolkits and training, thus ensuring that those intent on nefarious online activities continually innovate and develop new threats.





“For businesses digitising their operations, network security is a growing concern, but upgrading hardware-based firewalls across various branches can be unmanageable and costly. Traditional networks have limited visibility and control over network access, so a more modern approach is required. SD-WAN is an adaptable network solution that solves these problems and meets modern network requirements..”

[biztechafrika.com](http://biztechafrika.com)

“Cybercriminals are developing and boosting their attacks at an alarming pace, exploiting the fear and uncertainty caused by the unstable social and economic situation created by COVID-19.”

Jürgen Stock, INTERPOL Secretary General



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# Increased Connectivity Driving Tech Adoption



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## **African Connectivity Growth Outstrips Rest of the Planet!**

Africa has around half a BILLION Internet users, but that represents less than 40% of the population, leaving huge room for growth. Africa's telephone and Internet networks are the fastest growing globally with Africans using mobile banking services the most.

## **As Pandemic Subsides Focus Will Be On Digitisation**

As businesses emerge from the pandemic and economic crisis they will begin to focus on digital transformation at an accelerated rate, catching up on lost time. Main focus will be on cloud (multi and hybrid) migration, automation technologies and e-commerce opportunities where applicable in B2C businesses.



## Regions Getting Network-Ready

Connectivity options are increasing at an unprecedented rate in many African nations. Companies are getting an SD-WAN strategy in place to upgrade at speed as soon as new connectivity allows, to optimise their network and digitisation plans.

## Maximize New Connectivity Options

Businesses need to install the best underlying network technology, such as SD-WAN that will help drive agility, productivity and support the upgrade of your entire infrastructure and prepare for forthcoming technologies like 5G and Wi-Fi 6.



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“Via Covid-19, we’ve been given a peek into what the future holds. A lot of our emotional and social needs are being fulfilled through digital connections. This is especially true as the world adopts and adapts to online platforms.”

**Pushkar Gokhale**  
**Openserve Chief Digital & Strategy Officer**

“Network issues and poor accessibility often prevent individuals and small, medium and micro businesses from effectively leveraging formal banking solutions. Seamless and reliable connectivity empowers consumers and enables merchants to reap the benefits of digital by providing access to more affordable financial services.

**Murray Gardiner, Managing Director of Bluecode Africa.**



## Outsourcing Will Gain Traction

Rapid digitisation and catch-up post-pandemic, coupled with the level of skills required for digital transformation success, means many businesses will seek outsourced IT service providers to help strategise, deliver and support their IT teams through the entire process. Training will be seen as an essential element for IT providers.

## Added Benefits of Outsourcing

Following on from the above trend businesses will take advantage of IT audits, support on cloud strategies, pen tests and POCs to find network and cyber security weaknesses in their current IT and network provisions and forge greater success in transformation projects.



## Clarity Essential for Business Workloads

Already African businesses are moving from just cloud to multi and hybrid clouds. Deep knowledge of their infrastructure is essential to ensure not only smooth transitions but that they have selected the optimal characteristics for their needs and have the ideal deployment model for every and all workloads.

## Niche Experts Often Provides Better Skills & Support

Organisations must ensure they have the right partners with the prerequisite skills and internally have the appropriate tools and process to migrate and manage any hybrid infrastructures that house their business applications. This includes addressing all the current and future security issues. Finding the right partners who can support their teams ongoing [who will also maximise their investments] is essential- smaller niche companies often have more skills than the corporates.



"Let us be clear: No single actor will be able to meet Africa's 2030 target and carry the burden of a \$100 billion investment funding requirement alone. All stakeholders must strive to ensure that every African has affordable and reliable access to the internet."

Hafez Ghanem World Bank's vice president for Eastern & Southern Africa

"The volume of data pouring into data centres continues to climb, driven by ever greater connectivity demands and accelerating cloud adoption. This is fast-tracking the need for businesses to rethink their ability to evolve their physical layer infrastructure in the data center, which will ultimately be the key to keeping pace (and outstripping) competitors thanks to low latency, high-bandwidth, and reliable connectivity."

[www.zawya.com](http://www.zawya.com)





# Smart Cities & the Land of Opportunity



## Everyone Will Soon Be On Edge!

Businesslive.co.za recently reported from the joint IDC and Limelight Networks research paper, *Outlook for Edge Services* suggest there will be a huge 40% increase in edge network deployment in 2022, with 60% of all network resources deployed at the remote edge, or at service provider locations.

## SA Government Support Sees Tech & Start-ups Thriving

The South African government SMME Development Strategy ICT initiative is creating a thriving start-up and technology marketplace for all sizes of enterprises, offering incubation, networking and capacity building.



# Rapid Action Required Across Many SA Municipalities

South Africa leads across the continent when it comes to smart city technologies, having long-recognised that smart city benefits are wide ranging, impact positively on a majority of industries and are life-enhancing for resident and businesses alike. However, lack of infrastructure, maintenance and years of corruption have left residents not only wanting but waiting. Assessment of each cities' needs and rapid action is required to enable modernisation and digitisation.

## Johannesburg, Cape Town, and Durban Taking the Lead

These 3 major SA cities are forging ahead with various smart city initiatives and are already operational with some solutions. They are also exploring innovative technologies and best practices already in place in first world countries, which will enable fast learning and adoption, when ready. Although essentials such as electricity supply and connectivity must first be laid down in many areas.



“Businesses will entrench long-term remote and hybrid working policies. This provides businesses with a good opportunity to reduce office overheads to anywhere from 25% to 75% of peak occupancy. Hot desking and collaboration spaces take centre stage. On-demand rental workspaces could well become a viable option for many businesses”

[Itweb.co.za](http://Itweb.co.za)

“With its relatively high internet penetration rates, demand for co-location capacity will continue to rise fast. The country also remains a data centre hub for the broader region, thanks to its relatively advanced internet infrastructure and other advantages. Many sub-Saharan African and international companies are investing in the data centre market in South Africa.”

[Businessstech.co.za](http://Businessstech.co.za)



[www.sdwan-solutions.global/](http://www.sdwan-solutions.global/)



## South Africa's SALGA Drives Private And Public Sector Cooperation

South Africa Local Government Association (SALGA) is actioning the need for smart cities, recognising the subsequent benefits that reach countrywide such as, quality of life expectations, implementation of best practices in businesses and services across many industries and as an innovation driver and enabler.

## Europe Meets Africa.... And Can Begin To Compete!

Google's undersea cabling link connecting Africa and Europe is expected to come into service in Q3 of 2022. It is predicted to increase internet speeds by five times and lower data costs by around 21% in countries such as South Africa and Nigeria.



“In October, US tech giant Google announced that it intends to invest \$1 billion in Africa over the next five years. The massive funds will ensure access to fast and affordable internet and support start-ups to aid the continent's digital transformation. Nigeria, Kenya, Ghana and Uganda will be the prime beneficiaries.”

Reuters

“We’re often asked why we chose to expand into Africa and the EU simultaneously. That’s an easy one to answer – SD-WAN technology removes many of the barriers that African businesses face, particularly when it comes to the quality and cost of decent connectivity and problems with electricity supply. We have solutions for Africa and want African businesses to reap the benefits right now, not in 12 or 24 months time!”

Anthony Senter, CEO, SDWAN Solutions



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As the trusted experts in all things SD-WAN, our focus is and always has been 100% SD-WAN and SASE.

Multi-award winners and the only company in the world with 2 recognised SD-WAN Subject Matter Experts, we design, demonstrate, install and manage solutions according to your exact budget, applications and business requirements.

We partner with 9 of the world's top proven SD-WAN vendors and the top 4 security vendor technologies, all running on our powerful VENA and VECTA hardware range.

We have deployment capabilities in 190 countries worldwide and provide connectivity to any place on the planet using 1,952 telecoms providers.

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Email [jp@sdwan-solutions.global](mailto:jp@sdwan-solutions.global) and visit [www.sdwan-solutions.global](http://www.sdwan-solutions.global) for more information



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