For communications professionals in southern Africa

SOUTHERN AFRICAN WIRELESS COMMUNICATIONS

NOVEMBER/DECEMBER 2020 Volume 25 Number 3

- Is Covid-19 a blessing in disguise for mobile money?
- New Wi-Fi and voice tech for African patients
- Empowering businesses and subscribers

Fadi Pharaon, Ericsson's President for Middle East and Africa, explains the company's focus for Africa

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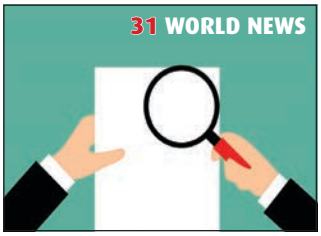

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EDITORIAL:
Editor: **Robert Shepherd**
Designer: **Sean McNamara**
Sub editor: **Gerry Moynihan**
Contributors: **Martin Jarrold, Robert Koldys, Fadi Pharaon, Lucky La Riccia, Clementine Fournier**

Editorial enquiries:
roberts@kadiumpublishing.com
Tel: +44 (0) 1932 481729

ADVERTISEMENT SALES:
Sales: **Kathy Moynihan**
kathym@kadiumpublishing.com
+44 (0) 1932 481731

Production & circulation: **Suzanne Thomas**
suzannet@kadiumpublishing.com
Tel: +44 (0) 1932 481728

Publishing director: **Kathy Moynihan**
kathym@kadiumpublishing.com
+44 (0) 1932 481730

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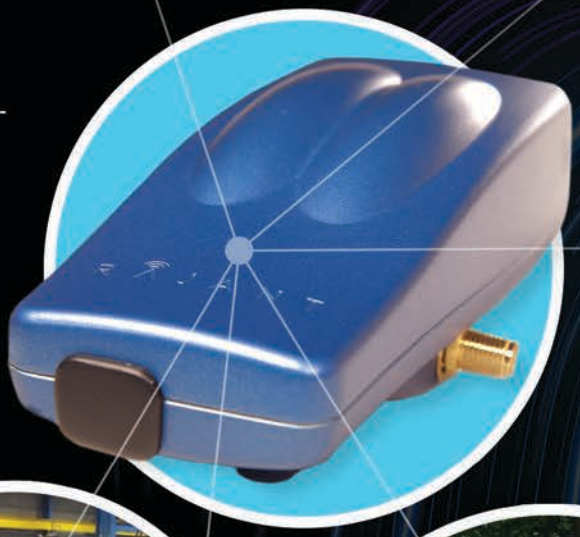

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Madagascar joins free Wi-Fi party

Madagascar is the latest African country to join the trend towards offering free internet access to its people, with government-supported rollout of Wi-Fi terminals across the island nation.

Wireless internet access in the busiest places in the country is expected to be available by the close of 2020. Among the 22 regions of the country, the first to get access to the new hotspots was Vatovavy-Fitovinany, in the province of Fianarantsoa in south central Madagascar.

The nation's minister of posts, telecommunications and digital development Andriamanohisoa Ramaherijaona made the announcement of plans to deploy free Wi-Fi hotspots across the country in June.

Around 50 terminals should be operational by the end of the year, with a total of 130 expected by 2023, all providing free internet.

Complimentary Wi-Fi is often available in hotels and restaurants and there are internet cafes in major towns and cities, easy-to-access, but cheap internet is not always available in Madagascar.

By improving access to the internet in the country, Madagascar aims to reduce the digital divide and develop the digital economy to increase activity in areas such as e-commerce, online learning and digital health.

Complimentary Wi-Fi is often available in hotels and restaurants and there are internet cafes in major towns and cities, easy-to-access, but cheap internet is not always available in Madagascar

This year has seen an acceleration of the trend towards affordable Wi-Fi in Africa. Recently in Uganda, Roke Telkom and Facebook have launched a new internet service programme called Roke Express Wi-Fi. Tanzania and Kenya are among a number of other African countries that have signed up to Facebook's Express Wi-Fi service network.

In Nigeria, Fiam Wi-Fi, is now rolling out public outdoor hotspots to underserved communities in Lagos. In South Africa meanwhile, Project Isizwe, an award-winning, non-profit organisation, is working with the public and private sector to bring free public Wi-Fi internet access to low-income communities across South Africa.

Potraz boss criticises telecoms vandals

Postal and Telecommunications Regulatory Authority of Zimbabwe (Potraz) director-general Gift Machengete said that vandalism and theft of telecoms infrastructure have affected marginalised areas which already face network challenges.

He added that the country's ICT sector has come under siege from thieves and vandals, in the process affecting connectivity. He said the ICT sector has suffered rising theft of solar panels, batteries, copper cables and generators.

In addition, Machengete said it would be most disappointing to see communities such as Silonkwe going back to the misery of connectedness, all because a few individuals take advantage of the night to steal and vandalise that which was built for the greater good of the community.

The Silonkwe area had gone for decades without network connectivity owing to lack of base stations. A new base station will provide coverage to five wards in the Matobo district.

SA: Vodacom invests nearly US$20m to develop broadband connectivity in KwaZulu-Natal

New telecom base and fibre optic stations will be deployed by Vodacom South Africa in the province of KwaZulu-Natal by 2021.

The operator announces an investment of US$19.5m for these projects intended to improve access for populations broadband.

Vodacom announces an envelope of R320m (US$19.5m) to finance the development of high-speed internet connectivity in urban and rural areas in KwaZulu-Natal. Investment in optical fibre is also planned.

More than 50 new telecom base stations will be deployed across this province and in south-eastern South Africa, by the mobile operator. 27 are already active and 19 are expected to be installed in deep rural areas by the end of fiscal 2021.

The district municipalities likely to host telecom base stations are: eThekwini, Ugu, Umhlabuyalingana, Umkhanyakude, uThungulu and Zululand.

The 56km of fibre will be installed in Newcastle, then the operator will complete a loop that will connect Newcastle to Madadeni, Oswezwini and Blaauwbousch. The project is expected to be completed in December 2020. Note that the fiber network under construction - from Durban, passing through Scottsburg, Port Shepstone, Harding to Kokstad - will be completed by the end of fiscal 2021.

"We have always maintained that the key differentiator for us is the quality, strength and reliability of our network," said Ishmael Mathinya, executive director of operations for Vodacom KwaZulu-Natal.

"At Vodacom, we believe that investing in our network ensures that we provide top-notch coverage and customer service, not only to urban areas, but also to townspeople and deep rural areas, so that they are well positioned to reap the benefits of the digital revolution."

The 56km of fibre will be installed in Newcastle, then the operator will complete a loop that will connect Newcastle to Madadeni, Oswezwini and Blaauwbousch

Angola's president inaugurates Afrione phone assembly plant

Afrione's mobile phone assembly plant, located in the Luanda-Bengo Special Economic Zone, is now fully operational. The infrastructure was inaugurated by the president of the republic João Lourenço, on October 14, 2020, in the presence of Manuel Homem the minister of telecommunications, information technology, and social communication.

Resulting from an equity investment of nearly US$15m and a US$2bn credit line from the United Arab Emirates, the plant, built on 1,140 square meters of land, is composed of three departments: offices, manufacturing, and storage.

The factory will have a capacity of 100,000 devices per year. Over time, it is expected to diversify its production by including computers and several other types of digital devices. Initially, the plant is expected to create nearly 150 new jobs, especially for young people.

Afrione also plans to build distribution centres for its devices in Cabinda, Uíge, Huambo, and Benguela. The price of low-end phones should vary between 3,000 and Kz4,000 (about U$5 and US$6) while the price of the most advanced high-end phones could reach Kz200,000 (about US$300), according to verangola.net.

New Zamtel towers boost coverage

Zamtel switched on 744 towers to expand its network coverage, with its chief executive claiming the move repositioned the operator as the one with the largest coverage in Zambia.

Sydney Mupeta announced the new towers were part of the operator's GRZ Phase II Access to Communication Project to bring connectivity to remote areas of Zambia.

These towers are located in three locations in the districts of Muchinga and Chasefu, districts the chief executive labelled as key to tapping into for growth.

The tower project aimed to construct a total of 1009 new sites and Mupeta claimed they place Zamtel as the nations' leading operator with Zambia's largest network footprint.

"We are proud to partner with the government to ensure that every citizen, regardless of their geographical location, has access to reliable communication services," said Mupeta.

He added that Zamtel will be announcing new digital products and services that will respond to the digital needs of customers.

Zamtel views Muchinga and Eastern Provinces as key strategic markets for its business growth.

Mupeta also said that Muchinga Province has so far received 128 communication towers while Eastern Province has received 74.

Zamtel is also expected to announce new digital products and services in the coming weeks to meet customer demands.

Globalstar Satellite IoT device deployments for relief agencies double in 12 months

Globalstar Europe Satellite services said specialist reseller Traksat has deployed over 1,200 Globalstar-enabled safety and tracking devices for humanitarian organisations in Africa and worldwide.

Prominent NGO Humanity & Inclusion (HI) is deploying SPOT Gen3 satellite messengers and SmartOne Solar IoT tracking devices to protect relief workers and support operations in several African nations. International Rescue Committee, rescue.org, headquartered in New York, uses SPOT Gen3s in numerous African countries to safeguard and track relief workers. ACTED is similarly using SPOT Gen3s in Niger.

Traksat reports dramatic uptake of its NGO-centric solution with Globalstar technology as its backbone. The number of Traksat-provided Globalstar devices being used to support humanitarian efforts has doubled in the last 12 months.

In Traksat's longest-standing project, over 250 devices enabled by Globalstar satellite technology are providing staff security and supporting vehicle management for Humanity & Inclusion's humanitarian workers in DRC (Democratic Republic of Congo), CAR (Central African Republic), Chad, Mali, Burkina Faso and Niger.

"Globalstar technology and expert support from Traksat together play a big part in helping us meet our security and fleet management challenges," said Emmanuel Bertolus, logistics manager at Humanity & Inclusion.

Traksat reports dramatic uptake of its NGO-centric solution with Globalstar technology as its backbone. The number of Traksat-provided devices being used to support humanitarian efforts has doubled in the last 12 months

"Our teams work in extremely varied and challenging contexts. Reliable, economical Globalstar technology, together with the wide-ranging expertise and responsiveness of Traksat, help us to consider geolocation as a key operational asset and never as a constraint."

H&I is equipping staff with SPOT Gen3s so that they can stay connected with their colleagues while working in locations where alternative communications networks are inadequate. In an emergency, a simple press of SPOT's SOS button immediately raises an alert and instantly sends the user's GPS location to HI's central operations centre and local coordination sites, from where a rescue can be initiated.

Traksat has developed a specialist software platform with extensive options to meet the particular needs of NGOs and government agencies. With the combination of Globalstar technology, enabled by its fleet of Low-Earth Orbit satellites, the Internet of Things (IoT), and the Traksat platform, NGOs can benefit from a wide range of capabilities to support worker safety and other operational requirements.

Over 10 different mapping options can be chosen with Traksat, along with specific map layers with additional live detail on traffic, wind, weather and occurrence of natural disasters.

Airtel and Ericsson strike deal to tackle e-waste in Zambia

Airtel Networks Zambia has teamed-up with Swedish gearmaker Ericsson on a 'Product Take-Back' program to minimise the potential environmental impact associated with the disposal of decommissioned electrical equipment.

This is part of Ericsson's Sustainability efforts geared towards taking accountability for environmental impacts of all products and services during their lifecycle. The program ensures that end-of-life material is treated and recycled in an environmentally responsible manner.

"E-waste – discarded electrical or electronic equipment – is one of the fastest growing waste streams in the world in terms of volume," said Todd Ashton, vice president and head of Ericsson East and South Africa. He added that Africa is one of the more highly affected continents because large quantities of end of life materials from around the world end up at dumps in this region. "A lot of it has to do with education – people cannot dispose of their e-waste responsibly if they do not differentiate it from other forms of waste," Ashton added. "This project provides a sound platform for raising awareness and discussing these issues."

Ericsson's 'Product Take-Back' program ensures that end-of-life material is treated and recycled in an environmentally responsible manner

He added: "The Global Product Take-Back Program enables us to support responsible waste management by taking a step further in our own recycling efforts, while simultaneously educating our consumers about e-waste, and the ways they can safely dispose of their unwanted devices. In fact, 21 tons of e-waste was collected from Zambia – contributing towards preserving the beauty of Zambia and making a positive environmental impact."

Globally, Ericsson provides free product retrieval and safe disposal services for equipment that has reached its shelf life from the collection point, as part of the company's extended producer responsibility. Ericsson offers the program to all customers, guaranteeing that this e-waste does not end up in trade-restricted areas, landfill, or in places where unethical business practices are taking place.

SA government plans own internet satellite

The South African government is supporting moves to build and launch its own satellite for broadband and internet.

This proposal comes from part of a report from the 'Africa in Focus 2020' study backed by the Brookings Institute and its Fourth Industrial Commission (4IR). It has recommended that South Africa launch its own internet satellite to combat connectivity issues.

The government believes this will solve the issue of connectivity, or lack thereof, in these areas. The satellite service would essentially be offered to the whole of the Southern African Development Community (SADC) region. This includes other countries, such as Botswana, Lesotho, Zimbabwe and Eswatini.

The 4IR diagnostics report was prepared by a 4IR commission constituted by the South African President, Cyril Ramaphosa, towards enhancing development in the country.

However, there are as yet no tangible suggestions as to whether this would be a government-backed scheme or left to private enterprise.

South Africa is already served by a number of satellite operators.

Angola's ISPs talk broadband expansion with government

The Angolan Association of Internet Service Providers (AAPSI) has offered the government support to boost digital inclusion, while at the same time maintaining the sustainability of the business.

AAPSI members said in a meeting with government officials that the high prices for international connections were one of the main components of the price structure of services, thus conditioning the expansion of broadband and digital inclusion.

According to AAPSI chairman Silvio Almada, the meeting with the government was an important milestone as it aimed, on the one hand, to find a common platform to defend the interests of operators and, on the other hand, to jointly propose solutions that would enable digital inclusion and the expansion of broadband in the country.

Central African MNOs told to stop deducting airtime as payment

The Bank of Central African States (BEAC), the sole central bank within the membership-based Central African Economic and Monetary Community (CEMAC), has warned MNOs in the sub-region to stop deducting airtime for payments.

In a correspondence dated 29 October 2020 sent to the president of Cameroon Association of Telephone Mobile Operators (CATMO), BEAC governor Abbas Mahamat Tolli insisted communication airtime is not a recognised mode of payment within CEMAC.

He stated subscribers' airtime should only be deducted for communications and data subscription.

"In effect, please note that communication airtime is a commodity, product or service, which only serves for telephone services and, even though they have a market value, they are not a mode of payment or currencies," Tolli said. "They are created by companies which are not payment service providers authorised to issue and manage means of payment."

The governor added that mindful of the applicable regulations within the monetary community, communication airtime is neither fiduciary money, electronic money, nor an instrument or means of payment.

Recently, network service providers operating within the sub-region, comprising Cameroon, Chad, Central African Republic, Congo, Gabon and Equatorial Guinea, and their third parties have deducted users' communication airtime to pay for value-added services such as ringtones, medical consultation, game of chance, music, news, amongst others.

Network service providers have deducted users' communication airtime to pay for value-added services such as ringtones, games and music

The central bank wants this to stop as its persistence may give users the false notion that communication airtime is a legal means of payment within the sub-region.

CWS launches public Wi-Fi with help from Alepo

Cable & Wireless Seychelles (CWS) launched public Wi-Fi services in Seychelles using Alepo's Wi-Fi Service Management Platform.

The latter also included a self-care portal that lets consumers control and monitor their Wi-Fi data usage.

Scheduled for a multi-phase release, the service is now live for casual users at a popular resort in the capital city of Victoria and will be rolled out to major resorts and other prominent public places. The second phase of the project will extend Wi-Fi services to Cable & Wireless broadband and mobile subscribers with Wi-Fi offload.

The company made Wi-Fi available through both free and paid journeys and customers can purchase volume, time, and speed-based offers and vouchers, as well as control and monitor their usage, from the self-care portal. When logged in to the portal, customers can also see the network of Wi-Fi hotspots, special promotions from CWS and their purchase history.

Nokia enables ultra-fast 5G services for Vodacom SA customers with 5G radio, core and fixed wireless access

Nokia is enabling ultra-fast 5G services for Vodacom South Africa's customers by deploying its 5G radio, core and fixed network solutions across the operator's network.

The latter is using Nokia's 2G, 3G, 4G and fibre access networks, as well as 5G fixed wireless access (FWA) and mobile broadband services.

Nokia is supplying its AirScale, Fastmile and Subscriber Data Management (SDM) / Home Subscriber Server (HSS) products to Vodacom to enhance its service offering and deliver increased operational efficiencies.

Nokia's AirScale radio network product portfolio will enable Vodacom to deploy 5G services across several spectrum bands, including the new 3500 MHz, 2600 MHz and 700/800 MHz bands which will be auctioned by the Independent Communications Authority of South Africa (ICASA) before the end of March 2021. It will help to manage the increased demand for data services during the ongoing COVID-19 pandemic. The 5G network rollout is in line with South Africa's broadband policy of building infrastructure by 2030 for an inclusive knowledge economy which supports the 4th Industrial Revolution (4IR).

Vodacom will also use Nokia's FastMile 5G gateway to offer FWA broadband services in areas not currently served by a fibre network. The solution delivers fibre-like speeds to homes while using Wi-Fi to connect devices within the home. Vodacom is also using Nokia's mesh Wi-Fi solution, which improves user experience by creating a seamless Wi-Fi coverage area while reducing the time and complexity required to install and manage the WiFi network.

Nokia's cloud-based SDM software and HSS will be rolled out to securely manage subscriber data and services in a centralized hub. Vodacom South Africa will also utilize Nokia's NetAct network management system, which is cloud-agnostic and meets customer demands for software-only delivery. It can be deployed on the same data center platforms as existing IT and network systems for increased agility and lower operational costs.

"We are committed to providing the most innovative products and highest quality service to our subscribers," said Beverly Ngwenya, technology director at Vodacom South Africa. "5G technology allows us to deliver ultra-fast mobile networks and support entirely new use cases as we move into the 4IR era. Nokia has been our network partner for more than two decades, and its latest technology solutions are now helping us to deliver superior 5G services."

Tommi Uitto, president of mobile networks at Nokia, added: "Our AirScale 5G and Fastmile fixed wireless access portfolio helps service providers across the globe to build robust and reliable networks to address the growing demand for high-speed broadband services. From our 26-year relationship with Vodacom we understand that South Africa is a highly competitive market, with end-users expecting continent-leading services and applications. We are proud to have successfully executed this important network deployment, enabling Vodacom to deliver those sought-after broadband capabilities."


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Nzadi cable project starts in Angola

The Nzadi Cable System Project, which will be implemented in waters offshore Angola, has begun.

Nzadi Consortium, the developer of the project, along with WFN Strategies, a submarine cable planning, engineering and implementation firm, jointly announced the commencement of the work.

The Nzadi Cable System will comprise a main trunk cable from Luanda to Cabinda in Angola with a branching unit for future connection to Soyo, as well as potential northward expansion to both the Republic of Congo and the Democratic Republic of the Congo.

In addition, the system will consist of a high fibre count of up to 14 fibre pairs and will connect some 15 to 30 offshore oil and gas assets. The ready-for-service date of the Nzadi Cable System is the fourth quarter of 2023. The project is committed to using as much local content as possible.

WFN Strategies will act as the project planner, designer and implementer. Its work will include establishing an initial understanding of the telecommunications infrastructure which will need to be constructed; creating a high-level plan (including technical requirements and timeline) for developing that infrastructure; identifying any obstacles or issues in constructing the infrastructure; and providing budgetary cost estimates for the cable system.

The Nzadi Cable System will comprise a main trunk cable from Luanda to Cabinda in Angola with a branching unit for future connection to Soyo

Econet fights for reduction in smartphone duties

Econet, Zimbabwe's largest mobile company, is pushing for a review of duties payable on imports of smartphones to boost adoption and internet usage.

The country has experienced a rise in its internet penetration rate to over 50%, with WhatsApp and Facebook bundles accounting for nearly half of all internet usage, according to the Posts and Telecommunications Regulatory Authority of Zimbabwe (Potraz),

However, said that the local penetration rate for smartphones is lower compared to regional counterparts like neighbouring South Africa.

The company is now lobbying government to reduce import duties on smartphones to encourage more widespread adoption.

"Smart phone penetration is low at 52%, compared to about 90% for South Africa, (it) remains a limitation for the adoption of digital services," said Econet chairman James Myers on Saturday.

Myers added that approximately 22% of the devices on the company's network trying to access data services are feature phones with low data handling capacity.

Local consumers have had to battle with inflation as well as government taxes and levies on telecommunications services.

The southern African nation has continued to levy a 25% customs duty on mobile handsets since October 2014. There are also other levies on top up purchases for data and voice. Added to this is the intermediated money transfer tax on digital finance transactions that now also include foreign currency payments and transfers.

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Malawi: lack of funding threatens Last Mile Rural Connectivity Project

Malawi's plan to complete the roll out of the Last Mile Rural Connectivity Project, designed to provide mobile phone telecommunication services to rural areas by 2021, is being thwarted by financial challenges.

The government had put in place a plan to erect 136 towers as part of the Last Mile Rural Connectivity Project to facilitate the roll out of mobile phone communication and internet connectivity to the un-served areas.

These towers will be managed by the Malawi Communication Regulatory Authority (MACRA) and will be used by all mobile phone operators in the country.

However, Huawei Technologies Malawi, contracted to provide services for the project, has warned that a lack of funding could stall progress.

Company deputy managing director Titus Misi said of the 28 towers erected to date, 15 are on air and 13 may not be completed due to inadequate fund allocation by the government.

"Civil works have been completed but the remaining part is the actual equipment which is supposed to come on the tower to be able to do its work, but we have been having talks with the ministry of Information on this challenge," Misi was quoted by the local Times newspaper as saying,

Malawi's minister of information Gospel Kazako said there was no need for concern because the government will source other available resources outside of the national budget to fund the project.

"Government does not only use money in the national budget," said Kazako. "We also have partners that will be coming in and we also have other resources lying elsewhere. So the budget may be low but that should not cause concern."

The project was allocated just MK350m available MK5.5bn within the 2020/2021 national budget, which the contractor has stated is not sufficient to complete the project.

Like many other countries in Africa, most of rural Malawi is not connected to mobile networks as operators remain reluctant to invest because of a delay in ROI.

DACMA continues MTN fight

Durban residents said they will continue to fight against 123 MTN cell masts erected across the city four years ago, allegedly without complying with town planning regulations.

The lobby group – Durban Anti-Cell Mast Alliance (DACMA) – is taking on Ethekwini Metro in the High Court, seeking a review of an alleged secret deal between the municipality and MTN, which paved the way for the installation of the cell masts.

DACMA said the installations were not procedural and are in contravention of the city's bylaws and national legislation.

The group claims court papers presented in the Durban High Court last Friday revealed the Ethekwini Metro had never undertaken any 'infrastructure-sharing arrangement' with MTN, as both city management and MTN previously claimed.

The latest battle against the cellphone masts comes on the back of a Constitutional Court (ConCourt) ruling in June that mobile operators cannot be allowed to install telecommunications stations – cellphone masts – at locations of their choice and without prior approval from local authorities.

In the matter, Telkom approached the ConCourt seeking the interpretation of Section 22 of the Electronic Communications Act. It wanted the court to pronounce whether the exercise of rights it held in terms of the section is subject to compliance with municipal bylaws before exercising those rights.

The court's decision has far-reaching impact on telcos that previously faced criticism over cellphone masts. Concerns from some quarters ranged from the masts being a distraction, to alleged emission of electromagnetic radiation.

"Here you have a city with a well-established town planning scheme, and you have a massive, multinational, billion-dollar cellular service provider who has entire departments full of legal experts devoted to compiling contracts and agreements and between them they manage to erect several dozen cell masts illegally, worth hundreds of millions of rands, as a result of a 'misalignment'," said Niki Moore, spokesperson for DACMA.

Talking satellite

Martin Jarrold, chief of international programme development, GVF

'Zoom'ing in on a Global Digital Ecosystem

In my last column published here I began with the words "The Digital Divide remains despite years of debate about solutions to bridge it." I was reflecting on the opening statement of the pre-event description for a dialogue in the GVF Webinar Series, organised in association with the Satellite Evolution Group (https://www.satellite-evolution.com/).

In this contribution I would like to draw attention to a discussion facilitated by another of GVF's webinars to consider the problem of a variation, or rather an extension, of that divide... A divide with consequences and implications far beyond those encompassed within the usual framework of discussion about inadequate access to the technologies and services of modern digital communications... This is what I describe as the digitisation divide.

What is the digitisation divide? The GVF webinar Global Transitions: Digital Economy, Digital Infrastructure, Connected Communities, Digital Planet set out to explore this with the help of representatives of two GVF members, Isotropic Networks and Telstra, joined by the Coordinator of the Digital Transformation Task Force of the United Nations Environment Programme (UNEP), with moderation by the Chief Technology Officer of the Satellite Applications Catapult in the UK.

Whilst the early train of thought leading to this theme originated out of the social distancing and travel restriction imperatives of pandemic lockdown, over time the initial thoughts, influenced by ideas from the UNEP, evolved into the concept of "Digital Planet".

The importance of the digital communications technologies behind our now having been forced to realise the full potential of virtual business meetings/events has been boldly underscored. Lockdown necessitated digital ways of working to allow people still to do their jobs. Extending digitisation will help recovery from the economic recession engendered by pandemic. Notions about, and gearing-up for, Digital Economy and Digital Infrastructure, are not new but a global socio-economic crisis has elevated debate about the necessity, and advantages, of far greater change than previously conceived. Though a necessary consequence of the (hopefully) limited phenomenon that is the SARS-Cov2 virus, we have undergone a profound change in the human experience, one which gives small illustration of the importance of a much more deeply rooted and strategic phenomenon: our ability to gather, analyse and disseminate that which can be digitised.

We have the potential to increasingly and more accurately understand the complexities of the world around us – natural disaster causes and consequences, manifestations and effects of climate change, monitoring environmental degradation throughout the biosphere, human action and inaction with consequences including conflict and refugee population migrations.

Communities and economies will be more deeply and widely enabled by the growing digital infrastructure. There is a much greater significance now attaching to the integration of 5G and satellite technologies into a single network of networks. Industries, businesses, people and governments worldwide, facing unprecedented challenge, will accelerate in their adoption of digitisation to both adjust to the new normal and to improve preparedness to minimise the impact of the next crisis – an impact that may again be equally as serious for, and equally intertwining of, people's economic well-being and their health.

Digitisation is not itself the end point. Whilst data gathered from a massively expanded – 5G + satellite enabled – communications infrastructure will be the vital raw material of a digitised economy and society, what matters is the mechanism and processes by which it is turned into what is today commonly called "Actionable Intelligence", often represented in the form of dashboards.

Data in the Zettabyte Age will flow in vast volumes from the tap of the Internet of Things (IoT), including devices from our own personal wireless communications (i.e., smartphones with social media, plus increasing biometrics-based data generation) to our Wi-Fi-enabled domestic appliances. All this data will only be of use when it is determined exactly what it is for. Data may be just measurement, quanta, of things, but when data is analysed it becomes information, and information is the building block of the knowledge that facilitates effective decisions and enables positive and productive action.

Data maintains financial liquidity in markets, improves creativity in maintaining and evolving supply chains, makes production of "things" more efficient using latest manufacturing technology advances, takes ideas and develops them, and builds more robust cyber security to sit alongside machine learning and artificial intelligence (AI).

5G Enhanced Mobile Broadband (eMBB), Ultra Reliable Low Latency Communications (URLLC), and Massive Machine Type Communications (mMTC), may be expanded into not just a global digital ecosystem, but a global digital ecosystem. Data will be gathered from all conceivable sources by all available technologies and processed by all available tools: satellites, drones & sensors; artificial & virtual reality; smartphone apps; open source software; blockchain & distributed databases; social media feeds; IoT; AI & machine learning; cloud & edge computing; and, other!

The "product" of this global digital ecosystem will enable more than just the formulation of Actionable Intelligence, but foster a culture of Sustainable Decision-Making that, in the context of trying to meet the Sustainable Development Goals (SDGs) and of trying to stem climate change, will be the indispensable currency of the future Digital Planet.

The webinar panellists were asked what they thought still needs to be done to guarantee a level of digitised connectivity – in developed and developing economies alike – to enable gathering of data for the World Economic Forum Stakeholder Capitalism Metrics which are designed to show how companies are doing on climate change action, biodiversity, etc., and track contributions towards the UN Sustainable Development Goals. If you want to hear their perspectives, this video recording is not to be missed.

If you want to grow your understanding of what the future of the digital Earth may be, how satellites contribute now and might be contributing 10 years from now, and understand the steps needed now to create a pathway to this future visit *https://gvf.org/webinars/.*

How IoT healthcare is transforming testing for infectious diseases across Africa

The road to universal healthcare in Africa is by necessity taking a different route with digital health projects deployed across the continent. Robert Koldys from Telecom26 takes a look at an innovative testing programme made possible by IoT networks

In fact, the World Health Organisation says that there are fewer than 5,000 intensive care beds across 43 of Africa's 55 countries which is about five beds per million people, compared with about 4,000 beds per million in Europe.

However, a shortage of physical infrastructure - hospitals and beds - doesn't mean that the people of Africa go undiagnosed and untreated both during the current Covid crisis - and in the future.

The approach to universal healthcare is by necessity taking a different route from other continents. Just as parts of Africa leapt straight from no telephones to 3, 4 and now 5G coverage, the rollout of Digital Health projects are improving access to health care services for those living in hard to reach areas across Africa.

Two companies that have been pioneers in the rollout of ehealth and mobile health solutions are Telecom26 and its long-term customer, SystemOne. Together our innovative approach of integrating diagnostic devices with IoT networks is changing the way healthcare is delivered.

Traditionally medical samples taken from patients are transported by road to the nearest laboratory for analysis. However, many of the medical centres are in remote rural areas and so it can take days for samples to arrive and the results and treatment plans communicated back to the patient. Unfortunately, speed of diagnosis and treatment is often the difference between life and death with many infectious diseases.

Across 43 countries, SystemOne tests around 250,000 people per month for TB, HIV, ebola - and now Covid-19. It has been operational in 19 countries in Africa since 2012.

SystemOne's technology has revolutionised testing programmes. Its software connects to any diagnostic analyser into which samples are fed with information sent to a remote diagnosis system where diagnosis and treatment plans can be immediately developed and sent back.

In addition, the information that SystemOne gathers helps countries respond more effectively to outbreaks of infectious disease by identifying positive cases faster and allowing a big-picture view of disease spread across a region.

Key to the success of SystemOne's real-time remote diagnostic data software is reliable connectivity.

Unreliable bandwidth and patchy connectivity are problems encountered by digital health programmes across the world but particularly in Africa where many medical clinics are in remote areas with unreliable telecom networks.

Brad Cunningham, COO at SystemOne, says "The traditional route for us was to buy local SIMs to provide device connectivity. Unfortunately, this limits users to one mobile network operator (MNO) - and adds juggling multiple SIMs across devices to find the strongest local network to a long list of headaches for healthcare professionals on the ground".

Telecom26's global SIM cards were developed with the specific goal of improving connectivity in remote areas. They enable devices to automatically access and switch between multiple networks both in-country and across borders thus removing the need to worry about the coverage of a single MNO, or the existence of roaming alliances. Multiple-IMSI profiles are pre-loaded on every SIM allowing for simple reconfiguration if the primary network has poor or no service.

Telecom26 has been providing IoT connectivity to SystemOne across both Africa and Asia for the last two years. Most recently, the contract has been extended to SystemOne's projects in Ghana, Mozambique and Zimbabwe.

The SystemOne diagnostic devices used by medical personnel now have Telecom26's global SIM cards inside.

The approach Africa is taking towards universal healthcare is by necessity a different route from other continents

In addition, SystemOne is trialling Telecom26's multi-SIM routers in Mozambique and Zimbabwe. These enable SystemOne's diagnostics devices to access secure connectivity and automatically switch between multiple cellular and satellite networks - and any wifi or LANs - so that they always use the best performing connected network available.

Together SystemOne, Telecom26 and their IoT healthcare approach are saving lives across the world and helping countries respond more effectively to outbreaks of infectious disease by identifying positive cases faster and allowing a big-picture view of disease spread across a region. ■

General Trend: Narrowband & Broadband Convergence

Today, PMR networks provide critical communications for a wide range of organisations within a number of vertical markets such as public safety, public transport, utilities, oil and gas and mining, etc, with reliable, secure and highly available mission critical voice and low bandwidth data communications, based on instant push-to-talk technology. However, many organisations are increasingly dependent on the reliability of broadband data to help them run their businesses more efficiently and to increase productivity.

In comparison to narrowband networks, the investment in private broadband networks is huge. In some situations the investment cost are even 10 times higher.

Based on the continuous increased demand of private networks as well as the increase of big data, critical applications and the need for real time video, we believe that the narrowband and broadband convergence within the PMR industry, which will be a long-term coexistence, is the future trend.

Hytera Multi-mode Advanced Radio

As a pioneer in PMR communications, Hytera developed the multi-mode advanced smart radio. Through this device end-users are now able to get the best of two worlds - narrowband and broadband communications on a single device. Through the adoption of the multi-mode advanced radio, organisations are now able to retain their mission or business critical narrowband networks for as long as they want. This ensures a full return on their investment.

We believe that before the development of broadband networks and services enters the mature stage, end-users heavily rely on narrowband for critical voice communications and broadband for data applications. During this long transition period, we are convinced that multi-mode devices can meet the demanding requirements of these demanding end users globally.

- The convergent multimode radio delivers critical voice and broadband data applications
- Extend network footprint with complementary PMR and LTE networks
- Interoperability between various device types and vendors

Hytera Hybrid Mission Critical Service Platforms

To go with the stream and make multi-mode radios better serve industrial users, Hytera has developed three Hybrid platforms, Hytalk, Hytalk Pro and Hyteralk MC, which help users easily carry out daily administrative tasks, supporting enhanced security. The platforms provide trunking voice and video communication, converged command and dispatching, high speed multimedia data transmission service based on commercial network as well.

Liquid gets $US40m shot in the arm

Liquid Telecom has received a US$ 40m cash injection from the Commonwealth Development Corporation (CDC), the UK's private sector finance institution in developing countries.

The investment is part of a larger transaction that has already enabled the company to raise US$307m through a capital increase intended for its shareholders. It will support Liquid Telecom's plan to further expand its pan-African data centre operations.

"We remain committed to improving digital infrastructure in Africa and helping governments, businesses and citizens across the continent to access quality online services," said Nick O'Donohoe, CEO of CDC Group. "Our overall investment in Liquid Telecom now stands at US$ 220m; which will play an important role in meeting the growing demand for digital services and helping to bridge the digital divide between Africa and other regions."

Meanwhile,Liquid Telecom is proposing to buy back Botswana Power Corporation's (BPC's) stake in Liquid Telecom Botswana, according to reports.

The firm has a controlling 57.5% in Liquid Telecom Botswana and the Competition and Consumer Authority is considering its proposal to acquire the other 42.5% currently held by BPC

The government has, to date, blocked plans by BPC and Liquid Telecom to become a major internet service provider in Botswana. The deal was backed by Econet Global Limited, which is the majority shareholder in Liquid Telecom Group.

Hello Paisa halves remittance fees

Money transfer service Hello Paisa has dropped remittance fees by half on every transaction to Zimbabwe, the company said.

It is also offering digital banking accounts with zero transaction fees, to assist migrants impacted by the Covid-19 pandemic. The firm said cost-effective remittances are an essential service as they are a lifeline for the migrants and those they support across borders.

According to Hello Paisa, migrants resident in SA have found it more difficult than ever to send money back home due to the pandemic, which is devastating, as those who depend on receiving the funds are unable to buy basic goods and cover household expenses.

Earlier this year, the World Bank forecast that in the wake of the Covid-19 economic crisis, remittance flows to Sub-Saharan Africa would fall by 23.1%.

"A substantial amount of Zimbabwean migrants call South Africa home and their earnings are a vital source of income for their families," said Sayjil Magan, MD of Hello Paisa. "The inability to send money home is a catastrophic circumstance for both our residents and their loved ones. As expenses are a major pain point for all South African residents – now more than ever – it is our mandate to create access to the most cost-effective remittance service."

Hello Paisa said it has also taken steps to broaden digital remittance networks to make it easy to send funds by offering a free digital banking solution to its subscribers.

"Not only are migrants offered a leading money and goods remittance service, but now also a free bank account to save their hard-earned money," added Magan. "Zimbabwe is currently facing its own unique hardships economically, and Zimbabweans residing in South Africa are very cognisant of getting support to their family as safely and affordably as possible."

MTN officials visit Ghana in hope of peace talks

Senior MTN Group officials are on a "calming mission in Ghana", following tensions between the Ghanaian subsidiary and the telecom regulator.

Ralph Mupita, chairman and CEO of South African telecom group MTN and Mcebisi Jonas, chairman of the board, have been in the west African country since October 27, 2020. It is as part of a tour of priority markets.

In a statement, MTN Ghana said that during the two-day trip, representatives of MTN Group who have already met with Vice-president Mahamudu Bawumia and former President John Kufuor, member of MTN Group's international advisory board, will also hold meetings with minister of communications, Ursula Owusu-Ekuful and minister of finance, Ken Ofori-Atta.

During these various exchanges, the MTN Group delegation said it wanted to "align itself with certain key stakeholders on important issues of common interest".

MTN Ghana, which appealed to Ghanaian courts last June to overturn the decision of the state, represented by the Communications Authority (NCA), finally ended the action in mid-October. The company stressed its willingness to settle this dispute amicably.

Orange sees return to growth in third quarter

Orange Group noted a return to revenue growth in its Q3 financial results, despite witnessing declines in roaming revenue and equipment sales.

MEA saw growth of 5.1% compared to growth of 1.3% in the second quarter.

"From the beginning of the year the Orange Group has demonstrated its resilience in all its markets in the face of an unprecedented health and economic crisis," said chairman and CEO Stéphane Richard. "Our networks have proven their robustness, our commercial performance has been very positive and we're in line with all our financial objectives for the year. "We returned to top-line growth in the third quarter (+0.8%) with EBITDAal on a more favourable trend than in the previous quarter (-0.4%), giving us added confidence in terms of the delivery of our guidance. Finally, after difficult first half for B2B services, the recovery at Orange Business Services (OBS) is well under way, in particular due to the momentum in IT services."

Linking the trends to the Covid-19 pandemic, Orange Group reported a "moderate" decline in EBITDA in the first nine months of the year, down 0.6%. The loss was minimised by the co-financing of the fibre network in France yet remained adversely impacted by the decline in roaming and the cost of health measures.

Telecel names Shalak CEO

Telecel Group has recently named Ramzi Shalak as its new chief executive officer (CEO) effective October 2020.

As a B2B/B2G provider, Telecel Global Services provides voice, data, SMS, SMS firewall and integrated cyber security solutions serving network operators, OTTs and wholesale Carriers with a global footprint.

"I am excited to be joining the Telecel Global team as CEO. Telecel is an iconic brand with a long history working in the African telecommunications space," said Shalak. "This team has built an excellent reputation by being innovative to consistently deliver strong results in the mobile and wholesale sectors."

In 2005, Shalak joined pan-African telecom operator Liquid Telecom and quickly rose to be part of the core team who oversaw the rapid rise of the company from a small startup to a major operator with a reach that serviced both large operators and enterprise customers.

Ericsson launches Graduate Program in Africa to help innovate the future

Ericsson has announced the launch of its 2020 edition of the Graduate Program in Africa, which aims to grow the technical skills of the recruits, train them in the Ericsson technology, solutions and their delivery and understanding our processes, methods and tools.

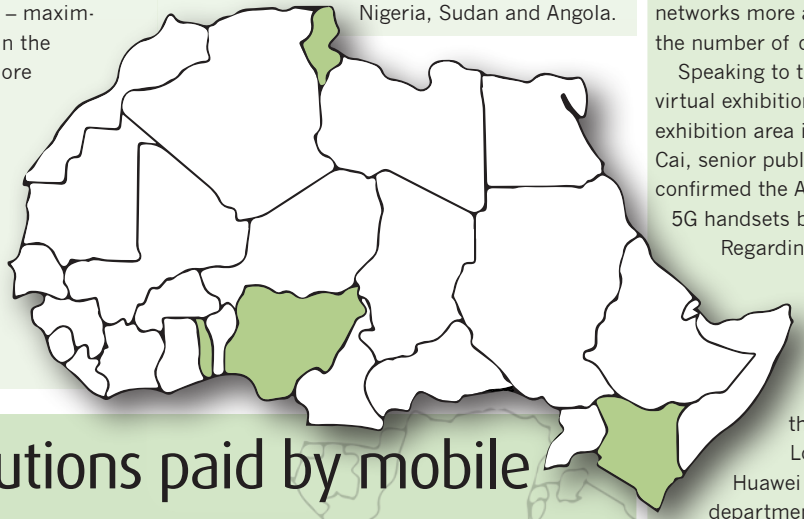
It also helps Ericsson "to move the needle on gender equality" within the field of technology as half of the graduates hired are women. This is in alignment with Ericsson Educate and local Connect to Learn projects which empower women in STEM (Science, Technology, Engineering and Math) fields and leverage connectivity to increase access to education for children, especially girls.

"The Fresh Graduate Program in Africa is designed to give graduates' career an added momentum at just the right time – maximising the skills they have gained in the course of their degree, adding more to their repertoire and equipping them to make a positive impact on the continent," said Caroline Berns, head of talent acquisition at Ericsson Middle East and Africa. "Aiming to attract and guide the most talented, innovative and creative technology minds, the programs offers graduates an opportunity

Caroline Berns, head of talent acquisition at Ericsson Middle East and Africa says the program "is designed to give graduates' career an added momentum at just the right time"

to engage with the most exciting technology on the planet and the challenges it brings."

Due to the sudden and unprecedented disruption of the Covid-19 pandemic, the Graduate Program will run virtually for the time being, and will focus on graduates in Kenya, Nigeria, Sudan and Angola.



Huawei commits to 5G handsets by year-end

Huawei has confirmed plans to help supply the continent with 5G handsets, at an average baseline price of US$150, by the end of 2020.

The Chinese company said it will join various manufacturers to ready at least 400 types of 5G smartphones for the African market by the end of this year. However, it did not mention which manufacturers were on board.

Several African countries, including Kenya, Namibia, Nigeria and Zambia, are planning to roll out 5G networks, but acknowledge the cost of the handsets remains a challenge.

It is understood that the company has realised that the adoption and making of 5G networks more accessible in Africa will rely on the number of devices available.

Speaking to the media during a Huawei virtual exhibition, hosted by Galileo Hall, a 5G exhibition area in China in October, Maggie Cai, senior public relations manager at Huawei confirmed the African market will have US$150 5G handsets by year-end this year.

Regarding concerns over the safety of 5G technology and any potential impact that this could have on adoption, Cai said, "People are concerned about the safety of 5G technology. It's an allegation that has been politicised."

Louis Katongo Mwape from Huawei Zambia's public relations department said that it is not necessarily so that Huawei would make all the smartphones and added: "We mean that the four hundred is a composition of various phone manufacturers and that is the projection."

Mwape said just like any corporate organisation, Huawei will continue to work with policymakers in the region, partners and financial institutions to drive digital inclusivity and make smartphones more affordable to different African communities.

"In as much as some handsets may cost as low as US$150, others may cost less while others may cost more than that," Mwape added.

CNSS contributions paid by mobile

Orange Tunisia customers are now able to securely view and pay their CNSS contributions from their mobile phones, courtesy of the Orange Money service.

Orange Tunisia subscribers, without travelling, can now pay their CNSS contributions in full or in installments, in a simple and secure way.

All Orange mobile subscribers and bank card holders can benefit from the orange money service by dialing the command USSD * 139 #. Once the payment transaction has been made, the customer will receive an SMS to notify him of the actual payment of the CNSS contribution.

Note that with the current context of the Covid-19 epidemic in Tunisia, Orange Tunisia protects you and your loved ones, by offering citizens via the Orange Money service a multitude of remote payment services with the mobile phone and without moving.

These mobile payment services, in partnership with the Société Monétique de Tunisie, allow Orange customers to perform several payment transactions through their mobile phone: top up a mobile line, pay an Orange bill, pay radar fines, and recharge their Tunisia highways subscriptions.

Togo: Michel Yaovi Galley named new regulatory boss

Michel Yaovi Galley has been appointed director general of ARCEP (Regulatory Authority for Electronic Communications and Posts).

Formerly technical advisor in charge of digital transition projects, Galley, will take the head of the structure, following a decree dated October 15, 2020.

The regulator is institution responsible for regulating the electronic and postal communications sector in Togo. Its prerogatives include managing and controlling state-approved telephone operators, issuing licences for independent networks and managing radio-electronic frequencies.

Set up in 2015 the entity replaces the ART & P (Regulatory Authority for the Post and Telecommunications sectors).

Earlier this year, ARCEP appointed a raft of members of the management committee. They were Haringa Yaou, telecom engineer, chairman of this committee, Colonel Cossi Sogoyou, senior officer of the Togolese Armed Forces, Messan Awoh Dedji, divisional commissioner and Djahlin Broohm, economist. It is understood that a fifth member has yet to be appointed.

Fadi Pharaon, Ericsson's President for Middle East and Africa, explains the company's focus for Africa

As a continent with very high potential for growing economies, how can African countries accelerate their digital adoption and leapfrog into a new era of socio-economic prosperity?

This could be achieved by leveraging new technologies that make it easier to conduct business, raise productivity and efficiency while encouraging an inclusive society. Embracing new ways of enabling positive change will boost livelihoods, promote financial inclusion and improve access to health, education, government services and more.

With the ambition of supporting the acceleration of Africa's digitization journey, we are working jointly with our customers - the service providers - and other stakeholders across the continent to enable #AfricaInMotion.

We believe that Information and Communications Technology (ICT) is the catalyst for digital transformation, with mobile networks being the crucial ingredient in increasing Africa's economic competitiveness in the global arena. While we have witnessed impressive market developments in recent years, Africa's ICT sector still has growth potential compared to leading economies.

As digital infrastructure and transaction become increasingly impactful to the development of the African societies and economies, affordable broadband access will need to be extended to over a billion individuals to bridge the "digital divide" and enable them to reap the benefits of the digital economy.

Bridging the "digital divide" is a demanding journey both for the public sector and the telecoms industry. This carries significant potential to contribute to the United Nations Sustainable Development Goals (SDGs) in Africa. In order to achieve that, we have a continuous ongoing journey serving several parameters.

And the story just begins here. We strongly believe in the importance of education for the economic development of Africa by building the right foundation to propel a steady eco-system. Our efforts to support education in Africa is a continuous determination and for that we are proud to launch our three-year global partnership with UNICEF that will help map school connectivity in 35 countries by the end of 2023. Our partnership will support the UN's Giga initiative, a global program led by UNICEF and the International Telecommunications Union (ITU) that aims to connect every school to the Internet.

Another key example in supporting education is our "Connect to Learn" program, an initiative that implements Information and Communications Technology (ICT) in schools often in resource poor settings to enhance the quality and access to teaching and learning resources in a safe, cost effective, and user-friendly way.

Furthermore, another testimony that reiterates our efforts in supporting education, is our recently announced "Ericsson Educate" initiative with UNESCO. In response to the global COVID-19 Pandemic, UNESCO and Ericsson have launched a new portal for teaching Artificial Intelligence (AI) to children. Teaching AI is a learning program.

Additionally, we have also launched recently our Digital Lab program in South Africa. The program represents Ericsson's commitment to supporting the UN Sustainable Development Goals – especially Goal #4, with the aim of ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all.

On the other hand, we also focus on another fundamental goal and that is financial inclusion through the use of digital technology which is an essential element in furthering the economic development of Africa. Mobile money services have become an essential, life-changing tool across the continent, providing access to safe and secure financial services but also to energy, health, education and employment opportunities. One key example to showcase our efforts in that area is our Ericsson Wallet Platform that allows users to store, transfer and withdraw money; pay merchants and utility providers; and use financial services such as savings and loans.

Clearly, the SDGs provide a unique opportunity for interesting discussions that will lead to more multi-sectoral partnerships and opportunities that will help spur progress towards meeting the goals.

At Ericsson, we strongly believe in the great competencies of the local talents in each market where we operate and for that we continue to offer our employees opportunities that guide and supports them from a knowledge, competence, and skill development perspective — to foster an innovative, high-impact learning culture focused on continuous development.

One of the initiatives we launched in-light of our efforts to supporting young talents is our "Ericsson Graduates Program ", a program that will offer fresh graduates a chance to join experienced Ericsson staff for on-the-job, online and classroom learning followed by recruitment to join the Ericsson world. The program also engages with young talents from Africa -the Change makers-to explore and identify innovative ideas, that reflect and capture the needs of the continent with an ambition to accelerate the African markets' digitalization journey.

The Change makers attend multidisciplinary sessions with Ericsson specialists spanning across technology, business and entrepreneur to empower and enable them to ideate and work on their ideas in a well-rounded approach. Our ambition is to continue with this program and train and hire more fresh graduates in the coming period.

When it comes to empowering young talents and innovation, we can proudly mention the Ericsson Innovation Awards (EIA), a global competition that gives university students the opportunity to turn their ideas into reality by collaborating with EIA mentors.

As we look ahead, it's clear that Africa shows significant promise for economic, technological and infrastructure growth over the coming years. Yet, there are still many challenges we must overcome if we are to deliver real sustainable change for all.

While there are parts of the continent trialing 5G services, majority of countries remain focusing on 3G and 4G as smartphone affordability improves year on year. The development of advanced wireless digital infrastructure is an integral part of Africa's growing economy. Mobile broadband access has proved to be an essential driver of an inclusive information society that integrates digitization in all critical aspects of life, such as education, transport, health, energy and even homeland security. Never has this been more evident than during the current COVID 19 pandemic.

Ericsson focuses on assuring best performing networks in Africa, while also offering the best digital services and solutions to our customers. Our aim is to create a unique customer experience evolving from networks adopting automation, artificial intelligence and analytics.

Tackling the digital divide, continuing to build a robust ICT infrastructure, promoting sustainability, innovation, education and entrepreneurship will be critical for maximizing the role of technology in boosting resilience and inclusive growth in Africa. By achieving that, Africa will experience a paradigm shift on all levels with new game-changers as e-health, e-government and e-education; the African society will accelerate into a much economically advanced nation. However, collaboration between the different stakeholders in the ecosystem becomes even more important than ever to achieve this vision.

Our promise and commitment towards Africa are to always support a world where digitalization is transforming the eco-system; enabling sustainable growth, economic development and opening up opportunities for all.

To accelerate our promise to Africa and achieve a true impact, we are looking forward to supporting our customers in their quest, bringing our latest innovation, leveraging our global skill and scale to the benefit of Africa's digital development. ■

Covid-19: a blessing for mobile money?

Many countries in Africa have either stopped or limited the circulation of cash in a bid to slow down the spread of the novel coronavirus. Robert Shepherd asks: could this be the making of mobile money?

Mobile money, affectionately known as MoMo to many, has been a staple of the east African economy for years.

After more than a decade since its emergence, the service has evolved as the formal financial service of choice for many underserved groups in developing countries.

Pre-pandemic days, the rapid adoption and widespread use in this part of Africa wasn't necessarily to do with convenience, but on its necessity, since it bridges gaps for the "unbanked" population that the existing banking sector doesn't.

It comes as no surprise then that emerging markets have become the epicentre of mobile money activity and sub-Saharan Africa has long been experiencing the most growth. Prior to Covid-19, transaction volume and value in the region saw double-digit growth during the last decade, and mobile money accounts are expected to reach 500 million at the end of 2020.

Championed by the late Bob Collymore, the late chief executive officer (CEO) of Safaricom, Kenya and Tanzania have embraced the technology that helped the unbanked pay and receive money for goods and services for some time now.

Nevertheless, we are now in very different times - fighting a war with an invisible and indiscriminate enemy, going by the name of Covid-19. Is that good or bad news for mobile money? Let's start with east Africa, which is now synonymous with the likes of Safaricom's M-pesa service.

Edwin Okoye, chief executive officer of Follow Me Talk, a smartphone financing company, says that while mobile money is popular, it is saturated. "What will happen now due to Covid is that people will need to look for 'deals' on mobile - either with cheaper calls, or spreading the costs of handsets," he says.

"Mobile Money is already a saturated market in Kenya - with nearly all the banks trying to have a go at it. Covid has had a massive impact on the Kenyan economy and one big impact has been that smartphone sales have gone through the roof. People are at home looking for new business ideas and consuming more data looking for jobs or communicating with loved ones."

He says that one implication of Covid that Follow Me Talk can predict is that there will be more take up of financing of smartphones. "At the moment people are still conscious of the economy but we predict that before Christmas and certainly in 2021, there will be a big rise in financing," Okoye continues. "Covid has increased phone usage in Kenya - especially with more people working from home. People also want to try new alternatives for cheaper calls, or new international numbers for cheaper calls to friends and family abroad. It's actually a great time to be launching an MVNO service."

However, head left to the west coast of the world's second largest nation and you'll find that "Cash is King". Well, that was true until the Covid-19 pandemic ripped through the continent, making the governments of Nigeria and its neighbours nervous of handling banknotes, owing to the fact they can carry the novel coronavirus, transmitting it from person to person.

While that might be the obvious and conscientious thing to do, it's not always straightforward expecting a population to embrace a new method of payment when they've spent centuries using cold, hard cash. Before that, of course, the infrastructure needs to be established in the first place.

Patrick Roussel, director of mobile financials services, MEA, Orange says apart from northern Africa and in the Middle East, the countries where it operates as a mobile money operator (MMO) in Africa have less infrastructure than in eastern Africa but things are moving and Covid19 is accelerating progress.

"For example, bank switches are not yet present in our countries but with Orange Money we have more and more direct bank integrations (Bank2Wallet) which enable us to propose transfers from a customer's Orange Money wallet to their bank account and vice versa," he says. "Also, we have more and more retailers that are willing to integrate Orange Money as a payment method. In general, we can see that, especially since the pandemic, regulators have been increasingly promoting mobile money adoption."

That said, Anil Krishnan, head of Africa region at Comviva, the Indian mobile solutions and VAS specialist, says even in the pre-Covid era, "quite a few west African countries like Ghana, Côte d'Ivoire, Senegal and Mali; central African countries like Cameroon, Gabon and Democratic Republic of Congo and southern African countries like Zimbabwe, Zambia, Mozambique, Botswana and Malawi had significant traction on the mobile money front. "Popular MoMo services like Orange Money, Airtel Money, EcoCash, MTN MoMo, etc to name a few have been doing extremely well in multiple African countries even before the onset of Covid pandemic," he says. "We are also seeing other markets in the region warming up to mobile money services in the post Covid times. For example, Nigeria has approved regulations to launch of mobile money in the country through Payment banks. While Egypt took slew of regulatory measures like easing KYC rules and increasing transaction limits, Ethiopian regulators have also cleared the decks for the lone operator in the country to offer mobile money services. Morocco recently saw launch of three new mobile money services including Inwi Money and Orange Money. MTN in South Africa re-launched MoMo. These are positive trends that show the popularity of mobile money now transcends east Africa."

It's a view shared by Ahmad Sayed, regional director, Middle East and Africa at fellow VAS specialist, Nexign, who says pandemic aside, MoMo "has been a hot trend", especially countries in western and north western Africa. What's more, he has the stats to back up the claim. "According to the 2019 GSMA report on Mobile Money, Africa is by far the leading continent for MoMo services with 50 million new accounts created on the continent in 2019 and a 12% increase in registered users," Sayed

Ahmad Sayed, regional director, Middle East and Africa, Nexign

"Generally, telco operators are ready for MoMo in terms of infrastructure. However, implementation of BSS solutions that support online charging and MoMo transactions can make it even easier for CSPs to fully embrace the trend"

continues. "Big operators and groups in Africa try to promote MoMo because it is a huge revenue generator. A good example is Orange with its Orange Money offering and recently launched 100% mobile Orange Bank Africa."

Sayed says that, generally, telco operators are ready for mobile money in terms of infrastructure. "However, implementation of BSS solutions that support online charging and MoMo transactions can make it even easier for CSPs to fully embrace the trend," he continues. "However, regulatory requirements and local laws can be an obstacle. In some countries, operators are not allowed to operate as a bank – for example, to host a mobile wallet and use it to transfer money – which means that CSPs have to partner with banks and other institutions to launch these services. In this case, the operator provides the front end for financial services to its clients, but the actual transactions happen within the partner bank's systems."

Good news then that, in the current climate, MoMo is not the preserve of a handful of east African nations. However, it still begs the question as to how the more 'unbanked' countries with little internet access survive if cash is no longer in circulation if app-based transactions become the dominant form of money transaction?

Krishnan says one of the key success factors of mobile money among the "unbanked" in Africa is that the services are fundamentally device and "channel agnostic". In simple English, that means the services work seamlessly across access channels supported by any type of phones – basic feature phone to smartphone. "Internet availability has proven less of a challenge in the adoption as the mobile money services are being offered over other popular access channels like USSD, IVR, etc," he continues. "In fact, a significant portion of transactions in Africa (over 90% in some countries) are done through USSD, which does not require internet. On the other hand in markets with reasonable

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Popular MoMo services like Orange Money, Airtel Money, EcoCash, MTN MoMo, etc to name a few have been doing extremely well in multiple African countries even before the onset of Covid pandemic

Internet connectivity, we are also seeing the rise of mobile money apps, which provide better user experience as well as more flexibility for innovations such as 'Scan & Pay' (QR Code), 'Tap & Pay' (NFC) and so on."

If you don't have a smartphone, there are other options, such as the mobile payment option that is Orange Money. Even more than that, it's a service that is very easy to use, accessible from almost all phones and does not need to have internet access, according to Roussel.

"The service works from a simple 2G network through the very classic USSD interface," he continues. " Customers register free of charge at an Orange Money point of sale near their home: this can be an Orange store of course, but also, depending on the country, an Orange franchise, a grocery store or a petrol station for example. Then, once registered, our customers can perform all of their other operations directly from their mobile. One of the Orange Money strengths is to put in place a huge number of point of sales i.e. more than 300,000 across our footprint in order to facilitate customer cash in and cash out."

Roussel says Africa is already seeing increased proliferation of smartphones, such as the Orange Sanza mobile phone range, "providing an affordable way for consumers in the UEMOA region" to gain access to more advanced technology. "These smartphones will deliver new ways for customers to access mobile money services through easy to use apps, and new functionality which will improve the customer experience," he says.

For Sayed, even countries without widespread internet connectivity can have operators that offer mobile money solutions. "In fact, today primary channels for MoMo are USSD and SMS and high-speed internet and mobile broadband (4G/5G) is not absolutely necessary, which means this won't be much of an obstacle for African CSPs," he adds. "Moreover, MoMo can be a good solution for banks that need to develop remote service channels in places where financial infrastructure is not well-developed. Here operators can help banks by providing them with solutions that enable remote card issuance in compliance with all KYC procedures and reach the existing mobile subscriber base with new financial services."

Unlike other forms of technology, such as methods of communication, the uptake tends to be more evolutionary. People see their friends using an app, so they join them. Yet while one could argue that the slow, but steady appreciation of mobile money in northern, western and southern Africa is or was evolutionary prior to the pandemic, one could

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also retort that it has now become a medical necessity – a revolution, if you will.

If the latter is to be believed, does that mean mobile money will be more than a short-term catalyst and – for want of a better expression – "the future"? Sayed says there is no doubt the pandemic has accelerated the trend towards virtual products and remote channels. "When personal visits to banks and cash payments became dangerous, all market participants started looking for a contactless infrastructure that would be ready for operation with minimal modifications," he continues. "Covid-19 might be a short-term catalyst for use of MoMo, but the growing trend for transactions without physical contact makes MoMo extremely attractive both for CSPs and end-users in a long-term perspective. Earlier people were not making use of MoMo, mainly due to security concerns. Now, after Covid-19 forced them use MoMo solutions, many subscribers feel more confident about it, even those who were initially sceptical. Now the trick for CSPs is to convince people to continue using MoMo and change the 'Cash is King' mindset with new digital offerings."

Roussel says the pandemic has definitely been a catalyst for accelerating trends in digital adoption by Orange's customers. He adds that during the pandemic, the BCEAO Central Bank and others like BEAC in central Africa and BCC in DRC have asked Orange and other MMOs to cut transaction fees for Orange Money and reduce KYC requirements, in an attempt to encourage people to avoid using cash and therefore help slow down the spread of the virus. "For example, the person-to-government (P2G) payments, like public benefits and pensions, school fees, etc. is particularly vital during a pandemic for people and governments," he says. "There is a growing understanding that the effects of Covid19 will be long-lasting. The crisis has increased mobile money adoption, and the strategy of Orange is to accelerate the Orange Money digitalisation for a better customer experience and more services. And Orange is encouraged by the governments and the Central Banks in this strategy."

The irony is that despite the pandemic bringing global economies to a grinding halt, some positives have come from it, depending on one's own personal circumstances. For Krishnan,

Anil Krishnan, head of Africa region, Comviva

"One of the key success factors of mobile money among the "unbanked" in Africa is that the services are fundamentally device and channel agnostic"

it has reinforced the need and demonstrated the multiple benefits offered by mobile money services. "A large number of users beyond east Africa where MoMo was already popular have experienced the benefits of contactless payments at merchants, P2P transfers, enabling financial transactions like bill payments, etc during the lockdown period," he continues. "Mobile money is also enabling government and humanitarian organization to disburse financial aid directly to mobile wallets of the vulnerable people, collecting Covid-19 relief donations digitally, paying salary to front line workers etc."

Krishnan believes these use cases and benefits will – in Comviva's view – propel the adoption of mobile money in these markets as we have witnessed significant growth in mobile money transactions during the pandemic period. "It is our strong belief that the interest in mobile money is not short-term and this service is here to stay even in post Covid-19 era," he says.

However, it's not all roses for players in the mobile money space.

The success of such services attracted the attention of tax authorities seeking to expand their revenue base. After all, in sub-Saharan Africa, the formal economy represents about 34% of the population, putting extra pressure on states to seek new sources of revenue. Mobile money services have been such an opportunity. While there is no doubt that African governments have to raise taxes and broaden their tax bases, they must also approach tax policy with a discerning eye. Despite the diverse methods proposed to tax mobile money, in most cases the results – especially on mobile money transaction – are controversial, proving the structural weaknesses of taxation in the region and putting Africa's financial inclusion at risk.

A recent report from GSMA notes: "State authorities are unable to fully understand the nuances of emerging sectors, such as mobile-money services or even the wider digital economy." The result has been "badly designed taxes which, although they may seem attractive at first sight, fail to consider the impact on the broader economy and society."

Independent research and reports from prestigious organisations, such as the above mentioned GSMA, reveal aspects of the problematic way in which mobile money services are treated. This includes specifics of the population that uses these services or the negative impact on financial inclusion those taxes bring about.

According to another report of GSMA, 77% of mobile money providers reported paying sector-specific taxes in 2019, whether on fees, transaction values, or total revenue. Additionally, 23% of those affected said taxation was harming the uptake of mobile money services and their business, revealing the regressive effect of poorly designed taxes.

Sadly, in the absence of a vaccine/cure, we're still no closer to knowing when we might see the back of this debilitating, the world at large will have to continue looking at ways to minimise the spread. If, in this case, Africa is looking to migrate from paper to digital money, it's not a bad idea to know what's out there.

"Today you have to be an Orange customer to use the service," says Roussel. "Now it is possible in many Orange Money countries to make money transfer transactions to non-Orange Money countries such as for example between Botswana where Orange is implemented and Zimbabwe where Orange is not."

Comviva is also doing its bit, with customers in over 40 countries in Africa. It also takes a lot of pride in what it calls its "dominant" position in the African market for its digital financial solutions that include our mobile money platform, digital banking suite and electronic recharge & voucher management solution. "Today we not only serve telecom providers, but also banks, fintech and digital payment providers," adds Krishnan. "We are building on our strong leadership position in the region to expand our reach into other countries for our digital financial solutions both in greenfield as well as transformation opportunities."

What about Nexign? SAYED says the Russian firm is willing to develop its Network Monetisation Suite and offer its functionality to African customers to help them embrace mobile money and its benefits, like fast money transfer, micropayments and NFC-based payment products.

"Nexign has already a successful example of partnering with MegaFon - a pan-Russian provider of digital opportunities and a leader in the Russian and global telecommunications market - to create a popular mobile money product," adds Sayed. "MegaFon subscribers were offered a virtual bank card that mirrored the mobile balance and could be immediately used with an NFC-based smartphone payment system. As a result, MegaFon received a convenient product closely integrated with the connectivity services and loyalty programmes. Within the 1st year of the project MegaFon issued one million virtual cards bound to subscribers' mobile accounts and increased ARPU by 100% for mobile money users."

He argues that Nexign's solutions are flexible enough to support multi-currency and be implemented in various countries. "Despite different regulatory requirements in each region, Nexign's delivery team is ready to share its experience and work closely with African CSPs to develop MoMo offering that will be fully integrated with partner's solutions and will be suitable for the local market," says Sayed. "Ultimately, Nexign can help African CSPs be fintech advocates in their region and become trusted partners for customers that use financial services."

While the bad news is, we don't know how things will pan-out in the short or even long-term, the good news is you don't have to have all the mod-cons synonymous with wireless technology to make or receive payments. This could make mobile money. ■

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Empowering businesses and subscribers through investment and collaboration

Africa is seeing steady growth, but there are ways to make it grow faster, writes Clementine Fournier from BICS

Mobile infrastructure in Africa is evolving. There are moves to make cross-continent roaming affordable. We're seeing investment in infrastructure from home and abroad. Lower-cost handsets are helping to democratise internet access and communications. All of these factors are allowing individuals and communities to benefit from mobile digital services and the growing IoT. They are also crucial for businesses to realise the potential of the African continent.

However, challenges remain. This year, these have included Covid-19 and fraud, both of which present barriers to progress. If such challenges can be overcome, intelligent connectivity will drive Africa's digital transformation. It will support everything from harvests to healthcare, and enhance the lives of the continent's 1.2 billion residents. Last year, mobile money transactions with a total value of over $456 billion were carried out across sub-Saharan Africa. That's three and a half times the value of transactions recorded in South Asia, the second-highest ranked region in terms of such services. This is helping to fuel enterprise and commerce across the continent.

Connected agriculture, meanwhile, presents fertile ground (pun intended!), and offers a solution to enduring problems of food poverty. Since 2016, over US$19m has been invested in connected agritech in Africa alone, according to a report released last year by Disrupt-Africa.

Businesses in the sector include AgroCenta, which is aiming to improve the agriculture value chain in Ghana. Its online platform allows smallholders to access finance and the agricultural market, cutting out middlemen and selling goods directly to buyers.

Smart healthcare is also thriving. Zipline, for instance, recently announced that its drones are now responsible for delivering more than 20% of Rwanda's national blood supply outside the country's capital city of Kigali.

Connected industries and services such as these are helping to attract investment and boosting home-grown businesses. But there is still a lot more investment and progress that can be made.

Investing in connectivity for Africa's future

In terms of attracting investment, you couldn't pick more high-profile partners than Google and Facebook. In May, Facebook announced 2Africa, one of the largest subsea cable projects in the world. The 37,000km cable will deliver internet capacity, redundancy, and reliability across Africa, connecting both sides of the continent on a single system.

At the start of July, the Kenyan government gave the go-ahead to Google-owned Loon to launch a network of internet-enabled balloons across the country. The balloons will provide 4G coverage and will initially cover a region spanning 50,000sqkm.

It's great to see investment in connectivity solutions in Africa. However, it's also worth noting the wider business, political and soft-power benefits that such a strong presence on the continent can afford. To ensure investment in connectivity is intelligent – not just for the main players in question, but for the continent, its citizens and telco community – partnering with local businesses and governmental organisations is crucial. Investment, wherever and whoever it's from, should empower African regions. Loon's project is a collaboration with carrier Telkom Kenya, while Facebook said it has 'partnered with leading African and global operators to build 2Africa.'

Connecting Africa makes business sense, but what of the end users of connected services? According to the GSMA, there are 456 million unique mobile subscribers in sub-Saharan Africa. By 2025, this is predicted to reach 600 million. This latter figure represents about half the total population of Africa, which is still fairly low compared with other global regions. The opportunity for telecoms providers to grow in Africa is therefore huge. In fact, the GSMA forecasts $51 billion in operator revenues by 2025. In 2018 they were $42 billion; an increase of around 21%.

Challenges of working from home

2020 and Covid-19 have highlighted the importance of access to reliable, affordable connectivity. At the start of the pandemic there was much talk of Covid-19 as a virus that does not discriminate. However, it quickly became apparent that those with limited access to services would obviously be the worst hit. Those services include healthcare of course, but they also include digital services and the underlying connectivity infrastructure that supports these.

Since March, working from home became the norm for many employees across the world. For many – myself included – this was perfectly feasible. Decent broadband and cellular connectivity meant we have been able to do the basics, like access emails and make phone calls. A smaller, though still sizable proportion, have also been able to make and take video calls, attend virtual events, and collaborate with colleagues using cloud-enabled unified communication and collaboration platforms. For many employees based in countries in Africa, on the other hand, the situation has been very different. Without connectivity, smartphones or computers, many employees have been unable to work remotely. Others have had to contend with network congestion caused by a sharp rise in the number of people trying to get online.

Supporting the surge in internet traffic has been a challenge for some operators. The pandemic will have highlighted to many governments the level of investment that's required to develop connectivity infrastructure and improve national backbones. Nigeria's government, for instance, recently approved the National Information Communications Technology Infrastructure Backbone, an initiative to extend fibre infrastructure to 19 states in the north of the country. Cameroon, meanwhile, is set to complete the country's component of the Central Africa Backbone by the end of this year.

To ensure that subscribers receive a high quality of service, it is important – especially across a continent as huge as Africa – that traffic is kept locally. This can be achieved by routing traffic via points of presence, or PoPs. If operators and service provider don't utilise PoPs, voice calls placed in Africa have to be rerouted via international PoPs, impacting the quality of service. A call made from Kenya to Tanzania, for example, would normally be routed through London and back to Tanzania, travelling thousands of kilometres in the process. Leveraging PoPs means that voice and roaming data traffic stay within the region. By keeping traffic in Africa local, customers can benefit from an increase in the quality of service, no latency and increased internet speeds.

Roam free in Africa?

Africa is home to around 1.2 billion people, and many businesses and livelihoods are dependent on the seamless movement of people and goods. An 'intelligent' approach to connecting the continent must therefore include a focus on developing roaming infrastructure. Upgrading infrastructure from 3G to 4G (and thus delivering a better QoS for subscribers) is a global trend. In January, BICS' findings on worldwide mobile traffic growth revealed an uplift in roaming traffic across all continents. We've also noted an uptick in the number of our African operator customers launching LTE roaming. Two years ago, only around 10% had done so; today its approximately 60%.

'Intelligent connectivity' needs to be accessible and affordable for end users. We've seen great strides in this area in 2020. New members continue to join the SMART Africa Alliance, for instance, and support its One Africa Network project. The Alliance is working to reduce roaming charges among the 30 participating African countries, which collectively represent over 750 million people.

Upgrading roaming infrastructure and delivering 'intelligent connectivity' is not without significant challenges. Upgrading to LTE roaming is a separate process to launching next-generation services on a national level. First, a national backbone must be upgraded, and only then can an operator reconfigure roaming infrastructure. In many regions, there's still some way to go.

The GSMA predicted that 3G connections would overtake 2G connections in 2019. We'll await more recent announcements to see if this has been the case. However, we do know that in 2018, 4G accounted for 7% of total connections in sub-Saharan Africa, compared to the global average of 44%. It won't be too long before this improves, though 4G adoption is predicted to overtake 2G in 2023 and rise to 23% of connections by 2025.

4G connectivity will help to support the kind of IoT applications discussed earlier. In the meantime, 3G is adequate for many IoT applications. Deployments of 5G across Africa remain few and far between, and we've not received any requests for 5G roaming in Africa. In July, South African operator MTN launched its 5G network in the country, with the initial deployment of 100 5G sites. However, this is limited to regions in Johannesburg and Cape Town, so remains far from the kind of accessible service needed to guarantee what we can term 'intelligent connectivity.'

Fighting fraud

Another major challenge is fraud. Again, Covid-19 served to highlight what still needs to be achieved by many African countries to ensure safe, secure, high quality services for subscribers. Traditional SIM box fraud has always been an issue in Africa, and during the Covid-19 period we also witnessed a surge in Wangiri. In addition to a reported increase in victims of Wangiri on the continent, a number of global reports pointed the finger of blame at African countries, where many of the scam calls originated.

As with the need for upgrading infrastructure, Covid-19 has demonstrated there is a need to improve security and anti-fraud solutions on operators' networks. This includes deploying solutions like SMS firewalls, IPX security, and fraud detection and blocking platforms.

Tackling the bottleneck

Despite the global crisis of Covid-19, developments in connectivity are continuing throughout Africa. The pandemic will undoubtedly impact what is already the biggest bottleneck in improving technology and access to technology: cost. However, we've seen positive moves by OTT players and traditional telcos, and this investment activity must continue.

Investment must be a combination of government and private sector. It must go hand in hand with industry regulations that enable competitive pricing for the customer. Finally, to ensure that connectivity really is 'intelligent' for end-users as well as for businesses and operators, collaboration and regional participation is needed to drive innovation. ■

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Last mile unit is easy to disguise

This new wireless device from Infinet Wireless is said to be ideal to supply a last mile service to businesses and homes and for CCTV.

The Quanta 5-18, the latest in the company's range, is claimed to deliver an industry-first throughput of up to 460 Mbit/s in just 40 MHz of spectrum with lower power consumption and easy installation.

It uses Infinet's software defined radio (SDR) technology and is said to deliver stable connection in the most difficult weather, including extreme temperatures.

Infinet says it can be easily fitted to lampposts and buildings, including those of historical significance. It says that unlike other wireless products which often have curved details that are hard to paint and impossible to cover with film, Quanta Q5-18 can be painted over to easily blend with its surroundings. It measures 188x188x45mm and weighs 1.3kg. It has a claimed reach of 5km and can serve up to 10 CCTV cameras.

Infinet has 500,000 deployments from the plains of Siberia to the Sahara and is one of the largest privately owned broadband wireless access (BWA) development and manufacturing companies in the world. *infinetwireless.com*

Base stations designed to serve low populations

Service providers planning greenfield deployments in areas of low population face the challenge of supplying high-quality omni-directional coverage inexpensively for a limited number of potential customers, says Radwin.

The company says its two new PtMP dual-carrier base stations, MultiSector, suit these providers and network operators with a similar challenge.

MultiSector, it says, delivers 1.5Gbps throughput and supports up to four sectors per base station with integrated or external antennas for 360-degree coverage. They enable increased network capacity and coverage while reducing complexity and TCO.

Radwin says the new base stations minimise the amount of glue components and cabling wiring per site. They incorporate dual radios, built-in GPS antenna and Layer-2 Switch. Self-backhaul removes the need for an additional PtP radio.

MultiSector Integrated includes 180-degree (dual 90-degree) sector MIMO antennas and connectors to attach an additional 180-degree Radwin antenna unit or third-party antennas to cover a full 360 degrees. Each of the radio carrier resources are split between two antennas in the time domain, avoiding signal power loss when using an RF splitter.

This model, says Radwin, was designed for MicroPoP coverage supporting short range connectivity of up to 2-3km.

MultiSector Connectorized is a self-contained base station, connecting up to four external MIMO antennas to enable ultra-high flexibility in antenna selection per deployment. *radwin.com*

Wireless products find the best connection

New Wi-Fi 6 devices from Nokia are said to be the first self-optimising mesh products. They use EasyMesh, as certified by the Wi-Fi Alliance.

The new products include fibre gateways, 5G fixed wireless access (FWA) gateways and mesh Wi-Fi beacons. The company's Wi-Fi mesh middleware is embedded in their operating systems to automatically and autonomously solves any issues with performance, including interference and congestion.

This, it says, ensures that the best channels and bands are selected to provide the fastest and most reliable connection for every user and every device.

There is a cloud controller designed to provide full visibility on all access points and allows optimization of Wi-Fi performance across neighbouring buildings.

The new range includes: ONT G-2426G-A (pictured) and XS-2426G-A: dual-band, AX1800 capable ONTs (optical network terminals) with GPON (global passive optical networks) and XGS-PON (a passive optical networks standard) uplinks respectively; Beacon 2 and Beacon 6 are dual-band AX1800 and tri-band AX4200-capable mesh access points with ethernet and Wi-Fi uplink, to extend the mesh network; and FastMile 5G Gateway 3 and 5G Gateway 3.1 which are dual-band, AX3600-capable mesh access points with 5G uplink with high-gain and omni-directional antennas respectively. *nokia.com*

New access points deliver Wi-Fi 6 indoors or outside

Four new Wi-Fi 6 access points have been introduced to appeal to users from small businesses to those which need to cope with extremes of weather.

Juniper Networks says the new products are driven by Mist AI and are operated via its cloud services.

AP63 (pictured) has a vBLE antenna array to deliver Wi-Fi and location services in outdoor and harsh environments; AP33 has an integrated vBLE antenna array to support Wi-Fi and location services for moderate density needs that also require accurate location services, such as smaller enterprise offices, shops, schools and clinics.

AP32 is equipped with an integrated omni BLE antenna to support Wi-Fi and basic asset visibility location services for cost sensitive customers. Jupiter says it is suited for remote workers, smaller offices and schools that do not require advanced location services.

AP12 is a compact wall plate AP for multiple devices and said to be easy to deploy. It is, says the company, ideal for home offices, remote workers, school dorms and hotel rooms.

The new APs, which follow Juniper's flagship AP43, are said to be the first cloud-managed Wi-Fi 6 access points with integrated AI-driven automation and insight. This, it says, simplifies Wi-Fi 6 operations and delivers features such as intelligent load balancing between radios/bands, service levels that monitor and enforce orthogonal frequency-division multiple access (OFDMA) subcarrier assignments, Basic Service Set (BSS) colouring assignments for high-density Wi-Fi environments, sticky client prevention using AI-driven algorithms and advanced radio resource management (RRM). *juniper.net*

Two-way radio eases move from analogue to digital

Specially designed for small- to medium-sized businesses in sub-Saharan Africa, the Mototbro DP540 two-way radio has been introduced by Motorola Solutions.

The company says it is suited to cost-conscious businesses looking to move to digital technology for reliable and efficient communications. It is based on the ETSI digital mobile radio (DMR) standard, which it says is proven worldwide in affordable digital systems with low complexity.

Motorola says the radio makes the transition from analogue to digital smooth because it can operate in both digital and analogue modes.

Made to withstand harsh conditions and resist corrosion, it is said to have superior audio output and unique features, such as voice announcement customisation, allowing users to adapt the default voice announcement languages using their own audio files. It is also designed for multi-language working environments, with special audio profiles designed to deliver enhanced audio quality when speaking languages with distinct rolled "R"s such as French or Afrikaans.

Motorola points out that in mission-critical areas such as healthcare it is not ideal for personnel to handle their radios.

Like other models in the range, the DP540 is equipped with voice-activated transmit (VOX) which allows users to operate their radio without the need to press the push-to-talk (PTT) button. In addition, there are compatible earpieces designed for handsfree operation. *motorolasolutions.com*

Lancom's new entry-level Wi-Fi 6 access point looks like a smoke detector

Styled to look like a smoke detector, Lancom's new entry-level Wi-Fi 6 access point is priced to appeal to small- to medium-sized organisations.

With aggregated data rates of up to 1,775 Mbps, the LW-600 is said to be ideal where small to medium numbers of users require high-throughput Wi-Fi.

Lancom says its inconspicuous smoke detector design blends harmoniously into hotels, offices, medical practices or small schools. It is managed automatically from Lancom's cloud service, with a web interface or by a WLAN controller.

The LW-600 is said to provide fast access to clients in the 2.4- and 5-GHz frequency bands. In dual-concurrent mode, it achieves aggregate data rates of up to 1,775 Mbps (up to 1,200 Mbps with 5 GHz and up to 575 Mbps with 2.4 GHz in parallel).

And it says genuine 2x2 multi-user MIMO distributes all of the available downlink and uplink spatial streams to several clients concurrently, rather than consecutively. The available bandwidth is exploited to the full and delays in the wireless network are reduced.

Power is supplied via PoE meaning that it can be installed independently of power sockets. Alternatively, it can use the power adapter and country adapter supplied. It includes a number of security features and has a three-year warranty (five years optional). *lancom-systems.com*

Wireless router is ready for the future

Targeted at businesses with branch networks, the E3000 range is said by Cradlepoint to be the first 5G-optimised, all-in-one wireless edge router for the market.

Customers, it says, can set up a wireless WAN today using LTE and Wi-Fi technology and seamlessly upgrade to 5G in the future.

Packaged as part of the company's NetCloud Enterprise Branch Service, E3000 products contain an embedded gigabit-class LTE modem, integrated Wi-Fi 6, gigabit Ethernet ports for WAN/LAN connectivity, and expansion slots accommodate a secondary LTE modem module today with 5G modem and Bluetooth 5.0 modules due later this year.

Cradlepoint says it can run processor-intensive WAN edge features within the NetCloud service at gigabit speeds, including BGP routing and application-aware SD-WAN and security functions, such as firewall, analytics, IPS/IPS and content filtering. It also supports customisable services like Wi-Fi guest portal and IoT edge computing capabilities.

It is said to be ideal for branch-oriented sectors such as retail stores, restaurants, healthcare clinics, financial services, construction sites, and field service offices.

Cradlepoint, now owned by Ericsson, claims to provide the most pathways from LTE to 5G in the industry. In February, it introduced the W-Series 5G Wideband Adapter, said to be the first 5G product purpose-built for the enterprise. *cradlepoint.com*

Look out for...

NGMN unveils plans for 6G

The Next Generation Mobile Networks (NGMN) board has launched a 6G project, while continuing its 5G efforts, it said.

NGMN published the first 5G White Paper in 2015, which helped pave the way for standardising 5G and its commercialisation. A second 5G White Paper (5GWP2) followed in July 2020

The new 6G Vision and Drivers project is designed to provide early and timely direction for global activities around the next generation. NGMN will facilitate an information exchange within its internal partnership and with relevant external stakeholders.

With its new "6G Vision and Drivers" project, NGMN intends to provide early and timely direction for global 6G activities, which will develop the mobile network technology for operation in the future. In this context, NGMN will also facilitate an information exchange within its internal partnership and relevant external stakeholders. NGMN said it is "very excited" to be working on this future vision project and to set the footprint for generations to come.

"As we continue to implement and further develop 5G to maximize the benefit of its potential, our goal as NGMN is to remain at the forefront of next generation mobile networks," said Arash Ashouriha, SVP group technology innovation, Deutsche Telekom and chairman of the board of NGMN said. "It is therefore essential that we start anticipating the future societal needs and elaborate the drivers for mobile communications in the future."

Anita Döhler, CEO of NGMN added: "The NGMN Board is committed to further drive the implementation of 5G. At the same time, we are looking at the future with our new work on 6G. Our organisation with its network operators, vendors and research associations has played such an important role for the requirements setting of 4G and 5G, and we will continue to provide guidance also for the next generation mobile networks beyond 5G. Interested parties are welcome to contribute to the "NGMN 6G Vision and Drivers" activity."

Connecting patients: free Wi-Fi made available in hospital

Giving patients what they need: companies rally to donate Wi-Fi for Covid sufferers and how a new idea using basic technology aids in healthcare feedback

The Chris Hani Baragwanath Hospital, in Soweto, Johannesburg, is the third largest in the world with 429 buildings, 3,200 beds and 6,760 employees. Every year, there are about 150,000 inpatients and 500,000 outpatients. More than 350 daily admissions – about 70% of the total – are emergencies.

It is a teaching hospital for the University of the Witwatersrand Medical School, along with the Charlotte Maxeke Johannesburg Academic Hospital, Helen Joseph Hospital and the Rahima Moosa Mother and Child Hospital.

It currently has five dedicated Covid-19 wards but the patients were unable to communicate with friends and family. As a result, Dr Gloria Teckie, consulting physician, contacted Greg Wilson, CEO of Reflex Solutions, based in nearby Noordwyck.

It resulted in a Wi-Fi project installed free of charge by four companies: Reflex; Mustek, of Midrand, Gauteng; Dark Fibre Africa, Centurion, Gauteng; and ESET, which has offices in Rondebosch, Cape Town.

Mr Wilson said that working in the largest hospital in the Southern hemisphere was not going to be simple: "There was a need for large backhaul, fibre reticulation within the hospital grounds, power over Ethernet (PoE) switching infrastructure, Cat 6 cabling and mounting access points in the Covid-19 wards."

The company's head of carriers and access, Rudolf Beets, said: "Ensuring that power is always available to run the system is still a concern, which we are also looking to solve. We do not want to provide a half-baked solution, especially for a humanitarian issue like this. It has to be a quality service"

And it was important that the work was not intrusive with no interruptions to the operations of the wards or discomfort to patients.

The CEO of Dark Fibre Africa (DFA), Thinus Mulder, said: "When we saw the opportunity to make a meaningful contribution to provide connectivity to major public health sites in collaboration with Reflex Solutions, we felt compelled to get it done. We are very much aware of how critical connectivity has become as an enabler of essential services for a number of sectors, including, of course, the health sector."

DFA is responsible for providing connectivity to the hospital from the Reflex core network, Reflex Solutions is providing the fibre, cabling, switching, labour, internet bandwidth and two Service Set Identifiers (SSIDs) – one for hospital guests and one for Doctors and medical personnel, which will be used in the treatment of patients.

Digital security provider, ESET, is providing its software security product model for hospitals and health systems and licences to the software. ESET Channel Manager, Sean Cocks said: "Our security solution for hospitals and the health system supports their financial and operational needs while promoting innovation and transformation to provide value to patients and healthcare professionals. It is the perfect security solution in a case like this".

Mustek is sponsoring 10 Mercer tablets and 30 Huawei access points (APs) to connect patients, allowing them to stay connected with loved ones through video calls and messaging applications. The Huawei business unit manager at Mustek, Donna Mostert, said: "This is such an emotional thing and we could not but assist. We did not only want to pay it forward but bring communications as close as possible to patients and put devices in their hands and give them access to multiple communication channels".

Dr Teckie said: "Medical personnel at Baragwanath are taking heavy strain having to not only manage the physical aspects of the illness, but also the emotional distress of patients unable to communicate with family during their time in hospital. It is just incredibly humbling that Reflex Solutions decided to help the hospital, showing their selfless desire to assist the medical fraternity and patients in this way".

Now medical staff are able to help patients communicate via platforms such as WhatsApp or FaceTime. And staff are also able to use the system to run webinars, meetings and education events.

The business unit manager, end-user computing, at Reflex, Andrew Dobie said: "This is not a once-off project for Chris Hani Baragwanath. We have started preparations with Steve Biko academic hospital in Pretoria to roll out the same fully sponsored solution soon. Our aim is to do the same for other healthcare facilities across the country."

• The hospital's name is from those of two men. John Albert Baragwanath, who planned to make a fortune from gold, instead started a hostel which eventually bore his name and it became the name of a military hospital which opened in 1941. Baragwanath is derived from the Welsh words bara, which means bread, and gwanath which means wheat. Chris Hani was a prominent activist in the ANC, regularly targeted for assassination, who aided the country's move to the first democratic elections. He was widely mourned after he was assassinated outside his home in 1993. His name was added to that of the hospital in 1997. ■

Basic tech gives a voice to patients

Thousands of patients of community health care workers in rural Africa can use a basic tool on their mobile phones – with no internet connection – to provide feedback on their care anonymously, easily and inexpensively.

The system was developed by researchers from Cornell Tech, Manhattan, part of Cornell University.

In remote areas of Africa and India, where a single doctor might serve 10,000 people, many rely on community health care workers who visit their homes and act as intermediaries between doctors and patients.

This model is considered effective and has been adopted around the world, there have been cases of poor treatment, say researchers.

Efforts to improve care and accountability involved collecting data from caregivers. A study by the Cornell researchers sought to create a system allowing care recipients to offer feedback of their own.

Fabian Okeke, a doctoral student in information science at Cornell, said: "If you're providing services for a pregnant mother in rural Kenya, how is the pregnant mother going to say whether the service is helping her? "We wanted to somehow bridge this gap – not just in the research literature but in community health. So, we started thinking about ways to integrate the voices of care recipients and to do it in a way that is scalable."

The researchers chose an unstructured supplementary service data (USSD) system – commonly used by owners of prepaid mobile phones to check their balances. They chose USSD because it offered anonymity, unlike short message service texting; and because it is far less expensive than a call-based system.

With USSD, users enter a series of numbers into their phones, prompting questions about their experiences at the health care centres. Since most Kenyans already own mobile phones and are familiar with USSD, it was easy for them to adopt, the researchers said.

Mr Okeke said: "Often when people think about interventions in developing nations, they think, 'Let's go build an app from scratch or a completely new tool,' but many times you can go back and tap into existing infrastructures.

"People are already used to placing calls and texting – I think the innovation here is that you can go back to those mundane technologies and transform them into something else."

The researchers deployed the tool for seven weeks, training five care workers who, in turn, trained care recipients. For example, users who were visited by health care workers could dial *384*888# on their phones to provide feedback, which took less than two minutes. Users who visited community health care centres could dial a different series of numbers to offer feedback.

Users dialled in to answer a series of questions 495 times, with an error rate of less than 1%. Around 70% of the responses were positive, 17% negative and 13% neutral.

The researchers also conducted focus groups with patients and caregivers to gauge their opinions.

Mr Okeke said: "We found that people were pretty enthusiastic about using USSD for providing feedback. "It was a way to empower them to communicate how they felt about the services they received."

Even the health care workers – who at first feared the feedback could be used maliciously against them – seemed pleased with the results, the researchers found.

"Initially, when we started the design process, health workers said this could be a tool that becomes a punishment," Okeke said. "But most of the feedback was positive, so it's validating the hard work that they're doing, but it's also holding them accountable. We heard things from

A study by the Cornell researchers sought to create a system allowing care recipients to offer feedback of their own

care workers like, 'Now it's on me to combine both the positive and the negative to understand where I can improve my services.'"

"The potential impact is thrilling. Technological interventions, when designed in the right way, can help address some of the complex health problems we have in the world."

Medic Mobile, a non-profit health tech company, is in the process of incorporating the USSD system into its software toolkit, which is used by health care organizations across Africa. The system showed promising results in a recent study and will soon be expanded by Medic Mobile, that collaborated on the research and works with more than 20,000 health care workers across 14 African countries.

The research paper was co-authored with Nicola Dell, assistant professor of information science, and Medic Mobile researchers Beatrice Wasunna, Mercy Amulele and Isaac Holeman. The research was partly funded by the Children's Investment Fund Foundation UK.

Camilleri named non-exec chairman, Vodafone Malta

Industry veteran Juanito Camilleri has returned to the telecom sector as non-executive chairperson of Vodafone Malta, the company's new shareholder has announced.

Vodafone Malta was acquired by Monaco Telecom earlier this year and the company will continue operating under the Vodafone brand for a transition period.

Camilleri, a former rector at the University of Malta, served as founding CEO at Go Mobile and later group CEO at Melita Cable. He is currently chairperson and resident professor at the Centre for Entrepreneurship and Business Incubation at the University of Malta and is a director on various boards.

"I am very excited about Monaco Telecom's vision for the Malta operation, which seeks to retain the company's great strengths while heralding innovative digital services beyond mobile communication," Camilleri said.

He added that Monaco Telecom formed part of a greater network of operators which are not only well rooted in Europe but also have extensive experience in providing state-of-the-art and innovative services in small states. "They will be an asset to Malta and I am very pleased to be invited back to make a contribution to the telecommunications sector," he said.

Camilleri forms part of a new board at Vodafone Malta made up of representatives of the shareholders of Monaco Telecom, which completed the €250m acquisition of Vodafone on April 1 after receiving regulatory approval from the Maltese authorities.

SpaceX adds 60 satellites to Starlink

SpaceX, the company founded by South African billionaire Elon Musk, deployed an additional set of 60 satellites to orbit for the company's broadband internet service, two days later than originally scheduled in order to ensure mission assurance.

The October 24 launch marked the third batch of Starlink satellite batch sent to space this month and the 15th mission to support the global broadband system.

The company is establishing ground stations in Texas, North Carolina and California, which bring the number of filed US gateway locations to 42.

International Starlink partners include New Zealand, Austria, Australia, South Africa and Japan.

SpaceX teamed up with Microsoft to bring satellite-powered connectivity on the latter's Azure cloud platform for public and private sector customers via the mobile data center offering.

Huawei issues legal threat to Europeans

Huawei has told top European lawmakers that Warsaw and Bucharest risk violating EU law with new 5G security rules, offering a glimpse into possible court battles over new telecom security policies.

In a letter sent to EU competition chief Margrethe Vestager on September 11, the Chinese tech giant said proposed 5G security rules in Poland and Romania — two countries that have taken a hawkish approach to Chinese technology over the past year — "are predicated on several violations of EU law." The company also took aim at bilateral "joint declarations" that Warsaw and Bucharest signed with the US administration.

Any legal challenge to national 5G security legislation in Europe would be a test case for Europe's nascent "technological sovereignty," the notion that Europe should be autonomous in the digital sector and not rely on foreign companies or governments.

Cambodia's watchdog goes after 17 operators

Cambodia's Ministry of Post and Telecommunications (MPTC) has suspended or revoked the licences of 17 operators, in a dramatic response to apparently unacceptable business practices.

The move came after a number of operators (both ISPs and MNOs) failed to pay their revenue shares to the government. It appears that some were inactive and some had been reporting false revenue figures.

This was apparently revealed when the MPTC's inspection team was asked to monitor and audit some of the country's operators to gather information on, amongst other things, the status of their business operations, technical capacities and financial conditions.

A statement from the ministry said that inspection findings showed that the 17 operators were "operationally inactive, had no employees or were non-compliant regarding their revenue shares and other obligations as required in their licences or that they failed to provide the necessary technical documents".

CadComms, which had its licence and spectrum revoked in June, has been joined by another mobile operator, Emaxx Telecom. CN Xinyuan Interconnect, XNET, Saturn Holdings, ATA Telecom, PPIN Internet, HT Networks, DG Communications, DTV Star and Cambodia Broadband Technologies have all lost their ISP licences. Aerospace Information Cambodia, Lim Heng Group and TPLC Holdings have had their ISP and voice over IP licences revoked. Kingtel Communications still has an ISP licence but is no longer permitted to provide voice over IP. Finally, the ISP licence of BDKtel has been suspended and the 'position and navigation licence' of Asia Star Resources Investment Holding has been revoked.

All these companies have been ordered to settle any outstanding debts to the MPTC and the country's regulator as well as public debts, private debts and other tax obligations.

A statement from the ministry said that findings showed 17 operators were ''operationally inactive, had no employees or were non-compliant regarding their revenue shares and other obligations as required in their licences or that they failed to provide the necessary technical documents''

Japan's PM orders operators to cut prices

New Japanese prime minister Yoshihide Suga is moving to drive down prices more in line with the rest of the West.

The Japanese Ministry of Internal Affairs and Communications announced plans to reduce the cost of mobile data packages, which the government have previously noted are 40% steeper than similar plans in other Western countries.

Operators recently begun to take notice, with KDDI and SoftBank both announcing new lower-cost plans for their customers that are more in line with Western averages. However, these discounted plans have received immediate criticism for not affecting the vast majority of the telcos' customers; the plans are for the companies' sub-brands (SoftBank's Y! Mobile and KDDI's UQ) that already have low-cost plans and thus will not affect between 80–90% of the telcos' customers who use their au or SoftBank branded plans.

Meanwhile, NTT DoCoMo is seemingly lining up price cuts of its own, saying today during an earnings call that it was weighing its options in response government pressure.

NTT DoCoMo is currently undergoing the process of being reabsorbed by NTT in a US$40bn deal announced at the end of September. The deal is expected to give DoCoMo a more stable financial position from which it could consider further price cuts. The deal is expected to close in November.

For the Japanese customers themselves, who currently pay some of the highest mobile fees in the world, any reduction in prices will be welcomed. However, one player likely to be less excited by this prospective price war is new entrant Rakuten. The disruptive, open RAN-based telco launched 4G services back in April, boasting far cheaper mobile rates than their rivals, even making the initial three million subscriptions free for one year. If the major players do ultimately commit to a significant reduction in plan prices, some of Rakuten's initial appeal could rapidly dwindle.

Batelco claims 5G first

Batelco, the principal operator in Bahrain, claimed to have successfully activated 5G coverage across the kingdom.

The 5G coverage is available in all four governorates covering 95 percent of the nation's population. Batelco said this makes it the first operator to have national 5G coverage in Bahrain – and positions Batelco among the leading operators in the Gulf Cooperation Council (GCC), a political and economic alliance of six countries in the Arabian Peninsula: Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates.

It was in March last year that Batelco signed a partnership agreement with Ericsson to build a national 5G mobile network over a period of two years.

In June 2019, the former announced that it was to be the first operator in Bahrain and among the first in the region to deliver commercial 5G network services for its customers.

"Covering Bahrain with 5G is a key strategic goal for Batelco, both at the corporate and national level. It's is a technology that will change the telecom industry as we know it today and will open up endless possibilities in the digital space," Batelco CEO Mikkel Vinter previously said. "The entire Batelco team are very proud of the national 5G coverage that is in line with Bahrain's economic vision for 2030."

The Economic Vision 2030 is described as a comprehensive economic vision for Bahrain, providing a clear direction for the continued development of the Kingdom's economy.

In June 2019, the former announced that it was the first operator in Bahrain and among the first in the region to deliver commercial 5G network services for its customers

Vodafone Spain 'first' to offer Alexa-based calls via Echo speakers

Vodafone Spain has integrated its 'OneNumber' calling service with the Alexa voice assistant, becoming the first Spanish operator to offer its customers the possibility of making and receiving phone calls via their Amazon Echo smart speakers and displays.

To use the service,customers simply have to link their existing mobile phone number to their Alexa account via the Alexa app to receive hands-free calls directly on their Echo devices just as they'd use their regular phones, said the company.

OneNumber was launched in Spain back in 2018 and allows customers to share their number and contracted tariff among multiple devices including smartwatches, tablets and smartphones. The OneNumber with Alexa service will cost an additional €1 a month but will be offered for free until the end of the year.

Vietnam to end 2G services in 2022

Vietnam plans to bring the number of 2G subscribers to under 5% by 2022, so it can instead invest in and push the development of higher-technology cellular networks.

There are currently around 24 million 2G subscribers in the country and the ministry of information and communications aims to bring the figure down to five-seven million, or around 5% by the year after next, it said.

Closing 2G will leave more bandwidth for 3G, 4G as well as the upcoming 5G network and help accelerate the establishment of a digital economy, the ministry added in a statement.

The department is now working to boost the sales of low-cost smartphones so more people will be familiar with 3G and higher networks.

Hoang Minh Cuong, head of the Southeast Asia nation's telecommunications department under the ministry, said the 24 million 2G users are the ones that telecom operators need to help transition to smartphones.

The number of 2G subscribers has dropped by six million since 2019, showing that the goal to bring the ratio to under 5% is achievable, he added.

SIM re-registration hits Telenor subs figures

Telenor Myanmar has lost over six million customers in the third quarter of this year, which for parent company Telenor of Norway is related to SIM deactivation.

However, the Myanmar unit did not lose money. Figures released by Telenor suggest that total third-quarter revenues of kr1.62bn were up from kr1.39bn a year earlier. Subscription and traffic revenues amounted to kr1.43bn, up from kr1.20bn. Mobile ARPU and EBITDA were also up.

The number of subscriptions decreased by 6.3 million as Telenor Myanmar deactivated SIMs following the SIM re-registration process to comply with new directives from the authorities. There was an underlying increase of more than four million subscribers but the overall effect was a 2.1 million reduction in the group's subscriber base.

The inherent demand for telecommunications services, however, is growing. In fact the increase in subscription and traffic revenues was apparently driven by strong growth in data usage, more than offsetting the impact of price pressure.

The Telenor report also noted that operations in Asia and roaming revenues remained impacted by the Covid-19 situation. Lockdowns have eased in some places, but the report says, the number of new daily Covid-19 cases has been increasing in Myanmar, and local movement restrictions and lockdowns have been implemented.

Pure Telecom agrees €10m deal with BT

Irish broadband and telecoms provider Pure Telecom has penned a €10m deal with BT Ireland that will provide it with access to SIRO's nationwide high-speed fibre broadband network.

The network consists of 338,000 homes and businesses in 45 towns around Ireland so far.

As SIRO continues to connect urban and regional premises with Gigabit broadband, the BT deal will allow Pure Telecom to expand its reach countrywide.

Under the terms of the deal, BT will provide Pure Telecom with a comprehensive managed service which will help bring its broadband "Fibre to the Premises" product offering to the market.

The service will be made available across Ireland at every location where there are FTTP services available.

Paul Connell, CEO at Pure Telecom, said the company is consistently striving to get more people and businesses access to high-speed broadband.

"Too many homes and businesses in Ireland still don't have fast internet access and it is detrimental to our society and economy - particularly at a time when everyone has been advised to work from home where possible," Connell said.

Sparkle and Mobileum provide enhanced connectivity and roaming solutions

Sparkle, the first international service provider in Italy, has partnered with Mobileum, a provider of analytics solutions for roaming, telco security, risk management and end-to-end testing, to provide integrated roaming and security services to mobile operators worldwide.

Under the terms of the deal, the partners are able to offer mobile network operators (MNOs) and mobile virtual network operators (MVNOs) "a unique intelligence infrastructure" to support secure roaming services such as end-to-end IPX connectivity, data roaming, signaling security services for SS7, Diameter and GTP, and analytics-based roaming solutions. Services are delivered through an integrated next-generation platform that covers a broad range of connectivity scenarios, from VoLTE to IoT to 5G.

"This partnership represents a new era in the relationship between Sparkle and Mobileum," said Michele Campriani, chief sales officer of Mobileum. "Sparkle's global connectivity and service portfolio and Mobileum's proven Active Intelligence platform are complementary solutions that, when paired together, create a unique intelligence infrastructure that supports a rich set of secure roaming services."

Mario Pastore, chief revenue officer of Sparkle, added: "By partnering with Mobileum, we enhance our service portfolio and act as a real solution provider on top of providing pure connectivity. We are confident that this will be a fruitful and successful new page in the history of Sparkle as a supplier for mobile operators globally."

Thousands of Yemenis could lose telecom services

Thousands of Yemenis could soon lose access to telecom and internet services in the capital, Sanaa, due to a lack of fuel needed to operate the corporation's facilities.

Local media quoted a corporation source saying that the telecom corporation's stock of fuel is about to run out which could cause the switchboards and other stations to stop operating.

"Large segments of Yemenis will be deprived of communication and internet service, and most economic and banking activities that depend on telecommunications services and the internet to conduct their business will cease," the source said, adding that the activities of vital sectors that depend on fuel to produce energy and operate their equipment as well as transportation could also stop.

The Houthis, an Islamic political and armed movement that emerged from Sa'dah in northern Yemen in the 1990s, have recently closed Sanaa International Airport to the UN and other humanitarian aid flights claiming that the internally recognised Yemeni government and Arab coalition have prevented the entry of oil derivatives needed to operate the airport.

However, the internationally-recognised Yemeni government accuses the Houthis of taking advantage of the suffering of civilians to cover up their theft of more than 50 billion riyals (US$0.2 billion) of oil derivatives revenues from Hudaydah port, designated to pay the salaries of public sector employees.

Local media quoted a source saying that the telecom corporation's stock of fuel running out which could cause the switchboards and other stations to stop operating

Moreover, the government says the fuel crisis in the Houthi-controlled areas is "fabricated", explaining that the country has received fuel that covers the Yemeni people's needs for at least seven months.

KaiOS, E. B. Solutions launch phone with built-in infrared thermometer

KaiOS Technologies, maker of the leading mobile operating system for smart feature phones and E. B. Solutions, a Bangladeshi technology services provider, have brought to market the geo phone T15.

Available for BDT3,500 (US$41), the KaiOS-enabled device includes an infrared thermometer developed by FISE. KaiOS says the T15 combines feature phone hardware with KaiOS, giving users access to WhatsApp, YouTube, Facebook apps, as well as the Google Assistant through the KaiStore.

Available for BDT3,500 (US$41), the KaiOS-enabled device includes an infrared thermometer developed by FISE

"This combination of high-speed internet, on-the-go temperature monitoring, and affordability are perfect for Bangladesh," said Sebastien Codeville, CEO of KaiOS Technologies. "Popular apps and other vital digital resources are more accessible than ever via the T15, alongside the potentially life-saving power of contactless temperature readings. With E. B. Solutions Ltd., we're taking a crucial step towards closing the digital divide in South Asia and helping stop the spread of COVID-19 through an affordable, innovative device."

Rafiur Rahman Khan Yusufzai, managing director of E. B. Solutions added: "Geo Phone T-15 will be an affordable device which can narrow this digital divide for rural populations. Geo Phone T15, powered by KaiOS, is a 4G VoLTE-enabled device with necessary apps for your digital lifestyle."

Accurate down to 0.2 degrees Celsius, the T15's IR thermometer is located next to the smart feature phone's rear-facing camera. Users can point it at the subject's forehead for an instant temperature reading. The Geo Phone T15 also provides access to educational resources such as Kai's in-house app Life, which features lessons and self-help articles related to Covid-19, general health, digital literacy, agriculture and more.

Quortus partners with TLC for private 5G network radio solution

Quortus, the UK-based provider of private edge, LTE and 5G network solutions, has partnered with Florida-based TLC Solutions, a provider of wireless network solutions for remote, rural, tactical and emergency deployments, to deliver 5G radios for private network deployment.

The former has been working with the US firm to provide its ECX Pack, ECX Access and ECX Core products as an integrated part of TLC Solutions' wireless network systems. The combined offering is said to deliver "greater flexibility for private network deployments", particularly with regards to radio range and spectrum optimisation. TLC is currently integrating the Quortus' packet core and its access management system as part of its 5G New Radio (NR) solution.

"We are extremely proud of the longstanding partnership we have formed with Quortus," said Lee Sanders, president at TLC Solutions. "Its innovative products ensure that we continue to meet the very specific needs of our customers. We are excited to continue to see our partnership develop as we enter the next generation of wireless technology and see Quortus help TLC bring to market its private 5G network solutions and products."

Mark Bole, CEO at Quortus added: "There is tremendous interest in the potential of private 5G networks as enterprises across multiple vertical markets evaluate the new levels of efficiency and productivity they offer. We're delighted to be extending our valued partnership with TLC to include private 5G networks, as we help organisations either migrate from private LTE networks or build bespoke 5G infrastructure for the first time."

This latest announcement builds on an 11-year partnership between the two companies, which has seen Quortus provide software-defined core network solutions to TLC Solutions for its 2G, 3G and LTE network systems.

The combined solution is targeted to be available later this year.

Talking on the moon

Nokia has been chosen by the American space agency NASA to build the first mobile phone network on the moon.

The Finnish gear-maker recently announced that its Nokia Bell Labs division will build the lunar communications system. It said NASA will put the equipment on a lunar lander. The spacecraft is expected to reach the moon's surface in late 2022.

Nokia's announcement comes as the space agency continues preparations for sending astronauts to the moon by 2024. NASA's Artemis program aims to establish a long-term human presence on the moon as a "warm-up" for future missions to the planet Mars.

NASA also recently announced it had awarded US$370m to 14 companies to provide technology for the moon-landing program. The money will support studies of cryogenic fluid management and technologies related to energy storage and power production on the moon's surface.

The Nokia agreement was included in NASA's latest awards to private companies. The space agency said it is paying the company US$14.1m to build the mobile network.

Nokia said its network will provide critical communications for work astronauts will need to perform on the moon. This will include remote control of lunar vehicles and other equipment, real-time navigation activities and high-quality video streaming.

The equipment includes a base station, antennas and computer software programs. All the equipment will be designed to survive difficult launches, lunar landings and extreme conditions in space.

Nokia also said the equipment is designed to configure, or set up, the 4G/LTE communications network on its own. Marcus Weldon is Nokia's chief technology officer. Weldon said he sees the 4G/LTE system as a necessity to support "a sustainable human presence on the lunar surface."

The company decided to use 4G instead of 5G, the latest mobile technology, because 4G has been available longer and proven its reliability.

Q&A

Lucky La Riccia
head of digital services
Ericsson Middle East and Africa

Who did you want to be when you were growing up?

I've always been a big fan of Steve Jobs and I grew fonder of him after he managed to turnaround Apple. How he cultivated a customer focus that boosted the company's bottom line and the innovation shown prioritising customer in production and products. He was truly ahead of his time in terms of Design Thinking; the ability to learn from mistakes and "fail-fast". The other element which was inspiring at the time was his unwavering and relentless focus on pursuing his vision.

What was your first job after leaving school?

I was so eager to hit the work force so took a role combined with my last year of University studies. Joining a small Software Company that had the endorsement of Greg – "The Shark" – Norman, I landed a software engineering role with a golf swing coaching software company. It was the perfect job, traveling from one golf tournament to another working on the state of the art on site technology to assist golfers with their swing. It's a pity my golf swing hasn't improved so much over that time!

When was your big career break?

Having spent 10 years in the finance industry working in Systems Integration and IT, I was ready for a pure technology role. Ericsson presented the perfect opportunity being one of the pioneers in ICT. I've been with Ericsson since 2004 and haven't looked back since! The role has given me access to multiple markets, multiple disciplines and varied customer environments.

What is the best thing about your job?

The world as we know it is being digitized, and at Ericsson we get a front row seat. It's a pride to take part of connecting the world: we're connecting communities, digitalizing industries and enabling financial ecosystems by our technology. It's not easy to say that about all roles, but we can see real-life benefits to consumers and societies from what we do every day. Today, one of my real highlights is being able to help drive Mobile Financial Services uptake in Africa as an example, helping the unbanked get access to Financial instruments that drive both basic banking services and spur entrepreneurship.

What is the hardest thing about your job?

The "distance" in market maturity within geographies is the barrier that stands between those countries and the benefits of advanced technologies. While at the same time that we are making history with our 5G technology, in the same Middle East & Africa market we are trying to address basic telecom needs still with 2G and 3G spectrum. Addressing both market dynamics at the same time is difficult to balance while we are eager for all markets to benefit from 5G technology and it impacts not only on the telecommunication front, but also entertainment, healthcare, transportation...

What has been your career low to date?

None other than the Millennium bug. It had a huge impact on the ICT industry as a whole. It affected the perception the masses had on computer programming and technology rendering doubts on the ability for ICT to truly be fundamental in society. The recent Covid-19 pandemic went some way in my view to correct those perceptions. Technology and the quality of remote communication services became critical for all – and largely as an industry we have been able to maintain a positive communication experience for all those working and studying from home during this period.

What has been your career high to date?

Quite a few years back now and after 10 months of effort and hard work, we managed to rollout 3G nationwide in Australia for Telstra delivering coverage to 95% of the population. It was the first rollout of its kind at an international level, and to play a major role in that achievement gives me a lot of pride. It's a while ago now, but experiencing the impact that major technology change brings to society such as 3G at the time or even 5G as we deploy it today, gives an immense sense assuredness that we do everyday can really benefit consumers, enterprises and society at large.

Who has been your biggest inspiration?

I think the story of Ginni Rometty as the first female leader of IBM is quite impressive; the hardships and challenges but the perseverance and belief of one's own skills are a tremendous story. We don't often talk about it specifically, but "resilience" for me is one of those qualities I look for in both those I want to work for and with. The ability to sustain pressure, sustain setbacks and recover and perform can be truly inspirational.

What is your biggest regret?

I believe I should have taken on a role in the global market earlier on. The learning opportunities are multiplied on the global level. Different technology shifts, exposure to different cultures, new technical difficulties to learn from... The scene differs from a local market to a global one, the experience I gathered rubbing shoulders with global markets would not have been possible to acquire from one location. How you apply learnings across different markets also has different impacts – the learning you achieve in this regard becomes invaluable.

What is the best business lesson you have learned?

The motto "Fail-fast" is true to being able to re-ignite at the same time improve beyond the original misgivings. You learn when you fail, to apply that learning and generate the wanted outcome shows that failure in itself is a starting point for something special, if you can adjust your thinking ... It also builds humility. Knowing that pushing the boundaries can result in failure, it teaches you to listen, learn and collaborate more with others – rather than taking the "it was invented here" position every time.

If you had to work in a different industry, what would it be?

I'd have to return to Finance; an industry that can benefit from design-thinking, agile ways of working and digitalization! Given the impact that financial trade and inclusion has in communities of all sizes and across all geographies, its one of those industries that continues to play a pivotal role in the way we live, interact and grow prosperity. It would also be a great opportunity to apply learnings from the experience of deploying mobile financial services in a telecom sense and how mobility is much more than just data transfer. Let's hope it's not too late!

What do you want to do when you retire?

I haven't locked down those plans yet, but I can already see lots of good coffee and morning newspapers. Reflection is probably one of those things we don't get enough time to do daily so if I can impart some learning from my years in technology, it's probably an area I'd invest my spare time and energy either via teaching, coaching or consulting...

What would you say has been the best technological advancement in your lifetime?

I got to witness the Sony Walkman, which I think before we got the Iphone, started to scratch the surface of a "pro-user experience". It also combined the concept of mobility, user experience and content; something that is pivotal to the Telecom industry today! It also was the advent of technology 'add-ons' where the ecosystem of accessories and variants based on use case become an industry in itself! ■

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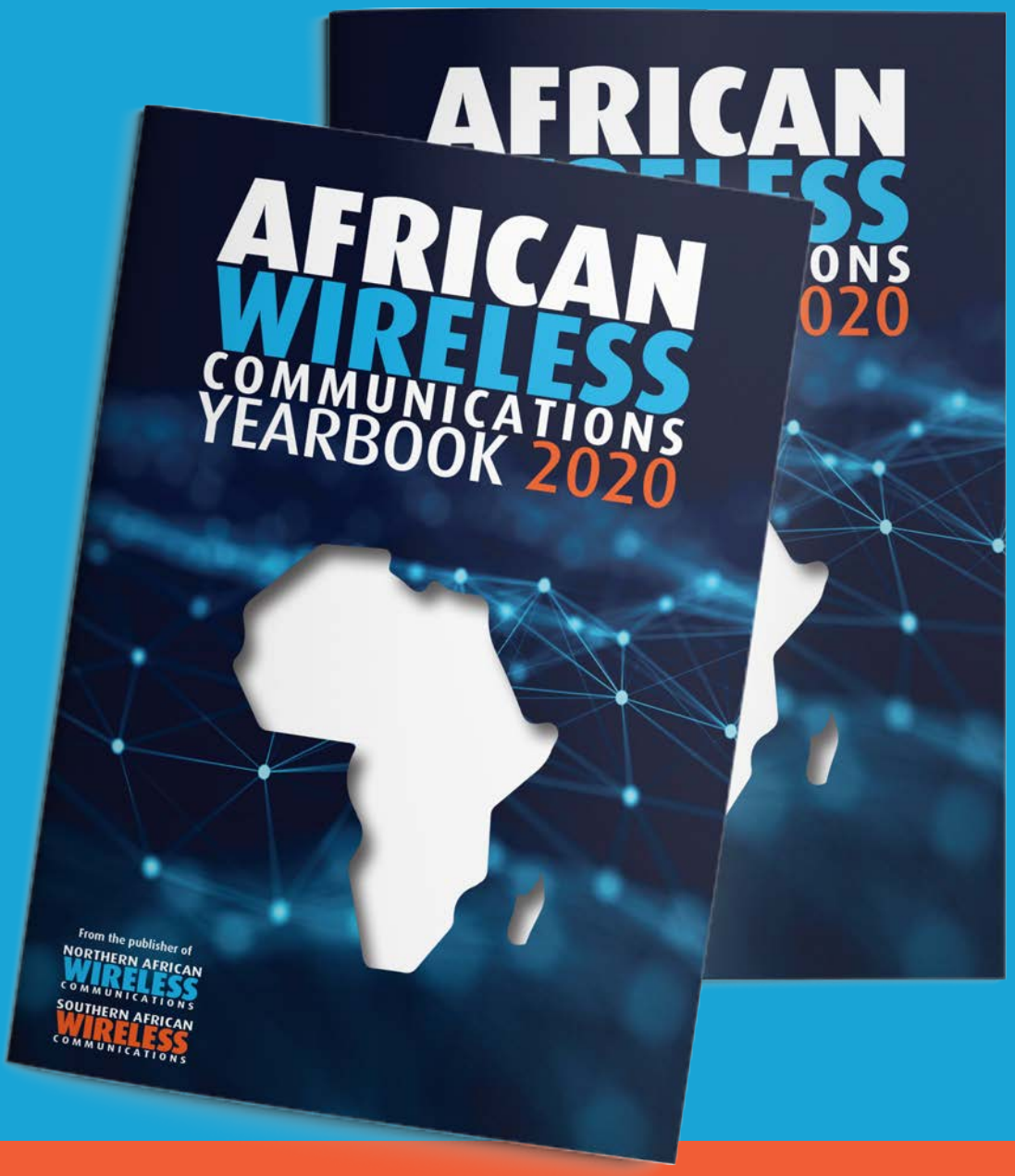

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