

BRIDGING THE CONNECTIVITY DIVIDE: Leveraging Infrastructure Sharing for Inclusive Access in Africa



RÉDUIRE LA FRACTURE NUMÉRIQUE: exploiter le partage d'infrastructure pour un accès inclusif en Afrique

- **Harnessing 5G Fixed Wireless Access (FWA) in Africa**
- **Utilisation de l'accès sans fil fixe (FWA) 5G en Afrique**
- **Why Telcos are the New Banks in Africa's Mobile Revolution?**
- **Pourquoi les opérateurs télécoms sont les nouvelles banques dans la révolution mobile en Afrique ?**
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Bridging the Connectivity Divide: Leveraging Infrastructure Sharing for Inclusive Access in Africa

In today's digital age, access to reliable and affordable internet connectivity is crucial for driving socioeconomic development. However, across the African continent, millions of individuals still lack access to basic internet services. This digital divide not only limits individual opportunities but also hampers overall economic growth and development. To address this issue, leveraging infrastructure sharing offers a promising solution. By optimizing existing infrastructure and fostering collaboration among stakeholders, Africa can bridge the connectivity gap and unlock the full potential of its digital economy.

Understanding the Connectivity Divide in Africa

Africa's digital landscape is marked by disparities

in access to telecommunications services. While urban centers often enjoy robust connectivity and high-speed internet access, rural and remote areas are frequently underserved or entirely disconnected. According to the World Bank, as of 2021, only around 28% of Africa's population had access to the internet, significantly lower than the global average of over 60%. This digital divide exacerbates existing inequalities, hindering educational opportunities, access to healthcare, and economic development for millions of Africans.

Various factors contribute to the connectivity gap in Africa, including inadequate investment in infrastructure, geographical challenges, and regulatory barriers. The cost of deploying and maintaining telecommunications infrastructure in remote and underserved areas is often prohibitive for individual operators, leading to a lack of network coverage in these regions. Additionally, regulatory frameworks in some countries may discourage or impede infrastructure development, further increasing the digital divide.



The Role of Infrastructure Sharing

Infrastructure sharing, also known as network sharing or passive infrastructure sharing, involves multiple operators sharing physical infrastructure components such as towers, fiber optic cables, and data centers. By pooling resources and collaborating on infrastructure deployment and maintenance, operators can overcome many of the challenges associated with expanding network coverage in Africa. Infrastructure sharing offers several compelling benefits for enhancing connectivity:

- 1. Substantial Cost Savings (CAPEX and OPEX):** The initial investment and ongoing maintenance of telecommunications infrastructure demand significant financial resources, especially in remote and underserved regions. However, by collaborating and sharing infrastructure components such as towers and fiber optic cables, operators can distribute these expenses among multiple stakeholders. This cost-effective approach allows operators to extend network coverage to previously unconnected areas without incurring prohibitive expenses. By reducing both capital and operational expenditures, infrastructure sharing enables operators to optimize their resources and allocate funds towards other strategic priorities. Overall, infrastructure sharing presents a financially sustainable solution for expanding connectivity in Africa, unlocking access to essential telecommunications services for underserved communities and driving socioeconomic development across the continent.
- 2. Improved Network Coverage, Especially in Remote and Rural Areas:** Infrastructure sharing plays a pivotal role in efficiently expanding network coverage to remote and rural areas. Through collaboration on deploying towers, fiber optic cables, and other infrastructure components, operators can

overcome geographical challenges and logistical constraints. This collaborative approach enables operators to extend network coverage to underserved communities more effectively. By ensuring connectivity in even the most remote areas, infrastructure sharing empowers communities to access essential telecommunications services. This access facilitates communication, connectivity, and participation in the digital economy, thereby fostering socioeconomic development. Overall, infrastructure sharing facilitates inclusive access to telecommunications services, bridging the digital divide and promoting equitable development across Africa.

- 3. Enhanced Quality of Service:** Infrastructure sharing enables operators to optimize network coverage and capacity, leading to enhanced quality of service for end-users. Through strategic placement of towers and expansion of fiber networks, operators can effectively address coverage gaps and deliver more reliable and high-speed internet connectivity. This improved quality of service is crucial for promoting digital inclusion and supporting the adoption of emerging technologies like IoT and cloud computing. By ensuring reliable and high-quality telecommunications services, infrastructure sharing contributes to bridging the digital divide and facilitating access to opportunities in the digital economy. Additionally, the enhanced connectivity facilitated by infrastructure sharing enables individuals and businesses to leverage advanced technologies for innovation, productivity, and socioeconomic development. Overall, infrastructure sharing plays a vital role in improving the quality and accessibility of telecommunications services, driving digital inclusion, and fostering economic growth across Africa.

4. **Environmental Sustainability:**

Telecom infrastructure sharing prioritizes efficient resource utilization and energy conservation, resulting in a significant reduction in environmental impact. Operators achieve this by minimizing the deployment of towers and cables and optimizing network infrastructure, thereby reducing the environmental footprint of telecommunications networks. Furthermore, the adoption of renewable energy sources, such as solar power for powering telecom equipment, enhances environmental sustainability efforts. By leveraging renewable energy, operators not only reduce reliance on fossil fuels but also contribute to conservation efforts by minimizing greenhouse gas emissions and environmental degradation associated with traditional energy sources. Overall, telecom infrastructure sharing promotes environmentally responsible practices within the telecommunications industry, aligning with global efforts to mitigate climate change and preserve natural resources. Through collaborative initiatives and sustainable practices, operators can play a pivotal role in building a more environmentally sustainable telecommunications infrastructure across Africa, ensuring that future generations can benefit from a cleaner and greener digital landscape.

Case Studies: Successful Models of Infrastructure Sharing

Several successful examples of infrastructure sharing initiatives in Africa demonstrate the transformative potential of this approach in bridging the connectivity gap:

Open Access Networks in Rwanda:

Rwanda has emerged as a pioneer in promoting open access networks (OANs) to expand broadband connectivity. Through the Rwanda Utilities Regulatory Authority (RURA), the government mandates infrastructure sharing among



operators, leading to the establishment of shared fiber optic networks. These OANs enable multiple service providers to offer broadband services to end-users, promoting competition and lowering prices.

Tower Sharing in Nigeria: In Nigeria, tower sharing agreements have gained traction as a cost-effective means to expand mobile network coverage. Companies like IHS Towers and American Tower Corporation have deployed thousands of shared towers across the country, enabling multiple mobile operators to collocate their equipment. This tower sharing model has significantly improved network coverage and quality of service, particularly in rural and underserved areas.

Fiber Consortia in East Africa:

In East Africa, regional fiber consortia have played a crucial role in extending fiber optic connectivity across borders.

Initiatives such as the Eastern Africa Submarine Cable System (EASSy) and the East African Backhaul System (EABS) facilitate collaboration among multiple telecom operators and governments to deploy and manage submarine and terrestrial fiber optic infrastructure. These consortiums have reduced the cost of international bandwidth and expanded internet access in the region.

Challenges and Opportunities in Infrastructure Sharing for Connectivity Expansion in Africa

While infrastructure sharing presents significant benefits for expanding connectivity in Africa, several challenges must be addressed to maximize its effectiveness:

- **Regulatory Frameworks:** Clear and supportive regulatory frameworks are essential for fostering infrastructure sharing. Governments need



to establish transparent rules and incentives that encourage collaboration among operators while safeguarding competition and consumer interests. By creating a conducive regulatory environment, policymakers can facilitate infrastructure sharing agreements and promote investment in shared networks.

- **Interoperability:** Ensuring interoperability between shared infrastructure components is crucial for seamless connectivity and service delivery. Standardization of technologies and protocols can facilitate interoperability and prevent compatibility issues. By establishing common technical standards and protocols, operators can ensure that shared infrastructure components work seamlessly together, enhancing the reliability and performance of telecommunications networks.

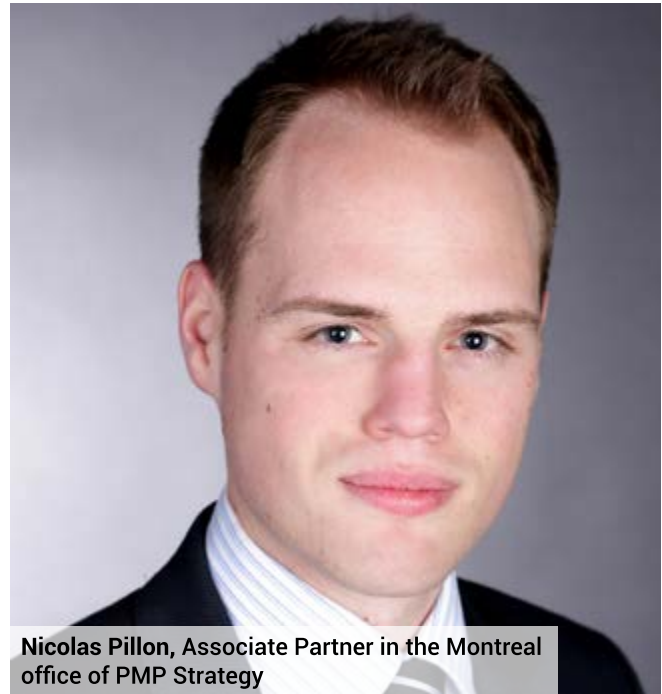
- **Investment and Financing:** Adequate investment and financing mechanisms are necessary to support infrastructure sharing initiatives. Public-private partnerships (PPPs), development funding, and innovative financing models can help overcome initial investment barriers and incentivize private sector participation. By mobilizing funding from both public and private sources, governments can support the deployment of shared infrastructure projects and accelerate connectivity expansion in underserved areas.
- **Capacity Building:** Building technical capacity and expertise among stakeholders is vital for the successful implementation and management of shared infrastructure projects. Training programs and knowledge exchange initiatives can empower local operators and regulators to navigate the complexities of

infrastructure sharing effectively. By investing in capacity building initiatives, governments can ensure that stakeholders have the skills and knowledge needed to plan, deploy, and maintain shared telecommunications infrastructure.

Telecom infrastructure sharing holds immense promise for enhancing connectivity across Africa and bridging the digital divide. By leveraging shared infrastructure, operators can realize substantial cost savings, improve network coverage, and promote environmental sustainability. Through collaborative efforts and innovative approaches, African countries can unlock the transformative potential of telecom infrastructure sharing, ensuring that all citizens have access to the benefits of the digital economy. As we look towards a more connected future, infrastructure sharing will continue to play a pivotal role in building a more inclusive and prosperous Africa. **TE**



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Open Access Fibre: The When, Where and How

Historically, most telecom operators have a hard time 'sharing their toys.' While tower sharing has existed for decades and RAN sharing has seen some success, the idea of open access networks on fibre has only really taken shape in the last few years.

France adopted it early, with a regulatory policy that provided pseudo-monopolies in rural areas. The UK, with BT's Openreach in place, has provided a platform for open access since the UK government's Digital Communications Review in 2017, forcing the creation of a separate entity. In the UK others have followed, including the Mubadala-backed, alt-net CityFibre and nexfibre (Liberty Global, Telefonica, Infravia JV). In the landscape of UK alternative network providers (altnets), the presence of an open access element is a common thread among many of the

98 players. The intention is to challenge Openreach's dominance in the market.

The US had been reluctant to pick up the idea as North American broadband markets are characterized by a multitude of vertically-integrated operators. However, various local open access networks (Intrepid, Ubiquity, SiFi, Utopia, Meridiam, Tillman, and Underline) have developed in recent years, and in May of 2023, AT&T and BlackRock came together to announce a joint venture. AT&T's idea was to build a 1.5 million wholesale open access fibre network in the United States which could leverage the financial strength of BlackRock and the

operational/brand strength of AT&T. The JV, called Gigapower, is now taking shape with AT&T as the anchor tenant.

Bob Lagrone, SVP of AT&T Corporate Strategy, summed it up. "We will be the first selling into this, but it's being built as an open access network. We believe that's a better way to drive the utilization of that network up and to reach segments that AT&T might not be able to reach."

While this announcement was big news in the US, PMP expects to see significant progress in open access development in the coming years given its key advantages.

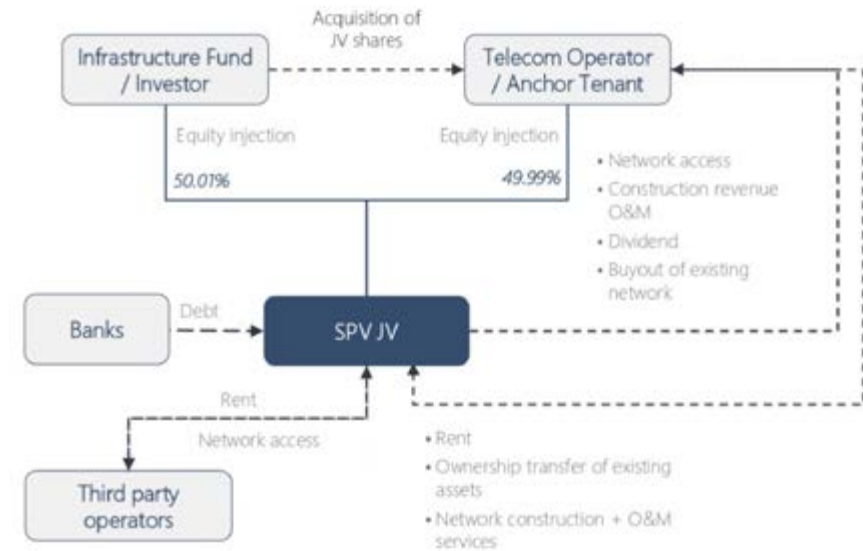
Why Move to Open Access Networks?

- **To Drive Penetration:** With multiple ISP brands offering services over one network, penetration is boosted. Competitive intensity among ISPs creates an important dynamic.
- **To Address Financing Needs:** The need to access new sources of financing (project financing/infra-fund equity investment) beyond traditional corporate financing to support the high cost of building these fibre networks.
- **To Discourage Infrastructure Based Competition:** There is a clear need amongst any company deploying fibre to prevent overbuild risk and defend market share.
- **To Support a Converged Offer:** There is increasing demand for open access models from MNOs that are eager to capitalize on the convergence thesis. The fixed/mobile convergence strategy enriches MNO's value proposition by boosting customer retention through churn reduction. This is the case for both T-Mobile in the US and Vodafone in the UK, where they lack their own fibre infrastructure but need a fibre proposition to defend their mobile business through a bundled proposition.
- **To Improve the Overall Economics:** Open access reinforces overall operator positioning, especially with regards to potential market consolidation. For a fibre infrastructure player, the open access model can be more profitable (and trade at a higher multiple) than the vertically integrated model in the long run.

Although current open access development is still very localized in the U.S., it will become increasingly important to secure first-mover advantage as the main open access player in regional markets.

Three Main Open-Access Models Exist: Independent Wholesale Platforms, Hybrid Retail/Wholesale Providers and the JV/FibreCo Model

The JV/FibreCo model has widely developed in Europe where tough competition among operators and investment funds' willingness to finance infrastructure has led operators to open



their network (either pushed by the regulator or for economic reasons) and to carve out their networks. Operators needed to finance new infrastructure builds and were facing constraints in funding capacity. European investors were also looking to invest in a new digital asset class and benefited from the low-interest market (at the time). In France in 2018, the Altice FTTH carve-out was one of the first major fiber carve-outs that paved the way for many such developments.

Given the increase in interest rates, debt financing is becoming more challenging, and it is likely that many US and international players will seek to develop JV structures to access equity financing from Infrastructure Funds (IF) to finance the roll-out of their fiber networks.

The Standard Characteristics of the Fiber JVs Are the Following:

- Creation of an SPV by an incumbent or a large player (the Telecom Operator/anchor tenant) and the sale of a roughly equal stake of the SPV to an investor to allow deconsolidation
- Call option allows reconsolidation after building period, securing long-term network control
- The operator is an anchor tenant of the JV, buying access to the JV's network through rental fees or IRUs, usually pledging not to use any other NextGen Network in the area covered by the JV

- The JV-SPV is responsible for network construction, network management and commercialization of the network
- Operations are usually sub-contracted to the operator through ex-ante exclusive sub-contracts, covering network construction, network maintenance, and managed services (IT, payroll, compliance, management, real-estate, etc.)
- Lenders provide additional debt financing to the SPV (Project Financing Model with high gearing ratio and lower interest debt than corporate financing)

In summary, assuming the right conditions, an open access model can de-risk the business and create more business opportunities than an integrated operator.

Standard JV Structure

The 'age of sharing' is upon us. As with an airport or a shopping mall, a shared tower or any shared infrastructure, the right mode of investment can provide superior returns and unlock access to lower costs of capital. Assuming the right ISP agreements (or anchor tenancies) are in place, commercial risk is mitigated, and a sustainable business model is created. **TR**

By Ken Campbell, Managing Partner in the London office of PMP Strategy and Nicolas Pillon, Associate Partner in the Montreal office of PMP Strategy

Liberia Introduces New Service Quality Regulation



The Liberia Telecommunications Authority (LTA) introduced a new regulation to improve the quality of services provided by mobile network operators, despite

demands for services. It sets standards that these companies must adhere to, ensuring better quality services for consumers. Penalties are also provided.

The regulation notably requires telecom operators to promptly address consumer complaints and restore lost data and minutes when networks fail without fault on the consumer's part. Consumers are also urged to carefully read contract terms before accepting them.

This initiative by the LTA aims to strengthen the protection of Liberian telecom consumers while also contributing to accelerating the development of the Liberian ICT sector through stimulating greater service improvement. According to DataReportal, as of January 2024, Liberia had 4.7 million mobile phone subscribers, with a penetration rate of 87.1%. However, only 30.1% of the country's population has access to internet services, according to the same source.

UAE and Kenya to Advance Digital Infrastructure and AI Initiatives



The Ministry of Investment of the UAE and the Ministry of Information, Communications and the Digital Economy of the Republic of Kenya have signed an Investment Memorandum establishing a framework for investment cooperation in the field of digitalization and technology.

The Investment Memorandum was signed by His Excellency, Mohamed Hassan Alsuwaidi, Minister of Investment of the UAE, and His Excellency, Eliud Owalo, Cabinet Secretary at the Ministry of Information, Communications and the Digital Economy in Kenya.

Kenya's Digital Economy

Kenya has witnessed significant growth in its digital economy, primarily driven by the ICT sector, which has outperformed all other sectors, expanding by 23% annually during the last decade. As the largest economy in East Africa, Kenya is also becoming a preferred investment destination for data center providers, with the growing demand for cloud services prompted by improved business conditions and new market entrants, as well as the migration of many businesses to digital solutions. There are currently several operational data centres in the country, and the

local data center market is expected to witness a compound annual growth rate of 11.22% between 2023 and 2028.

Partnership for Economy Advancement and Inclusive Digital World

His Excellency, Mohamed Hassan Alsuwaidi, said: "A closer partnership between our two nations harbours remarkable opportunities in numerous fields that can contribute to the continued strengthening and advancement of our economies. Through targeted investments in digital infrastructure and artificial intelligence (AI), this Investment Memorandum is set to accelerate the development of a sector that has the potential to become a growth driver for other industries, setting out a vision for the future defined by prosperity and progress."

His Excellency, Eliud Owalo, said: "Collaboration between Kenya and the UAE goes beyond strategy; it is poised to strengthen the bonds between our two nations."

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Expanding Broadband Access: Strategies for Enhancing Connectivity in Urban Areas of Africa

In the digital age, access to broadband connectivity is essential for economic growth, education, healthcare, and social inclusion. While Africa has made significant strides in improving internet access, challenges persist, particularly in urban areas where demand is high but infrastructure may be lacking. This feature explores strategies to expand broadband access in urban Africa, focusing on innovative solutions and collaborative efforts to bridge the digital divide.

Africa's urban centers are hubs of economic activity, innovation, and cultural exchange. However, many urban residents still lack reliable and affordable

broadband connectivity. Limited infrastructure, high costs, and regulatory barriers often impede efforts to expand access to high-speed internet in these areas. Additionally, disparities in income and access exacerbate the digital divide, leaving marginalized communities further behind.

Strategies for Enhancing Connectivity Infrastructure Investment

Governments and private sector stakeholders must prioritize investment in broadband infrastructure, including fiber-optic networks, mobile towers, and satellite technology. Targeted infrastructure development projects can

improve connectivity in underserved urban neighborhoods and informal settlements.

Public-private partnerships (PPPs) can facilitate infrastructure investment by leveraging government resources and private sector expertise. Collaborative initiatives such as the Broadband for All Africa Commission (BAAC) aim to mobilize funding and coordinate efforts to expand broadband access across the continent.

Policy and Regulation

Governments play a crucial role in creating an enabling regulatory environment for broadband deployment. Streamlining licensing processes, reducing spectrum fees, and promoting competition can incentivize investment and drive down costs for consumers.

Regulatory frameworks should prioritize universal access and affordability, ensuring that broadband services reach all segments of the population, including low-income urban residents. Policy interventions such as subsidies and tax incentives can help make internet access more accessible and affordable for underserved communities.

Digital Inclusion Initiatives

Community-based organizations, non-profits, and technology companies can collaborate to implement digital inclusion programs tailored to the needs of urban populations. Initiatives such as digital literacy training, public Wi-Fi hotspots, and subsidized internet access can empower residents to harness the benefits of connectivity.

Partnerships with local governments and educational institutions can expand the reach of digital skills training programs, equipping urban residents with the knowledge and tools they need to participate in the digital economy.

Innovation and Technology

Embracing innovative technologies such as 5G, Internet of Things (IoT), and satellite broadband can leapfrog traditional infrastructure barriers and deliver high-speed connectivity to urban areas more efficiently.

Mobile network operators (MNOs) can deploy small cell networks and mobile broadband solutions to enhance coverage and capacity in densely populated urban environments. Investments in smart city infrastructure, including sensor networks and data analytics platforms, can improve urban planning and service delivery while promoting digital inclusion.

Case Studies

The Kenyan government's ambitious National Broadband Strategy aims to achieve universal broadband access by 2030, with a focus on expanding connectivity in urban centers such as Nairobi and Mombasa. Initiatives like the Last Mile Connectivity Project and the Digital Literacy Program are helping to bridge the digital divide and empower urban communities through technology. The Last Mile Connectivity Project, launched in 2013, has been instrumental in extending broadband infrastructure to underserved areas, including remote rural regions and urban slums. By leveraging a combination of fiber-optic cables, wireless technologies, and satellite connectivity, the project has significantly expanded internet access across the country, reaching millions of Kenyans who previously lacked reliable connectivity. Additionally, the Digital Literacy Program, launched in 2016, aims to equip primary school students with digital skills and resources to thrive in the digital age. Through partnerships with technology companies and educational institutions, the program provides access to digital devices, internet connectivity, and interactive learning content, empowering students to become digitally literate citizens and future innovators.

In Lagos, Africa's largest city, initiatives like the Lagos State Smart City Project are leveraging technology to address urban challenges and improve quality of life. Lagos, with its rapidly growing population and sprawling urban landscape, faces numerous socio-economic and infrastructural challenges, including

traffic congestion, inadequate housing, and limited access to basic services. The Lagos State Smart City Project, launched in 2017, seeks to harness the power of technology to transform the city into a more sustainable, efficient, and inclusive urban environment. Through initiatives such as the deployment of smart transportation systems, the implementation of e-governance solutions, and the provision of digital services to residents, the project aims to enhance urban mobility, optimize resource allocation, and improve the overall quality of life for Lagosians. Moreover, partnerships between the government, private sector, and civil society organizations have been instrumental in driving innovation and expanding broadband access to underserved neighborhoods. By collaborating on infrastructure development, digital inclusion programs, and community engagement initiatives, stakeholders are working together to bridge the digital divide and create a more equitable and prosperous future for urban residents in Nigeria.

Expanding broadband access in urban Africa requires a multi-faceted approach that combines infrastructure investment, policy reform, digital inclusion initiatives, and technological innovation. By leveraging partnerships and embracing innovative solutions, stakeholders can work together to bridge the digital divide and unlock the full potential of Africa's urban centers for economic and social development. As demonstrated by the case studies in Kenya and Nigeria, strategic investments in broadband infrastructure, coupled with targeted digital literacy programs and smart city initiatives, can have a transformative impact on urban communities, empowering residents, stimulating economic growth, and fostering inclusive development. As Africa continues to urbanize and digitize, it is essential that governments, businesses, and civil society organizations collaborate effectively to ensure that no one is left behind in the digital revolution. **TR**

Enhancing Performance: Edge Computing Solutions for Reducing Latency in African Telecommunications



In the ever-evolving realm of telecommunications, particularly within the African context, the quest for heightened performance and diminished latency stands as a paramount objective. With the onset of cutting-edge technologies and the escalating demand for seamless connectivity, traditional telecommunication infrastructures frequently encounter hurdles in meeting these evolving requirements. Yet, amid these challenges, the incorporation of edge computing solutions emerges as a promising avenue poised to revolutionize African telecommunications, offering substantial enhancements in performance, efficiency, and user experience.

Africa, distinguished by its diverse landscapes, expansive populations, and disparate levels of infrastructure development, presents a distinctive array of challenges for telecommunications providers. Across many regions, constraints such as limited connectivity, inadequate infrastructure, and pronounced latency persist as formidable barriers, hindering the delivery of reliable and efficient telecommunications services. These obstacles not only

impede economic advancement but also restrict access to vital services like healthcare, education, and financial inclusion.

Latency: A Barrier to Seamless Connectivity

Foremost among the impediments to achieving optimal performance in African telecommunications is latency – the delay experienced during data transmission across a network. Elevated latency can precipitate sluggish response times, compromised user experiences, and inefficiencies in data transfer. In applications such as video streaming, online gaming,

and financial transactions, even marginal delays can yield significant repercussions for user satisfaction and business outcomes.

Edge computing solutions offer a compelling approach to confront these latency challenges by situating computational resources proximate to the point of data generation and consumption. Unlike traditional cloud computing paradigms, wherein data processing occurs within centralized data centers situated distantly from end-users, edge computing disseminates computational power to the “edge” of the network, in close

proximity to the devices and sensors generating data. By curtailing data traversal distances and minimizing network hops, edge computing substantially diminishes latency and augments response times.

Localized Data Processing: Empowering African Telecommunications

A notable advantage of edge computing within the African telecommunications landscape is its capacity to facilitate localized data processing and storage, thereby diminishing reliance on distant data centers and international connectivity. This localization of computational resources not only mitigates latency but also bolsters data privacy and security by retaining sensitive information within national borders. For nations confronted with restricted international bandwidth and dependence on expensive satellite connections, edge computing furnishes a cost-effective alternative for locally processing and managing data.

Unlocking Potential: Applications of Edge Computing in Various Industries

Furthermore, edge computing facilitates the efficacious deployment of latency-sensitive applications and services, encompassing Internet of Things (IoT) devices, augmented reality (AR) applications, and real-time analytics. By harnessing edge computing infrastructure, telecommunications providers can furnish seamless experiences for users, optimize network performance, and unlock novel avenues for innovation across various industries.

In the healthcare domain, for instance, edge computing streamlines the deployment of telemedicine solutions necessitating real-time data processing and low-latency communication. By enabling remote consultations, medical diagnostics, and patient monitoring, edge computing harbors the potential to revolutionize healthcare delivery in underserved regions, enhancing access to quality healthcare services and effecting life-saving interventions.

Similarly, within the agricultural sector, edge computing empowers farmers with precision agriculture solutions,

leveraging IoT sensors, drones, and AI algorithms to monitor crops, optimize irrigation, and amplify crop yields. By locally processing data and furnishing actionable insights in real-time, edge computing enables farmers to make well-informed decisions, boost productivity, and mitigate risks associated with unpredictable environmental conditions.

Furthermore, edge computing bears significant ramifications for the future of smart cities in Africa, where urbanization and population growth pose formidable challenges for infrastructure management and service delivery. By deploying edge computing infrastructure at pivotal junctures within urban environments, cities can streamline traffic management, bolster public safety, and refine the efficiency of essential services such as energy distribution and waste management.

Despite its transformative potential, widespread adoption of edge computing within African telecommunications encounters several challenges, including infrastructural limitations, regulatory barriers, and the exigency for a skilled workforce. Erecting the requisite infrastructure to support edge computing deployments – encompassing data centers, network connectivity, and power supply – necessitates substantial investments and collaborative endeavors among governmental entities, private sector stakeholders, and international partners.

Policy Imperatives: Fostering an Enabling Environment

Moreover, regulatory frameworks must adapt to accommodate the idiosyncratic requisites of edge computing, spanning data sovereignty, privacy regulations, and cybersecurity standards. Policymakers wield a pivotal role in fostering an enabling environment for edge computing innovation, incentivizing investment, and ensuring alignment with international best practices.

Additionally, addressing the skills deficit in emerging technologies such as edge computing is imperative



to unlock its full potential within African telecommunications. Training initiatives, educational endeavors, and public-private partnerships serve as instrumental vehicles for equipping local talent with the requisite expertise and knowledge to effectively design, deploy, and manage edge computing solutions.

In summation, edge computing solutions furnish a transformative opportunity to augment performance, diminish latency, and unlock novel possibilities within African telecommunications. By leveraging edge computing infrastructure, telecommunications providers can surmount the distinctive challenges posed by the African landscape, refine service delivery, and propel economic growth and development across the continent. Nevertheless, realizing the full spectrum of benefits associated with edge computing mandates concerted efforts from all stakeholders to surmount infrastructural, regulatory, and skills-related impediments and engender an environment conducive to innovation and progress. ■■



Why Telcos Are the New Banks in Africa's Mobile Revolution

In the dynamic landscape of Africa's digital transformation, a notable trend has emerged: Telecommunication companies (telcos) are assuming increasingly prominent roles in the financial sector, evolving into the new banks of the continent's mobile revolution.

This shift is propelled by the widespread adoption of mobile technology and the rising demand for accessible financial services across Africa's diverse communities.

Traditionally, banks have been the primary custodians of financial services in Africa. However, with the proliferation of mobile phones and the expansion of internet connectivity, telcos have seized the opportunity to bridge the gap in financial inclusion by leveraging their extensive reach and innovative mobile platforms.

One of the key drivers behind telcos' emergence as financial powerhouses is their unparalleled penetration into African markets. Telcos boast expansive networks that span urban centers and remote rural areas, reaching populations that have limited access to traditional banking infrastructure. By leveraging their existing infrastructure, including mobile networks and distribution channels, telcos can swiftly deploy financial services to underserved communities, thereby democratizing access to banking.

Furthermore, telcos are capitalizing on the widespread adoption of mobile money services across Africa. Mobile money platforms, such as M-Pesa in Kenya and MTN Mobile Money in Ghana, have revolutionized financial transactions by enabling users to send, receive, and store money using their mobile phones. Telcos have played a pivotal role in driving the adoption of mobile money services, transforming the way people manage their finances and conduct transactions.

The agility and innovation inherent in telcos' operations have positioned them as formidable competitors in the financial services landscape. Unlike traditional banks, telcos can swiftly adapt to changing market dynamics and consumer preferences, introducing innovative products and services tailored to the needs of African consumers. From mobile banking apps to digital wallets, telcos are spearheading the development of fintech solutions that cater to the unique challenges and opportunities present in Africa's diverse markets.



Moreover, telcos are leveraging their vast customer data and analytics capabilities to offer personalized financial solutions to their users. By harnessing data-driven insights, telcos can better understand customer behavior, preferences, and financial needs, allowing them to tailor their offerings and enhance the overall user experience. This data-driven approach enables telcos to build deeper relationships with their customers and drive customer loyalty in an increasingly competitive market.

Another factor driving telcos' foray into financial services is the regulatory environment in many African countries. Regulatory bodies have recognized the potential of telcos to promote financial inclusion and stimulate economic growth, leading to the liberalization of financial services and the issuance of licenses that allow telcos to offer banking and payment services. This regulatory support has provided telcos with the necessary framework to expand their financial offerings and compete effectively with traditional banks.

Furthermore, partnerships between telcos and traditional financial institutions have become increasingly prevalent, facilitating collaboration and innovation in the financial sector. By combining their strengths, telcos and banks can leverage their respective expertise and infrastructure to deliver innovative financial products and services that meet the evolving needs of African consumers. These strategic partnerships enable telcos to leverage banks' expertise

in regulatory compliance and risk management while providing banks with access to telcos' extensive distribution networks and customer base.

In conclusion, telcos are revolutionizing banking in Africa's mobile revolution, spearheading a transformative shift in how financial services are accessed and delivered across the continent. By harnessing their extensive reach, innovative mobile platforms, and regulatory support, telcos are breaking down barriers to financial inclusion and empowering individuals and businesses with newfound access to essential banking services. Their agility enables them to swiftly adapt to evolving market dynamics and consumer preferences, while their data-driven insights allow for the creation of personalized financial solutions tailored to meet the diverse needs of African consumers. Moreover, telcos are actively engaging in strategic partnerships with traditional financial institutions, fintech startups, and regulatory bodies to drive collaboration and innovation in the financial sector.

This collaborative approach not only enhances the accessibility and affordability of financial services but also fosters economic growth and empowerment across Africa. As telcos continue to lead the charge in reshaping the financial services landscape, they are poised to unlock a wealth of new opportunities for individuals, businesses, and economies throughout the continent. **IB**

Etisalat Egypt to Transform Entertainment Landscape in Egypt



In an exciting development, Etisalat Egypt has teamed up with Viu, a prominent streaming platform, to deliver an unparalleled entertainment experience to its customers in Egypt. This exclusive collaboration is set to elevate the entertainment landscape,

offering a diverse array of content in Arabic, English, Turkish, and Korean.

This strategic partnership underscores the commitment of both Etisalat Egypt and Viu to enriching the entertainment choices available

to their customers. By joining forces, the companies aim to provide an exceptional and varied content library that caters to the preferences of a broad audience.

Customers can anticipate a one-of-a-kind service featuring an extensive collection of the best series and movies across multiple genres. The collaboration also promises an exciting opportunity for viewers to immerse themselves in the finest series during the Ramadan season, adding a special touch to the overall entertainment offering.

This groundbreaking alliance signifies a new era in the telecommunications and streaming industry, where customers can look forward to an enriched entertainment experience delivered seamlessly.

Zain Sudan Records a Strong Showing in 2023



During the fiscal year 2023, telecom operator Zain Sudan generated a revenue of \$558 million, according to the latest annual results from Zain Group. This marks a significant 14%

increase compared to the company's 2022 revenues.

In 2023, Zain Sudan reported an Earnings Before Interest, Taxes,

Depreciation, and Amortization (EBITDA) of \$269 million, showing a 7% rise with a 48% margin. The net profit for the financial year reached \$216 million.

The notable growth of Zain Sudan is primarily attributed to data services, with a 22% year-on-year increase. Data services accounted for 35% of Zain Sudan's total revenue.

It's important to note that this positive performance occurred amid a conflict between the ruling military and paramilitary forces since April 15, 2023. The clashes significantly impacted the operations of telecom operators, leading to service interruptions. Despite these challenges, Zain is gradually restoring its services across Sudan after a general disruption in February.

MTN Appoints New CEO in South Sudan



MTN Group announced the appointment of Ali Monzer as Chief Executive Officer of MTN South Sudan, effective 1 April 2024. Ali succeeds Gordian Kyomukama, who

will retire after a distinguished career with MTN.

Monzer brings over 23 years of telecommunications industry experience

to his new role. Since joining MTN in 2004, he has held progressively senior positions, most recently as Chief Technology and Information Officer of MTN Uganda. In previous roles, he has demonstrated success in operational efficiency, cost optimization, market growth, and customer experience enhancement. He holds a master's degree in computer communication engineering and relevant industry certifications.

Ralph Mupita, MTN Group President and CEO, expressed his satisfaction with Monzer taking the lead in the South Sudan operations, foreseeing substantial contributions to the market. Mupita emphasized Monzer's extensive experience and successful history in technology and operations, positioning him strategically to propel the ongoing growth and success of MTN South Sudan.

FY 2023 Outcomes: "WE" Converts Obstacles into Prospects and Elevates Performance



Consolidated revenue surged by 28% year-over-year, hitting EGP 56.7 billion. This growth was led by a substantial 18% year-over-year growth in data, with infrastructure, IDD, and cable projects also

contributing significantly with growth rates of 27%, 76%, and 64%, respectively. The customer base for fixed voice and broadband expanded by 8% and 9% year-over-year, respectively, while the

mobile customer base remained stable. EBITDA saw a remarkable 30% year-over-year increase, achieving a robust 40% margin at EGP 22.7 billion, slightly surpassing management's expectations.

This upswing was primarily fueled by strong operational results and savings from a new national roaming agreement, which mitigated escalating costs due to inflation. Operating profit climbed by 28% year-over-year, driven by improved operating performance, counterbalancing a 27% increase in direct costs. Net profit rose by 25% year-over-year to EGP 11.5 billion. In-service capital expenditure amounted to EGP 20.3 billion, representing 36% of revenue, while cash capital expenditure, including license fees, reached EGP 26.4 billion.



Harnessing 5G Fixed Wireless Access (FWA) in Africa

In an increasingly interconnected world, high-speed internet access is no longer a luxury but a necessity for economic and social development. In Africa, where traditional wired infrastructure struggles to reach remote areas, Fixed Wireless Access (FWA) technology has emerged as a game-changer. With the potential of 5G networks, FWA offers a promising solution to bridge the connectivity gap and unlock new growth opportunities. FWA, providing wireless internet access to homes or businesses without laying fiber and cables, is particularly suitable for Africa, offering so-called 'last-mile' connectivity.

Is Africa FWA-Ready? FWA is emerging as a viable alternative to traditional fixed broadband, with 116 operators worldwide offering commercial 5G FWA services. In Africa, 30 operators in 17 markets have launched commercial 5G, with 14

offering 5G FWA. However, high costs for customer premises equipment (CPE) are hindering market growth. To address this, measures such as reducing taxes on terminals are recommended. According to GSMA, collaboration among stakeholders is important to facilitate the deployment and adoption of 5G FWA networks,

recognizing the importance of connectivity for Africa's digital economy.

According to Ericsson, FWA leverages mobile networks to provide primary broadband access through mobile network-enabled customer premises equipment. This technology is favored



by operators as it allows them to utilize existing mobile infrastructure, while end users benefit from services like video streaming, entertainment, e-learning, and remote working, which may not be accessible or affordable through traditional fiber connections.

In Africa, where legacy infrastructure is limited, FWA presents a practical alternative to costly and disruptive fiber deployments. While fiber rollout is increasing, FWA offers quicker and more cost-effective deployment, providing acceptable throughput and latency for many markets.

While 4G FWA exists, the potential of 5G FWA is far greater. 5G FWA utilizes standardized architectures and mobile components to deliver ultra-high-speed broadband services. However, it may face challenges such as interference from natural elements like trees, snow, or rain, requiring smaller cell sizes and increased infrastructure costs. Additionally, backhaul, often reliant on fiber, can be problematic in areas without fiber availability, necessitating potentially expensive microwave or satellite links as alternatives.

Africa's FWA Market

South Africa currently stands as the primary FWA market in Africa, marked by competitive pricing driven by market competition, although still not reaching the vast potential customer base. While fiber pricing is also becoming more competitive, especially in South Africa with the introduction of prepaid pay-as-you-go services catering to low-income subscribers, the adoption of FWA in the rest of Africa holds significant promise.

Nokia predicts that FWA adoption across the Middle East and Africa (MEA) region could reach 23 million subscribers by 2027, predominantly propelled by countries in Southern Africa. Notable strides in FWA technology, such as successful trials of 4G/5G FWA network slicing in Kenya and initiatives in Senegal aimed at establishing digital education ecosystems using FWA technology, underscore the potential of FWA to bridge the digital divide in Africa. However, challenges like the pace of 5G network rollout, spectrum availability, and operator marketing and pricing strategies will influence FWA adoption across the continent, with the promise of FWA in Africa outweighing its current delivery.

Moreover, Huawei's presence in Africa's FWA landscape is notable through its collaboration with operators like Telkom South Africa in deploying innovative solutions. Since 2014, when Telkom South Africa launched Huawei's WTTx solution, the company has been instrumental in extending broadband services to underserved areas, particularly benefiting lower-income segments. This partnership has evolved to include the rollout of 5G FWA services in various regions, showcasing Huawei's role in pioneering advanced connectivity solutions across the continent. With multiple operators across Sub-Saharan Africa launching commercial 5G FWA services, Huawei's expertise and collaboration underscore its commitment to addressing the connectivity challenges faced by both urban and rural communities. Additionally, initiatives like providing FWA connectivity to schools in Senegal highlight Huawei's broader impact in leveraging technology to enhance educational opportunities and bridge the digital divide in Africa.

What's Next?

In the African context, the challenge of bridging the digital divide is particularly pronounced due to lower levels of broadband penetration compared to other regions globally. The pressing question revolves around efficiently and swiftly providing connectivity to unconnected households and businesses. Solutions for home broadband can be categorized into fixed-dedicated line solutions such as fiber or DSL, satellite-based solutions, and Fixed Wireless Access (FWA). While xDSL and cable offer relatively low investment requirements, fiber stands out for its high-speed capabilities despite facing deployment challenges. FWA, however, presents itself as a cost-effective and flexible alternative, with significantly lower deployment costs and the ability to cater to various use cases beyond home broadband, such as Mobile Broadband (MBB) and Internet of Things (IoT).

Notably, the adoption of FWA in Africa is gaining momentum, especially with the emergence of 5G FWA, which can deliver fiber-like speeds and has already been introduced in markets like Angola, South Africa, Nigeria, and Zimbabwe. FWA holds promise for enabling digital inclusion beyond home connectivity, exemplified by initiatives like the joint effort between FREE Senegal and Ericsson's Connect to Learn program, which aims to connect schools using Fixed Wireless Access technology while providing essential resources like laptops, learning content, and teacher training to support educational development.

FWA, particularly 5G FWA, emerges as a potent instrument to bridge Africa's digital divide. The convergence of 5G technology and Fixed Wireless Access represents a transformative opportunity for Africa. By leveraging the potential of 5G FWA, the region can overcome longstanding connectivity barriers, empower businesses and communities, and unlock new pathways to prosperity. With concerted efforts to address challenges and foster an enabling environment for innovation and investment, Africa is poised to harness the full potential of 5G FWA and pave the way for a digitally inclusive future. **TE**



Assessing the Progress of Internet Activity in Africa

In the last decade, Africa has experienced a significant surge in internet usage, reshaping how individuals across the continent communicate, work, and access information. This transformation has been fueled by the widespread adoption of mobile technology and substantial investments in internet infrastructure, leading to a growing number of Africans connecting to the digital realm.

According to Statista, the internet landscape in Africa has undergone rapid evolution, with approximately 570 million users recorded in 2022. Nigeria leads the continent with over 100 million users, followed by Egypt

with 76 million and South Africa with 41 million. This surge in internet usage is attributed to improved telecommunication infrastructure and increased adoption of mobile devices.

Central to this evolution are social media platforms, which serve as vital connectors for social interactions and business engagements.

According to Statista, Africa's social media users have continuously increased, totaling over 384 million as of 2022. Social media penetration is significantly higher in Northern and Southern Africa compared to other regions. Despite notable progress, persistent challenges such as inadequate infrastructure, high data costs, and disparities in digital

literacy continue to hinder universal internet adoption.

Nevertheless, concerted efforts are underway to tackle these obstacles through initiatives focusing on infrastructure expansion, governmental policies, and international collaborations. As the reach of internet connectivity expands, it carries the potential to catalyze economic development, spur innovation, and enhance the quality of life for millions of Africans.

The latest data from the International Telecommunication Union's "Facts and Figures 2023" report indicates that internet penetration in Africa stood at 37% in 2023, marking a slight decrease from the previous year's 40%. However, a consistent upward trajectory in internet adoption over the past decade highlights the resilience and promise of Africa's digital future.

From a modest 16% in 2013, internet usage in Africa climbed to 25% by 2016 and continued to grow steadily, reaching 40% in 2022. The only other decline over the past ten years occurred in 2017, with usage dropping by 3.3 percentage points. Several factors contributed to the surge between 2020 and 2022, notably the COVID-19 pandemic, which forced many activities online, thereby increasing internet usage.

While the ITU does not provide specific reasons for the decrease between 2022 and 2023, several factors could be responsible, including the resumption of physical activities, internet blackouts in certain countries, and access issues elsewhere. In August 2023, disruptions in internet service in some African countries were attributed to the cutting of the WACS and SAT-3 submarine cables.

Challenges and Opportunities for Internet Expansion

Despite the progress, there's significant room for improvement in Africa's internet connectivity compared to global averages. While the continent reported a 37% internet



usage rate, the global average stood at 67%. Meanwhile, Europe, the Commonwealth of Independent States (CIS), and the Americas recorded internet usage rates between 87 and 91%. The Arab States and the Asia-Pacific region are closer to the global average, with rates of 69% and 66%, respectively.

Enhanced connectivity could significantly boost various economic sectors in Africa, particularly e-commerce. According to TechCabal Insights' "Future of Commerce: Outlook for 2024" report, the e-commerce sector is booming, with total revenue reaching \$32.49 billion in 2022 and 387.5 million African online shoppers.

Despite having 25 submarine cables and 1.2 million km of terrestrial fiber, Africa's optical fiber footprint remains limited, with many countries lacking the necessary high-speed telecommunications infrastructure. Additionally, Africa has the highest fixed broadband access rates in the world, costing an average of 14.8% of Gross National Income (GNI), far above the ITU's recommended 2%.

To address these challenges and enhance internet access in Africa, the Internet Society has made several recommendations. These include reforming the telecom market to encourage the emergence of competing access networks and expanding national basic infrastructure beyond major submarine cable landing points and primary population centers to additional population hubs.

Despite grappling with various challenges, with affordable access to the internet standing out as a primary concern, Africa remains resolute in its commitment to prioritize internet connectivity and accessibility. The continent's digital landscape is in a state of continual transformation, lifted by the increasing demand for connectivity and the promising opportunities it presents for stimulating economic growth. Through concerted collaborative efforts aimed at narrowing infrastructure gaps and improving affordability, Africa is poised to fully leverage the internet's potential to drive its development and prosperity forward. **IB**

Tech Integration Surges: Insights into Egypt's Business Landscape for 2024



NetBlocks, an internet observatory, reported a major disruption in internet connectivity affecting West and Central Africa. This outage was compounded by multiple failures reported by operators of subsea cables in the region. Despite the widespread impact, the precise cause of these cable failures remained unclear at the time of reporting.

Confirming the severity of the situation, African subsea cable operator, SEACOM, acknowledged the outage affecting its

West-African cable system. Consequently, affected customers were redirected to the Google Equiano cable, which SEACOM utilizes as an alternative route. SEACOM emphasized that this redirection process is automated, triggered whenever a route experiences disruption, providing some relief to affected users.

Among the countries bearing the brunt of the outage, the Ivory Coast experienced particularly severe disruptions, while Liberia, Benin, Ghana, and Burkina Faso also faced significant challenges, as indicated by data from NetBlocks. The extent of the outage underscores the critical role of reliable internet connectivity in facilitating various aspects of daily life, from communication to commerce and beyond.

Further exacerbating the situation, internet firm, Cloudflare, reported ongoing disruptions in several other nations, including Gambia, Guinea, Liberia, the Ivory Coast, Ghana, Benin, and Niger. Cloudflare's analysis revealed a discernible pattern in the timing of these disruptions, spanning from the northern to the southern regions of Africa.

Echoing the widespread impact, South African telecoms giant, Vodacom, also cited undersea cable failures as a contributing factor to connectivity issues experienced by network providers within the country. This acknowledgment underscores the interconnected nature of the global internet infrastructure and the ripple effect of disruptions in one region on users and businesses across borders.

Internet Outage Hits West, Central Africa Due to Subsea Cable Failures



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Telecom and Banking Sectors Unite to Improve Smartphone Accessibility in Tanzania



Vodacom Tanzania PLC and CRDB Bank have united their efforts to introduce a smartphone financing program aimed at accelerating smartphone adoption and narrowing the digital divide in Tanzania. This partnership, unveiled at a launch event in Dar es Salaam, underscores Vodacom's dedication to initiatives geared towards reducing device costs. Among these initiatives are subsidies for feature phones and financing options facilitating the shift from 2G to 4G-enabled

smartphones. Leveraging strategic partnerships, such as this collaboration with CRDB Bank, is instrumental in broadening their customer base.

During the event, Philip Besiimire, Managing Director of Vodacom Tanzania, expressed enthusiasm for the collaboration with CRDB Bank, emphasizing their shared goal of extending smartphone financing to a wider audience at affordable rates and flexible payment

terms. "As a major stakeholder and partner in the communication and technology sector, Vodacom is proud to launch this collaboration with CRDB Bank, a respected financial institution in the country. Our collaboration will allow us to extend smartphone loans to more customers at an affordable cost and flexible payment plans. The smartphone loan can be repaid daily, weekly, or monthly for a period of up to 12 months through M-Pesa," detailed Vodacom MD, Philip Besiimire.

On his part, the Managing Director of CRDB Bank, Abdulmajid Nsekela, added, "The partnership between Vodacom and CRDB Bank is an excellent opportunity for Tanzanian citizens to access affordable financial and communication services. As major stakeholders, we are responsible for supporting the government's efforts to ensure that every Tanzanian can benefit from these sectors' growth and development."

Namibia Launches ICT Improvements



Namibia is charting a new trajectory in its Information and Communication Technology (ICT) sector, with significant investments aimed at advancing digital connectivity and fortifying cybersecurity measures.

At the forefront of this initiative is the Ministry of Information and Communication Technology, which recently unveiled a series of programs during the 23rd ICT Stakeholders' Engagement held

in Windhoek. Emma Theofelus, the Minister of Information and Communication Technology, outlined the ministry's commitment to expanding digital access by rolling out 30 Radio Access Network towers over three years, at a cost of N\$110 million. These towers aim to extend network coverage to previously unserved and underserved areas, ensuring equitable access to reliable digital services for all Namibians.

In addition to bolstering connectivity, the Ministry has allocated N\$20 million towards establishing the Namibia Cybersecurity Incidence Response Team (Nam-CSIRT) under the purview of the Communications Regulatory Authority of Namibia (CRAN). This initiative represents a crucial step in enhancing the nation's cybersecurity infrastructure,

equipping Namibia to effectively respond to and manage cyber threats.

Furthermore, an additional N\$15 million has been earmarked for the implementation of a 5G strategy, underscoring Namibia's commitment to embracing next-generation mobile networks for faster and more reliable internet service.

The Minister emphasized the importance of stakeholder involvement in revising the National Broadband Policy, inviting inputs to ensure a more inclusive and responsive digital future for Namibia. This collaborative approach is deemed essential as the country adapts its legislative and policy frameworks to keep pace with rapid technological advancements.



Telecom's Triple Bottom Line: Environmental, Social, and Governance in Africa

In recent years, the concept of the triple bottom line (TBL) has gained significant traction across industries worldwide. Traditionally, the bottom line in business has been solely focused on financial performance. However, the triple bottom line framework extends this perspective by emphasizing not only economic prosperity but also environmental sustainability, social equity, and governance integrity.

Environmental Sustainability Africa, often referred to as the cradle of humanity, stands as a continent of immense potential and opportunity. Yet, it grapples with multifaceted environmental challenges that threaten its ecosystems and the well-being of its people. Deforestation, driven by agricultural expansion and logging, poses a significant threat to Africa's rich biodiversity and ecological balance. Water scarcity, exacerbated

by climate change and inefficient water management practices, jeopardizes access to clean water for millions of Africans. Additionally, pollution from industrial activities, urbanization, and inadequate waste management further compounds these environmental woes.

Telecom companies operating in Africa recognize the urgent need to address these environmental challenges and minimize their ecological footprint. They are actively pursuing strategies to promote environmental sustainability and mitigate their impact on the planet.

One key area of focus is reducing energy consumption and transitioning to renewable energy sources. Telecom operators are investing in energy-efficient technologies and renewable energy infrastructure to power their operations sustainably. For instance, many companies are deploying solar-powered cell towers in remote areas where access to the grid is limited. By harnessing the abundant solar energy available in Africa, telecom operators can reduce their reliance on fossil fuels and mitigate carbon emissions.

Moreover, telecom companies are implementing eco-friendly practices in infrastructure development and operations. This includes using recycled materials, optimizing resource utilization, and adopting environmentally friendly construction techniques. By incorporating sustainability principles into their infrastructure projects, telecom operators minimize ecological disturbances and contribute to ecosystem preservation.

Furthermore, telecom companies are actively engaging in environmental conservation initiatives and partnerships. They support reforestation efforts, biodiversity conservation projects, and initiatives to combat climate change. By collaborating with governments, NGOs, and local communities, telecom operators amplify their impact and contribute to broader environmental conservation efforts across Africa.

Social Inclusion

Access to affordable and reliable telecommunications services is not just a luxury but a fundamental driver of socioeconomic development in Africa. However, despite significant progress in recent years, millions of people across the continent still lack access to basic connectivity. This digital divide stems from a combination of infrastructural constraints, affordability barriers, and socioeconomic disparities. Rural and remote areas in particular face significant challenges in accessing telecommunications services due to inadequate infrastructure and limited economic opportunities.

Recognizing the importance of bridging this digital divide, telecom

operators in Africa are actively working to address these disparities and promote social inclusion. One of the key strategies employed by these companies is expanding network coverage to underserved areas. Telecom operators are investing in infrastructure development projects to extend the reach of their networks to remote and rural communities. By expanding network coverage, these companies enable previously marginalized communities to access telecommunications services, connect with the global digital economy, and participate in social and economic activities.

Moreover, telecom operators are offering affordable data plans and mobile services tailored to the needs and purchasing power of underserved populations. By lowering the cost of access to telecommunications services, these companies make connectivity more accessible to low-income individuals and communities. Affordable data plans enable users to access essential services such as education, healthcare, and financial services, thereby improving their quality of life and socioeconomic prospects.

In addition to expanding access to telecommunication services, telecom operators are deploying mobile infrastructure in remote regions to overcome infrastructural challenges. Mobile technology, particularly mobile phones, has emerged as a powerful tool for extending connectivity to underserved areas where traditional infrastructure is lacking. Mobile networks provide a cost-effective solution for connecting remote communities, enabling them to access voice and data services even in areas with limited infrastructure.

By expanding access to telecommunication services, telecom operators empower marginalized communities, spur economic growth, and contribute to social progress in Africa. Improved connectivity facilitates access to education, healthcare, and employment opportunities, empowering individuals and communities to improve their livelihoods and break the cycle of poverty. Moreover, telecommunication services play a critical role in

promoting social cohesion, fostering communication, and facilitating civic engagement in diverse societies. As Africa continues its journey towards social and economic development, telecom operators play a pivotal role in driving social inclusion and building a more inclusive and equitable future for all.

Governance Integrity

Good governance lies at the heart of building trust and credibility in the telecommunication sector, ensuring transparency, accountability, and ethical conduct in business operations. While Africa has made significant strides in improving governance standards and regulatory frameworks in recent years, challenges such as corruption, regulatory inconsistencies, and cybersecurity threats continue to pose risks to the industry's integrity and stability.

Telecom companies operating in Africa recognize the critical importance of upholding high standards of corporate governance and ethical conduct. They understand that maintaining the trust of customers, investors, and other stakeholders is essential for long-term sustainability and success. As such, these companies are committed to adhering to stringent governance practices and regulatory requirements to mitigate risks and safeguard their reputation.

One of the key pillars of governance integrity for telecom companies is compliance with regulatory requirements. This involves ensuring adherence to laws, regulations, and industry standards set forth by regulatory bodies and government agencies. Telecom operators invest significant resources in understanding and complying with these requirements, ensuring that their operations are conducted in accordance with legal and regulatory frameworks.

Moreover, telecom companies actively engage in fostering partnerships with local governments and regulatory bodies to promote transparency and collaboration in the regulatory process. By working closely with regulators, telecom operators contribute to the development of regulatory policies and frameworks that support industry growth

while addressing key challenges and concerns. These partnerships help create a more conducive business environment for telecom operators, fostering innovation and investment in the sector.

In addition to regulatory compliance and engagement, telecom companies prioritize transparency and ethical conduct in their business operations. They implement robust corporate governance structures and mechanisms to ensure accountability and integrity across all levels of the organization. This includes establishing clear codes of conduct, ethical guidelines, and whistleblower mechanisms to encourage transparency and accountability.

Furthermore, telecom companies recognize the growing importance of cybersecurity in safeguarding customer data and privacy in an increasingly digital world. They invest in reliable cybersecurity measures to protect their networks, systems, and customer information from cyber threats and attacks. This includes deploying advanced security technologies, conducting regular security assessments, and implementing comprehensive incident response plans to mitigate risks and ensure business continuity.

By promoting good governance practices, telecom companies enhance their reputation, build stronger relationships with stakeholders, and create a conducive business environment for sustainable growth. Through a commitment to governance integrity, telecom operators contribute to the overall stability and resilience of the telecommunications sector in Africa, driving innovation, investment, and socioeconomic development across the continent.

In conclusion, telecom's triple bottom line approach – encompassing environmental sustainability, social inclusion, and governance integrity – is crucial for driving positive impact and sustainable development in Africa. By aligning their business strategies with these principles, telecom companies contribute to environmental conservation, bridge the digital divide, and uphold ethical standards, paving the way for a brighter future for the continent. **TR**

0.147

71.88

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0.15

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“ South Africa’s fintech sector is swiftly evolving due to regulations, tech advances, and competition. Known for diverse services like online banking, it is gaining global recognition, contributing 40% to Africa’s fintech revenue

”

27.28

58

88.5



En Afrique du Sud, les fintechs évoluent rapidement grâce aux réglementations, aux avancées technologiques et à la concurrence. Ce secteur, offrant divers services comme la banque en ligne, est internationalement reconnu, contribuant à 40 % des revenus des fintechs en Afrique



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Progrès majeurs : modernisation des télécommunications en Algérie



Lors d'une séance plénière à l'Assemblée populaire nationale (APN), consacrée à des questions orales adressées à des membres du gouvernement, le ministre des télécommunications a souligné que « l'Algérie a réalisé, ces dernières années, des progrès considérables en termes de quantité et de qualité, dans le domaine des télécommunications », ajoutant que « le pays avance à pas sûrs pour mettre en place une infrastructure à la

hauteur des aspirations des citoyens, des entreprises et des opérateurs économiques, et ce en concrétisation des directives du président de la république, Abdelmadjid Tebboune ».

Il a également indiqué que ces progrès étaient « très encourageants pour relever les défis et poursuivre les efforts afin de combler les lacunes ».

Répondant à une question sur les délais prévus pour l'élaboration d'une politique de production de données locales visant à remplacer les câbles sous-marins limités, le Ministre a souligné que « la production de données ne se limite pas seulement à la garantie des infrastructures d'internet, mais repose sur un écosystème qui requiert la contribution de tous les secteurs ». Il a, par ailleurs, ajouté que « le gouvernement s'attèle à garantir les conditions

nécessaires, au titre d'une approche intégrée ».

Il a souligné, dans ce sens, que ces efforts ont permis d'augmenter la capacité de la bande passante internationale de façon « remarquable », la capacité traitée du réseau international de télécommunications ayant atteint 9,8 terabytes/seconde en début 2024, alors qu'elle ne dépassait pas 1.5 terabytes/seconde en 2020, soit une capacité sextuplée.

À la faveur de cette augmentation, « l'Algérie est classée en deuxième position au niveau africain, avec une capacité de près de 15% de connexion de l'Afrique au continent européen », affirmant que son secteur « œuvre avec la même détermination à multiplier les capacités durant les prochaines années ».

5G en Tunisie : un nouveau chapitre dans la technologie



Nizar Ben Neji, ministre des Technologies de la communication, a révélé lors d'un atelier de travail que la Tunisie a franchi une étape significative dans le domaine des technologies de communication, et

il a annoncé la feuille de route pour le déploiement commercial de la technologie 5G.

Selon la feuille de route, les licences pour la 5G seront accordées en

septembre, avec un lancement commercial prévu pour novembre 2024. L'Agence nationale des fréquences (ANF) a été mandatée par le gouvernement pour identifier et fournir les bandes de fréquences nécessaires à cette transition. Parallèlement, l'Instance nationale des télécommunications (INT) examinera la faisabilité économique du déploiement de l'ultra haut débit et déterminera le prix des licences.

Cette initiative s'inscrit dans le cadre de la « Stratégie nationale de transformation numérique 2025 » de la Tunisie, visant à accélérer la digitalisation de l'administration, à sécuriser le cyberspace national, à garantir la souveraineté numérique et à instaurer un climat de confiance numérique nécessaire à la mise en œuvre des projets de digitalisation.



Le rôle des télécommunications dans la gestion des catastrophes et les interventions d'urgence

Dans un monde où les catastrophes naturelles et les crises humaines peuvent survenir à tout moment, la communication joue un rôle essentiel, en particulier les télécommunications, qui englobent les technologies de l'information et de la communication. Elles sont ainsi devenues des outils indispensables pour coordonner les interventions d'urgence, sauver des vies et minimiser les dommages.

Réponse immédiate aux catastrophes
Outre les catastrophes naturelles telles que les tremblements de terre, les ouragans, les inondations et les incendies de

forêt qui peuvent causer des pertes en vies humaines et des dégâts matériels considérables, il existe également une autre sorte de catastrophes tout aussi graves, à savoir les catastrophes d'origine humaine.

En effet, les accidents industriels, les attaques terroristes et les pandémies

sont hautement susceptibles de générer des situations d'urgence nécessitant une réponse rapide et coordonnée. Dans de telles circonstances, un rôle primordial est joué par les télécommunications qui servent à faciliter la communication entre les secouristes, les autorités locales, les organisations humanitaires et les populations affectées.



Les avancées technologiques dans le domaine des télécommunications ont ainsi considérablement amélioré la capacité des intervenants à gérer les catastrophes et à répondre aux urgences de manière efficace.

Une connectivité fiable et une large couverture sont cependant indispensables pour faire face à ces catastrophes. Les réseaux de communication modernes déploient constamment des efforts à cet égard permettant ainsi aux secouristes de rester en contact même dans les zones les plus reculées ou les plus touchées par la catastrophe. De plus, une meilleure compréhension de l'ampleur des catastrophes est possible grâce aux progrès effectués dans les domaines de la géolocalisation, de la cartographie numérique et de l'analyse des données, ce qui permet aux autorités de planifier les opérations de secours de manière plus efficace.

Communication en temps réel

L'un des aspects les plus importants

des télécommunications dans la gestion des catastrophes est la capacité à fournir une communication en temps réel. Les réseaux de télécommunications permettent aux premiers intervenants, aux autorités locales ainsi qu'aux organisations humanitaires de rester en contact et de coordonner leurs actions. Que ce soit par le biais des téléphones mobiles, des radios bidirectionnelles ou des réseaux satellitaires, la communication instantanée est vitale pour prendre des décisions rapides et efficaces lors de situations d'urgence.

Ainsi, la communication en temps réel, qu'il s'agisse de la localisation et du suivi des personnes en danger, de la diffusion d'alertes et de consignes de sécurité ou de la coordination des opérations de secours, de la collecte de données et de l'évaluation des dommages, est plus qu'essentielle dans de tels cas d'urgence.

Localisation et suivi des personnes

Les technologies de télécommunication offrent des outils précieux pour la localisation et le suivi des personnes en danger lors de catastrophes. Ainsi, les systèmes de géolocalisation intégrés aux téléphones mobiles permettent aux secouristes de localiser les personnes piégées sous les décombres ou perdues dans des zones isolées. De plus, les réseaux de communication fournissent des données en temps réel sur les déplacements des populations affectées, ce qui aide les autorités à planifier et à mettre en œuvre des opérations de secours efficaces.

Diffusion d'alertes et de consignes

La diffusion rapide d'alertes et de consignes de sécurité aux populations touchées par une catastrophe est un autre rôle fondamental joué par les télécommunications. Les systèmes d'alerte précoce envoient des messages aux téléphones mobiles, aux radios et aux télévisions pour avertir les gens des dangers imminents, tels que les tremblements de terre, les tsunamis ou les tempêtes. De plus, les plateformes

de médias sociaux et les applications mobiles permettent aux autorités de diffuser des consignes de sécurité et des informations importantes pour guider les actions des citoyens pendant les crises.

Coordination des opérations de secours

En outre, les télécommunications facilitent la coordination des opérations de secours en permettant aux différentes agences et organisations impliquées dans les interventions d'urgence de partager des informations critiques. Les centres de commandement peuvent, dans ce cas, utiliser des systèmes de communication intégrés pour surveiller et coordonner les activités de recherche et de sauvetage, la distribution de fournitures médicales et alimentaires, ainsi que d'autres opérations humanitaires. C'est ainsi que la communication transparente et efficace entre les acteurs sur le terrain contribue à optimiser les ressources et à sauver des vies.

Collecte de données et évaluation des dommages

Les technologies de télécommunication jouent également un rôle essentiel dans la collecte de données et, partant, l'évaluation des dommages causés par les catastrophes. Dans ce contexte, les drones équipés de caméras et les satellites peuvent être déployés pour cartographier les zones sinistrées et évaluer l'étendue des dégâts. De plus, les applications mobiles et les outils de collecte de données permettent aux bénévoles et aux secouristes sur le terrain de signaler les besoins prioritaires et de coordonner les efforts de secours de manière plus efficace.

Étant donné l'étendue des avantages des télécommunications, il est essentiel que les gouvernements, les agences humanitaires et les entreprises privées continuent d'investir dans le développement et le déploiement de technologies de télécommunication avancées pour renforcer la résilience des communautés face aux catastrophes futures. **ITB**



Éco-boost : adopter les énergies vertes en Afrique

Dans le cadre des négociations climatiques internationales, les pays développés sont reconnus comme ayant une dette climatique envers les pays en développement en raison de leurs émissions passées, attribuées à la période d'industrialisation. À l'inverse, les pays moins développés, tels que l'Afrique, ont moins de responsabilités historiques, mais aussi ont des capacités limitées pour réduire leurs émissions.

Adoption accélérée des énergies renouvelables Une transition vers des sources renouvelables dans le secteur énergétique est en cours depuis une décennie. Cette transition est plus que bénéfique pour de nombreux pays africains qui ainsi, n'ont pas à remplacer d'anciennes infrastructures. En outre, les préoccupations environnementales mondiales et la vulnérabilité de l'Afrique face au changement climatique tendent à accélérer l'adoption des énergies renouvelables sur le continent.

Il va sans dire que l'énergie est cruciale pour le développement économique. Cependant, selon la Banque africaine de développement, plus de 640 millions d'Africains vivent sans accès à l'énergie. Afin de remédier à cette situation, un soutien technique et financier de pays tiers est nécessaire pour alimenter le moteur du développement durable en Afrique.

Défis et impact des entreprises sur le changement climatique

Le continent africain fait face à des défis uniques liés au changement climatique. En effet, l'Afrique est particulièrement vulnérable aux effets néfastes du changement climatique, lesquels provoquent non seulement des événements météorologiques extrêmes,

mais aussi des changements importants dans les schémas agricoles. Vu le rôle croissant et essentiel des entreprises dans le développement économique, il devient impératif de prendre également en compte leur impact environnemental. Pour cette raison, il est nécessaire de concilier le développement économique avec la responsabilité environnementale. Comme les économies du continent sont étroitement liées aux ressources naturelles, la durabilité devient par conséquent, elle aussi, une préoccupation majeure.

De plus, les opérations commerciales dans divers secteurs contribuent de manière significative au changement climatique par le biais d'émissions de

gaz à effet de serre et d'autres pratiques nuisibles à l'environnement. En Afrique, des secteurs tels que l'agriculture, l'énergie et les transports contribuent considérablement à l'empreinte carbone globale. Reconnaître et aborder ces contributions est donc essentiel pour favoriser un avenir durable.

Se distinguant par sa diversité culturelle, sociale, économique et politique, l'Afrique possède un vaste potentiel énergétique encore inexploité, notamment dans les domaines de l'énergie solaire et hydroélectrique. Par exemple, le continent bénéficie d'une irradiation solaire annuelle moyenne de 2 119 kWh/m², représentant 60% des meilleures ressources solaires mondiales, mais seulement 1% de la capacité solaire photovoltaïque installée dans la région.

Solutions énergétiques intelligentes

Pour atténuer l'impact climatique des entreprises en Afrique, il est important d'adopter des solutions énergétiques intelligentes. Or, l'Afrique a un atout important qui est sa richesse en ressources naturelles lui permettant aisément répondre à la demande grandissante d'énergie propre. En d'autres termes, le continent africain devrait sans problème embrasser des technologies et des pratiques qui privilégient l'efficacité énergétique, les ressources renouvelables et la gestion durable de l'énergie. Plusieurs domaines clés peuvent être explorés à cet égard :

- Adoption d'énergies renouvelables: la mise en œuvre de solutions solaires, éoliennes et hydrauliques peut fournir aux entreprises une source d'énergie propre et durable, réduisant la dépendance aux combustibles fossiles et diminuant du coup, les émissions de carbone.
- Mesures d'efficacité énergétique : les entreprises peuvent optimiser leur consommation d'énergie en adoptant des technologies et des pratiques éco-énergétiques, telles que la mise à niveau des équipements, la mise en place de solutions intelligentes pour les bâtiments et l'adoption de systèmes de gestion de l'énergie.
- Chaînes d'approvisionnement durables: les entreprises peuvent renforcer leur durabilité via l'évaluation

et l'optimisation leurs chaînes d'approvisionnement. Pour ce faire, elles devraient choisir des fournisseurs respectueux de l'environnement, réduire les déchets et mettre en œuvre des principes d'économie circulaire.

Bien qu'elle ne soit pas un fournisseur d'énergie, la *Nigerian Communications Commission (NCC)* est en train de participer largement à des initiatives visant à améliorer l'efficacité énergétique dans le secteur des télécommunications au Nigeria. Cela comprend la promotion de l'utilisation de sources d'énergie renouvelables pour les infrastructures de télécommunications.

Par ailleurs, plusieurs entreprises à travers le continent ont déjà adopté des solutions énergétiques intelligentes, démontrant la faisabilité et les avantages de telles initiatives. Par exemple, une entreprise manufacturière nigériane a investi dans des panneaux solaires pour alimenter ses opérations, réduisant à la fois les coûts énergétiques et les émissions de carbone. Ces succès servent d'inspiration pour inciter les autres à suivre le mouvement sans tarder.

Avantages pour les entreprises

L'adoption de solutions énergétiques intelligentes offre de nombreux avantages aux entreprises opérant en Afrique. En voici quelques-uns :

- Économies de coûts : les pratiques éco-énergétiques et les sources d'énergie renouvelable peuvent générer d'importantes économies à long terme, rendant les entreprises plus résilientes et financièrement durables.
- Responsabilité environnementale : démontrer un engagement envers des pratiques durables améliore la réputation et la valeur de la marque d'une entreprise. On note que les consommateurs sont actuellement de plus en plus informés et conscients des problèmes environnementaux, c'est pourquoi les entreprises qui privilégient la durabilité bénéficient souvent d'une plus grande attractivité sur le marché.
- Conformité réglementaire : les gouvernements de divers pays africains sont en train de mettre en place des réglementations pour

promouvoir des pratiques commerciales durables. En adoptant activement des solutions énergétiques intelligentes, les entreprises peuvent anticiper les exigences réglementaires et éviter ainsi, d'éventuelles sanctions.

Défis et opportunités

Malgré les défis initiaux et les obstacles potentiels, la transition vers des solutions énergétiques intelligentes offre des opportunités significatives. Il est vrai que les avantages à long terme, tels que la réduction des coûts opérationnels et l'amélioration de la compétitivité, l'emportent sur ces difficultés. Cependant, pour maximiser ces avantages, il est essentiel de surmonter les obstacles grâce à des collaborations continues et des partenariats stratégiques. En parallèle, des efforts soutenus sur le plan de l'éducation et de la sensibilisation aux dangers du changement climatique sur la planète sont nécessaires pour créer une culture de responsabilité environnementale. Une telle culture aidera sans aucun doute tant les entreprises que les employés et la population en général, à comprendre pleinement l'impact positif des solutions énergétiques intelligentes sur l'environnement et l'économie.

Une collaboration étroite entre les entreprises, les agences gouvernementales, les organisations non gouvernementales (ONG) et d'autres parties prenantes est indispensable pour la promotion des solutions énergétiques intelligentes. D'autre part, les partenariats public-privé jouent un rôle important dans la création d'un écosystème propice aux pratiques durables. Effectivement, les gouvernements peuvent encourager les entreprises par le biais de politiques bien établies et les subventions, tandis que les ONG pourront apporter leur expertise et leurs ressources, renforçant ainsi la synergie nécessaire à une transition réussie vers des solutions énergétiques plus intelligentes.

Cette transition représente en Afrique une étape cruciale pour atténuer l'impact climatique des entreprises sur le continent. En adoptant des sources d'énergie renouvelables, en mettant en œuvre des pratiques éco-énergétiques et en favorisant la collaboration, les entreprises peuvent considérablement contribuer à garantir un avenir durable et résilient. 



Le Sénégal s'engage sur la voie de l'émergence numérique

Le Sénégal connaît actuellement une croissance significative dans le domaine des technologies de l'information et de la communication (TIC). Ce pays de l'Afrique de l'Ouest, souvent salué pour ses initiatives de développement, se positionne de plus en plus comme un acteur émergent dans le secteur des technologies.

Une série de facteurs contribuent à cette ascension. Tout d'abord, le gouvernement sénégalais a mis en place des politiques visant à stimuler l'innovation et à encourager l'investissement dans les TIC. Ainsi, des incubateurs et des hubs technologiques ont été établis à Dakar, offrant un espace professionnel pour que les startups puissent prospérer.

En tournant le regard vers l'avenir, il est prévu que les exportations des TIC

du Sénégal atteignent 248 millions de dollars américains d'ici 2026, selon *ReportLinker*. Cette croissance est soutenue par une augmentation annuelle de 0,8% depuis 2021, bien que le pays ait connu une baisse de 1,3% par an depuis 2001. Cependant, en 2021, le Sénégal s'est classé au 76ème rang mondial des exportateurs de TIC, la Tunisie venant en tête avec 237 millions de dollars américains.

En outre, le Sénégal bénéficie d'une population jeune et dynamique, souvent qualifiée et désireuse de contribuer au développement du pays à travers les nouvelles technologies.

Cette main-d'œuvre qualifiée attire l'attention des investisseurs étrangers qui voient le potentiel du marché sénégalais en plein essor.

Par ailleurs, les initiatives gouvernementales visant à étendre l'accès à l'internet et à améliorer l'infrastructure de télécommunication ont également contribué à cette croissance. Une connectivité accrue offre, en effet, de nouvelles opportunités pour les entrepreneurs et les entreprises, tout en facilitant l'accès des citoyens aux services en ligne.

Malgré ces progrès, des défis persistent, car le Sénégal doit encore surmonter les obstacles liés à l'accès à l'électricité et à la formation professionnelle, ainsi qu'à la création d'un environnement réglementaire stable pour les entreprises technologiques.

Opérateurs primaires

Les opérateurs mobiles au Sénégal jouent un rôle essentiel dans la fourniture de services de télécommunications à la population du pays. Celui-ci dispose d'un secteur des télécommunications mobiles en pleine croissance qui a connu des développements significatifs ces dernières années. De plus, le marché est compétitif et divers opérateurs proposent une gamme de services pour répondre aux besoins diversifiés des consommateurs.

- *Sonatel*, une filiale de la multinationale française des télécommunications *Orange*, autrefois connue sous le nom de *Sonatel Mobiles*, propose une vaste gamme de services mobiles, comprenant des offres prépayées et post payées, des services de données 3G et 4G, l'itinérance internationale, ainsi que des services à valeur ajoutée. *Orange Sénégal* a investi dans l'expansion de son infrastructure réseau afin d'améliorer la couverture et d'offrir des services de données plus rapides. Positionné comme l'un des acteurs majeurs sur le

marché des télécommunications au Sénégal, *Orange Sénégal* a marqué un jalon en devenant le premier opérateur sénégalais à obtenir la licence 5G.

- *Free Sénégal*, anciennement connue sous le nom de *Tigo*, est désormais une filiale du groupe *Free*. La société a été rebaptisée après avoir été acquise par le consortium sénégalais, *Saga Africa Holdings*. *Free Sénégal* propose divers services mobiles, comprenant des services de données 3G et 4G, l'itinérance internationale, ainsi que des forfaits de données compétitifs. Ses investissements pour l'amélioration de son infrastructure réseau renforcent encore plus la couverture et les performances de cet opérateur. De plus, *Free Sénégal* représente un concurrent majeur sur le marché des télécommunications sénégalais, puisqu'elle est le deuxième opérateur télécom sénégalais à obtenir la licence 5G.
- *Expresso Sénégal*, détenu par la *Sudan Telecom Company (Sudatel)*, constitue un autre acteur majeur sur le marché des télécommunications sénégalais. La société propose une gamme de services mobiles, englobant la voix, les données, ainsi que des services à valeur ajoutée. *Expresso Sénégal* étend son réseau pour assurer une couverture dans diverses régions. Bien que de moindre envergure par rapport à *Sonatel* ou *Free Sénégal*, *Expresso Sénégal* dessert une partie de la population contribuant, par conséquent, à la compétition dynamique sur le marché.

À noter que le gouvernement joue un rôle dans le développement et l'expansion du secteur des télécommunications sénégalais lequel est soumis à une réglementation gouvernementale. Force est de constater que l'industrie a connu une croissance des services de données mobiles, avec les opérateurs investissant

dans l'expansion de leurs réseaux 4G pour répondre à la demande croissante de connectivité mobile haut débit. Le paysage concurrentiel entre ces opérateurs a conduit à l'expansion des services et de la couverture réseau, bénéficiant aux consommateurs sénégalais avec des options de télécommunications améliorées. De plus, l'implication du gouvernement dans le secteur permet de garantir un équilibre entre les opérateurs privés et publics sur le marché, favorisant, par-là, la croissance et l'innovation au sein de l'industrie.

Croissance de la connectivité

Une combinaison de facteurs, comprenant des avancées technologiques, le développement économique et des politiques stratégiques, contribuent à propulser la croissance de la connectivité au Sénégal.


Ainsi, *Sonatel* a lancé des offres 5G fixe pour les clients résidentiels et les entreprises, prévoyant également d'introduire des forfaits Internet mobile à haut débit. Mettant en avant les avantages de la 5G, la société promet des vitesses de téléchargement et de streaming instantanées, ainsi qu'une réactivité améliorée pour les applications en temps réel.

Ce déploiement commercial survient sept mois après l'acquisition de la première licence d'exploitation de l'ultra haut débit au Sénégal. *Sonatel* prend ainsi de l'avance sur ses concurrents, consolidant sa position de leader sur le marché des télécommunications sénégalais. Avec une part de marché significative dans la téléphonie mobile et Internet, l'entreprise vise à capitaliser sur la demande croissante de connectivité à haut débit dans le pays, prévoyant des perspectives positives pour ses revenus.

En outre, au Sénégal, la connectivité internationale est assurée par plusieurs câbles sous-marins. Le système *ACE (Africa Coast to Europe)* relie plusieurs pays de la côte ouest de l'Afrique à l'Europe, avec des

points d'atterrissage au Sénégal, entre autres nations africaines. De même, le câble majeur *SAT-3/WASC/SAFE* établit une connexion sous-marine entre le Portugal et l'Espagne d'une part, et l'Afrique du Sud et l'Asie d'autre part, avec des points d'atterrissage dans plusieurs pays d'Afrique de l'Ouest, dont le Sénégal. À cet égard, *GLO-1*, un autre câble sous-marin fondamental, assure la liaison entre l'Europe et l'Afrique de l'Ouest, avec un point d'atterrissage à Dakar, la capitale. De plus, bien que principalement destiné à connecter l'Asie du Sud-Est, le Moyen-Orient et l'Europe, le câble *SMW4* étend son réseau à divers pays africains, dont le Sénégal.

Concernant les plans futurs, le Sénégal s'apprête à renforcer davantage sa connectivité internationale grâce à son intégration imminente au câble sous-marin à fibre optique *2Africa*. Dirigée par le consortium dirigé par *Meta*, l'installation de la branche sénégalaise a débuté avec l'arrivée d'un navire câblé d'*Alcatel Submarine Networks (ASN)*, une filiale de *Nokia* chargée de la construction du câble. En collaboration avec *Sonatel*, l'entreprise de télécommunications chargée de la construction de la station d'atterrissage de *2Africa* au Sénégal, cette initiative marque la connexion du pays à son cinquième câble sous-marin à fibre optique international. Les bénéfices prévus incluent une amélioration de la qualité et de la couverture des services internet à haut débit, une réduction des coûts, un accès élargi à des millions de personnes, de même qu'une accélération dans la voie menant aux objectifs de transformation numérique du gouvernement sénégalais.

Indubitablement, l'avenir semble prometteur pour le secteur des TIC au Sénégal. En effet, avec un engagement continu envers l'innovation et le développement, le pays est bien placé pour jouer un rôle de premier plan dans la révolution numérique qui est en train de transformer l'Afrique. 

Orange aspire à acquérir 50% d'Ethio Telecom



Orange vise à détenir au moins 50% d'Ethio Telecom pour réussir son introduction sur le marché éthiopien des télécommunications. En juillet 2021, Orange a manifesté son intérêt pour investir dans l'opérateur historique Ethio Telecom, considérant l'Éthiopie comme un marché à fort potentiel pour renforcer sa présence en Afrique subsaharienne.

Jérôme Henique, directeur général d'Orange pour le Moyen-Orient et l'Afrique, a déclaré que l'entreprise

cherche à obtenir le contrôle opérationnel en acquérant une participation d'au moins 50% dans Ethio Telecom.

Selon Henique, la société souhaite obtenir le contrôle des opérations afin de pouvoir déployer son modèle opérationnel alors que le gouvernement éthiopien est prêt à céder au maximum 45% de l'opérateur historique. *"Nous sommes prêts à discuter avec le gouvernement d'Ethio Telecom s'il change d'avis sur la manière dont il souhaite ouvrir le capital d'Ethio Telecom. Il s'agit d'une transaction formidable avec un grand potentiel pour l'Éthiopie."*, il ajouta.

Ces déclarations font suite au retrait d'Orange du processus de privatisation

partielle d'Ethio Telecom en novembre 2023, qui constitue la deuxième phase du processus de libéralisation du marché éthiopien des télécommunications lancé par le gouvernement en 2019.

La première phase a vu le consortium du Partenariat mondial pour l'Éthiopie obtenir la première licence privée de télécommunications du pays. La troisième phase prévoit l'introduction d'un deuxième opérateur télécoms privé sur le marché.

Pour Orange, cette troisième phase pourrait représenter une alternative pour pénétrer le marché éthiopien des télécommunications, même si le processus d'attribution de la deuxième licence privée (Licence B) a été suspendu en novembre 2023.

Réponse spéciale du Cameroun à la panne Internet en mer



À la suite des incidents affectant une partie des infrastructures sous-marines de fibre optique reliant l'Afrique, la ministre des Postes et Télécoms du Cameroun, Minette Libom Li Likeng, a incité une réunion de crise avec les opérateurs télécoms du pays pour discuter les perturbations d'accès à internet observées dans plusieurs pays africains.

Au cours de cette rencontre, des mesures d'urgence ont été décidées afin de limiter l'impact de ces incidents sur la connectivité Internet au Cameroun. Ces mesures comprennent notamment l'augmentation des capacités Internet sur le câble sous-marin SAIL, reliant le Brésil et le Cameroun et non touché par les incidents, ainsi que la restitution des

crédits data non utilisés en raison des pannes d'internet.

Le gouvernement a également recommandé la diversification des voies d'accès internet en utilisant des voies de redondance satellitaires et en renforçant la mutualisation des infrastructures entre les opérateurs. De plus, un audit indépendant des réseaux des opérateurs a été jugé urgent.

Le régulateur des télécoms au Cameroun a été chargé de superviser la mise en œuvre de ces recommandations. Les perturbations d'accès à internet, causées par des incidents majeurs sur les câbles sous-marins WACS, SAT3 et MainOne, connectant le Cameroun à l'Afrique, pourraient durer jusqu'à cinq semaines, selon l'Autorité nationale des communications du Ghana. Cette situation affecte plusieurs pays africains, y compris le Bénin, le Togo, le Ghana, la Côte d'Ivoire, le Liberia, le Burkina Faso, le Gabon, le Niger et le Nigeria.

Algérie Télécom explore les satellites pour optimiser la connectivité



Algérie Télécom a conclu un accord de partenariat avec Algérie Télécom Satellite (ATS), deux filiales du Groupe Algérie Télécom. Les deux entités

se sont engagées à collaborer pour améliorer les services de connectivité destinés aux citoyens et aux entreprises.

Dans le cadre de cette coopération, les deux parties entreprendront diverses initiatives, comme le déploiement de solutions professionnelles novatrices, l'intégration de technologies de pointe et la modernisation des infrastructures de télécommunications.

Cette collaboration s'inscrit dans la stratégie globale d'Algérie Télécom, axée sur l'innovation technologique et l'amélioration constante de la qualité de service. Après la signature d'accords avec des acteurs du secteur des télécommunications tels que Djezzy et Ooredoo, l'entreprise se tourne désormais vers les satellites. Cette orientation s'explique par la portée étendue offerte par la technologie satellitaire, permettant de desservir les populations résidant dans des zones rurales, reculées et difficiles d'accès pour les réseaux terrestres.

Maroc Telecom propulsé par sa filiale Moov Africa



En 2023, le groupe Maroc Telecom a réalisé un chiffre d'affaires de 36,8 milliards de dirhams, enregistrant une hausse de 3,0% (+1,4% à taux de change constants).

Au cours de l'année écoulée, sous la direction d'Abdeslam Ahizoune,

président du directoire, la société a généré un chiffre d'affaires de 36,786 millions de dirhams, comparativement à 35,731 millions de dirhams l'année précédente. Le résultat net s'est élevé à 5,283 millions de dirhams, contre 2,750 millions de dirhams l'année précédente.

La croissance du chiffre d'affaires des filiales de Moov Africa, ainsi que celle des activités internet fixe au Maroc, ont continué de soutenir le chiffre d'affaires du groupe, compensant la baisse du secteur mobile au Maroc.

Le résultat de base par action des activités poursuivies s'est établi à 6,01 dirhams, contre 3,13 dirhams l'année précédente. De même, le résultat dilué par action des activités poursuivies s'est également élevé à 6,01 dirhams, contre 3,13 dirhams l'année précédente.

En tant qu'opérateur historique des télécommunications au Royaume du Maroc, le groupe opère également en Mauritanie, au Burkina Faso, au Gabon, au Mali, en Côte d'Ivoire, au Bénin, au Togo et au Niger.



Les défis de la couverture mobile en milieu rural en Afrique : une nécessité pour le développement

L'Afrique, avec sa richesse naturelle et sa diversité humaine remarquable, est au cœur d'une transformation dynamique, largement impulsée par l'évolution rapide des technologies mobiles. Ces avancées ont ouvert la voie à de nouvelles perspectives et à des opportunités sans précédent, pleines de bénéfices pour le développement économique et social sur le continent. Cependant, malgré les progrès réalisés, la couverture mobile en milieu rural demeure un défi de taille à relever.



En effet, l'extension de la connectivité mobile dans les zones rurales d'Afrique est essentielle pour favoriser un développement équilibré et inclusif à travers le continent. Malgré les avancées technologiques remarquables, de nombreux obstacles subsistent limitant l'accès des populations rurales aux services de télécommunication.

Infrastructures limitées

L'un des principaux défis de la couverture mobile en milieu rural en Afrique réside dans l'infrastructure limitée du pays. Il est vrai que les vastes étendus de terres, souvent caractérisées par un relief accidenté et des zones reculées, rendent difficile l'installation d'infrastructures de télécommunication. De plus, les coûts élevés, associés au déploiement de tours cellulaires et de réseaux de transmission dans ces régions isolées représentent un obstacle majeur pour les opérateurs de téléphonie mobile.

Accès à l'électricité

Un autre défi majeur auquel fait face le continent africain en général, est l'absence d'électricité dans de nombreuses zones rurales ce qui rend difficile l'utilisation des téléphones portables et d'autres appareils électroniques. Sans alimentation électrique fiable, les tours cellulaires et les stations de base ne peuvent pas fonctionner correctement, ce qui compromet la qualité du service de téléphonie mobile.

Barrières géographiques et linguistiques

En outre, les barrières géographiques

et linguistiques peuvent également entraver la couverture mobile en milieu rural. Effectivement, les langues diverses et les différents et nombreux dialectes locaux peuvent rendre la communication et la prestation de services plus complexes, surtout dans les zones où les opérateurs de téléphonie mobile ne disposent pas de personnel local compétent pour fournir un support technique et linguistique adéquat.

L'importance de la couverture mobile en milieu rural

Malgré tous ces obstacles mentionnés, la couverture mobile en milieu rural en Afrique revêt une importance capitale pour le développement économique et social du continent. Les technologies mobiles permettent aux populations dans ces zones d'avoir accès à l'information, aux services financiers, à l'éducation et aux soins de santé, même dans les régions les plus éloignées.

Avantages des technologies mobiles

Ainsi, grâce aux applications mobiles, les agriculteurs peuvent désormais accéder aux prévisions météorologiques, aux prix des produits agricoles et aux conseils agronomiques, ce qui leur permet d'améliorer leurs rendements et leurs moyens de subsistance. De même, les services financiers mobiles ont révolutionné les systèmes financiers en Afrique, en donnant l'accès aux personnes non bancarisées à des services bancaires et financiers de base via leur téléphone portable.

Amélioration de l'accès à l'éducation et aux soins de santé

En outre, les technologies mobiles jouent également un rôle crucial dans l'amélioration de l'accès à l'éducation et aux soins de santé en milieu rural.

En effet, les applications éducatives et les plateformes d'apprentissage en ligne peuvent aider les élèves et les étudiants à accéder à du contenu éducatif de qualité, même dans les zones les plus reculées. Il ne faut pas oublier non plus les services de télémédecine permettant aux patients des zones rurales d'obtenir des conseils médicaux en ligne et de bénéficier de téléconsultations avec des professionnels de la santé, ce qui contribue à réduire largement les disparités en matière de santé entre les zones urbaines et rurales.

Surmonter les défis

Pour surmonter les défis de la couverture mobile en milieu rural en Afrique, une approche holistique et collaborative est nécessaire. La collaboration entre les gouvernements, les organismes de réglementation, les opérateurs de téléphonie mobile, les organisations internationales et la société civile est fondamentale pour développer des politiques et des initiatives qui favorisent le déploiement des réseaux mobiles dans les zones rurales, tout en garantissant un accès universel et surtout abordable aux services de télécommunication.

Il va sans dire que la couverture mobile en milieu rural en Afrique représente un défi complexe mais crucial pour le développement du continent. En surmontant avec intelligence et de manière stratégique les obstacles liés à l'infrastructure, à l'accès à l'électricité et aux barrières géographiques et linguistiques, l'Afrique peut exploiter pleinement le potentiel des technologies mobiles pour améliorer la vie des populations rurales et favoriser un développement durable et inclusif à l'échelle du continent. **TR**



Intégration de la stratégie des télécommunications : perspectives africaines sur les modèles de communication

Dans un monde de plus en plus connecté où un rôle central est joué par les télécommunications, l'importance cruciale de leur intégration est mise en évidence. Les questions soulevées par cette intégration sont fondamentales, particulièrement pertinentes en Afrique, où les dynamiques sont souvent uniques. Sur ce vaste continent aux multiples réalités, un éclairage singulier et profond est offert par les perspectives africaines, qui sont façonnées par les défis spécifiques rencontrés et les opportunités émergentes en jeu. Ainsi, cette exploration est entreprise pour comprendre comment ces perspectives africaines enrichissent notre compréhension et sont influencées par les modèles de communication à l'échelle mondiale.

Les dynamiques en évolution du paysage des télécommunications en Afrique

L'Afrique, un continent en

pleine transformation, connaît une évolution rapide de son paysage des télécommunications. Cependant, dû à une croissance démographique soutenue et l'adoption croissante des technologies numériques, les opérateurs de télécommunications

africains sont confrontés à de nouvelles opportunités accompagnées de défis.

L'émergence d'une classe moyenne en expansion, l'urbanisation croissante et l'installation

accrue d'infrastructures de communication ont augmenté considérablement la demande de services de télécommunications à travers le continent. En effet, les consommateurs africains sont de plus en plus connectés, utilisant des smartphones pour accéder à Internet, aux médias sociaux et à d'autres services en ligne. Ce surcroît de connectivité a ouvert de nouvelles perspectives de croissance pour les opérateurs de télécommunications, tout en leur imposant la nécessité de s'adapter rapidement à un environnement en constante évolution.

Les enjeux de l'intégration de la stratégie des télécommunications

L'intégration de la stratégie des télécommunications revêt une importance capitale pour les opérateurs africains. Grâce à des modèles de communication efficaces, ils cherchent à répondre aux besoins changeants des consommateurs tout en restant concurrentiels sur un marché en constante évolution.

L'un des principaux défis auxquels sont confrontés les opérateurs de télécommunications en Afrique est la nécessité d'investir dans des infrastructures robustes et fiables pour soutenir la demande croissante de services numériques. En d'autres termes, ils sont en train d'investir dans le déploiement de réseaux haut débit à large bande, la modernisation des infrastructures existantes et l'expansion de la couverture réseau dans les zones rurales et sous-connectées.



Néanmoins, un autre défi se présente à eux, et non des moindres, c'est celui de la réglementation et de la politique, les obligeant à naviguer dans un environnement juridique souvent complexe et à s'adapter aux exigences réglementaires en constante évolution.

Vers de nouveaux modèles de communication adaptés à l'Afrique

Pour réussir cette intégration, les opérateurs de télécommunications sur le continent africain sont en train d'explorer de nouveaux modèles de communication adaptés au contexte unique de l'Afrique. Pour cela, leur approche est de se concentrer sur la connectivité mobile -en raison de sa capacité à atteindre des populations jusque-là inaccessibles -, le développement de solutions innovantes pour les zones rurales et la collaboration avec des partenaires locaux pour maximiser l'impact social et économique.

Ainsi, à travers des initiatives telles que la fourniture de services de paiement mobile, l'accès à l'éducation et aux soins de santé via des applications mobiles et le développement de contenus locaux, les opérateurs cherchent à améliorer la vie des Africains tout en renforçant leur position sur le marché.

En outre, ils s'engagent de plus en plus dans des partenariats avec des entreprises locales et des organisations de la société civile pour répondre aux besoins spécifiques des communautés africaines. Il s'agit d'initiatives visant à étendre l'accès à Internet dans les zones rurales, à fournir des services de télécommunications abordables pour les populations à faible revenu et à promouvoir l'inclusion numérique à travers le continent.

Les opportunités futures dans le paysage des télécommunications africaines

Malgré les obstacles, l'avenir des télécommunications en Afrique est prometteur. En élaborant une stratégie intégrée et des modèles de communication innovants,



les opérateurs africains sont bien positionnés pour saisir les opportunités de croissance et contribuer au développement socio-économique de la région.

En outre, l'expansion continue de l'accès à Internet et la croissance de la demande de services numériques offrent des perspectives de croissance significatives pour les opérateurs de télécommunications en Afrique. Par ailleurs, l'émergence de technologies émergentes telles que l'Internet des objets (IoT), la 5G et l'intelligence artificielle (IA) ouvre de nouvelles possibilités d'innovation et de développement de nouveaux services.

Un avenir connecté pour l'Afrique

L'intégration stratégique des télécommunications promet un avenir radieux pour l'Afrique. Grâce à l'adoption de modèles de communication adaptés, les opérateurs peuvent non seulement favoriser la transformation numérique du continent, mais également ouvrir la voie à une ère d'opportunités sans précédent.

En tirant parti de technologies innovantes et de partenariats locaux, ils sont désormais aptes à répondre aux besoins diversifiés des populations africaines, favorisant, par conséquent, le développement socio-économique à grande échelle. Cet engagement envers une connectivité étendue et une accessibilité accrue témoigne d'une vision ambitieuse pour l'Afrique, où chaque individu peut bénéficier des avantages de la révolution numérique, pour un avenir vibrant et inclusif pour tous. **TR**

— 2024 —

Unleashing Network Capabilities with 5G-Advanced

Telecom review will host a virtual panel to discuss the potential of 5G-Advanced, or 5.5G, to revolutionize telecommunications, with a focus on its features, deployment strategies, and socioeconomic implications in Asia.

Place: Virtual



Unleashing Network Capabilities with 5G-Advanced

Telecom Review organisera un panel virtuel pour discuter du potentiel du 5G-Advanced, ou 5.5G, pour révolutionner les télécommunications, en mettant l'accent sur ses caractéristiques, ses stratégies de déploiement et ses implications socio-économiques en Asie.

Lieu : Virtuel

Gitex Africa

GITEX AFRICA is the hyper-connector event transforming Africa's core tech foundations, and addressing global challenges. This pan-African accelerator supercharges the potential to access and build core tech infrastructure, enabling global tech players, policymakers, startups, investors, and talent to realize true acceleration in the world's emerging tech continent.

Place: Bab Jdid, Marrakesh, Morocco



Gitex Africa

GITEX AFRICA est un événement hyperconnecté qui transforme les fondations technologiques de l'Afrique et répond aux défis mondiaux. Cet accélérateur panafricain renforce le potentiel d'accès et de construction des infrastructures technologiques de base, permettant aux acteurs technologiques mondiaux, aux décideurs politiques, aux startups, aux investisseurs et aux talents de réaliser une véritable accélération sur le continent technologique en plein essor.

Lieu : Bab Jdid, Marrakesh, Maroc

Telecom Review Leaders' Summit 2024

The Telecom Review Leaders' Summit, now in its 18th edition, stands as the premier event in the ICT industry, shaping global telecommunications. Returning to Dubai on **December 10-11, 2024**, it gathers top executives and leaders for strategic discussions and partnerships.

Place: Dubai-UAE



Telecom Review Leaders' Summit 2024

Le Telecom Review Leaders' Summit maintenant dans sa 18^e édition, est l'événement phare de l'industrie des TIC, façonnant les télécommunications mondiales. De retour à Dubaï les **10 et 11 décembre 2024**, il réunit les plus hauts dirigeants pour des discussions stratégiques et des partenariats.

Lieu : Dubai-EAU

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