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Sub-Saharan Africa: A closer look

Extract from the Ericsson Mobility Report

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Driving forces behind growth include a positive economic outlook and forward-thinking regulatory measures for building out network coverage, meaning the stage is set for the telecom market to thrive in the Sub-Saharan Africa region.

In each edition of the Mobility Report, we take a closer look at the trends in one specific region. This time we are exploring the Sub-Saharan Africa region.

In the face of a global economic slowdown, the economies of Sub-Saharan Africa are set for a period of robust 4 percent short-term growth.¹ Alongside this growth, total mobile subscriptions are projected to rise 3 percent year-on-year for the next 6 years, with a 9 percent increase in 4G subscriptions, indicating a promising market opportunity for service providers. Furthermore, the growing adoption of smartphones, especially affordable devices, is expected to lead to an annual increase of more than 20 percent in data consumption per smartphone throughout this period, from 6.7 GB per month to 23 GB per month.

These projections present numerous opportunities for service providers to support the evolving telecom landscape in Sub-Saharan Africa. The driving forces behind this growth are forward-thinking regulatory measures and substantial investments from both local and international telecom companies.

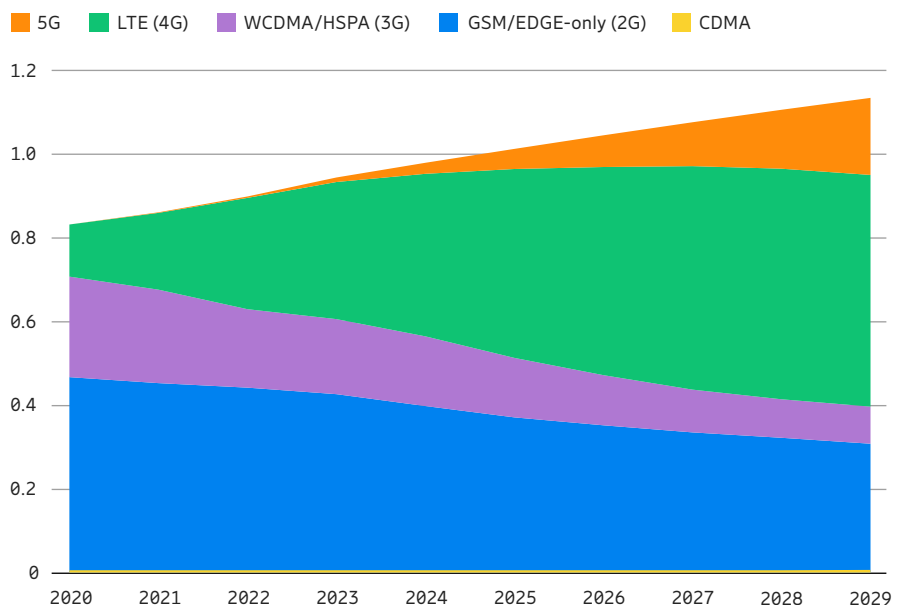
Catalyzing connectivity: Sub-Saharan Africa’s strategic network infrastructure investment
ICT can play a pivotal role in enabling critical climate action, steering African industries toward a low-carbon economic model. Research indicates that ICT solutions have the capacity to reduce global greenhouse gas emissions by up to 15 percent by 2030.²

At the same time, in the face of considerable macroeconomic challenges, a number of countries in the Sub-Saharan Africa region are demonstrating a strong commitment to making substantial investments in their network infrastructure. This strategic initiative is driven by the region’s demographic advantage of a largely youthful population, alongside a marked surge in demand for enhanced connectivity solutions. As societies increasingly embrace digitalization and the benefits it offers, the pressing need for comprehensive and modernized network systems becomes evident.

4G is reshaping Sub-Saharan Africa
In the pursuit of modernization and enhanced connectivity, subscribers are constantly migrating toward 4G networks. This trajectory indicates that 4G will be the primary driver for new subscriptions up

to the year 2028. By the end of 2029, 4G subscriptions are forecast to account for half of all mobile subscriptions. This technological shift underscores a pivotal moment in the region’s telecom landscape. 4G’s prevalence is poised to redefine the way communities engage with digital services, be it for education, commerce, healthcare, or social interactions. Service providers in Sub-Saharan Africa are evolving into technology companies, integrating mobile money services into their digital portfolios. This shift not only enhances financial inclusion in society but also significantly boosts revenue for service providers, complementing traditional voice and data services. The advantages of the high speeds, improved reliability and efficiency that 4G offers are instrumental in shaping a digitally empowered society.

Figure 4: Sub-Saharan Africa region mobile subscriptions by technology (billion)



¹ IMF, [Regional Economic Outlook: Sub-Saharan Africa](#) (October 2023).

² [Exponential Roadmap](#) (January 2020).

In 2029, 180 million 5G subscriptions are projected in Sub-Saharan Africa.

180m

Strategic spectrum deployment propels 5G expansion

Forward-looking 5G investments in the region are supported by spectrum releases in low- and mid-bands. The bulk of mobile subscribers will remain on 4G networks for several years, and it will be some time before subscribers who have migrated to 5G reach a more considerable proportion. Many African governments and service providers have nonetheless made measurable progress over the past year when it comes to releasing the relevant spectrum resources for launching 5G and activating them on compatible network equipment. More than a dozen countries – which, with the exception of Nigeria, are mostly in Eastern and Southern Africa – now have 5G services available.

Urban areas are increasingly reaching maximum capacity, given the site density and available spectrum, leading to service disruption. To maintain and improve user experience, African service providers could either secure additional spectrum or further densify network coverage.

Many governments, including Kenya and Tanzania, have allowed service providers to reuse their existing spectrum assets, thereby enabling frequency refarming in line with technology neutrality principles. Most also gave service providers access to additional frequencies, especially in the mid-band, in sizable amounts to allow 5G to fully deliver on its promises of higher download speeds. As these frequencies have a limited reach, releasing some low-band frequencies alongside them offers a strategic combination of 5G resources to simultaneously expand capacity and extend coverage. Only a few countries have released frequencies higher than 6 GHz, which are needed for ultra-high performance 5G services. This includes around 80 GHz in the E-Band for high-capacity microwave links to connect towers, which is especially effective in suburban settings where fiber may not yet be available. In 2029, it is anticipated that there

will be around 180 million 5G subscriptions in the region, accounting for 16 percent of all mobile subscriptions at that time.

Bridging the digital divide: Challenges and solutions for rural Africa

A substantial segment of the Sub-Saharan Africa population resides in rural areas. This demographic and economic landscape poses a significant challenge in the establishment of profitable macro sites for telecommunication networks, where the ARPU is low. The cost implications of deploying and maintaining infrastructure in these areas often outweigh the potential revenue generation, presenting a formidable financial obstacle to delivering of widespread coverage.

Providing connectivity to rural Africa to enhance digital inclusion calls for innovative solutions and collaborative efforts. An example of this is a tailored radio and transmission solution that is optimized specifically for the needs of rural sites, and can include 100 percent solar and battery power for clean energy and reliability.

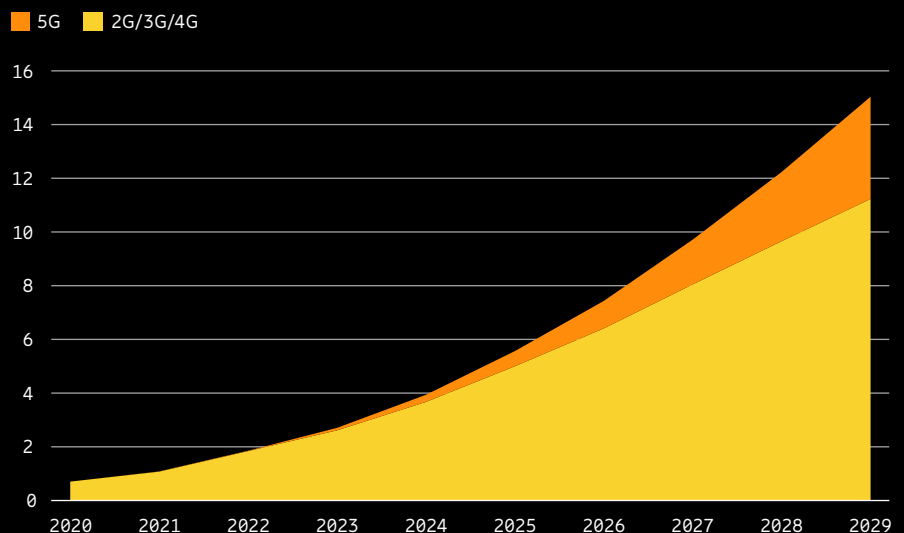
Fixed Wireless Access (FWA) takes center stage

In the quest to meet Africa's increasing broadband demands, FWA emerges as a pivotal technology. While 4G FWA is an initial stepping stone, 5G's potential is increasingly coming to the forefront due to its capability to deliver fiber-like speeds. This advancement complements traditional fixed broadband infrastructure within the region.

Notably, several key African markets, including Angola, South Africa, Nigeria, Kenya, Zambia and Zimbabwe, have already launched 5G FWA services. This shift can be attributed to its cost effectiveness, rapid deployment capabilities and inherent flexibility.

Sub-Saharan Africa has many unconnected households, especially in rural areas, and this digital divide can be effectively and quickly addressed by FWA. It is also a cost-effective solution for bringing digital connectivity to other segments, such as schools, opening a world of access to information and learning.

Figure 5: Sub-Saharan Africa region mobile data traffic (EB per month)



About Ericsson

Ericsson enables communications service providers and enterprises to capture the full value of connectivity. The company's portfolio spans the following business areas: Networks, Cloud Software and Services, Enterprise Wireless Solutions, Global Communications Platform, and Technologies and New Businesses. It is designed to help our customers go digital, increase efficiency and find new revenue streams. Ericsson's innovation investments have delivered the benefits of mobility and mobile broadband to billions of people globally. Ericsson stock is listed on Nasdaq Stockholm and on Nasdaq New York.

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