

From steel towers standing tall in dusty villages to satellites silently circling thousands of miles above the earth, Africa's race to connect its millions is no longer a ground-level battle – it has moved to the skies above

The entry and growing interest of satellite internet companies such as Starlink, OneWeb, and Amazon Kuiper into the Common Market for Eastern and Southern Africa offers significant opportunities, including greater consumer choice, competitive pricing, and improved access to high-speed internet. At the same time, regulators face the complex task of balancing these benefits against critical concerns such as national security, potential impacts on employment and the protection of local economies from disruption, writes **Ali Twaha**.

FUTURE OF INTERNET: TOWERS VS SATELLITES

Once the undisputed leader in mobile phones, Nokia held nearly half the global market at the turn of the century. In the late 1990s and early 2000s, models such as the 3310 and 3210 became status symbols across Uganda and the broader Common Market for Eastern and Southern Africa (COMESA) region as mobile telephony was liberalised. MTN launched in Uganda in 1998, and coverage expanded rapidly in urban areas. Nokia phones were prized for their durable build, long battery life, and resilience compared to rivals such as Ericsson, Motorola, and Siemens. At the time, phones were luxuries, often costing several months' wages. Owners flaunted them as fashion statements. Similar patterns emerged in Kenya after its 1999 liberalisation and across southern Africa, including Zambia, Zimbabwe and Malawi.

Yet within a few years, Nokia was reduced

to irrelevance by the rise of sleek touch screen smartphones from Apple and the Android ecosystem. Its leaders had dismissed the threat, clinging to feature phone dominance and incremental improvements. By 2013, the handset division was sold for a fraction of its former value. Technological disruption, observers noted, respects neither brand loyalty nor incumbency. A similar pattern is now unfolding in the regional telecommunications industry, where satellite internet technologies threaten to disrupt the market share of established local operators. Satellite operators are targeting COMESA countries mainly to serve rural, remote, and underserved communities where traditional fibre cables and mobile towers are unavailable, difficult to deploy, or prohibitively expensive.

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BEHIND THE ENTRY OF SATELLITE FIRMS IN THE REGION

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Demand is also rising among young, tech-savvy users seeking reliable high-speed, low-latency connections.

"Rural areas have a shortage or limited coverage of the Internet. The best way to capture this demographic is by using satellite internet, which does not require huge investment in infrastructure," Saitoti Letowon, an information technology analyst at Cincom Systems Limited, says.

He says while Starlink can work in urban settlements, performance may be limited in some areas.

"When you look at the urban settlements, Starlink can work, but where you have large buildings and a lot of obstruction in terms of lack of a clear line of sight to the skies or to the satellites, it will not work 100% in such an environment," he says.

In Uganda, internet users exceeded 15 million in 2024. By quarter 3 of 2025, mobile internet subscriptions had reached 17 million, with active mobile subscriptions overall at 45.7 million. Smartphone ownership stood at 19 million.

CHALLENGES

Traditional telecom operators across the region face significant hurdles. In Uganda, for example, operators can build towers and install antennas, but reliable electricity remains a major barrier. Only about a quarter of the country has access to hydroelectric power, the cheapest and most reliable source for telecom infrastructure. According to an industry report from the Uganda Communications Commission (UCC), power-related expenses in the telecom sector reach about \$60m (about sh225b) annually. This covers fuel, maintenance, and logistics for thousands of sites far from the national grid. Each tower requires its own power setup, often combining transformers, solar arrays, and backup generators at a cost of \$60,000 to \$270,000 per site, the report says.

This represents a heavy burden in low-income markets with modest average revenue

per user. Letowon says satellite internet is increasingly being integrated with terrestrial networks rather than serving as a standalone solution. Providers are adopting hybrid architectures that combine satellite connectivity with fibre and cellular networks to enhance coverage, resilience, and service continuity. Last year, Airtel Africa partnered with SpaceX to roll out Starlink direct-to-cell satellite connectivity across all 14 of its African markets by 2026.

REGULATION, COMPETITION

Reports indicate that Starlink's slower progress in parts of Africa stems mainly from regulatory barriers, efforts to protect incumbent telecom revenues, and concerns over national control and sovereignty.

In Uganda, Starlink Global Internet Services Ltd has expressed interest in providing satellite broadband. The UCC is also reviewing applications from OneWeb and Amazon Kuiper.

"Starlink has submitted most of the requirements we have asked of them. We are in the process of issuing them a licence," George Nyombi Thembb, the executive director of UCC, said on January 12.

"As a commission, we are excited about the potential Starlink has in achieving our objective of inclusive ICT uptake in the country. We want to thank Starlink for responding promptly to our regulatory inquiry and intervention. They have geo-locked all signals in the country. We are monitoring this 24/7 until the licence is officially issued."

According to UCC, licensing decisions are guided by public interest, regulatory compliance, and

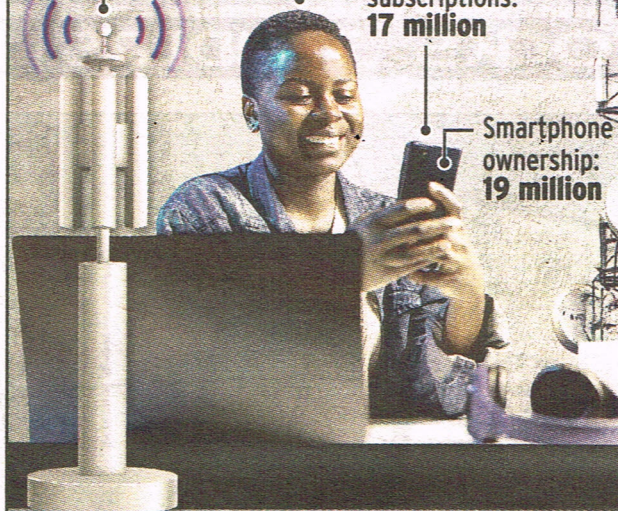
Internet growth in Uganda

Internet users (2024): 15 million+

Mobile subscriptions (Q3 2025): 45.7 million

Mobile internet subscriptions: 17 million

Smartphone ownership: 19 million



COST OF TRADITIONAL NETWORKS TELECOM INFRASTRUCTURE CHALLENGES

About 25% of Uganda has hydroelectric access

Power costs for Telecom: Around \$60m (sh216b) annually

Cost per telecom tower is between \$60,000-\$270,000

TOWERS MUST HAVE:

- Generators
- Solar systems
- Transformers
- Fuel logistics



national obligations. The UCC is also reviewing other satellite operators such as OneWeb.

In places such as South Africa and Namibia, Starlink has been blocked or delayed over majority local-ownership requirements, even as demand for reliable internet in underserved rural areas surges. Starlink is 100% foreign-owned and US-based. Experts say this raises fears about jurisdiction, as governments cannot easily enforce local laws, compel co-operation during crises, or maintain oversight.

Across eastern and southern Africa, only 64% of the population has access to high-speed internet, while just 24% were using the internet as of 2023. Sub-Saharan Africa, with an estimated 1.2 billion people at the end of 2024, records the world's lowest mobile internet penetration rate at 29%, compared to a global average of 58%.

While acknowledging that the satellite internet firm's rapid gains in neighbouring Kenya initially caused some concern, Sylvia Mulinge, MTN Uganda chief executive officer, says competition is healthy for any developing market.

"I respect competition, but I do not live in fear of it. So, I have to admit that initially,

BETWEEN THE LINES

Sub-Saharan Africa, with an estimated 1.2 billion people at the end of 2024, records the world's lowest mobile internet penetration rate at 29%.

when Starlink came onto the horizon, we saw what was happening in Kenya. It was a cause for concern. But I always seek to understand how the technology works. What is the potential for it? How does it balance out versus where we are?" she says.

"So, for us, it is just a matter of making sure that we keep on investing. At the end of the day, no matter what technology you have, the way you are going to win or lose is based on the experience that you deliver for your customers at a price that makes sense. On that basis, we will be unrelenting in making sure that we do not lose any market share to competition, by making the investments that are required."

In an interview with the *New Vision*, David Kibet Kemei, director general at the

Competition Authority of Kenya, said current observations show that the threat of new entrants has prompted existing telecommunications firms to shift towards unlimited data models to retain their customer base.

"Generally, the entry of new companies into a market is always a welcome development for consumers because they bring in new innovations and new products, thereby giving consumers more choices," he says.

"The entrance of Starlink in Kenya was looked at as a multi-agency decision. What the competition authority needs to do in terms of competition aspects, and the security considerations, also have to be assessed in terms of national security. No one welcomes competition in their business. The interest of another player means the pie will have to be shared. We have seen changes in the way players are now pricing their products. I have seen Safaricom moving away from the megabyte model to introducing unlimited packages sold by time."

PERSPECTIVES

Willard Mwemba, the chief executive officer of the COMESA Competition Commission, says while the

concerns from Uganda and other COMESA countries are understandable, blocking new entrants goes against basic competition principles.

"Starlink is a company that has never operated in any of our member states. It is a completely new entrant. When new players have entered in the past, prices have come down. Starlink says it can bring them down much further. If its service turns out to be expensive, no rational customer will switch from something cheaper," he says.

"The real fear is the opposite: that it will be so competitive that it hurts existing operators and jobs. That concern deserves attention, but we should not dismiss it before it even starts. This is greenfield investment. Starlink is not acquiring anyone; it is building from scratch. Competition authorities often approve mergers with conditions to protect jobs. Yet even then, a company might replace an underperforming manager, become more efficient, expand, open new branches, and ultimately employ more people. We should weigh the longer-

term gains as well. In Malawi, where Starlink is already operating, users tell me the service is noticeably faster and more reliable. We need to look at the bigger picture rather than focusing only on the immediate risks.

The concerns are real, but we should give the newcomer a chance to show what it can do."



Kibet

Letowon

Mulinge

Mwemba