



COUNTRY CONTEXT

The resource-rich but landlocked Southern African Republic of Zambia is a country whose population is sparsely distributed across its relatively large land mass but concentrated in urbanised areas. Zambia's digital landscape is evolving, presenting both advancements and challenges to achieving comprehensive digital transformation. As of 2021, about 21 percent of the 20 million Zambian citizens were actively using the internet. This figure is low and limits the potential of the youthful demography of the Zambian population. Like most Sub-Saharan African countries, Zambia ranks high amongst countries with elevated levels of poverty and inequality, leading to affordability challenges and a reality that limits individual adoption of digital technologies. The consequence of this manifests in reduced rates of digital advancement on a national scale.

As a Southern African country, Zambia is bordered by eight other countries (Angola, Botswana, Democratic Republic of Congo, Malawi, Mozambique, Namibia, Tanzania, and Zimbabwe), presenting an opportunity for regional cooperation in digital infrastructural development that improves affordability by leveraging on scale.

The CSEA Digital Preparedness Index allocates a score of 0.45 to Zambia, a little less than the average score of 0.47 from a maximum or perfect score of 1.0. This reflects the relatively poor state of widespread digital adoption in Zambia, leaving room for improvement. The country fares well in terms of business dynamism and ease of doing business but falls short in terms of a comprehensive regulatory framework to check the challenges associated with digitalization. According to the Zambia Information and Communications Technology Authority (ZICTA), there are 21 million mobile cellular subscriptions in Zambia and this number is expected to continue to grow. Airtel commands the sector with 48.6% of the market share, MTN Zambia at 32.6% and Zamtel at 18.8%.

Strategic investments can make Zambia a regional connectivity hub, bolstered by the nation's existing fiber-optic backbone connectivity with six neighboring countries, and its geographic centrality and proximity to subsea cables.

DIGITAL ADOPTION

Financial constraints are a key barrier to Zambia's digital uptake. About 20,000 kilometers of fiber-optic cables have been installed within and around the country, but affordability remains a concern for optimal internet subscriptions. The average cost of a consumption bundle encompassing both voice and data services stands at US\$3.06, translating to approximately 5% of the country's Gross National Income (GNI). This figure considerably surpasses the affordability target established by the UN Broadband Commission, which recommends a maximum cost of 2% of GNI. As of the end of 2021, active internet subscriptions exhibited a 1.3% year-on-year growth, a marginal increase from the 10.3 million reported in 2020 to 10.4 million. This translates to an internet penetration rate of 56.7 inhabitants per 100 possessing an active internet subscription.

Notwithstanding these challenges, Zambians demonstrate a growing online presence, particularly through engagement with social media applications. Data indicates a significant rise in social media usage within Zambia.

About 2.7 million social media users were active in January 2023, representing about 13% of the Zambian population. In addition to an increasing appetite for digital interactions enabled by messaging platforms like Whatsapp, the proliferation of other applications like Facebook and Instagram accelerates data generation and may signal the potential for data-driven development.

The venture capital market in Zambia is relatively new and should progress with the continued support of proactive government initiatives. To aid digital commercialization, the Ministry of Technology and Science introduced the National Technology Business Center (NTBC), which has been operational since 2002 to promote and transfer technologies for enhanced utilization and adoption. Local companies like Tigmoo, Kazang, Digital PayGo, and international operators like Alibaba, Amazon, and eBay continue to benefit from the government's commitment to further support and digital development.

DIGITAL GOVERNANCE IN PLACE

The Zambian government plans to realize an information and knowledge-based society by 2030. To this end, its 7th National Development Plan ([ZNDP](#)) includes strategies for digital transformation and strengthening of the legal framework for ICT and data management. A few initiatives were introduced in 2021 to improve the governance of digital transformation in Zambia, including the Cybersecurity and Cyber Crime Act ([CSCC](#)), the Data Protection Act ([DPA](#)), the Electronic Communications and Transactions Act ([ECTA](#)), and Zambia's Electronic Government Act ([ZEGA](#)). These provide a digital governance framework that adequately addresses data security but protects the rights and freedoms of citizens.

Effective balancing of this framework also involves protecting the state's interest versus openness in the flow of data. For example, major Chinese tech companies like Huawei and ZTE have well-established operations in Zambia, dominating the development of the digital ecosystem. This example, amongst others, may have motivated the promulgation of the earlier mentioned DPA, which introduced the concept of data localization to Zambia's legal landscape. This act mandates the physical storage of personally identifiable information (PII) within the country. As such, in response to this requirement, several data centers and cloud infrastructures have been established. These facilities adhere to international standards and possess the capacity to manage and store Zambia's data needs for the foreseeable future.

Well-established legal frameworks for e-commerce are generally recognized as beneficial for businesses, as they provide a clear and comprehensive regulatory environment that facilitates legal compliance. Currently, Zambia lacks a specific legal framework for e-commerce, along with complementary strategies and a designated inter-ministerial body to coordinate e-commerce matters.

RECENT DIGITAL DEVELOPMENT

The Zambian government continues to invest in initiatives aimed at greater development and advancements in the sector. ZICTA undertook a large-scale initiative to combat digital fraud. This effort involved the deactivation of millions of SIM cards nationwide that either exhibited irregularities in registration details or belonged to subscribers with an excessive number (more than ten) registered under a single identity. This action coincides with Zambia's implementation of the Integrated National Registration Information System (INRIS) in the first quarter of 2022. INRIS represents a robust national identity management system that leverages enhanced biometric digital security features to safeguard national registration cards, birth certificates, and death certificates. Furthermore, the Zambian government is actively developing a revised National ICT Policy and a Digital Transformation Strategy. These initiatives aim to establish a mid-term plan to hasten growth and development within the country's ICT sector. The recently released ZICTA 2023 report highlights sustained efforts in driving development in the ICT sector.

Several key developments in 2023 further shaped the Zambian ICT landscape. These include collaborative efforts such as the agreement between Angola and Zambia to strengthen cooperation in the field of ICT. Additionally, advancements within the country itself, such as the 8.3% increase in the number of telecommunication sites from 11,987 in 2022 to 12,969 in 2023, the introduction of embedded SIM technology, and the launch of Airtel Zambia's 5G network, contributed to the sector's growth.