

Zambia

The landlocked Southern African nation has been making significant strides in building its national backbone in order to access Internet bandwidth in neighbouring countries.

Mobile services: There are three mobile operators. MTN Zambia Limited, a subsidiary of South Africa's MTN, is the leader, with a 44.4 per cent market share at the end of December 2017, which entered the market through the purchase of TELECEL, which had been operating since 1995. Airtel Zambia Limited, a subsidiary of India's Airtel, had the second largest market share, at 39.7 per cent. The company launched its operations on the market in 1997, initially trading as Celtel Zambia and subsequently Zain Zambia. The State-owned incumbent, Zambia Telecommunications Company Ltd. (ZAMTEL), had the lowest market share, at 15.9 per cent, despite progressive gains in its customer base. ZAMTEL launched its mobile phone service offering in 1994 as the country's first mobile operator. The 2015 survey on access and usage of ICTs among households and individuals found that 65 per cent of households had mobile phones, including 85 per cent in urban homes and 50 per cent in rural ones.⁵⁰⁹ MTN Zambia launched its 3G offering in 2011, followed by Airtel and ZAMTEL in 2012. Mobile LTE was introduced by MTN in 2014 using the 1 800 MHz frequency, while ZAMTEL and Airtel Zambia launched their LTE offerings in 2016 and 2017, respectively. Mobile Broadband Limited (trading as Vodafone Limited), Hai Telecommunications Limited and Microlink Limited, which previously were traditional ISPs, extended their service offering since last year to provide LTE mobile Internet services.

Fixed services: ZAMTEL is the main provider of fixed-telephone services using public switched telephone network technology. It also offers fixed-broadband over capped ADSL and fibre-optic connections, and fixed wireless LTE–Time Division Duplex (the latter since 2014). Vodafone also launched a fixed wireless LTE–Time Division Duplex network using the 2 300 MHz band in 2016. While there are a number of other ISPs, most are small, with the top four (including mobile operators) accounting for more than 80 per cent of the market. Access to Internet services in the country increased rapidly, as the number of mobile-broadband subscriptions increased from a total of 5.2 million at the end of December 2016

Key indicators for Zambia (2017)	Africa	World	
Fixed-telephone sub. per 100 inhab.	0.6	0.9	13.0
Mobile-cellular sub. per 100 inhab.	78.6	74.4	103.6
Active mobile-broadband sub. per 100 inhab.	45.2	24.8	61.9
3G coverage (% of population)	53.0	62.7	87.9
LTE/WiMAX coverage (% of population)	43.4	28.4	76.3
Individuals using the Internet (%)	27.9	22.1	48.6
Households with a computer (%)	8.8	8.9	47.1
Households with Internet access (%)	16.6	19.4	54.7
International bandwidth per Internet user (kbit/s)	5.4	11.2	76.6
Fixed-broadband sub. per 100 inhab.	0.2	0.6	13.6
Fixed-broadband sub. by speed tiers, % distribution			
<i>-256 kbit/s to 2 Mbit/s</i>	52.2	38.7	4.2
<i>-2 to 10 Mbit/s</i>	45.6	37.2	13.2
<i>-equal to or above 10 Mbit/s</i>	2.2	24.1	82.6

Note: Data in italics are ITU estimates. Source: ITU (as of June 2018).

to 7.8 million at the end of December 2017. The fixed Internet services market remains highly concentrated, despite having more than 25 licensed operators. Zamtel, Africonnect, Zamnet and Microlink accounted for close to 90 per cent of the subscribers for the fixed wireless Internet services.

Five companies have built out fibre-optic networks, especially critical for ensuring access to submarine cables for the landlocked country. The largest is that of Fibrecom, a subsidiary of the Zambia Electricity Supply Corporation (Zesco), whose network reaches all 10 provincial capitals and stretches to about 6 000 km. The fibre network infrastructure is built on the electricity pylon. Fibrecom has direct connections to undersea cables through Tanzania, Malawi, Zimbabwe, Namibia and Botswana. CEC-Liquid Telecom has also deployed metropolitan and national fibre-optic networks via underground cable and in some cases overhead. MTN and Airtel collaborate on an underground metropolitan network in the capital Lusaka. ZAMTEL also has an extensive network with access to several international submarine cables. These links have enabled access to undersea fibre-optic cables since 2011. The Zambia IXP became operational in 2006.

Government policy: The Ministry of Transport and Communications has responsibility for sector policy. The current ICT policy was adopted in 2006, and is currently undergoing review. The three core areas of the current policy are capacity building, a competitive and efficient ICT sector, and an effective legal and regulatory framework. A national broadband strategy has been under development for the last few years, given the importance attached to ICT in the country's

National Development Plan. The President launched the SMART Zambia initiative in 2015, aimed at advancing the country into a digital and knowledge-based society. The Government, in August 2017, introduced a new licensing framework for the ICT sector aimed at supporting convergence in ICT services as well as deepening competition in the sector. The Zambia Information and Communications Technology Authority is the sector regulator for postal and electronic communications, deriving its mandate from the Information and Communications Technologies (ICT) Act No. 15 of 2009, the Postal Services Act of 2009, and the Electronic Communications and Transactions Act of 2009. The Authority also administers the country code top-level domain (.zm) and the Universal Access Programme.

Conclusion: Recent high-level government support for ICT, coupled with improved bandwidth availability from cross-border fibre-optic connections, provides a platform for the development of the sector.