

## Madagascar

***The fourth largest island in the world is seeking to become an Indian Ocean hub, while recognizing the need to address the large digital divide between the country's rural and urban areas.***

**Mobile services:** There are four facilities-based mobile operators in Madagascar: Airtel Madagascar, a subsidiary of the Indian mobile group, launched in 1997; Orange Madagascar, a subsidiary of Orange France, launched in 1998; Telma Mobile, a subsidiary of the incumbent operator Telecom Malagasy (TELMA), which entered the market in 2006; and Gulfsat Madagascar, of which the products and services are branded under the name Blueline. Despite the number of operators, there are coverage gaps and affordability challenges in Madagascar. Household penetration is relatively low, at just over a third of homes in 2016, with a significant difference between urban (73 per cent) and rural areas (29 per cent).<sup>296</sup> All of the operators have deployed 3G and, following renewal of their licenses, deployed LTE mobile-broadband networks.

**Fixed services:** Incumbent operator TELMA has been partly privatized since its creation, with a subsidiary of then-France Telecom owning 34 per cent. Those shares, along with an additional 36 per cent, were sold in 2004 to a consortium led by a private mobile group based in Hong Kong Special Administrative Region of China. A privately held local group, AXIAN, eventually gained control of TELMA; it also operates mobile networks throughout the Indian Ocean region in Comoros, and the French regions of Mayotte and Réunion. TELMA provides fixed-telephone service using copper lines and wireless local loop. Its fixed-broadband offerings include ADSL and fixed-wireless using WiMAX, and offers fibre-optic connections, mainly to businesses. Other Internet service providers (ISPs) use fixed-wireless broadband technology. TELMA has several thousand kilometres of optical fibre in its national backbone. The arrival of undersea fibre-optic cables – the Lower Indian Ocean Network (LION) in 2009 and the Eastern Africa Submarine System (EASSy) in 2010 – has dramatically boosted international bandwidth and reduced prices. The Madagascar Global Internet eXchange was launched in 2016 in Antananarivo.

Key indicators for Madagascar (2017)	Africa	World	
Fixed-telephone sub. per 100 inhab.	0.3	0.9	13.0
Mobile-cellular sub. per 100 inhab.	34.1	74.4	103.6
Active mobile-broadband sub. per 100 inhab.	13.0	24.8	61.9
3G coverage (% of population)	64.0	62.7	87.9
LTE/WiMAX coverage (% of population)	25.0	28.4	76.3
Individuals using the Internet (%)	9.8	22.1	48.6
Households with a computer (%)	7.1	8.9	47.1
Households with Internet access (%)	8.2	19.4	54.7
International bandwidth per Internet user (kbit/s)	8.9	11.2	76.6
Fixed-broadband sub. per 100 inhab.	0.1	0.6	13.6
<b>Fixed-broadband sub. by speed tiers, % distribution</b>			
<i>-256 kbit/s to 2 Mbit/s</i>	13.4	38.7	4.2
<i>-2 to 10 Mbit/s</i>	71.2	37.2	13.2
<i>-equal to or above 10 Mbit/s</i>	15.4	24.1	82.6

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

**Government policy:** The Ministry of Posts, Telecommunications and Digital Development is the sector policy-maker. It is supporting a number of projects to widen ICT infrastructure and use. This includes (a) extending infrastructure to uncovered zones; (b) development of the Smart City Nosy Be; (c) deployment of so-called “digital window” computer labs in educational institutions; and (d) expanding the higher education research network and distributing tablet computers to schools. The Authority for Regulation of Communications Technologies (ARTEC) replaced the previous regulator, the Malagasy Office of Studies and Regulation of Telecommunication, in 2015. The change broadens the regulatory portfolio to include ICT in addition to telecommunications. ARTEC regulates according to Law 2005-023 of 17 October 2005 revising Law 96-034 of 27 January 1997 on Institutional Reform of Telecommunications and ICT.

**Conclusion:** The large island has significant potential as an ICT hub given its strategic location in the Indian Ocean. The challenge remains to address the wide divide in ICT access between urban and rural areas, which could be lessened by enhancing the utilization of universal access funds.