Armenia

Armenia was one of the first countries to launch Long-Term Evolution (LTE) in the Commonwealth of Independent States (CIS) region. It has a high level of mobile-broadband coverage: 3G is available for almost 100 per cent of the population, and its LTE coverage is above the CIS region average.

Key indicators for Armenia (2017)		CIS	World
Fixed-telephone sub. per 100 inhab.	17.2	19.8	13.0
Mobile-cellular sub. per 100 inhab.	119.0	138.3	103.6
Active mobile-broadband sub. per 100 inhab.	66.8	72.0	61.9
3G coverage (% of population)	100.0	80.3	87.9
LTE/WiMAX coverage (% of population)	90.1	61.1	76.3
Individuals using the Internet (%)	*69.7*	68.6	48.6
Households with a computer (%)	*84.1*	68.1	47.1
Households with Internet access (%)	*86.4*	73.6	54.7
International bandwidth per Internet user (kbit/s)	101.9	66.8	76.6
Fixed-broadband sub. per 100 inhab.	10.8	17.8	13.6
Fixed-broadband sub. by speed tiers, % distribution			
-256 kbit/s to 2 Mbit/s	1.9	12.2	4.2
-2 to 10 Mbit/s	54.3	25.1	13.2
-equal to or above 10 Mbit/s	43.8	62.7	82.6

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

Mobile services: There are three mobile-cellular telecommunication operators in Armenia: MTS Armenia, Ucom and VEON Armenia. Also, 3G services have been provided since 2008. The first commercial LTE network was launched in 2011 and, since 2016, all mobile-cellular operators provide LTE services.[25] Mobile number portability was introduced in 2014. As of the end of 2017, 4.2 per cent of localities were covered by one operator, 15.3 per cent by two, and 80.2 per cent by all three operators. In general, around 90 per cent of the population was covered by LTE in 2017. The number of broadband Internet subscribers was increasing steadily in 2017, with 86 per cent accessing the Internet via mobile networks.[26]

Fixed services: Operators continue modernization of fixed-telephone networks in Armenia. By the end of 2017, around 93 per cent of fixed-telephone networks were digital. At the same time, the number of fixed-broadband connections has been increasing annually. Regulation authorities facilitate regional infrastructure development by imposing obligations on telecommunication operators. According to the latest licensing requirements, VEON Armenia had provided a total of 830 localities with broadband access by the end of 2017.[27] Besides VEON Armenia, Ucom and GNC-Alfa are also among the largest fixed-broadband companies in the market. Before 2016, the majority of fixed-broadband subscribers had Asymmetric Digital Subscriber Line (ADSL) Internet access, although their number was decreasing, while fibre-to-the-x (FTTx) networks were being actively deployed.[28] In the beginning of 2016, the number of FTTx Internet subscribers surpassed the number of ADSL Internet subscribers. Between 2015 and 2017, FTTx Internet subscribers increased by 17 per cent.[29] In remote areas, fixed-telephone and Internet access services are offered with fixed-wireless broadband networks.[30] In order to attract subscribers, operators bundle services together. Some services bundles contain both fixed and mobile services.

Government policy: The Ministry of Transport, Communication and Information Technologies is in charge of policy-making in information and communication technology (ICT) and telecommunications.[31] The government policy is stated in the "Concept paper on IT development for 2008–2018". It focuses on ICT infrastructure and e-government development, ICT education quality improvement, financial tools implementation to stimulate start-ups in the IT sector, etc. According to this strategy, Armenia aims to supply 70 per cent of households and 100 per cent of educational and governmental establishments with computers, and provide Internet access to 90 per cent of households by 2018.[32] Regulation authorities maintain a competitive environment in the telecommunication sector. One of the first steps for market liberalization was to end the international Internet gateway monopoly of VEON Armenia in 2007.[33] The monopoly on voice over IP (VoIP) services was cancelled in the same year.[34] Although there is an obligation to use "digital dividend" frequencies of the 800 MHz band for wireless-broadband services, in the majority of cases telecommunication operators are able to use their radio-frequency resources with no limitations on offered services or implemented technology.[35] Some operators compete with each other both in fixed and mobile market segments.[36] Dominant telecommunication operators shall provide interconnection capabilities to small operators.[37] Armenian legislation provides for mechanisms to access the infrastructure of dominant operators, non-discriminatory terms of telecommunication operators' networks interconnection and consumer protection measures, including tariff regulation.[38] In Armenia, investors are offered a number of privileges, such as fees exception when investing in initial capital. In 2017, USD 70.1 million were invested in the ICT sector in Armenia.

Conclusion: In its policy, the Government of Armenia incentivizes the ICT infrastructure development for further introduction of e-government. ICT-related activities have penetrated into many sectoral programme documents. Armenia is heading towards affordable, secure access to e-government services across the country.