

Measuring digital development

Facts and figures

2019



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The base map for this infographic is based on the UNmap database of the United Nations Cartographic Section.

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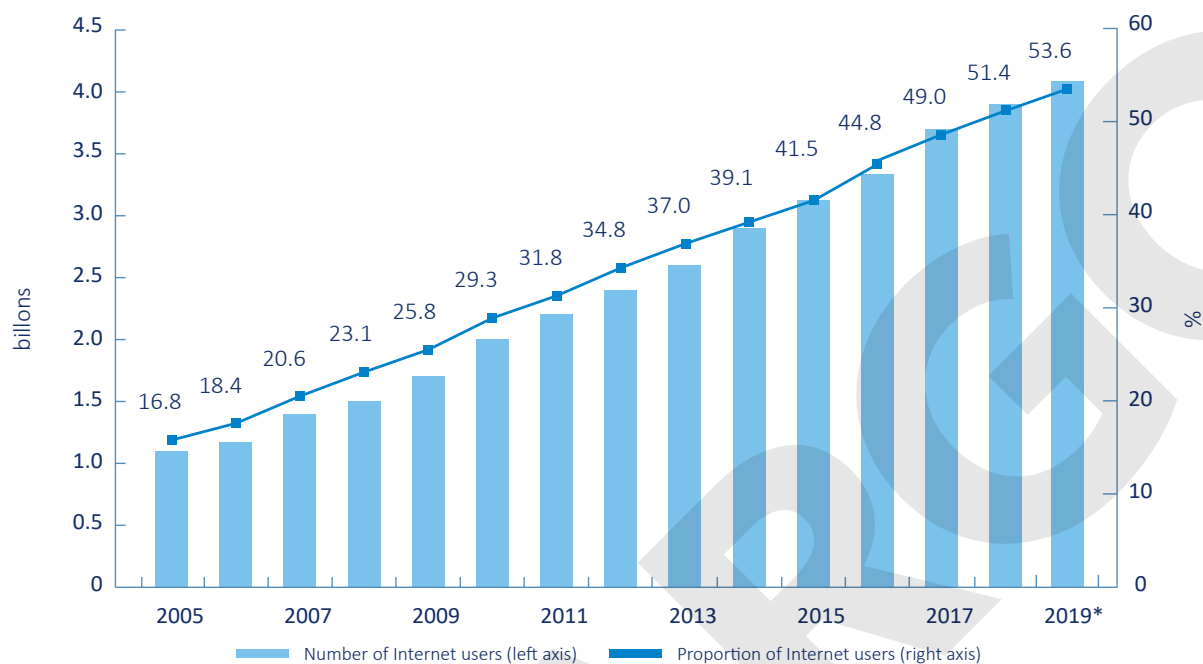
Welcome to the first of ITU's Measuring Digital Development series of statistical and analytical publications that replace the annual Measuring the Information Society Report. Facts and figures 2019 offers a snapshot of the most important ICT indicators, including estimates for the current year. Latest figures show that while Internet use continues to spread, the digital gender gap is also growing. More effective action is urgently needed to address a range of barriers – cultural, financial and skills-related – that are impeding Internet uptake, especially among women.

Doreen Bogdan-Martin

Director, ITU Telecommunication Development Bureau

Internet usage keeps growing, but barriers lie ahead

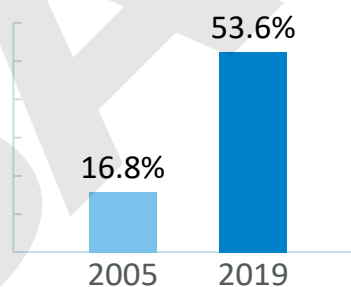
*Individuals using the Internet, 2005-2019**



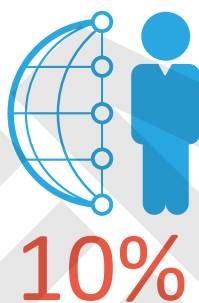
Note: * ITU estimate. Source: ITU.



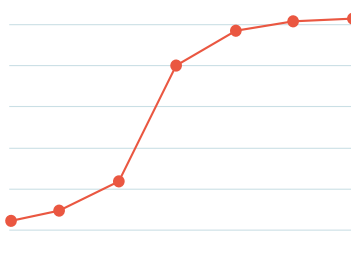
An estimated 4.1 billion people are using the Internet in 2019, reflecting a 5.3 per cent increase compared with 2018.



The global penetration rate increased from nearly 17 per cent in 2005 to over 53 per cent in 2019.



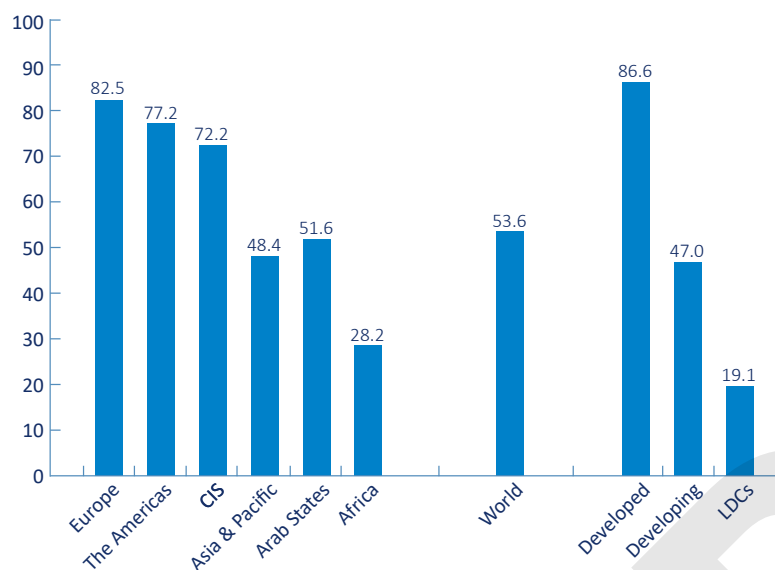
Between 2005 and 2019, the number of Internet users grew on average by 10 per cent every year.



In recent years though, global growth rates are not as high as a decade ago because some parts of the world are reaching saturation levels.

Most of the offline population lives in least developed countries

*Percentage of individuals using the Internet, by region and development status, 2019**

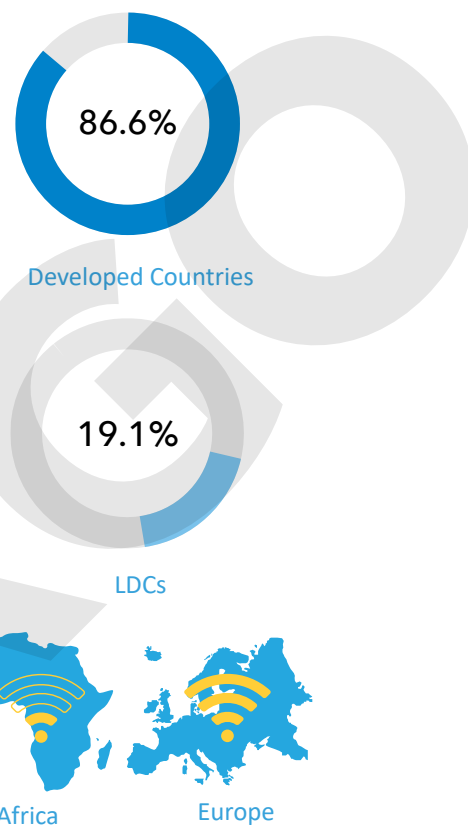


Note: * ITU estimate. Source: ITU.

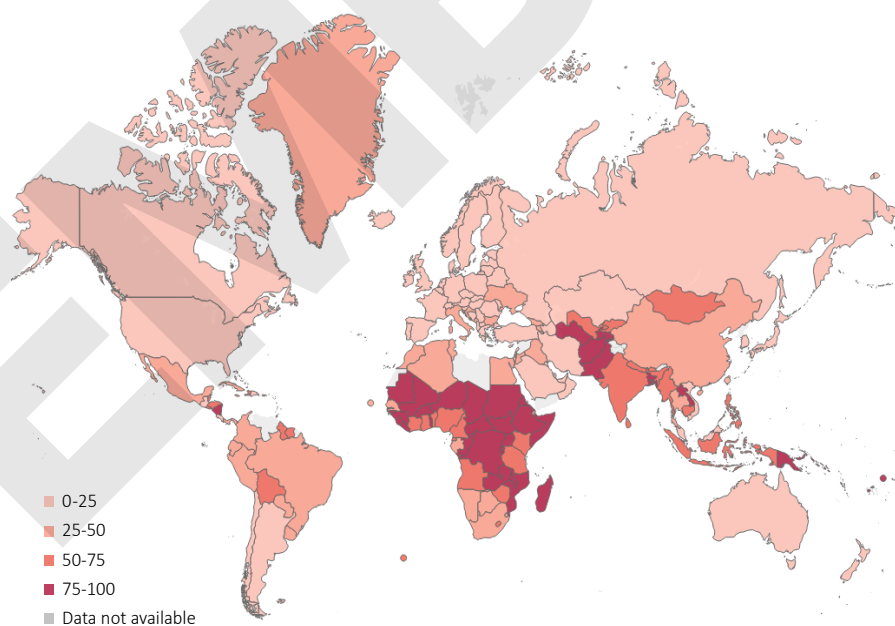
In developed countries, most people are online, with close to 87 per cent of individuals using the Internet.

In the least developed countries (LDCs), on the other hand, only 19 per cent of individuals are online in 2019.

Europe is the region with the highest Internet usage rates, Africa the region with the lowest Internet usage rates.



*Percentage of the population not using the Internet, 2019**



Note: * ITU estimate. Source: ITU.

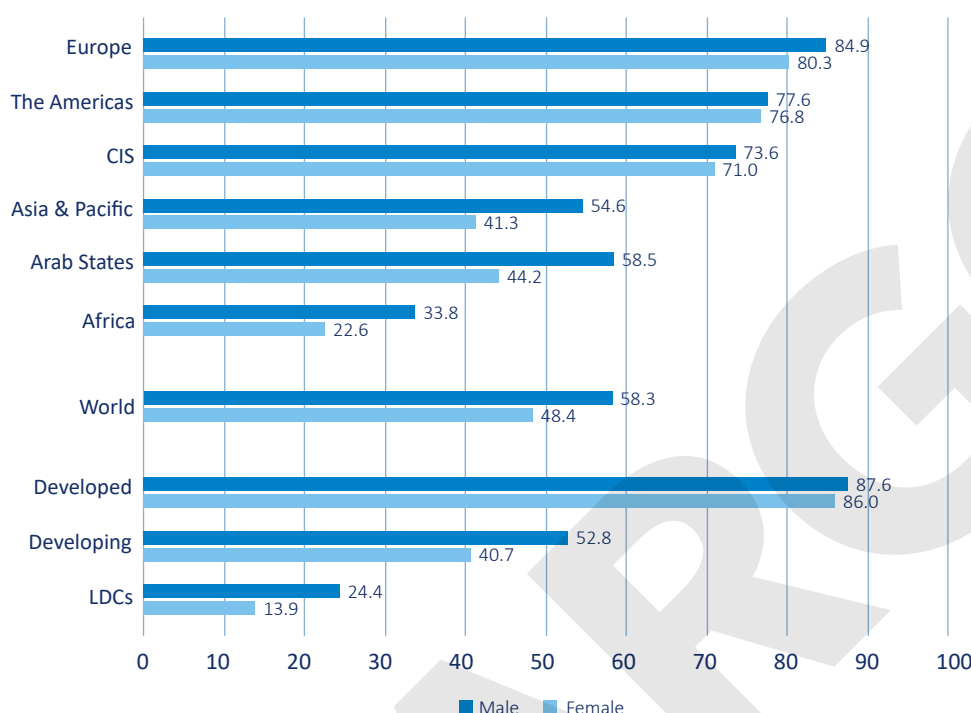
The map of the offline population highlights regional differences in Internet usage.

Countries with the highest proportions of people not using the Internet are mostly in Africa and South Asia, although there are inter-regional differences.



The digital gender gap is growing fast in developing countries

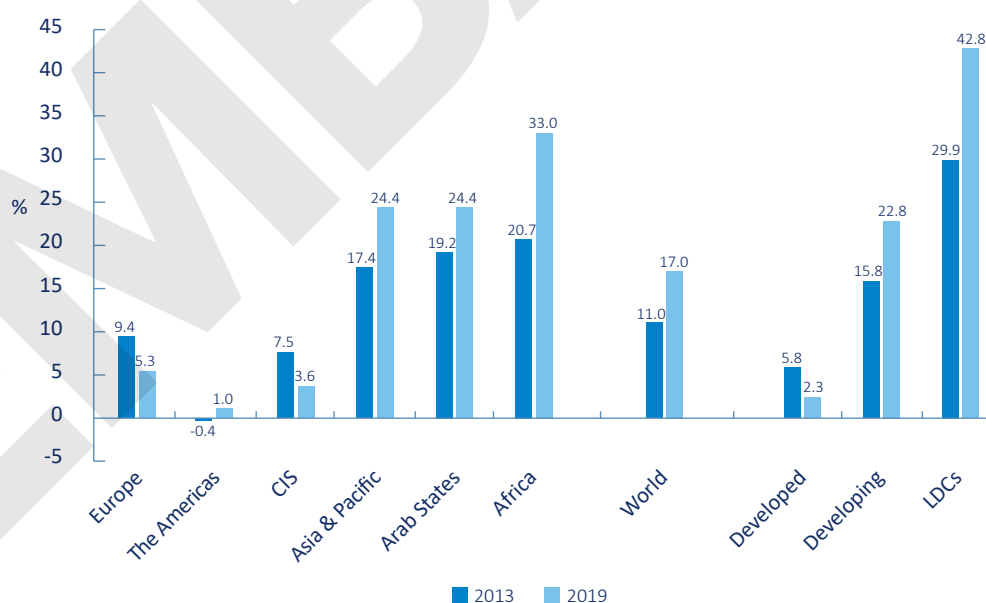
*Internet penetration rate for men and women, 2019**



Note: * ITU estimate. Penetration rates in this chart refer to the number of women/men that use the Internet, as a percentage of the respective total female/male population.

Source: ITU.

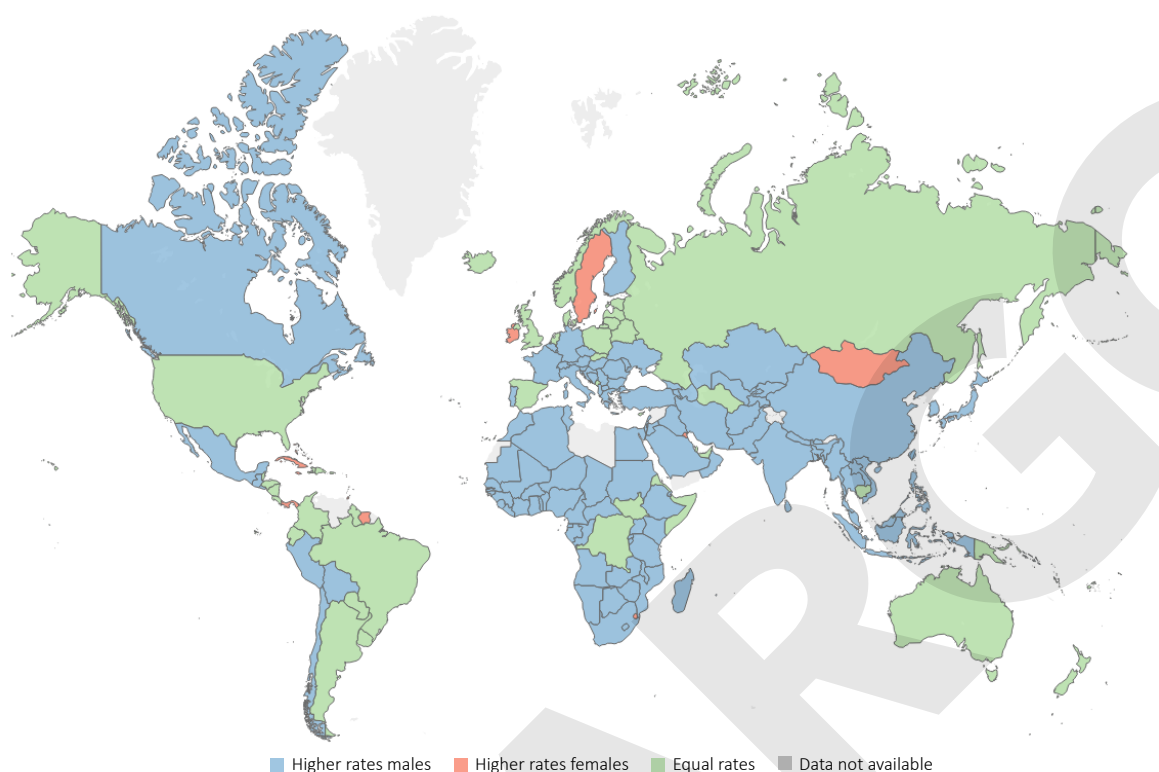
*The Internet user gender gap (%), 2013 and 2019**



Note: * ITU estimate. The gender gap represents the difference between the Internet user penetration rates for males and females relative to the Internet user penetration rate for males, expressed as a percentage.

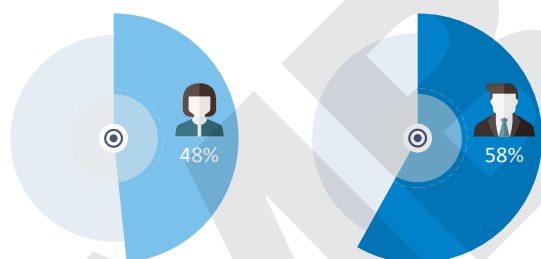
Source: ITU.

Proportion of Internet users, by gender, 2019*



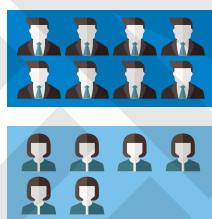
Note: * ITU estimate. Penetration rates in this map refer to the number of women/men that use the Internet, as a percentage of the respective total female/male population. The ratio is considered equal when the difference between the male and female Internet penetration rate is less than 2 percentage points.

Source: ITU.

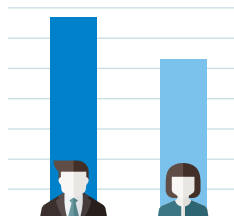


The proportion of women using the Internet globally is 48 per cent, compared to 58 per cent of men.

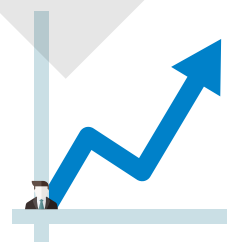
In relative terms, this means that the global Internet user gap is 17 per cent.



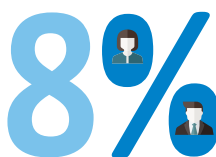
In all regions of the world, more men than women are using the Internet. The gap is small in developed countries and large in developing countries, especially LDCs.



Between 2013 and 2019, the gender gap hovered around zero in the Americas and has been shrinking in the CIS countries and Europe. However, in the Arab States, Asia and the Pacific, and Africa, the gender gap has been growing.



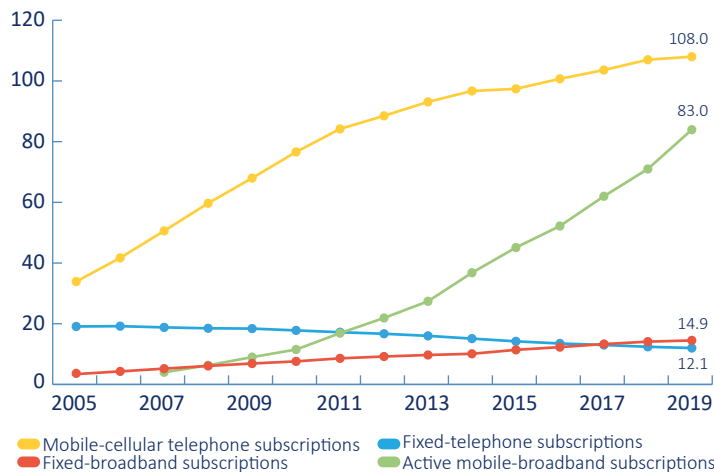
The global gender gap has increased owing to the rapid growth in the number of male Internet users in developing countries.



The proportion of women using the Internet is higher than that of men in only 8 per cent of countries, while gender equality in Internet use is found in just over one-quarter of countries.

Mobile-broadband subscriptions continue to grow strongly

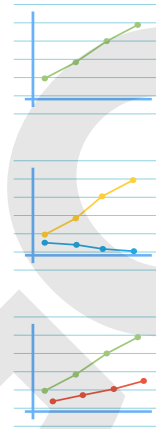
Evolution of mobile and fixed subscriptions, 2005-2019*



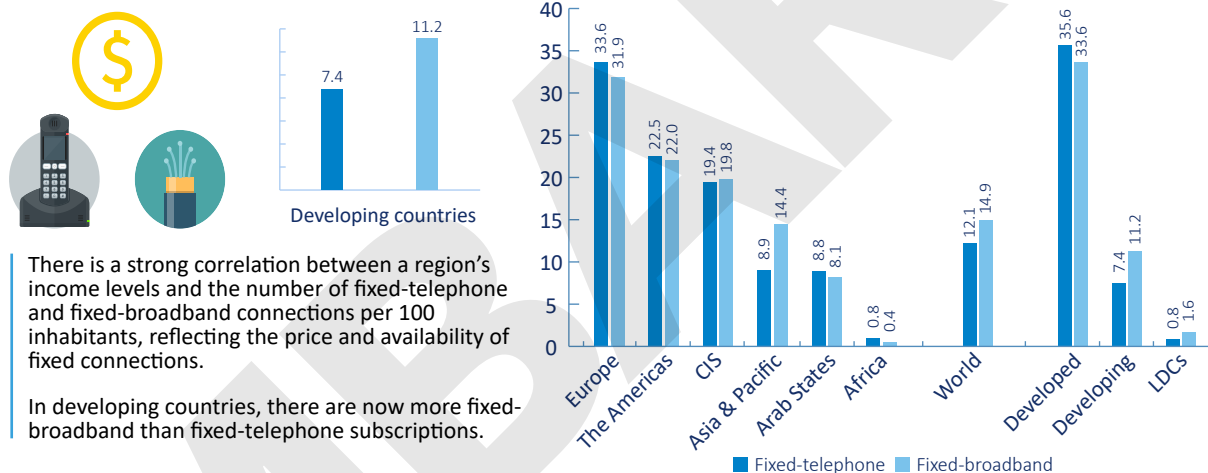
The number of active mobile-broadband subscriptions per 100 inhabitants continues to grow strongly, with an 18.4 per cent year-on-year growth.

Mobile-cellular subscriptions have also continued to grow, while fixed-telephone subscriptions continue to decline steadily.

Fixed-broadband subscriptions have continued to grow steadily, although at a more modest rate than mobile-broadband subscriptions.



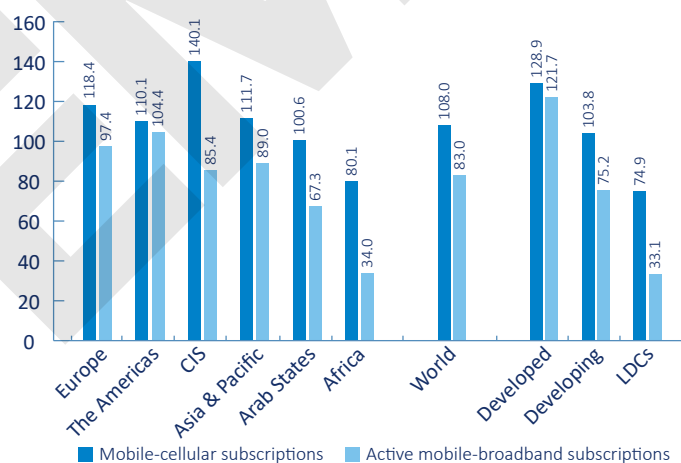
Fixed-telephone and fixed-broadband subscriptions per 100 inhabitants, 2019*



There is a strong correlation between a region's income levels and the number of fixed-telephone and fixed-broadband connections per 100 inhabitants, reflecting the price and availability of fixed connections.

In developing countries, there are now more fixed-broadband than fixed-telephone subscriptions.

Mobile-cellular and mobile-broadband subscriptions per 100 inhabitants, 2019*

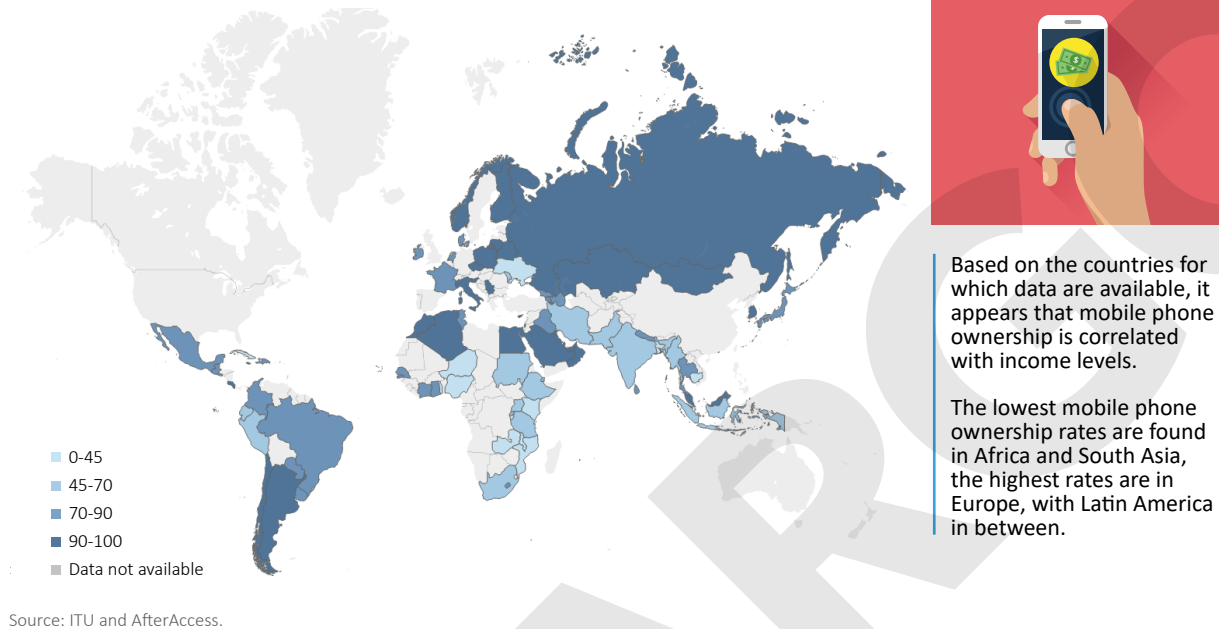


The correlation between level of development and uptake of mobile subscriptions is much weaker, reflecting the better affordability and availability of mobile compared with fixed network connections.

The relatively small difference between developed and developing countries also shows that connectivity is a priority among people in countries at all levels of development.

Wide gender gap in mobile phone ownership often coupled with a wide gender gap in Internet use

Percentage of individuals owning a mobile phone, latest year in 2015-2018



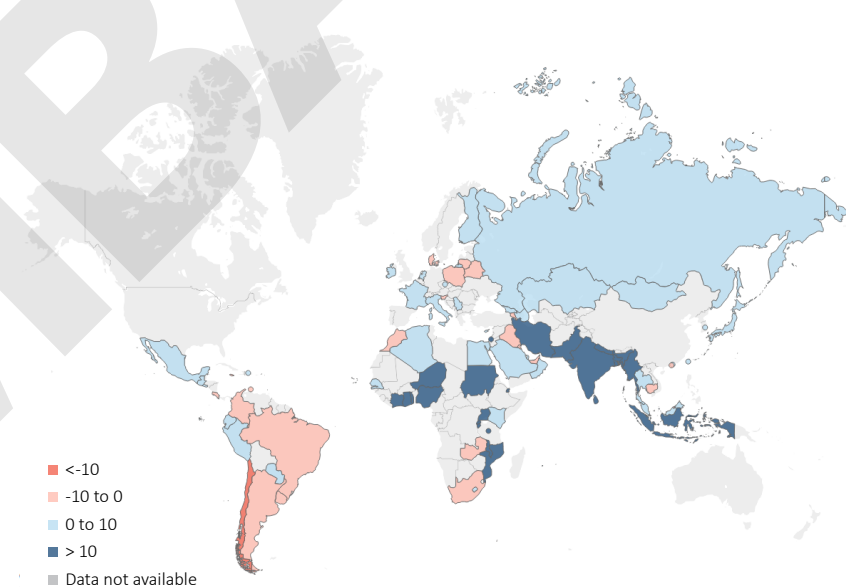
Gender gap in mobile phone ownership, latest year in 2015-2018

In 24 of the 85 countries for which data are available, a higher proportion of women than men own a mobile phone, although the gap is usually quite small. In only three cases is the gap wider than 5 per cent, with the widest gap of 12 per cent in Chile.

However, for 23 of the 58 countries where more men than women own a mobile phone, the gender gap is over 10 per cent, and in 14 of those countries over 20 per cent.

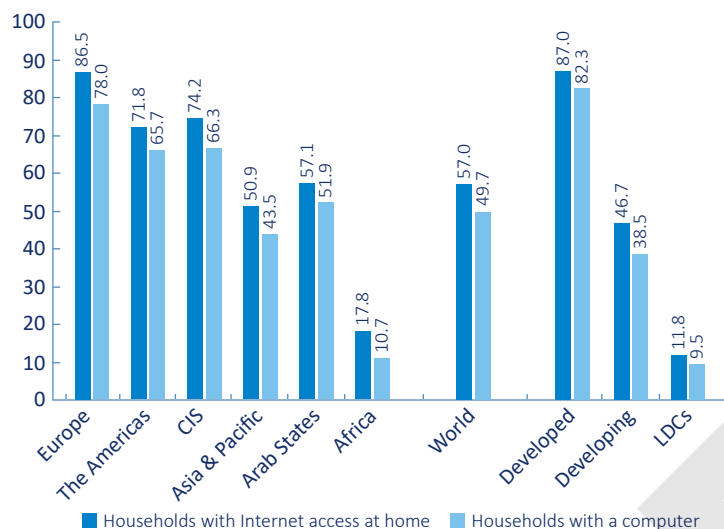
Most countries with a large gender gap in mobile phone ownership also have a large gender gap among Internet users.

Given that mobile phones are the most frequently used means of accessing the Internet, addressing this gender gap could help to reduce the Internet usage gender gap.



Computers no longer needed to access the Internet at home

Percentage of households with Internet access at home and with a computer, 2019*

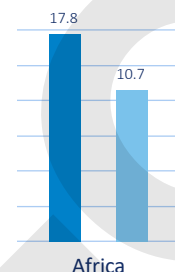


Note: * ITU estimate. Source: ITU.

The percentage of households with Internet access at home is generally correlated with a region's level of development.

In all regions of the world, households are more likely to have Internet access at home than to have a computer because Internet access is also possible through other devices.

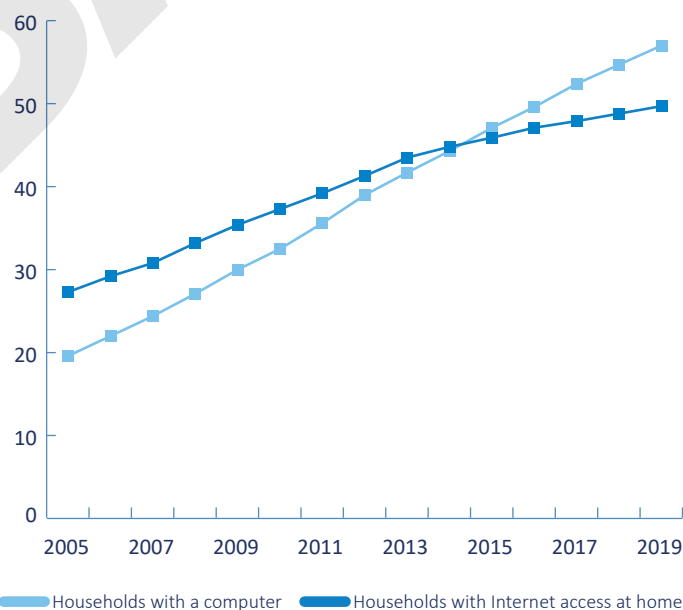
In Africa and the LDCs, very few households have either Internet access or a computer.



Percentage of households with Internet access at home and with a computer, 2005-2019*

Before the rise of smartphones, there were virtually no countries where more households had Internet access at home than computers.

In recent years, however, more households in many countries have had Internet access than computers. This is because computers are no longer necessary to connect to the Internet, and many people connect using devices such as smartphones.

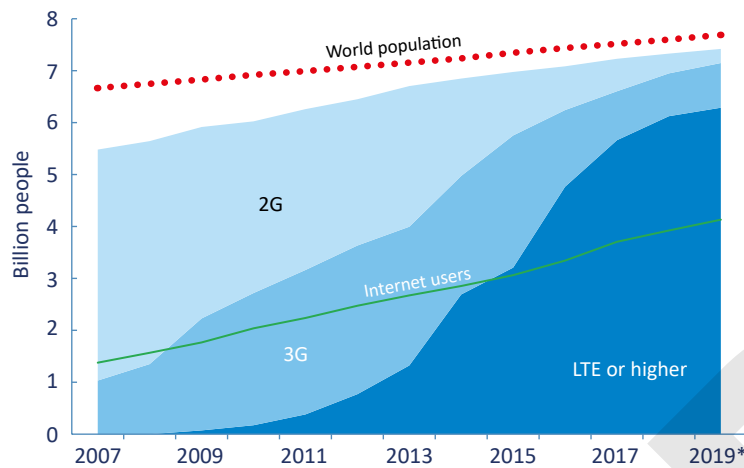


Note: * ITU estimate. Source: ITU.



Almost the entire world population lives within reach of a mobile network

Mobile population coverage by type of network, 2007-2019*



Note: * ITU estimate. Source: ITU.

Almost the entire world population (97 per cent) lives within reach of a mobile cellular signal.

97%

82 per cent of the world's population lives within reach of an LTE or higher mobile-broadband signal, and another 11 per cent have access to a 3G network.

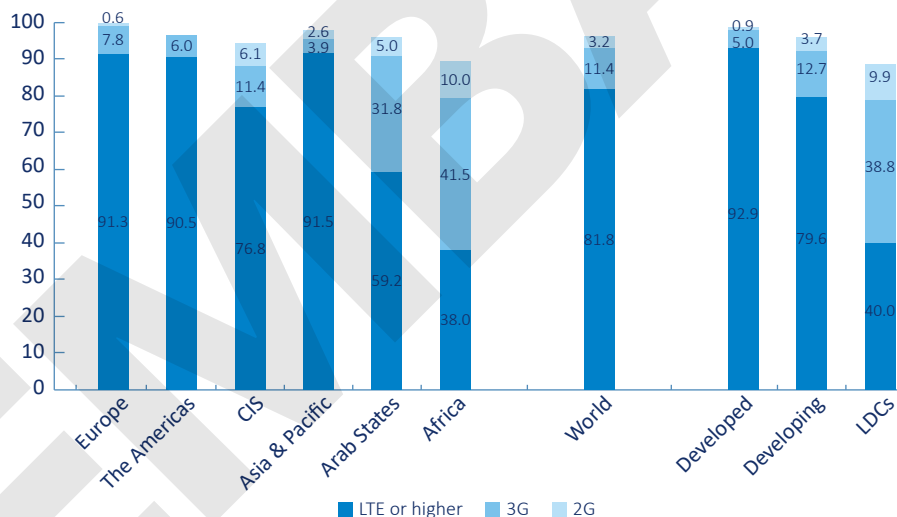
82%

While 93 per cent of the world's population lives within reach of a mobile broadband (or Internet) service, just over 53 per cent actually uses the Internet.

53%

93%

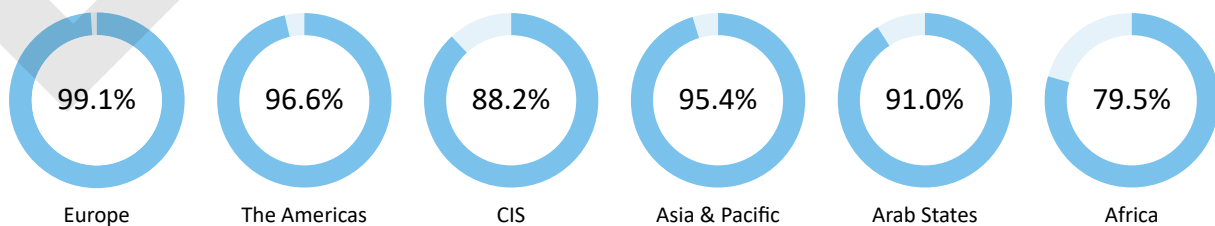
Mobile coverage by type of network, by region and development status, 2019*



Note: * ITU estimate. Source: ITU.

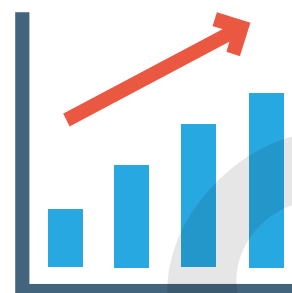
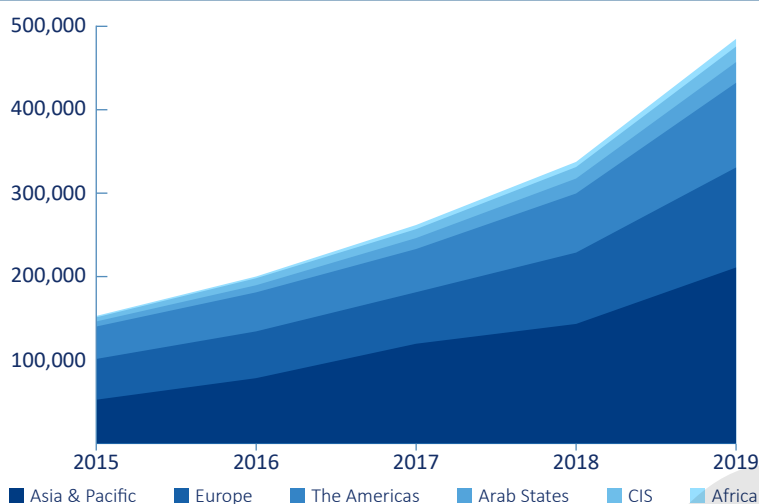
More than 95 per cent of the population in Asia and the Pacific, Europe, and the Americas is covered by a 3G or higher network.

In the Arab States, 91 per cent of the population is covered by a 3G or higher network, while in the CIS region coverage is 88 per cent, followed by Africa at 79 per cent.

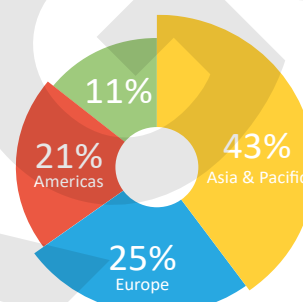


Bandwidth growing fast but with regional differences

International bandwidth usage in Gbit/s, 2015-2019*



International bandwidth usage grew by 33.4 per cent on average annually between 2015 and 2019.

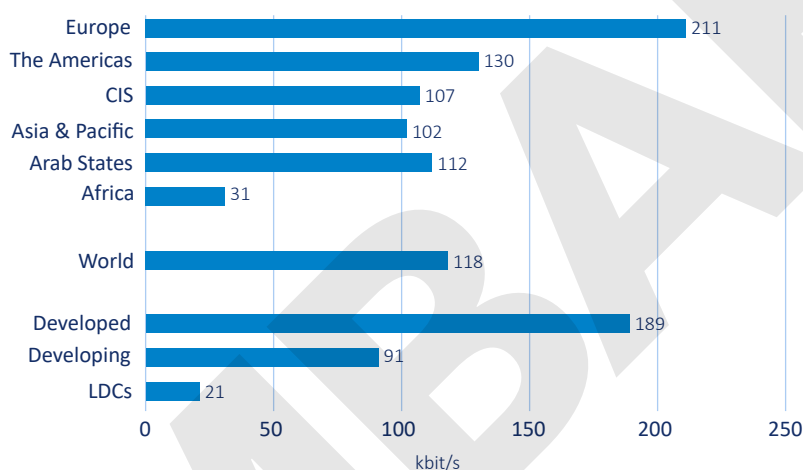


Asia and Pacific account for more than 40 per cent of global usage, followed by Europe (25 per cent) and the Americas (21 per cent).

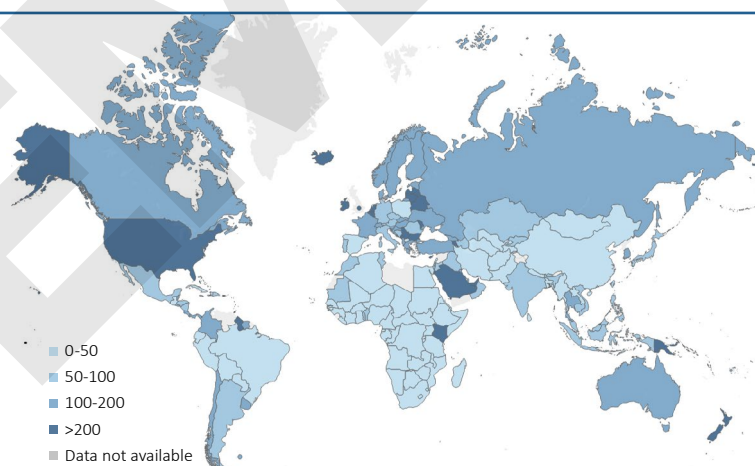
The other three regions combined account for only 11 per cent of the global total.



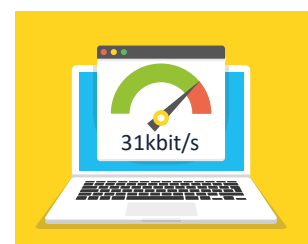
International bandwidth usage per Internet user (kbit/s), by region 2019*



International bandwidth usage per Internet user (kbit/s), 2019*



In terms of kbit/s per Internet user, Europe has by far the highest bandwidth usage (211 kbit/s), followed by four regions with similar bandwidth usage (between 100 and 130 kbit/s).

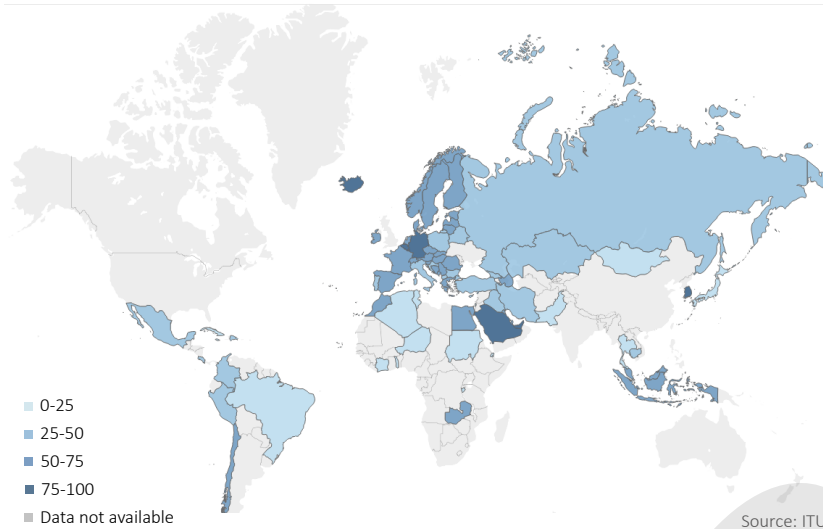


Africa is lagging behind, with 31 kbit/s per Internet user.

Note: * ITU estimate. Source: ITU.

Lack of ICT skills a barrier to effective Internet use

Percentage of people with basic skills, in 2014-2018



An important barrier in the uptake and effective use of the Internet is a lack of ICT skills.

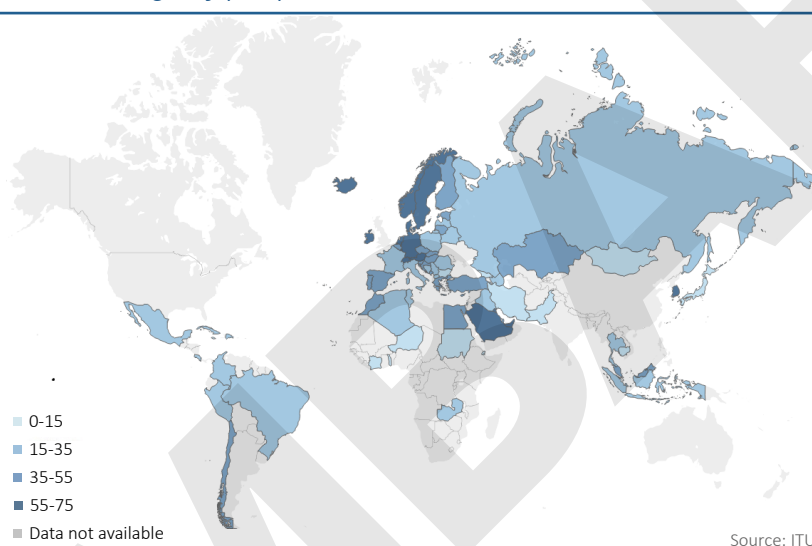
In 40 out of 84 countries for which data are available, less than half the population possesses basic computer skills such as copying a file or sending an e-mail with an attachment.

For more complex activities (classified as “standard skills”), such as using basic arithmetic formulae in a spreadsheet or downloading and installing new software, the proportions are even lower. In 60 of the countries for which data are available, these proportions are below 50 per cent.

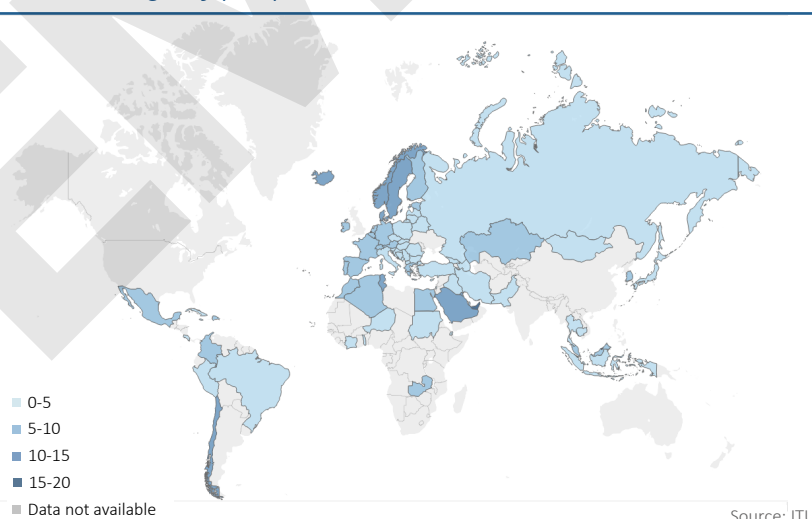
With respect to advanced computer skills, in only two countries (United Arab Emirates and Brunei Darussalam) do more than 15 per cent of people report having written a computer programme using a specialized programming language in the last three months. In only 10 other countries is that proportion above 10 per cent.

Although more data need to be collected, these results show that there is a strong need to develop digital skills.

Percentage of people with standard skills, in 2014-2018



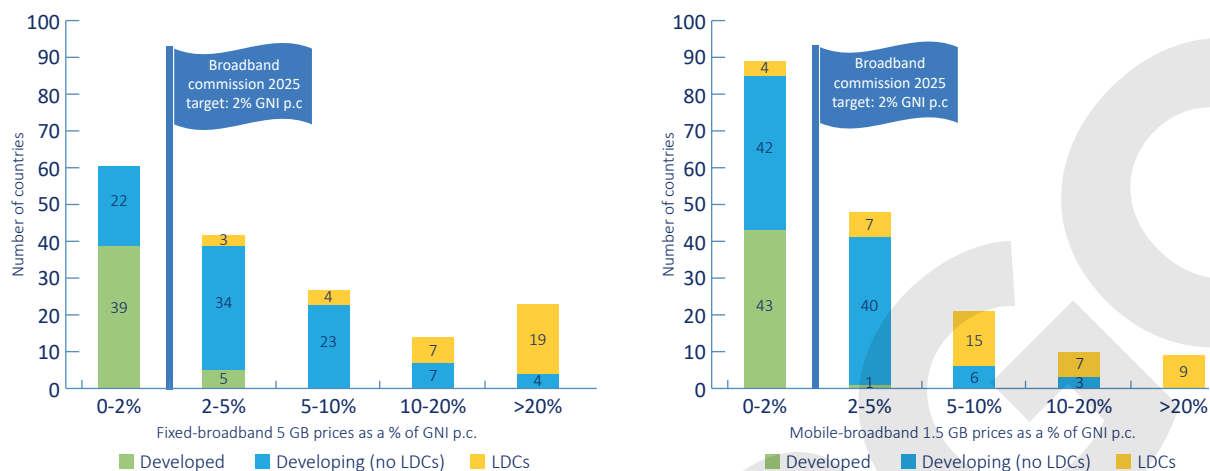
Percentage of people with advanced skills, in 2014-2018



Note: For each country, the value for basic skills is the highest value among the following four computer-based activities: copying or moving a file or folder, using copy and paste tools to duplicate or move information within a document, sending e-mails with attached files, and transferring files between a computer and other devices. The value for standard skills is the highest value among the following four computer-based activities: using basic arithmetic formula in a spreadsheet; connecting and installing new devices; creating electronic presentations with presentation software; and finding, downloading, installing and configuring software. The value for advanced skills is the value for writing a computer programme using a specialized programming language.

Broadband still expensive in LDCs

Broadband prices as a percentage of GNI p.c., 2019



Note: Data thresholds are based on the ITU price baskets (see <https://www.itu.int/en/ITU-D/Statistics/Pages/ICTPrices/default.aspx>). Source: ITU.

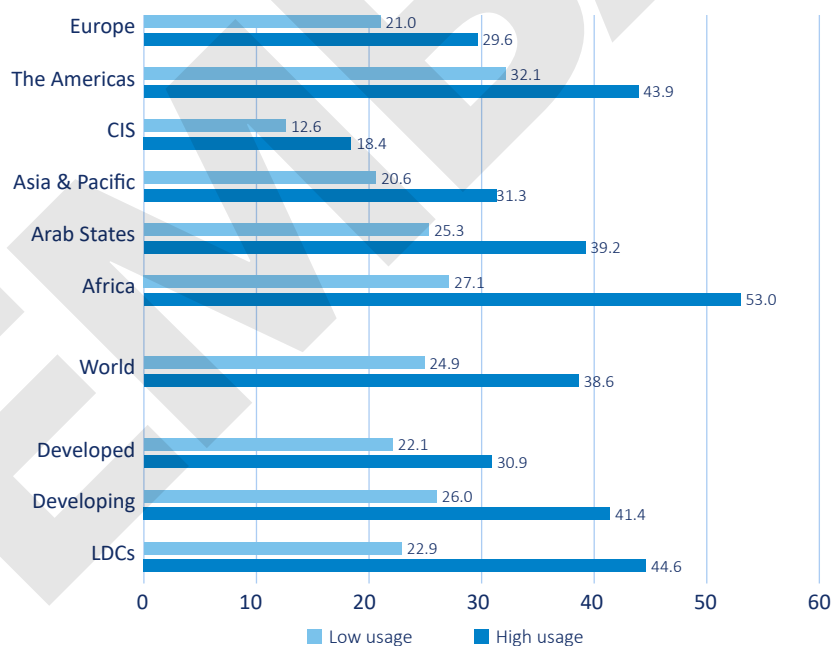
In 2018, the Broadband Commission for Sustainable Development set as a target for 2025 that entry-level broadband services should be made affordable in developing countries, corresponding to less than 2 per cent of monthly Gross National Income (GNI) per capita.

In 2019, in 61 countries, a fixed-broadband subscription including 5 GB of data costs less than 2 per cent of GNI per capita.

A mobile-broadband subscription with a 1.5 GB data package costs less than 2 per cent of GNI per capita in 89 countries, including four LDCs.

Although considerable progress has been made in recent years, affordability remains a challenge in many countries, especially LDCs.

Bundled mobile broadband prices, PPP\$, 2019



A high-usage mobile broadband bundle, which includes 140 minutes of voice, 70 SMS and 1.5 GB of data, costs on average just under USD 40 in purchasing power parity (PPP) terms, although there is a significant difference between developed countries (31 PPP\$) and LDCs (45 PPP\$).

A low-usage bundle of 70 minutes of voice, 20 SMS and 500 MB of data has an average price of 25 PPP\$, with very little difference between developed countries, developing countries and LDCs.

The CIS region has the lowest prices, while in Africa mobile broadband bundles are the most expensive.

Note: Simple averages, based on the economies for which data on mobile-broadband prices were available. High usage refers to a bundle including 140 minutes of voice, 70 SMS, and 1.5 GB of data. Low usage refers to a bundle including 70 minutes of voice, 20 SMS, and 500 MB of data.

Source: ITU.