



Digital Connectivity for the Western Balkans

Investments for digital transformation and growth

A fast and secure digital connection of high quality is a prerequisite for a modern economy and society. The requirements for high-speed networks are fast evolving and necessary to absorb increasing data usage of future applications in tomorrow's digital society – i.e. e-government, e-health, e-procurement as well as business-related and day-to-day household applications.

Higher penetration rates are essential to enable a digital transition in Western Balkan economies (Table 1). The significant gap of broadband coverage between rural and urban areas, as well as between income levels, is particularly challenging in the region.

Table 1 - Fixed broadband penetration rate (% per population) in 2016

Year	EU 28	Albania	Bosnia and Herzegovina	The former Yugoslav Republic of Macedonia	Kosovo*	Montenegro	Serbia
2013	29.2	6.4	13.4	N.A.	9.2	15.4	16.4
2014	30.5	7.3	14.2	N.A.	10.5	16.7	17.2
2015	31.6	8.8	16.6	N.A.	11.9	18.1	18.7
2016	32.7	9.3	17.4	18.4	13.1	18.5	20.5

Obtaining a higher broadband penetration is one aspect, but it does not say anything meaningful about the **quality of access**. Few households in the Western Balkans have access to speeds above 10 Mbit/s, which limits the ability to take greater advantage of the internet. Large-scale investments are needed in the Western Balkans to catch-up and to reach the EU's **2025 targets**, as established in the Gigabit society objectives.¹ Investments must ensure that the developments of broadband infrastructure are future-proof and focused on the most pressing needs, such as overall penetration rate, rural-urban divide, low broadband speeds, and connecting schools, governments and health institutions.

It is important that the public and private sector in the Western Balkans work together to increase high-speed broadband coverage. The Commission has earmarked €30 million through the Western Balkans Investment Framework (WBIF) to prepare for investments in high-speed broadband rollout across the region by 2020.

The level of mapping differs largely in the region and a single detailed overview of digital connectivity in all six economies is missing. **Broadband mapping** should be prioritised by the Western Balkans economies, and could be supported by technical assistance funding under the WBIF in order to establish a comprehensive overview of broadband rollout. This broadband mapping should be the first-step of a longer process that leads to the identification of infrastructure projects that are needed to bring the Western Balkans in line with the ambitious 2025 Gigabit targets.

¹ More details can be found at: <https://ec.europa.eu/digital-single-market/en/policies/improving-connectivity-and-access>.

*This designation is without prejudice to positions on status, and is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo declaration of independence.




Broadband infrastructure projects

The relatively poor level of broadband infrastructure in the Western Balkans is a challenge, but also an opportunity. The Western Balkans can move to a state-of-the-art, fibre-based broadband without passing through the multiple copper-based stages that are usual for the early adopters of broadband.

With updated national broadband plans and a correct mapping of the broadband situation in the region, the WBIF will, in cooperation with its partners, develop projects/mechanisms to attract broadband investments.

Ongoing and future connectivity projects for **electricity, railways and roads** in the Western Balkans and connecting with the EU should also address digital connectivity in an optimal way. Adding this component in a systematic approach could lead to mutual benefits and cost-sharing. For instance, including a fibre network during the construction process is often a negligible extra cost and it is something regularly done on electricity projects for monitoring the performance of the electric grid.

WITH BETTER CONNECTIVITY, WHAT WILL WE BE ABLE TO DO IN 2025?

 TIME TO DOWNLOAD	 2016 (typical European legacy networks - 20 Mbps)	 2025 (Fiber to the Home networks - 0.4 Gbps)
	CT scan	14 minutes
Virtual reality game	34 minutes	102 seconds
Top smartphone storage	3.6 hours	11 minutes
4K movie	11 hours	33 minutes
Medium sized corporate server restore	28 days	33 hours
Human genome	33 days	39 hours

Thousands of new services and features will be possible once EU targets are met and very high capacity networks are widely available. For example:

- Hundreds of machines in a factory cooperating in real-time;
- Doctors conducting specialised surgeries remotely;
- Cities adapting energy consumption or traffic lights based on real-time needs;
- Students studying at various universities throughout Europe at the same time.