

Europe's Digital Progress Report (EDPR) 2016

A report complementing the Digital Economy and Society Index (DESI)¹ country profile

BULGARIA

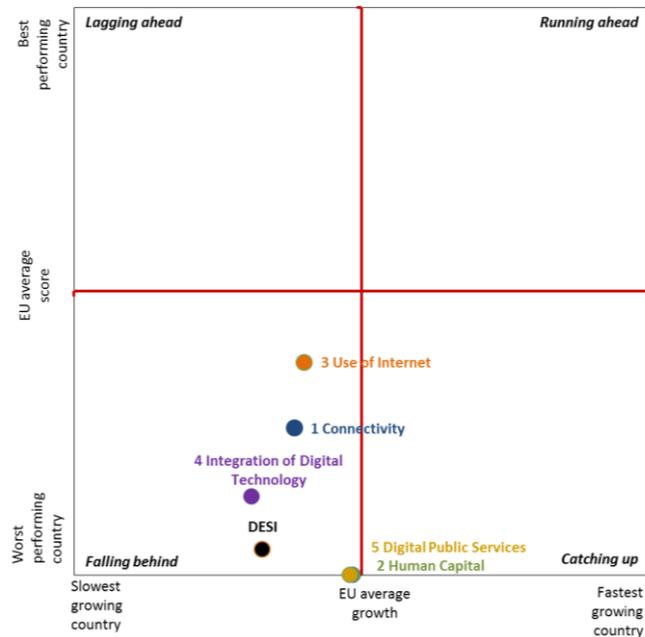
Bulgaria ranks 27th out of the 28 EU Member States in the European Commission Digital Economy and Society Index (DESI) 2016². Bulgaria falls into the **falling behind** cluster³ of countries that score below the EU average and grew slower than the EU as a whole since last year. Bulgarians who use the Internet on a regular basis perform a wide variety of activities online but low levels of digital skills hamper the further use of digital technologies by citizens and by enterprises.

1 – Connectivity

In Connectivity Bulgaria's performance is below the EU average and its progress is limited. While access to fast broadband-enabled services is a necessary condition for competitiveness, the development of

broadband networks in Bulgaria is lagging behind. The total fixed broadband coverage is 95% of households (97% in the EU) but in rural areas it's considerably below the EU average, 60% of homes compared with 91% in the EU. The coverage of next-generation access (NGA) network is at 72% of homes covered similar to EU average but only 3% in rural areas. On the take-up side, Bulgaria continues to have one of the lowest shares of homes with a fixed broadband subscription, 55% of homes compared with 72% average in EU. This might be due both to a lack of digital skills in the population and to the low availability of broadband infrastructure outside the main cities, leading to a digital divide between urban and rural areas. Furthermore, the lengthy permits procedure for network deployment and low public funding hold back investment in the sector.

Although the coverage of 4G mobile networks still remains quite limited, recent progress made on this front deserve to be mentioned. As of early May the entire harmonized 1800 MHz band had been assigned. Nevertheless while wireless broadband has the potential to bridge the urban-rural divide, the lack of clear and constructive plans for repurposing the bands for mobile broadband (800MHz and the 700 MHz bands) exacerbates the problem. However, there are ongoing efforts to repurpose the 800 MHz that is planned to start by the initial release of 2x5 MHz or 2x10 MHz. Despite the progress made on the 2.5-2.6 GHz band, which the Bulgarian authorities made available for civil use over the entire country in September 2015, the availability of the 800 MHz and 700 MHz for civil use is expected to have the highest impact on raising connectivity.



Bulgaria's performance in the five DESI dimensions relative to other EU countries

¹ The Digital Economy and Society Index (DESI) is a composite index developed by the European Commission (DG CNECT) to assess the development of EU countries towards a digital economy and society. It aggregates a set of relevant indicators structured around 5 dimensions: Connectivity, Human Capital, Use of Internet, Integration of Digital Technology and Digital Public Services. It clusters countries in four groups: Running ahead, Lagging ahead, Catching up and Falling behind. For more information about the DESI please refer to <https://ec.europa.eu/digital-single-market/en/desi>

² DESI Country Profile for Bulgaria: <https://ec.europa.eu/digital-single-market/en/scoreboard/bulgaria>

³ Other falling behind countries are Czech Republic, Greece, France, Hungary, Poland and Slovakia.

Bulgaria's broadband strategy, "National Broadband Infrastructure Plan for Next Generation Access," published in 2014 sets targets in line with the Digital Agenda for Europe: 100% coverage with 30 Mbps until 2020, and 50% take-up rate for 100 Mbps. Furthermore, it aims at 80% take-up rate (100 Mbps) for businesses by 2020 and foresees the need for a €150 Million investment. A roadmap including measures and actions for the effective fulfilment of the plan and the use of funding allocated under the European Structural and Investment Funds RDP has also been developed. In this respect, Bulgaria completed in December 2015 the first NGA broadband network project co-financed by the European Fund for Regional Development (2007-2013) and allocated €30 Million for the roll-out of further NGA broadband projects under the European Agricultural Fund for Rural Development (2014-2020). It aims at further reducing construction costs by combining them with the costs of road rehabilitation and other infrastructure projects. Moreover, small scale national state aid is also available in cooperation with local authorities, while public-private partnership is an integral part of the national broadband strategy. Lastly, Bulgaria was particularly active and submitted some well advanced projects in the context of Connected Communities Initiative⁴ (CCI), a joint European Commission and World Bank initiative.

The lack of availability of sufficient sub-1GHz spectrum (800MHz and 700 MHz bands in particular) in Bulgaria is critical with respect to the nation-wide deployment of high-quality wireless broadband services for economy, society and the expanding Internet of Things on the path to 5G, and in fulfilment of the Union's broadband and spectrum targets. Bulgaria still has to transpose the Cost Reduction Directive⁵ which could help to speed up broadband roll-out.

2 – Human Capital

In Human capital, Bulgaria's performance is well below EU average; but Bulgaria's progress is at EU average. Despite the existence of many highly skilled Bulgarian ICT professionals, in Bulgaria there is still a shortage of software specialists. The number of STEM (science, technology and mathematics) graduates slightly increased (1.4% of graduates). However, the digital skills in the overall workforce and population are among the lowest in the EU as only about a third (31%) of Bulgarians possess at least basic digital skills compared with more than half in the EU.

A Bulgarian Digital National Alliance⁶ for Digital Jobs was launched as part of the European Commission's Grand Coalition for Digital Jobs initiative. In the field of education the Bulgarian Government adopted a "Strategy for the effective implementation of ICT in Education (2014-2020)". Its main purpose is to provide equal and flexible access to education. By way of implementation, a new law was adopted on pre-school and school education and amendments made to the existing Higher Education Act. The new law on pre-school and school education includes several provisions on ICT teaching in schools. It is envisaged that digital competences will be included in the new school curricula as key competences, with references to specialized training in computer sciences and support for individual development. For higher education, the Ministry of Education and Science is implementing a number of changes, identification of protected specialisations benefiting from new places in universities and state funding that would bring a wider pool of quality ICT professionals in the next years.

The planned education reform will improve ICT related education in schools and universities, which will help the level of digital literacy of cohorts entering the labour market, and will increase the pool of ICT professionals. However, Bulgaria could also benefit from a clear strategy for equipping the

⁴ <https://ec.europa.eu/digital-single-market/news/connected-communities-initiative>

⁵ Directive 2014/61/EU of the European Parliament and of the Council of 15 May 2014 on measures to reduce the cost of deploying high-speed electronic communications networks (OJ L155, 23 May 2014, p. 1)

⁶ <http://www.digitalalliance.bg>

labour force with the required digital skills. Funding for lifelong learning initiatives for workers of all ages can be provided through the European Social Fund, in particular the Human Resources Development Operational programme.

3 – Use of Internet

In Bulgaria Use of Internet services is below EU average (only 55% of the population are Internet users) and progress is slow. The most popular online activity in Bulgaria is making video calls and participating in social networks and young people (16-24 years old) are the most active age group. However Bulgarian Internet users engage the least in online transactions such as online banking (9.4%) and online shopping (31%) most probably due to lack of digital skills and mistrust in the online environment.

4 – Integration of Digital Technology

As regards the Integration of digital technologies by businesses, Bulgaria¹ performance is below the EU average and its progress is limited. More and more SMEs are selling online but the numbers are low, at only 6% - flat since last year - of SMEs selling online and 3% (up from 2%) for those selling online to other EU Member States.

The silver lining is the emergence of a startup ecosystem in Bulgaria which is evolving significantly. The boom of information-technology outsourcing, hardware and software solutions has attracted many international companies, resulting in the rising of Bulgaria's reputation as an excellent source of bright minds. These developments have in turn stimulated entrepreneurship, as many professionals with years of corporate experience have started their own ventures. The startup ecosystem is growing thanks to co-working spaces such as Betahaus, SOHO and CowOrKing as well as local venture funds – LAUNCHub⁷ and Eleven⁸ – boosted by investment through the Joint European Resources for Micro and Medium Enterprises (JEREMIE) programme of the European Investment Fund. Several international venture capital funds and strong angel investors backed local companies which have become global success stories today⁹.

Bulgarian businesses could more benefit from the possibilities offered by online commerce and the integration of other digital technologies. They could also benefit from an Industry 4.0 strategy.

Highlight: Sofia Tech Park creates a unique environment for innovation

Sofia Tech Park opened its doors at the end of last year. Sofia Tech Park is a state-owned company working to boost innovation, research and technological development through various projects for which it creates partnerships with private and public institutions. Eleven laboratories for information and communications technology (ICT), biotechnology and green energy are located on the territory of the park based on Tsarigradsko Shose Blvd, on the outskirts of Sofia. The Park aims to foster knowledge exchange between academia and business while supporting startups and innovative ideas, thus providing a catalyst for commercialisation of research and making Bulgarian science and entrepreneurship more competitive. The Sofia Tech Park also plans continuing hosting major ICT events in the Balkans.

⁷ <http://launchub.com/>

⁸ <http://11.me/>

⁹ Start-up Manifesto Policy Tracker, Track progress in Bulgaria. <http://www.europeandigitalforum.eu/startup-manifesto-policy-tracker/country/BG>

5 – Digital Public Services

In terms of digital public services, Bulgaria's performance is well below the EU average and it is only making average progress. On the availability side, Bulgaria has progressed but there is room for improvement in re-using information across administrations in order to make life easier for citizens. However, the usage rate of eGovernment services remains one of the lowest in the EU28.

In spring 2014, Bulgaria adopted a Strategy for the development of eGovernment in 2014-2020, and recently, a roadmap for the implementation of the Strategy for the period 2016-2020. This was followed by the adoption of a Strategy for introducing "eGovernance and e-Justice 2014-2020", which aims to improve the efficiency of the e-Justice sector in the country. A number of follow-up steps have been undertaken since then. The government has approved a proposal for the creation of a dedicated eGovernance agency which is tasked with the strategic and budgetary planning of eGovernment policies as well as with the development and maintenance of the technical infrastructure, information centres and the communications network of the public administration. On 11 May 2016, Bulgaria adopted a bill on electronic identification, as a major step in the context of Regulation (EU) N°910/2014 on electronic identification and trust services for electronic transactions in the internal market (eIDAS Regulation). Since some provisions, which foresaw the embedding of a chip in identity documents, were dropped from the final text, a new proposal was put forward to amend and supplement the law on Bulgarian identity documents. It foresees that, as of 1 January 2018, the Ministry of Interior will be able to issue electronic identity documents.

The progress of Bulgaria in the area of digital public services will depend on the speed and quality of implementation of the proposed legislative and structural changes in the state administration. Follow-up of decisions remains crucial. In the area of electronic identification and authentication (eID) Bulgaria has not yet made use of the funding provided by the Connecting Europe Facility (CEF) for building the national eID node which would ensure interoperability with other Member States' notified eID schemes. Bulgaria would benefit from participation in future CEF calls.

Using various platforms and funding mechanisms, the EU contributes to the sharing of best practices between EU Member States. For instance through the Joinup platform <https://joinup.ec.europa.eu/>, the ISA programme <http://ec.europa.eu/isa/> and the Connecting Europe Facility (CEF) <https://ec.europa.eu/cefdigital>.