



Digital Economy and Society Index (DESI) 2020

Bulgaria

About the DESI

The European Commission has been monitoring Member States' digital progress through the Digital Economy and Society Index (DESI) reports since 2014. The DESI reports include both country profiles and thematic chapters. In addition, an in-depth telecoms chapter is annexed to the reports for each Member State.

The DESI country reports combine quantitative evidence from the DESI indicators across the five dimensions of the index with country-specific policy insights and best practices.

The current COVID-19 pandemic has shown how important digital assets have become to our economies and how networks and connectivity, data, AI and supercomputing as well as basic and advanced digital skills sustain our economies and societies by allowing work to continue, tracking the spread of the virus and accelerating the search for medications and vaccines.

Member States have put in place specific measures to mitigate the impact of the pandemic. A dedicated section in each country details them. Digital will also play a key role in the economic recovery as the European Council and the Commission have undertaken to frame the support to the recovery along the twin transition to a climate neutral and resilient digital transformation. In this framework, the deployment of 5G and very high capacity networks (VHCNs), digital skills, the digitisation of companies and the public administration are crucial for a robust recovery. The DESI monitors their progress in each Member State.

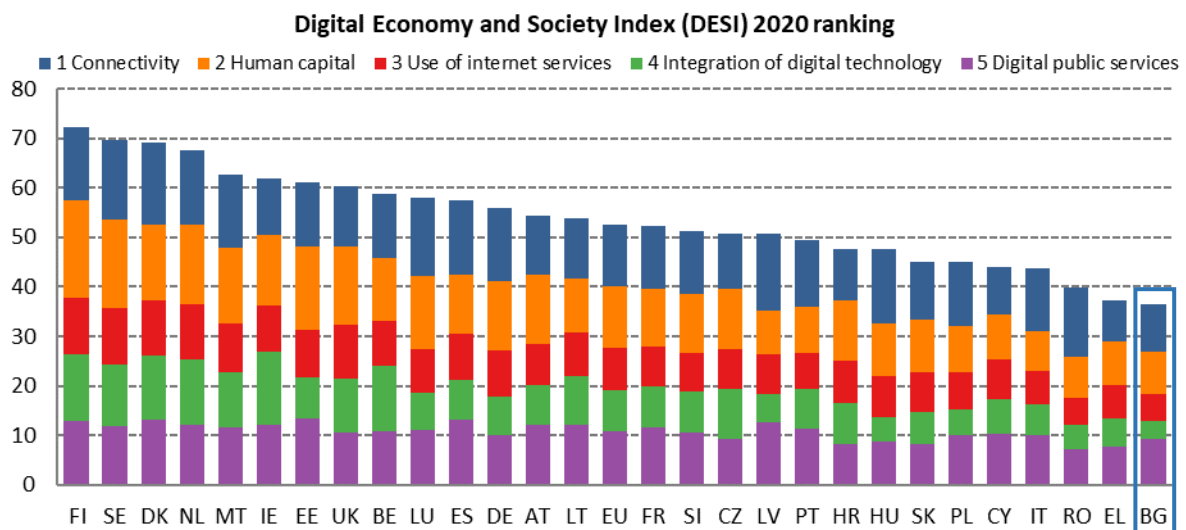
As regards the thematic chapters, the DESI 2020 report includes a European-level analysis of broadband connectivity, digital skills, use of the internet, digitisation of businesses, digital public services, emerging technologies, cyber security, the ICT sector and its R&D spending and Member States' use of Horizon 2020 funds.

To improve the methodology of the index and take account of the latest technological developments, a number of changes were made to the 2020 edition of DESI, which now includes Fixed very high capacity network (VHCN) coverage. The DESI was re-calculated for all countries for previous years to reflect the changes in the choice of indicators and corrections made to the underlying data. Country scores and rankings may thus have changed compared with previous publications. As the figures refer to 2019, the United Kingdom is still included in the 2020 DESI, and EU averages are calculated for 28 Member States. For further information, please consult the DESI website: <https://ec.europa.eu/digital-single-market/en/desi>.

It is noted that statements regarding planned or potential State aid measures record intentions declared by Member States and do not pre-judge or pre-empt the assessment of such measures by the Commission under the relevant state aid rules. The DESI report is not meant to provide any assessment of the compliance of such measures with state aid rules and procedures.

Overview

	Bulgaria		EU
	rank	score	score
DESI 2020	28	36.4	52.6
DESI 2019	28	33.8	49.4
DESI 2018	27	33.5	46.5



Bulgaria ranks 28th out of the 28 EU countries in the European Commission digital economy and society index (DESI) for 2020. Although its overall score has risen to 36.4, it now ranks lower than before on the basis of data prior to the pandemic. This is because the country has not performed particularly well on some DESI indicators, while EU peers have improved their performance on certain indicators. Bulgaria performs relatively well in connectivity, specifically as regards the wide availability of ultrafast and mobile broadband networks. It has made significant improvements in e-government, with rising numbers of users and a high score in providing digital public services for business.

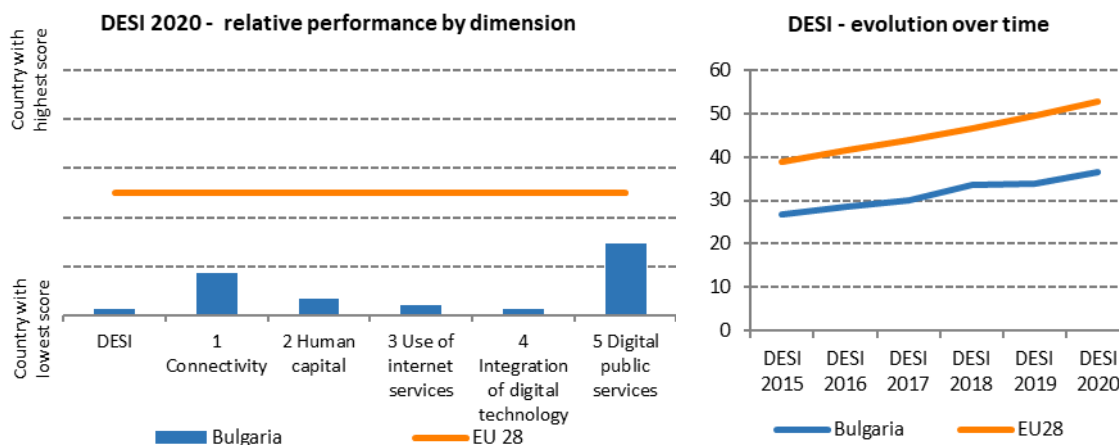
In **human capital**, Bulgaria has moved up two steps in the ranking since last year. However, its level of digital skills is among the lowest in the EU. People with at least basic digital skills account for 29% of the total adult population, against an EU average of 58%, while only 11% have skills above a basic level (just under a third of the EU average). Bulgaria's performance is also well below average as regards the integration of digital technology. Bulgarian firms are not yet taking full advantage of the opportunities online commerce offers: 7% of SMEs sell online (against an EU average of 18%), 3% of total SMEs make cross-border sales, and only 2% of their turnover comes from the online segment.

The priorities of Bulgaria's national programme **Digital Bulgaria 2025** include:

- a new regulatory framework for the electronic communications sector;
- harmonised use of radio spectrum;
- overcoming regional disparities through investment in ICT infrastructure and technologies;
- ICT research and innovation;
- digitising Bulgaria's industrial sectors and developing a data-based economy;
- modernising school and tertiary education in ICT;
- improving the labour force's ICT competencies;

- increasing the number of qualified ICT specialists;
- upholding children’s rights in the digital environment;
- e-government;
- equal access to digital public services;
- interoperability, network and information security;
- resilience to cyber-attacks;
- govern Bulgarian top-level domains (.bg and .br) to become the preferred registration;
- safer internet for children.

The Ministry of Transport, Information Technology and Communications is in the process of drawing up a document entitled ‘Digital Transformation of Bulgaria for 2020-2030’. That will cover the potential of digital transformation for growth, work and prosperity, healthcare, energy policy, equal opportunities and social participation, and government transparency. The technological changes associated with digitisation include the use of ICT in manufacturing (Industry 4.0), big data and artificial intelligence (AI), as well as the Internet of Things (IoT), smart living and smart transport.



The role of digital to manage the coronavirus pandemic and to support the economic recovery

The current COVID-19 crisis is having an important impact on key societal indicators, relating to the use of internet services by citizens. This does not show in the latest 2019 official statistics as reported in DESI. Consequently, the DESI 2020 findings need to be read in conjunction with the strained demand that has been put on digital infrastructure and services during the pandemic and the immediate actions taken by the Member States. Similarly, as Europe progressively exits from the pandemic, the recovery must be planned taking into account the lessons learnt from this crisis. This means a particular attention to the indicators relevant for a stronger and more resilient digital transformation and economic recovery, notably very high capacity networks (VHCNs) and 5G, digital skills, advanced digital technologies for businesses and digital public services.

The state of emergency led to new e-services, accelerating the digitalisation of the public administration and the information exchange between the institutions and citizens. The State eGovernment Agency (SEGA) launched a national telephone number for information on e-services. The Employment Agency launched an electronic service for job seekers to file applications and register. The National Social Security Institute offered the possibility to request and issue an NSSI Personal Identification Code (PIC) digitally. The Ministry of Health launched a

National information system for combating COVID-19 with information on all diagnosed and quarantined persons, linking all relevant institutions.

The free mobile app ViruSave allows health status sharing with the National Operational Staff, health authorities and the general practitioner. The Ministry of Health is speeding up the introduction of the National Health Information System. By December 2020 the electronic dossier, prescription and medical referral, registers and the system for drugs monitoring are expected to be ready.

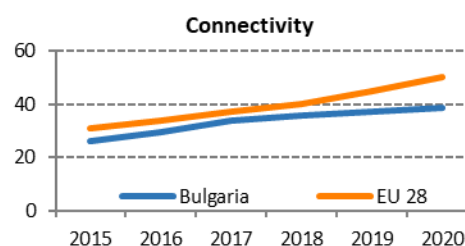
The Ministry of Education and Science developed a National Portal for Digital Education and integrated Teams to support schools and a National digital library. With funding from the budget schools can finance the cost of providing home internet to students who do not have access to it and to distance learning.

Bulgaria approved additional budget expenditure of BGN 7 million and redirected €20 million from the Operational Program "Regions for Growth" 2014-2020 for the purchase of equipment and materials. Through the operational programmes for cohesion policy, the authorities are mobilising another €495 million for measures alleviating the socio-economic consequences of the pandemic.

With regard to the DESI indicators relevant to the economic recovery after the COVID-19 crisis, Bulgaria is lagging behind in the 5G, the digital skills and the digitisation of businesses indicators. In the deployment of VHCN it ranks 20th, and its performance in digital public services is relatively weak.

1 Connectivity

1 Connectivity	Bulgaria		EU
	rank	score	score
DESI 2020	26	38.5	50.1
DESI 2019	26	37.2	44.7
DESI 2018	24	35.6	39.9



	Bulgaria			EU
	DESI 2018	DESI 2019	DESI 2020	DESI 2020
	value	value	value	value
1a1 Overall fixed broadband take-up % households	59% 2017	58% 2018	58% 2019	78% 2019
1a2 At least 100 Mbps fixed broadband take-up % households	7% 2017	10% 2018	11% 2019	26% 2019
1b1 Fast broadband (NGA) coverage % households	75% 2017	75% 2018	77% 2019	86% 2019
1b2 Fixed Very High Capacity Network (VHCN) coverage % households	38% 2017	38% 2018	42% 2019	44% 2019
1c1 4G coverage % households (average of operators)	72% 2017	80% 2018	81% 2019	96% 2019
1c2 Mobile broadband take-up Subscriptions per 100 people	87 2017	98 2018	103 2019	100 2019
1c3 5G readiness Assigned spectrum as a % of total harmonised 5G spectrum	NA	0% 2019	0% 2020	21% 2020
1d1 Broadband price index Score (0 to 100)	NA	NA	72 2019	64 2019

With an overall connectivity score of 38.5, Bulgaria ranks 26th among EU countries. Fast broadband coverage (NGA) improved from 75% in 2018 to 77% in 2019 and VHCN coverage from 38% in 2018 to 42% in 2019. Bulgaria still has a gap to fill in fixed broadband network deployment to reach the EU average. It ranks at the bottom in overall broadband take-up with only 58% households subscribing and 25th on take-up of high-speed fixed broadband of at least 100 Mbps, with only limited progress year after year: from 7% in 2017, 10% in 2018 and 11% in 2019. The mobile broadband indicators, on the contrary, are relatively good, having further improved average 4G coverage from 72% in 2017, to 80% in 2018 and to 81% in 2019, with a high take-up steadily increasing from 87 subscriptions per 100 people in 2017, to 98 in 2018 and 103 subscriptions per 100 people in 2019. This places Bulgaria slightly above the EU average. Bulgaria ranks 10th in the broadband price index with prices lower than the EU average mainly for fixed services.

As of September 2019, the Bulgarian National Broadband Plan (NBP) for 2014-2020 had an implementation rate of 60%. Bulgaria does not seem to be close to reaching the 2020 targets due to poor high-speed network coverage in rural areas (missing 25% 100 Mbps coverage). However, the country aims to tackle the missing 25% of 100 Mbps by 2023 with €30 million from the European Agricultural Fund for Rural Development (EARDF), attributed to the State eGovernment Agency. Bulgaria is considering a state-aid measure aiming to finalise its design by mid-2020.

Bulgaria has delayed the adoption of its new broadband plan. Nevertheless, the development and

deployment of high-speed networks is set as a priority in Bulgaria's National Development Programme (NDP) Bulgaria 2030. In line with the national priorities set in NDP, the new plan will focus on: deploying high-speed networks, especially broadband in rural areas; effective assignment of the spectrum for wireless broadband and 5G; accelerated development and take-up of broadband-dependent services such as cloud, IoT, etc.; and the development of digital skills and services. In addition, a mapping project based on 30 Mbps coverage at municipality level was completed in 2019. Private investments for the deployment of fibre broadband networks are estimated to around € 36.15 million in 2019. The WiFi4EU initiative and the possibilities of building free high-speed and high-quality wireless internet connection in public spaces was quite successful. It led to 227 municipalities (86% of all municipalities in the country) winning a voucher, compared to 113 in 2018. In 2019, Bulgaria adopted a new legal framework aiming at simplifying the investment process rules and implement cost-reduction measures, including the introduction of a Single Information Point.

Bulgaria scores 0 on the 5G readiness indicator. Overall, it has assigned only 14% of the spectrum for wireless broadband⁽¹⁾. Assigning this spectrum has been challenging due to military use and aircraft communications use of parts of the 700 MHz and 800 MHz bands. Insufficient spectrum assigned could negatively affect coverage and timely 5G deployment. However, Bulgaria has taken preparatory steps for the deployment of spectrum for 5G networks with the update of the National Radio Spectrum Allocation Plan in September 2019, a prerequisite to release radio spectrum in the 700 MHz and 26 GHz bands for 5G networks, and the adoption of a roadmap for the 700 MHz band. In addition, the Communications Regulation Commission (CRC) was successful in its efforts to reduce the high annual spectrum use fees (2G, 3G and 4G) as the Council of Ministers approved it in March 2020.

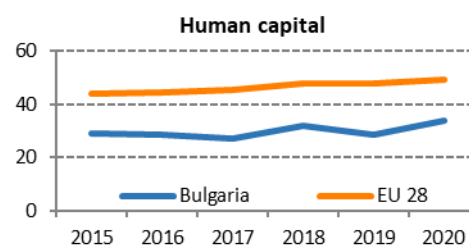
The CRC has the conditions in place to plan and organise public consultations preceding competitive procedures for granting spectrum. The first auction of available spectrum in the 2.6 GHz and 3.4-3.8 GHz bands was scheduled for the second quarter 2020. The auction of the 700 MHz band was also scheduled for the second quarter of 2020, while the auction for the 26 GHz band is scheduled for 2021. Despite uncertainties regarding the 5G roll-out, three operators are already conducting successful 5G trials in two main directions: connection of major transport arteries and fully functional 5G communities. Support from the next operational programme, as needed, could contribute to further progress in these areas.

Bulgaria needs to take additional measures to achieve the NDP's objectives, including deploying the funds earmarked for high-speed broadband deployment. 5G tests and trials demonstrate commercial interest in investment, the lack of sufficient spectrum remains an obstacle to timely 5G deployment.

⁽¹⁾ The 5G spectrum readiness indicator is based on the amount of spectrum already assigned and available for 5G use by 2020 within the 5G pioneer bands in each EU Member State. For the 3.4-3.8 GHz band, this means that only licences aligned with the technical conditions in the Annex to Commission Decision (EU)2019/235, are considered 5G-ready. For the 26 GHz band, only assignments aligned with the technical conditions in the Annex to Commission Implementing Decision (EU) 2019/784 are taken into account. By contrast, the percentage of harmonised spectrum takes into account all assignments in all harmonised bands for electronic communications services (including 5G pioneer bands), even if this does not meet the conditions of the 5G readiness indicator.

2 Human capital

2 Human capital	Bulgaria		EU
	rank	score	score
DESI 2020	26	33.9	49.3
DESI 2019	28	28.5	47.9
DESI 2018	26	31.7	47.6



	Bulgaria			EU
	DESI 2018	DESI 2019	DESI 2020	DESI 2020
2a1 At least basic digital skills	29%	29%	29%	58%
% individuals	2017	2017	2019	2019
2a2 Above basic digital skills	11%	11%	11%	33%
% individuals	2017	2017	2019	2019
2a3 At least basic software skills	31%	31%	31%	61%
% individuals	2017	2017	2019	2019
2b1 ICT specialists	2.7%	2.3%	3.0%	3.9%
% total employment	2016	2017	2018	2018
2b2 Female ICT specialists	1.7%	1.3%	1.8%	1.4%
% female employment	2016	2017	2018	2018
2b3 ICT graduates	3.1%	2.9%	3.7%	3.6%
% graduates	2015	2016	2017	2017

Bulgaria ranks 26th out of 28 EU countries in human capital, having climbed two steps up from 2019. Nevertheless, its score of 33.9% remains well below the EU average of 49%. The overall level of basic digital skills in Bulgaria is among the EU's lowest. People with at least basic digital skills account for 29% of the total Bulgarian population aged 16 to 74, against an EU average of 58%. Only 11% of people have above basic skills, equivalent to a third of the EU average. ICT specialists now account for 3% of total employment marking an increase, although this figure remains a small proportion of the workforce given the labour market shortages. Female ICT specialists account for 1.8% of total employment, slightly above the EU average.

The education system is currently being modernised. Although reforms do not fully capture the magnitude of the digital transformation, there is greater focus on improving digital skills levels. Government support for training in STEM and ICT faculties has brought about a revised school curriculum. Computer modelling was introduced in the third year of school, starting in the 2018-2019 school year. There are now more classes with IT profiles in upper secondary school, such as the national programme 'Education for IT careers'.

In the context of the higher-education reform, there are measures to increase cooperation between education institutions and businesses. The European Social Fund supports specific action to update university curricula in line with labour market needs. Student numbers in ICT show a slight increase, but remain low in science, mathematics and physics.

The national programme entitled 'Ensuring a contemporary educational environment' is investing in specialised equipment for study rooms, laboratories and workshops for both science education in general education and specialised training of students in physics, astronomy, chemistry, environmental protection, biology and health education.

The national programme called 'Information and communication technologies (ICT) in pre-school and school education' provides €5,624,000 (2019) to improve the quality of e-learning, access to ICT, innovative teaching methods and training of teachers. Funds from the operational programme 'Science and education for intelligent growth' for building a modern, protected educational environment in schools and kindergartens, including display equipment and ICT teaching materials, provided €11,660,000 under the 'Education for tomorrow' project (2019 – 2022).

There are several activities designed to develop digital skills, involving a variety of stakeholders. Examples include private companies providing free training in coding or an online course in cyber hygiene for schoolchildren, developed in collaboration with the State eGovernment Agency. The Bulgarian Digital National Alliance organises activities designed to boost digital skills among the general public. In 2019, EU Code Week Bulgaria organised 615 events with around 47,000 participants. Bulgaria also has a national jobs and skills coalition.

Performance-based funding for Vocational Education and Training (VET) will target occupations that are in short supply on the labour market. VET schools providing training for these occupations will receive financial incentives.

Negative demographic trends and rising skill shortages suggest that Bulgaria needs more investment in the skilling, upskilling and reskilling of its current and future labour force. The need to upskill and reskill the adult population is high, while participation in adult learning is low. A high level of even basic digital skills is a prerequisite for the uptake of technology. The national programme 'Digital Bulgaria 2025' mentions improving ICT competencies of the labour force and boosting the number of qualified ICT specialists. Other strategic documents also single out improving digital skills in the general public as a priority among Bulgaria's digital transformation policies. Targeted, specific policies should follow in the short term to alleviate skills shortages.

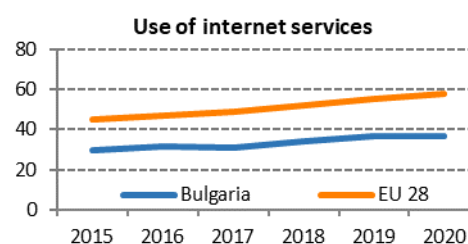
Highlight 2020: EU-funded support for continuing professional development

'Qualification of Pedagogical Specialists' is a project co-financed by the European Social Fund. With a budget of almost €10 million, it will provide training to 52,900 teachers aiming for qualification levels 1-3, and to 48,000 teachers seeking to gain qualification levels 4-5. The aim is to improve professional and career development and upgrade teachers' competencies in digital skills, modern pedagogy and student evaluation. The project started in October 2018.⁽²⁾

⁽²⁾ [Education and training monitor 2019, chapter on Bulgaria.](#)

3 Use of internet services

3 Use of internet services	Bulgaria		EU
	rank	score	score
DESI 2020	27	36.6	58.0
DESI 2019	27	36.7	55.0
DESI 2018	27	34.1	51.8

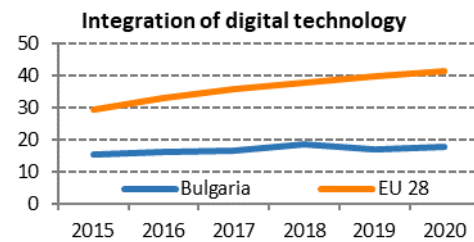


	Bulgaria			EU
	DESI 2018	DESI 2019	DESI 2020	DESI 2020
	value	value	value	value
3a1 People who have never used the internet	30%	27%	24%	9%
% individuals	2017	2018	2019	2019
3a2 Internet users	62%	64%	67%	85%
% individuals	2017	2018	2019	2019
3b1 News	74%	74%	66%	72%
% internet users	2017	2017	2019	2019
3b2 Music, videos and games	64%	64%	64%	81%
% internet users	2016	2018	2018	2018
3b3 Video on demand	8%	9%	9%	31%
% internet users	2016	2018	2018	2018
3b4 Video calls	85%	83%	85%	60%
% internet users	2017	2018	2019	2019
3b5 Social networks	79%	79%	78%	65%
% internet users	2017	2018	2019	2019
3b6 Doing an online course	3%	3%	3%	11%
% internet users	2017	2017	2019	2019
3c1 Banking	9%	11%	13%	66%
% internet users	2017	2018	2019	2019
3c2 Shopping	27%	31%	31%	71%
% internet users	2017	2018	2019	2019
3c3 Selling online	8%	13%	9%	23%
% internet users	2017	2018	2019	2019

Bulgaria continues to rank 27th in the use of internet services with an overall score well below the EU's: 67% of Bulgarians use internet against an EU average of 85%, while 24% have never used it - the highest level of non-use in the EU. Bulgarian internet users make more use of video calls than users elsewhere in the EU. They are also well above the EU average when it comes to social network activities (78% vs 65%). 66% of internet users read news online, a figure which is below the EU average. Bulgarian internet users are less keen to use other online services, especially online banking. Although use of e-banking has risen slightly, only 13% of internet users take advantage of it compared with the EU average of 66%. Only 31% of internet users shop online, against an EU average of 71%.

4 Integration of digital technology

4 Integration of digital technology	Bulgaria		EU
	rank	score	score
DESI 2020	28	17.9	41.4
DESI 2019	28	16.9	39.8
DESI 2018	28	18.3	37.8



	Bulgaria			EU
	DESI 2018	DESI 2019	DESI 2020	DESI 2020
	value	value	value	value
4a1 Electronic information sharing	23%	23%	23%	34%
% enterprises	2017	2017	2019	2019
4a2 Social media	9%	9%	10%	25%
% enterprises	2017	2017	2019	2019
4a3 Big data	7%	7%	7%	12%
% enterprises	2016	2018	2018	2018
4a4 Cloud	6%	6%	6%	18%
% enterprises	2017	2018	2018	2018
4b1 SMEs selling online	7%	6%	7%	18%
% SMEs	2017	2018	2019	2019
4b2 e-Commerce turnover	4%	2%	2%	11%
% SME turnover	2017	2018	2019	2019
4b3 Selling online cross-border	3%	3%	3%	8%
% SMEs	2017	2017	2019	2019

Bulgaria ranks 28th among EU countries on the integration of digital technology, well below the EU average. Bulgarian companies struggle to take advantage of the opportunities offered by online commerce: only 7% of SMEs sell online (against 18% of the EU average), 3% of total SMEs sell cross-border, and only 2% of their turnover comes from the online segment. Although Bulgarians make intensive use of social media for personal purposes, only 10% of firms use it to promote their business, against an EU average of 25%. Finally, firms with a high intensity index account for only 10.9% of the total. On a more positive note, 23% of businesses share information online against an EU average of 34%.

Bulgaria's Council of Ministers approved the strategy paper 'Plan for Digital Transformation of Bulgarian Industry (Industry 4.0)' as a precursor for the strategy for Bulgaria's participation in the fourth industrial revolution up to 2030. A working group with representatives from the Ministry of Economic Affairs, the employers' organisations and the ICT sector is finalising the document. Its measures and objectives will provide a basis for developing the SME strategy and the RIS3 strategy, with digitalisation a cross-cutting priority in both strategic documents. The strategy paper sets out three priorities:

1. strengthening the science-industry link and speeding up integration into European and international programmes, in line with developing and implementing Industry 4.0,
2. promoting technological innovation in the Bulgarian economy,
3. building human, scientific, organisational and institutional capacity for the development of Industry 4.0 in Bulgaria.

Digitising Bulgaria's industrial sectors and developing a data-based economy is one of the goals in the national programme 'Digital Bulgaria 2025'. Supported by EU structural funds, the programme outlines measures to encourage the digitisation of businesses. EU funds are allocated to four centres of excellence and nine centres of competences specialised in areas including mechatronics, clean technology and informatics. In parallel, another EU-funded project will support the creation of regional innovation centres for cooperation between businesses and research centres. These projects' sustainability and performance are vital for future investment in terms of infrastructure and soft measures.

The Ministry of Education and Science has recognised the laboratory complex at Sofia Tech Park as nationally significant infrastructure. Accordingly, it has allocated €485,000 for 2019-2020 to its 11 high-tech labs, which work in areas including AI, HPC and biotech.

Bulgaria is a founding member of the EuroHPC Joint Undertaking. Sofia Tech Park will be hosting a Petascale supercomputing system with the support of the Ministry of Economic Affairs. A 6 petaflops supercomputer will be positioned in Sofia Tech Park following EuroHPC project implementation, one of the five petascale supercomputers to boost Europe's computing power. After its launch, Bulgaria will become a regional digital hub.

In May 2019, Bulgaria adopted a strategy for the digitisation of agriculture and rural areas including measures based on AI and Blockchain. The strategy envisages the use of AI to track production, protect against pests, create a continuous farm-to-table chain, and ease farmers' administrative burden. In 2019 the Bulgarian Academy of Sciences drew up a framework for a national strategy for AI in Bulgaria by 2030 and submitted it to the Council of Ministers in July 2019. It identifies healthcare, public services, smart agriculture, animal husbandry and environmental protection as areas for AI implementation in Bulgaria. The technological areas with potential for the development of AI-based products and services include:

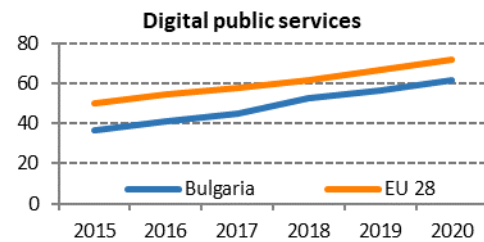
- robotics,
- AI in developing (and testing) software,
- human-machine interfaces in natural language,
- security systems,
- critical resources and infrastructure.

Bulgaria is a signatory to the Declaration of Cooperation on Artificial Intelligence.

Bulgaria has drawn up a number of strategic documents that consolidate the state's priorities and measures in the digitisation of industry as one of the many aspects of digital transformation. However, more targeted, sector-specific policies at all levels and in all territories should follow promptly to ensure that these strategies materialise in all spheres of the economy, including businesses of all sizes. It needs to communicate the benefits of digital transformation more effectively and facilitate cooperation between business, industry and academia. The level of qualification of the labour force is a major obstacle for Bulgarian business in making more extensive use of digital technologies.

5 Digital public services

5 Digital public services	Bulgaria		EU
	rank	score	score
DESI 2020	23	61.8	72.0
DESI 2019	23	56.5	67.0
DESI 2018	23	52.5	61.8



	Bulgaria			EU
	DESI 2018	DESI 2019	DESI 2020	DESI 2020
	value	value	value	value
5a1 e-Government users	58%	61%	61%	67%
% internet users needing to submit forms	2017	2018	2019	2019
5a2 Pre-filled forms	25	26	34	59
Score (0 to 100)	2017	2018	2019	2019
5a3 Online service completion	73	75	79	90
Score (0 to 100)	2017	2018	2019	2019
5a4 Digital public services for businesses	89	93	93	88
Score (0 to 100) - including domestic and cross-border	2017	2018	2019	2019
5a5 Open data	NA	NA	57%	66%
% of maximum score			2019	2019

Although Bulgaria has made some progress on digital public services, it remains in 23rd position with a score of 62. The number of e-government users has stagnated since the previous year, with 61% of internet users submitting forms online, close to the EU average of 67%. The outdated legal framework remains the major obstacle to its widespread use.

Bulgaria is continuing to perform well in providing digital public services for businesses where it scores 96%, well above the EU average of 89%. However, the number of e-government users has stalled at last year's level with 61% of internet users submitting forms online. The gap with the EU average which has climbed to 67%, has thus widened.

Bulgaria has made significant progress in implementing its strategy to develop e-government. The strategic framework is in place. The state e-government agency provides financial support for implementing the 2019-2023 updated strategy for electronic governance in Bulgaria. Three types of infrastructure services are provided to central and local administrative bodies:

- communication connectivity with the unified electronic communications network,
- communication and information infrastructure as a cloud service in the state hybrid private cloud, and
- joint leasing of communication and information equipment in state e-government agency data centres.

RegiX, Bulgaria's registry information exchange system, enables administrative bodies to access data in the registers and databases of other public sector services. However, the outdated legal framework is a major hurdle to its widespread use. Digital public services for businesses improved significantly in 2019. There has been a delay in introducing the new identity documents with electronic identification and electronic signatures, and little progress has been made over the past year.

Overcoming delays in the reform process associated with the implementation of the strategy could help achieve significant improvements in digital public administration.