



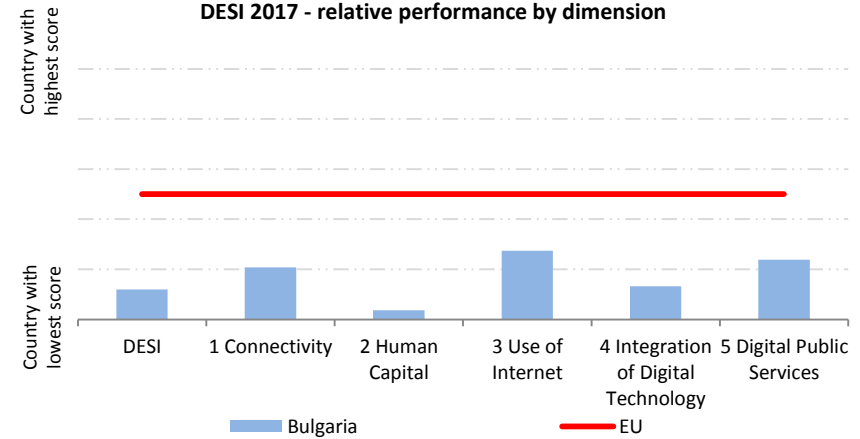
Bulgaria ranks 27th in DESI 2017. Bulgaria progressed in the enhancement of its broadband infrastructure and in open data developments. However, its low performance in digital skills, digitisation of businesses and of public services are acting as a brake to the further development of Bulgaria's digital economy and society.

The Digital Economy and Society Index is a composite index measuring progress in digital through five components:

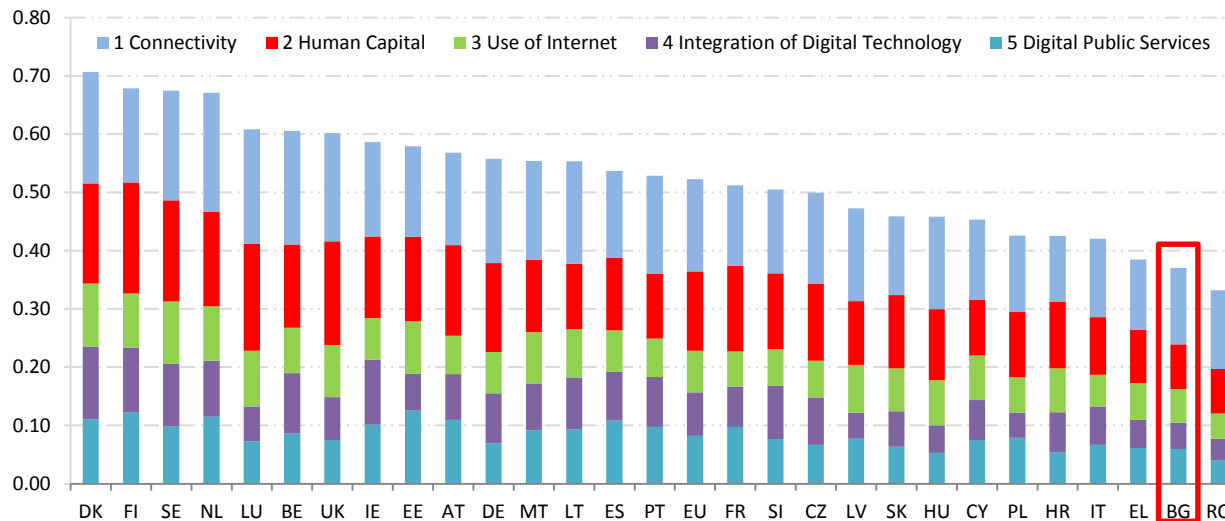
| | |
|-------------------------------------|---|
| 1 Connectivity | Fixed Broadband, Mobile Broadband, Broadband speed and prices |
| 2 Human Capital | Basic Skills and Internet Use, Advanced skills and Development |
| 3 Use of Internet | Citizens' use of Content, Communication and Online Transactions |
| 4 Integration of Digital Technology | Business digitisation and eCommerce |
| 5 Digital Public Services | eGovernment |

Clustering: Bulgaria belongs to the cluster of low performing countries.

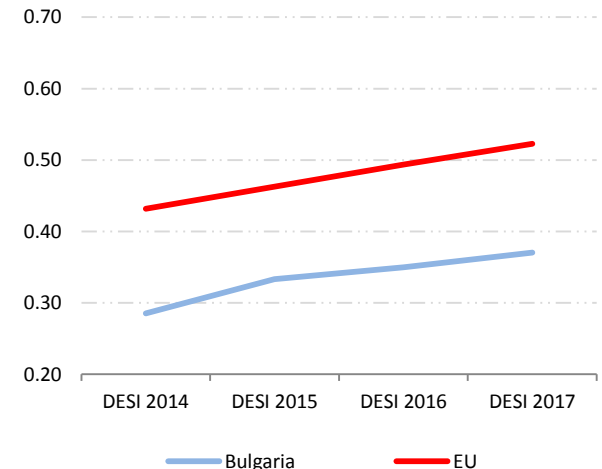
| | Bulgaria rank | Bulgaria score | Cluster score | EU score |
|------------------------|---------------|----------------|---------------|----------|
| DESI 2017 | 27 | 0.37 | 0.41 | 0.52 |
| DESI 2016 ¹ | 27 | 0.35 | 0.38 | 0.49 |



Digital Economy and Society Index (DESI) 2017 ranking



DESI - evolution over time

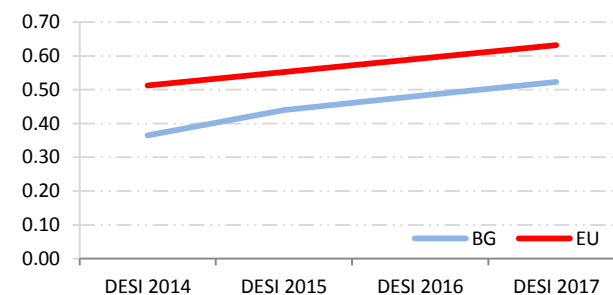


1) Connectivity: More and more Bulgarians are taking up mobile broadband subscriptions and the share of fast broadband subscriptions continues to increase. However, the price of fixed broadband connections remains relatively high. The availability of spectrum for electronic communication is one of the lowest in the EU.

| | Bulgaria | | | | EU | |
|---|----------------------------|------|----------------------------|------|----------------------------|--|
| | DESI 2017 | | DESI 2016 | | DESI 2017 | |
| | value | rank | value | rank | value | |
| 1a1 Fixed Broadband Coverage % households | 95% → | 23 | 95% | 22 | 98% | |
| | 2016 | | 2015 | | 2016 | |
| 1a2 Fixed Broadband Take-up % households | 57% ↑ | 27 | 55% | 27 | 74% | |
| | 2016 | | 2015 | | 2016 | |
| 1b1 Mobile Broadband Take-up Subscriptions per 100 people | 82 ↑ | 13 | 70 | 13 | 84 | |
| | June 2016 | | June 2015 | | June 2016 | |
| 1b2 4G coverage² % households (average of operators) | 66% | 26 | NA | | 84% | |
| | 2016 | | | | 2016 | |
| 1b3 Spectrum³ % of the target | 37% → | 27 | 37% | 26 | 68% | |
| | 2016 | | 2015 | | 2016 | |
| 1c1 NGA Coverage % households | 74% ↑ | 22 | 72% | 21 | 76% | |
| | 2016 | | 2015 | | 2016 | |
| 1c2 Subscriptions to Fast Broadband % subscriptions >= 30Mbps | 55% ↑ | 11 | 49% | 10 | 37% | |
| | June 2016 | | June 2015 | | June 2016 | |
| 1d1 Fixed Broadband Price⁴ % income | 1.7% ↓ | 20 | 1.6% | 19 | 1.2% | |
| | price 2016, income 2015 | | price 2015, income 2015 | | price 2016, income 2015 | |

| 1 Connectivity | Bulgaria | | Cluster | EU |
|----------------|----------|-------|---------|-------|
| | rank | score | score | score |
| DESI 2017 | 26 | 0.52 | 0.53 | 0.63 |
| DESI 2016 | 23 | 0.48 | 0.46 | 0.59 |

1 Connectivity - evolution over time

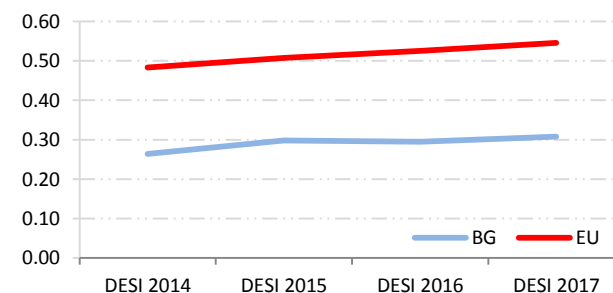


2) Human Capital: 58% of Bulgarians are online. Nevertheless, two thirds of citizens do not have basic digital skills and STEM graduate numbers have not increased, despite growing demand by the labour market.

| | Bulgaria | | | | EU | |
|--|-----------|------|-----------|------|-----------|--|
| | DESI 2017 | | DESI 2016 | | DESI 2017 | |
| | value | rank | value | rank | value | |
| 2a1 Internet Users % individuals | 58% ↑ | 27 | 55% | 27 | 79% | |
| | 2016 | | 2015 | | 2016 | |
| 2a2 At Least Basic Digital Skills % individuals | 26% ↓ | 28 | 31% | 27 | 56% | |
| | 2016 | | 2015 | | 2016 | |
| 2b1 ICT Specialists⁵ % individuals | 2.3% ↑ | 22 | 1.9% | 25 | 3.5% | |
| | 2015 | | 2014 | | 2015 | |
| 2b2 STEM Graduates Per 1000 individuals (aged 20-29) | 14 → | 22 | 14 | 22 | 19 | |
| | 2014 | | 2013 | | 2014 | |

| 2 Human Capital | Bulgaria | | Cluster | EU |
|-----------------|----------|-------|---------|-------|
| | rank | score | score | score |
| DESI 2017 | 27 | 0.31 | 0.40 | 0.55 |
| DESI 2016 | 27 | 0.29 | 0.38 | 0.53 |

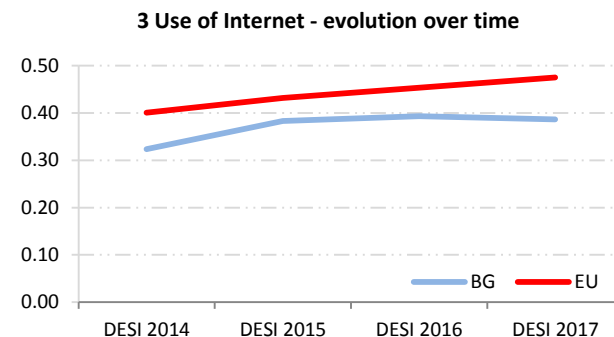
2 Human Capital - evolution over time



3) Use of Internet: Bulgarians are intensive internet users when it comes to making video calls and using social networks. However, on average, they engage in online activities much less than other Europeans.

| | Bulgaria | | | | EU |
|--|-----------|------|-----------|------|-----------|
| | DESI 2017 | | DESI 2016 | | DESI 2017 |
| | value | rank | value | rank | value |
| 3a1 News | 68% | ↓ 21 | 70% | 18 | 70% |
| % individuals who used Internet in the last 3 months | 2016 | | 2015 | | 2016 |
| 3a2 Music, Videos and Games⁶ | 64% | 28 | NA | | 78% |
| % individuals who used Internet in the last 3 months | 2016 | | | | 2016 |
| 3a3 Video on Demand⁷ | 8% | 23 | NA | | 21% |
| % individuals who used Internet in the last 3 months | 2016 | | | | 2016 |
| 3b1 Video Calls | 80% | ↓ 1 | 82% | 1 | 39% |
| % individuals who used Internet in the last 3 months | 2016 | | 2015 | | 2016 |
| 3b2 Social Networks | 76% | ↑ 6 | 74% | 6 | 63% |
| % individuals who used Internet in the last 3 months | 2016 | | 2015 | | 2016 |
| 3c1 Banking | 7% | ↓ 28 | 9% | 28 | 59% |
| % individuals who used Internet in the last 3 months | 2016 | | 2015 | | 2016 |
| 3c2 Shopping | 27% | ↓ 27 | 31% | 27 | 66% |
| % internet users (last year) | 2016 | | 2015 | | 2016 |

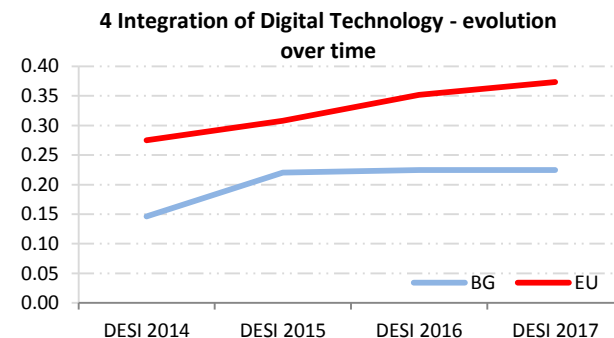
| 3 Use of Internet | Bulgaria | | Cluster | EU |
|-------------------|----------|-------|---------|-------|
| | rank | score | score | score |
| DESI 2017 | 26 | 0.39 | 0.39 | 0.48 |
| DESI 2016 | 23 | 0.39 | 0.37 | 0.45 |



4) Integration of Digital Technology: Bulgaria is an important user of RFID but is not closing the gap when it comes to business digitisation. Particularly in eCommerce, SMEs rarely use electronic sales channels and their turnover from on-line sales is the lowest in the EU.

| | Bulgaria | | | | EU |
|---|-----------|------|-----------|------|-----------|
| | DESI 2017 | | DESI 2016 | | DESI 2017 |
| | value | rank | value | rank | value |
| 4a1 Electronic Information Sharing | 25% | 22 | 25% | 22 | 36% |
| % enterprises | 2015 | | 2015 | | 2015 |
| 4a2 RFID | 9.2% | 1 | 9.2% | 1 | 3.9% |
| % enterprises | 2014 | | 2014 | | 2014 |
| 4a3 Social Media | 9% | ↑ 26 | 8% | 26 | 20% |
| % enterprises | 2016 | | 2015 | | 2016 |
| 4a4 eInvoices | 10% | ↑ 21 | 9% | 21 | 18% |
| % enterprises | 2016 | | 2015 | | 2016 |
| 4a5 Cloud | 5% | ↑ 28 | 4% | 28 | 13% |
| % enterprises | 2016 | | 2015 | | 2016 |
| 4b1 SMEs Selling Online | 5% | ↓ 28 | 6% | 28 | 17% |
| % SMEs | 2016 | | 2015 | | 2016 |
| 4b2 eCommerce Turnover | 1.7% | ↓ 28 | 3.1% | 26 | 9.4% |
| % SME turnover | 2016 | | 2015 | | 2016 |
| 4b3 Selling Online Cross-border | 2.8% | 27 | 2.8% | 27 | 7.5% |
| % SMEs | 2015 | | 2015 | | 2015 |

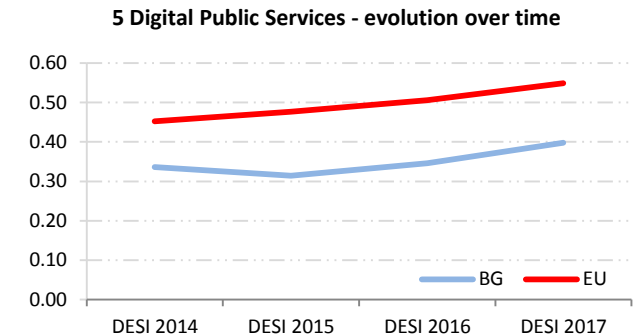
| 4 Integration of Digital Technology | Bulgaria | | Cluster | EU |
|-------------------------------------|----------|-------|---------|-------|
| | rank | score | score | score |
| DESI 2017 | 26 | 0.22 | 0.27 | 0.37 |
| DESI 2016 | 23 | 0.22 | 0.25 | 0.35 |



5) Digital Public Services: Bulgaria progressed in the provision of online public services thanks to the developments in Open Data, where Bulgaria has become one of the trendsetters in the EU. Nevertheless, citizens are not using eGovernment services as much as other Europeans do.

| | Bulgaria | | | | EU |
|--|--------------------|------|--------------------|------|--------------------|
| | DESI 2017 value | rank | DESI 2016 value | rank | DESI 2017 value |
| 5a1 eGovernment Users % internet users (last year) | 10% | ↓ 27 | 15% | 26 | 34% |
| 5a2 Pre-filled Forms Score (0 to 100) | 19 | ↓ 25 | 23 | 21 | 49 |
| 5a3 Online Service Completion Score (0 to 100) | 71 | ↑ 23 | 64 | 23 | 82 |
| 5a4 Open Data⁸ % of maximum score | 76% | ↑ 7 | 56% | 9 | 59% |

| 5 Digital Public Services | Bulgaria | | Cluster | EU |
|---------------------------|----------|-------|---------|-------|
| | rank | score | score | score |
| DESI 2017 | 25 | 0.40 | 0.43 | 0.55 |
| DESI 2016 | 23 | 0.35 | 0.42 | 0.51 |



Methodological note

- ¹ **DESI 2016** was re-calculated for all countries to reflect slight changes in the choice of indicators and corrections to the underlying indicator data. As a result, country scores and rankings may have changed from the previous publication.
- ² **4G coverage**: This is a new DESI indicator measuring the average coverage of telecom operators' 4G networks.
- ³ **Spectrum**: There is a decrease in most of the Member States due to the additional EU harmonisation of the 700 MHz band in April 2016.
- ⁴ **Fixed Broadband Price**: Due to a slight methodological change, historical data was re-calculated.
- ⁵ **ICT Specialists**: Historical data have been revised by Eurostat.
- ⁶ **Music, Videos and Games**: Break in series due to a change in the Eurostat survey.
- ⁷ **Video on Demand**: Break in series due to a change of data source. New source is Eurostat.
- ⁸ **Open Data**: Change of data source. The historical data have also been restated. The new source is the European Data Portal.