

# Digital Economy and Society Index<sup>1</sup> 2016<sup>2</sup>

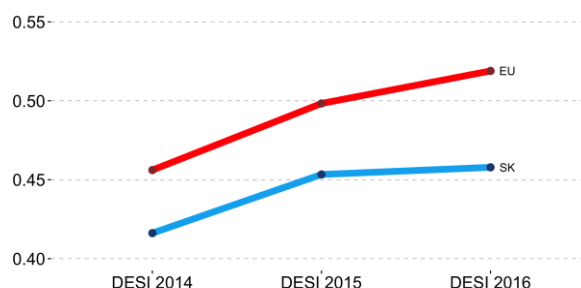
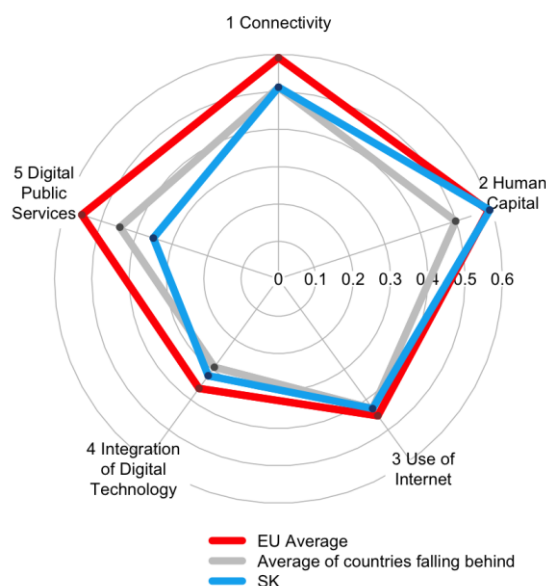
## Country Profile

### Slovakia

In 2015 Slovakia significantly invested in digital; results show slowly but are likely to further improve over time. Slovakia has an overall score<sup>3</sup> of **0.46** and ranks **21<sup>st</sup>** out of the 28 EU Member States. Slovaks have a good level of digital skills (74% are regular Internet users, 53% possess at least basic digital skills). This translates into Slovaks being quite active online: 65% read news online, 69% use social networks and 55% use voice or video calls via internet. However, progress has to be made as regards connectivity. For instance, 14% of Slovak households are still not covered by fixed broadband.

There is considerable potential for a better integration of digital technology by businesses compared to other EU countries. Furthermore, the sophistication of digital public services is expected to improve driven by recent initiatives in the public sector.

Slovakia's score was lower than the EU average and over the last year the score grew at a slower pace than the EU. As such, Slovakia is part of the "falling behind"<sup>4</sup> cluster of countries.



	Slovakia		Cluster	EU
	rank	score	score	score
DESI 2016	21	0.46	0.44	0.52
DESI 2015	20	0.45 <sup>5</sup>	0.44	0.5

<sup>1</sup> 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. For more information about the DESI please refer to <http://ec.europa.eu/digital-agenda/en/digital-agenda-scoreboard>

<sup>2</sup> The DESI 2016 is constructed from indicators referring mostly to the calendar year 2015 (except when data is not available for that calendar year, in which case the latest prior data was used).

<sup>3</sup> DESI scores range from 0 to 1, the higher the score the better the country performance.

<sup>4</sup> In the DESI 2016, Slovakia is part of the cluster of countries that are falling behind: countries that score below the EU average and whose score still grew slower than that of the EU as a whole (in comparison to the DESI 2015). Other falling behind countries are Bulgaria, Cyprus, the Czech Republic, France, Greece, Hungary and Poland.

<sup>5</sup> The DESI 2015 was re-calculated for all countries to reflect updates and corrections to the underlying indicator data (which took place between May 2015 and January 2016). As such, country scores and rankings may have changed from the previous publication. For further information please consult the DESI methodological note.

# 1 Connectivity

1 Connectivity	Slovakia		Cluster score	EU score
	rank	score		
DESI 2016	21	0.51	0.51	0.59
DESI 2015	22	0.49	0.5	0.57

Connectivity is one of the DESI 2015 dimensions where Slovakia is not a good performer compared to the EU average. The country ranks 22<sup>nd</sup> among EU countries with an overall Connectivity score of 0.45. The main reason for this low ranking is that 15% of Slovak households are still not covered by fixed broadband. Despite this fact, Slovakia is making progress as take-up of both fixed and mobile broadband has grown over the last year.

	Slovakia				EU DESI 2016 value
	DESI 2016		DESI 2015		
	value	rank	value	rank	
<b>1a1 Fixed BB Coverage</b> % households	86% (June 2015)	↓ 27	87% (Dec 2014)	28	97% (June 2015)
<b>1a2 Fixed BB Take-up</b> % households	72% (2015)	↑ 11	70% (2014)	11	72% (2015)
<b>1b1 Mobile BB Take-up</b> Subscribers per 100 people	63 (June 2015)	↑ 22	61 (Dec 2014)	12	75 (2014)
<b>1b2 Spectrum</b> % of the target for spectrum to be harmonised at EU level	86% (Dec 2015)	↑ 5	77% (Dec 2014)	9	69% (Dec 2015)
<b>1c1 NGA Coverage</b> % households, out of all households	67% (June 2015)	↑ 23	63% (Dec 2014)	23	71% (June 2015)
<b>1c2 Subscriptions to Fast BB</b> % of subscriptions >= 30Mbps, out of fixed BB subscriptions	30% (June 2015)	↑ 17	28% (Dec 2014)	15	30% (June 2015)
<b>1d1 Fixed BB Price</b> % individual gross income spent for the cheapest standalone Fixed Broadband subscription (lower values are better)	1.1% (Access cost: 2015, Income: 2014)	→ 12	1.1% (Access cost: 2014, Income: 2014)	12	1.3% (Access cost: 2015, Income: 2014)

In mid-2015, fixed broadband networks were available to 86% of homes in Slovakia (well below the EU average of 97%). Fast broadband networks (providing at least 30 Mbps) were available to 67% of homes (75% in the EU). The main challenge for the Slovak Digital Economy is a better coverage of fixed broadband networks and in particular in rural areas.

One of the culprits for the country's low fixed broadband coverage stems from the failure to absorb resources from the Operational Programme Information Society in the previous programming period (2007-2014). Slovakia needs to improve use and co-ordination of structural funds, for example by addressing the lengthy process for obtaining authorisations for construction works.

On the demand side, Slovakia has improved the take-up of fixed broadband; moreover, 30% of these subscriptions are for fast connections (at least 30 Mbps), which matches the EU average. Affordability of broadband prices has improved over the past years as an individual seeking to subscribe to a broadband connection<sup>6</sup> must spend on average 1.1% of her gross income, which is less than the EU average of 1.3%.

<sup>6</sup> Calculations performed taking into account the price of the least expensive standalone fixed broadband connection offering speeds between 12 Mbps and 30 Mbps.

## 2 Human Capital

2 Human Capital	Slovakia		Cluster score	EU score
	rank	score		
<b>DESI 2016</b>	<b>16</b>	<b>0.59</b>	<b>0.5</b>	<b>0.59</b>
DESI 2015	13	0.61	0.48	0.58

Human Capital is the DESI 2015 dimension where Slovakia performs best, with a score of 0.59, and despite losing three positions in the ranking of EU countries from the previous year (from 13<sup>th</sup> to 16<sup>th</sup>).

	Slovakia				EU DESI 2015 value
	DESI 2016		DESI 2015		
	value	rank	value	rank	
<b>2a1 Internet Users</b> % individuals (aged 16-74)	74% (2015) ↓	17	76% (2014)	12	76% (2015)
<b>2a2 Basic Digital Skills</b> % individuals (aged 16-74)	53% (2015)	12	n.a.	-	55% (2015)
<b>2b1 ICT Specialists<sup>7</sup></b> % employed individuals	4.1% (2014) ↑	13	3.9% (2013)	14	3.7% (2014)
<b>2b2 STEM Graduates</b> Graduates in STEM per 1000 individuals (aged 20 to 29)	18 (2012) →	12	18 (2012)	11	18 (2013)

The number of regular Internet users in Slovakia (74%) remained largely similar compared to the previous year and is just below the EU average.

53% of the Slovakian population possess at least basic digital skills. This is slightly below the EU average (55%). Slovakia has also a fair share of ICT specialists in the workforce (4.2%). The recent re-introduction of mathematics as a mandatory subject at the school-leaving examination may contribute to improve the share of STEM (science, technology, engineering and mathematics) graduates in Slovakia. This now amounts to 1.8% of Slovaks aged 20-29 years old.

<sup>7</sup> Change of calculation method between 2015 and 2016.

### 3 Use of Internet

3 Use of Internet	Slovakia		Cluster score	EU score
	rank	score		
<b>DESI 2016</b>	<b>18</b>	<b>0.43</b>	<b>0.43</b>	<b>0.45</b>
DESI 2015	22	0.41	0.42	0.43

In terms of the propensity of individuals to use Internet services, Slovakia scores 0.43 (up from 0.41 last year) and ranks 18<sup>th</sup> among EU countries. The use of internet by Slovaks is still growing and it is close to the EU average.

	Slovakia				EU DESI 2016 value
	DESI 2016		DESI 2015		
	value	rank	value	rank	
<b>3a1 News</b> % individuals who used Internet in the last 3 months (aged 16-74)	65% (2015) →	23	65% (2014)	22	68% (2015)
<b>3a2 Music, Videos and Games</b> % individuals who used Internet in the last 3 months (aged 16-74)	35% (2014) →	27	35% (2014)	27	49% (2014)
<b>3a3 Video on Demand</b> % households that have a TV	12% (2014) →	21	12% (2014)	21	41% (2014)
<b>3b1 Video Calls</b> % individuals who used Internet in the last 3 months (aged 16-74)	55% (2015) →	6	55% (2014)	5	37% (2015)
<b>3b2 Social Networks</b> % individuals who used Internet in the last 3 months (aged 16-74)	69% (2015) ↑	11	63% (2014)	16	63% (2015)
<b>3c1 Banking</b> % individuals who used Internet in the last 3 months (aged 16-74)	48% (2015) ↓	18	51% (2014)	17	57% (2015)
<b>3c2 Shopping</b> % individuals who used Internet in the last year (aged 16-74)	61% (2015) ↑	14	58% (2014)	13	65% (2015)

Slovakian Internet users engage in a broad range of online activities. They read news online (65%), listen to music, watch films and play games online (35%), use the Internet to communicate through social networks (69%), Voice or video calls via internet are particularly popular (55%). The uptake of online banking services amongst internet users is stagnating (48%) whilst online shopping is growing (61%).

## 4 Integration of Digital Technology

4 Integration of Digital Technology	Slovakia		Cluster score	EU score
	rank	score		
<b>DESI 2016</b>	<b>19</b>	<b>0.32</b>	<b>0.29</b>	<b>0.36</b>
DESI 2015	18	0.3	0.31	0.33

In Integration of Digital Technology by businesses, Slovakia scores 0.32 and ranks 19<sup>th</sup> among EU countries. Slovakia slightly dropped in the ranking for this dimension from last year essentially because it performed worse on individual indicators where the performance of its EU counterparts has improved. Hence, despite progress, Slovakia's businesses need to better exploit the possibilities offered by on-line commerce, social media and electronic sharing of information.

	Slovakia				EU DESI 2016 value
	DESI 2016		DESI 2015		
	value	rank	value	rank	
<b>4a1 Electronic Information Sharing</b> % enterprises (no financial sector, 10+ employees)	30% (2015) ↑	17	28% (2014)	18	36% (2015)
<b>4a2 RFID</b> % enterprises (no financial sector, 10+ employees)	3% (2014) ↑	20	3% (2014)	20	3.8% (2014)
<b>4a3 Social Media</b> % enterprises (no financial sector, 10+ employees)	12% (2015) ↑	19	10% (2014)	20	18% (2015)
<b>4a4 eInvoices</b> % enterprises (no financial sector, 10+ employees)	11% (2015)	15	n.a.	-	n.a.
<b>4a5 Cloud</b> % enterprises (no financial sector, 10+ employees)	13% (2015) →	10	13% (2014)	10	n.a.
<b>4b1 SMEs Selling Online</b> % SMEs (no financial sector, 10+ employees)	12% (2015) ↑	18	11% (2014)	18	16% (2015)
<b>4b2 eCommerce Turnover</b> % turnover of SMEs (no financial sector, 10-249 employees)	11% (2015) ↑	9	6.9% (2014)	19	9.4% (2015)
<b>4b3 Selling Online Cross-border</b> % SMEs (no financial sector, 10+ employees)	6.3% (2015) ↓	17	8.1% (2013)	13	7.5% (2015)

A true digital economy is one where businesses take full advantage of the possibilities and benefits offered by digital technologies, both to improve their efficiency and productivity, as well as to reach costumers and sell their products and services. The adoption of digital technologies is an important driver of labour productivity growth. To that end, Slovakia has still a long way to go.

The percentage of businesses using technologies such as electronic information sharing (ERP – 30%), radio-frequency identification (RFID -3%) or social media (12%) in Slovakia is improving but still below the EU average. Without further digitisation and the resulting efficiency and productivity gains, Slovakian businesses will struggle to make it in the global digital economy.

Slovakian businesses need also to take advantage of the possibilities offered by on-line commerce. The share of Slovakian SMEs selling online increased and those who do sell

online make a relatively small share of their turnover from those sales (11%, up from 6.9%) but less SMEs sell online to other EU member states (6.3%), which is below the EU average.

## 5 Digital Public Services

5 Digital Public Services	Slovakia		Cluster score	EU score
	rank	score		
<b>DESI 2016</b>	<b>26</b>	<b>0.35</b>	<b>0.45</b>	<b>0.55</b>
DESI 2015	26	0.37	0.47	0.54

In the Digital Public Services dimension, Slovakia scores 0.35, its weakest rank among the five DESI 2015 dimensions. Slovakia is slowly advancing in the digitization of the public administration and the use of digital public services is still low.

	Slovakia				EU DESI 2016 value
	DESI 2016		DESI 2015		
	value	rank	value	rank	
<b>5a1 eGovernment Users</b> % individuals returning filled forms, out of Internet users in the last year (aged 16-74)	16% (2015)	↓ 25	20% (2014)	22	32% (2015)
<b>5a2 Pre-filled Forms</b> Score (0 to 100)	19 (2015)	↓ 24	22 (2014)	21	49 (2015)
<b>5a3 Online Service Completion</b> Score (0 to 100)	59 (2015)	↑ 25	46 (2014)	27	81 (2015)
<b>5a4 Open Data</b> Score (0 to 700)	280 (2015)	↓ 21	380 (2014)	14	351 (2015)

Modern public services offered online in an efficient manner are a vehicle for reducing public spending as well as for efficiency gains for enterprises, citizens and the public administration itself. As regards most indicators, the situation in Slovakia has actually deteriorated: Only one in six internet users has engaged with the public administration and exchanged filled-in forms. The weak performance on the supply side places Slovakia amongst the low performers in the EU and show that the level of sophistication of its digital public services needs to improve significantly. Slovakia has recently undertaken initiatives in this area which are expected to show impact soon.

16 % <sup>(8)</sup> of internet users have engaged online with the public administration, and with a score of 19 the use of pre-filled electronic forms is still considerably below the EU average of 49.

<sup>(8)</sup> <https://ec.europa.eu/digital-agenda/en/desi>