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To: Mr Jeppe TRANHOLM-MIKKELSEN, Secretary-General of the Council of  
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Subject: COMMISSION STAFF WORKING DOCUMENT Europe's Digital Progress  
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Delegations will find attached document SWD(2017) 160 final - PART 31/62.

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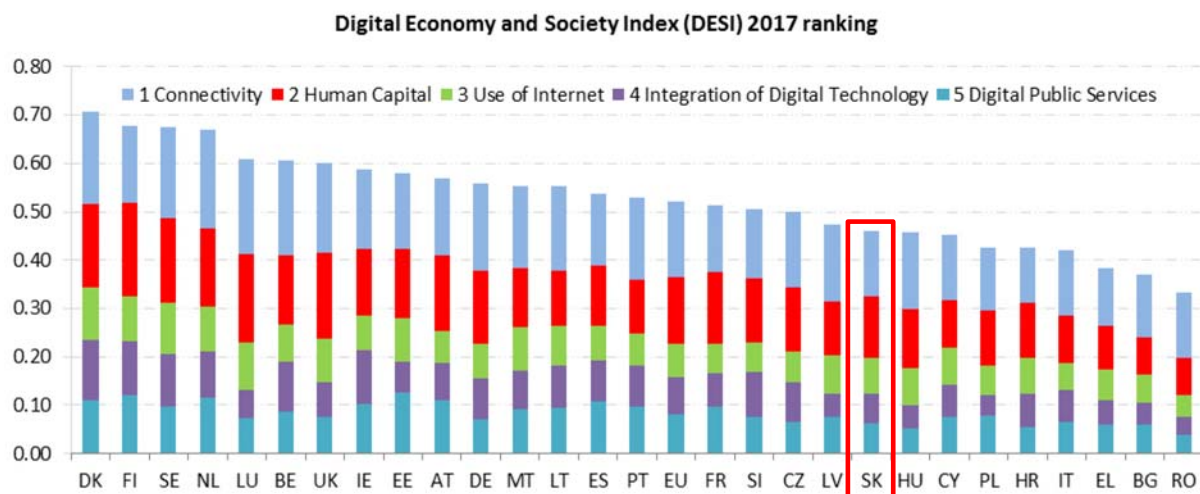
**COMMISSION STAFF WORKING DOCUMENT**

**Europe's Digital Progress Report 2017**

# Europe's Digital Progress Report (EDPR) 2017 Country Profile Slovakia

Europe's Digital Progress Report (EDPR) tracks the progress made by Member States in terms of their digitisation, combining quantitative evidence from the Digital Economy and Society Index (DESI)<sup>1</sup> with qualitative information on country-specific policies. It is structured around five chapters:

<b>1 Connectivity</b>	Fixed broadband, mobile broadband, broadband speed and prices
<b>2 Human Capital</b>	Internet use, basic and advanced digital skills
<b>3 Use of Internet</b>	Citizens' use of content, communication and online transactions
<b>4 Integration of Digital Technology</b>	Business digitisation and eCommerce
<b>5 Digital Public Services</b>	eGovernment

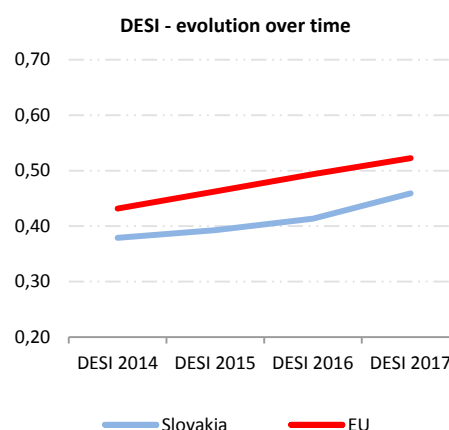
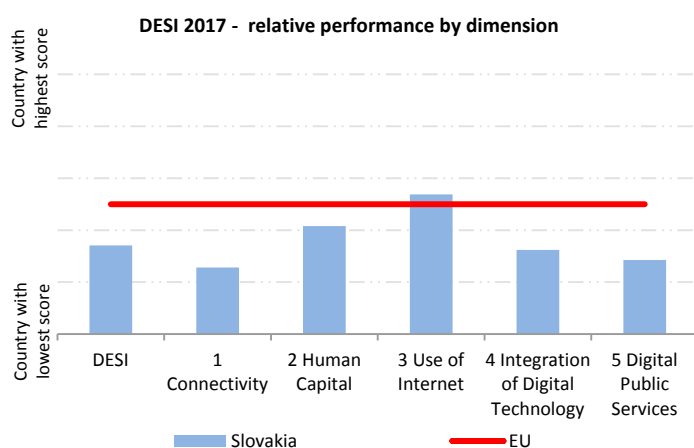


<sup>1</sup> <https://ec.europa.eu/digital-single-market/en/desi>

	Slovakia		Cluster	EU
	rank	score	score	score
<b>DESI 2017</b>	<b>20</b>	<b>0.46</b>	<b>0.41</b>	<b>0.52</b>
DESI 2016 <sup>2</sup>	22	0.41	0.38	0.49

Slovakia ranks 20th out of the 28 EU Member States in the European Commission Digital Economy and Society Index (DESI) 2017<sup>3</sup>, catching up in most domains, making substantial progress except for connectivity and integration of digital technologies. Progress in connectivity was mixed, leading to a similar position (23<sup>rd</sup>) as in 2016 (22<sup>nd</sup>). The Use of Internet dimension is where Slovakia is performing best compared to other EU countries and Slovaks have a good level of digital skills. The sophistication of digital public services is expected to improve further, driven by recent initiatives in the public sector.

Slovakia belongs to the cluster of low-performing countries<sup>4</sup>.



<sup>2</sup> The 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. For further information please consult the DESI methodological note at <https://ec.europa.eu/digital-single-market/en/desi>.

<sup>3</sup> DESI Country Profile for Slovakia: <https://ec.europa.eu/digital-single-market/en/scoreboard/slovakia>

<sup>4</sup> Low performing countries are Romania, Bulgaria, Greece, Italy, Croatia, Poland, Cyprus, Hungary and Slovakia.

# 1 Connectivity

1 Connectivity	Slovakia		Cluster	EU
	rank	score	score	score
DESI 2017	23	0.54	0.53	0.63
DESI 2016	22	0.49	0.46	0.59

	Slovakia				EU
	DESI 2017 value	rank	DESI 2016 value	rank	DESI 2017 value
<b>1a1 Fixed Broadband Coverage</b> % households	88% 2016	↑ 27	86% 2015	27	98% 2016
<b>1a2 Fixed Broadband Take-up</b> % households	72% 2016	→ 13	72% 2015	11	74% 2016
<b>1b1 Mobile Broadband Take-up</b> Subscriptions per 100 people	73 June 2016	↑ 20	63 June 2015	22	84 June 2016
<b>1b2 4G coverage<sup>5</sup></b> % households (average of operators)	80% 2016	22	NA		84% 2016
<b>1b3 Spectrum<sup>6</sup></b> % of the target	80% 2016	↓ 6	86% 2015	5	68% 2016
<b>1c1 NGA Coverage</b> % households	75% 2016	↑ 19	67% 2015	23	76% 2016
<b>1c2 Subscriptions to Fast Broadband</b> % subscriptions >= 30Mbps	32% June 2016	↑ 19	30% June 2015	16	37% June 2016
<b>1d1 Fixed Broadband Price<sup>7</sup></b> % income	1.1% price 2016, income 2015	→ 13	1.1% price 2015, income 2015	13	1.2% price 2016, income 2015

Although Slovakia's overall performance in connectivity is somewhat stagnating, several indicators improved. While Slovakia has made some progress on fixed broadband coverage, with 88% of households covered (86% previously). In terms of high-speed broadband coverage, Slovakia with 75% NGA coverage performs almost at EU average (76%), which is a significant improvement from last year (67% in 2015).

Fixed broadband take-up (72%), slightly below the EU average (74%), did not progress in 2016. 32% of fixed Internet subscriptions are to high-speed connections, which is lower than the EU level of 37%. Also mobile broadband take-up has stagnated (at 73%), placing Slovakia well below the EU average (at 84%).

<sup>5</sup> This is a new DESI indicator measuring the average coverage of telecom operators' 4G networks.

<sup>6</sup> There is a decrease in most of the Member States due to the additional EU harmonisation of the 700 MHz band in April 2016.

<sup>7</sup> Due to a slight methodological change, historical data was re-calculated.

4G coverage (80%) is slightly lower than the EU average of 84%<sup>8</sup>. When it comes to spectrum, 80% of that resource has been licenced, compared to 2015, which was (86%) and to 68% EU wide<sup>9</sup>. The reason for that is the ongoing assignment procedure in Slovakia, which started in August 2016 and is to be continued in 2017.

A citizen in Slovakia subscribing to a broadband connection must spend now on average 1.1% of his or her gross income, which is the same as last year and a bit less than the EU average of 1.2%.

Slovakia is working on improving its broadband coverage and launched a public consultation on a list of NGA white areas. Slovakia has some difficulties in implementing the Broadband Cost Reduction Directive. Slovakia has given considerable attention to the major project "Atlas for passive infrastructure" and a list of white spots is a good example of progress being made. This list will serve as a basis for building backhaul networks using a state aid scheme at a later stage. Slovakia is investing considerable public funds in building a new backhaul network. The Slovak Republic also plans to support broadband deployment through demand-oriented projects supporting the construction of last mile connections in places where the market fails<sup>10</sup>. Slovakia plans to use co-financing for broadband deployment from several EU programmes.

Although Slovakia's overall performance in connectivity is still below the EU average, almost all indicators have improved. The progress made in the allocation of spectrum and broadband infrastructure in 2016 is encouraging. However, a better, more efficient absorption on EU funds and the full implementation of the Broadband Cost Reduction Directive could further improve Slovakia's performance.

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<sup>8</sup> This is a new indicator for 2017 measuring the coverage of homes for the average of operators.

<sup>9</sup> New frequency band was added in 2017, so the total EU harmonised band is larger.

<sup>10</sup> European Commission's fact-finding mission to Bratislava, November 2016.

## 2 Human Capital

2 Human Capital	Slovakia		Cluster	EU
	rank	score	score	score
DESI 2017	15	0.50	0.40	0.55
DESI 2016	17	0.49	0.38	0.53

	Slovakia				EU
	DESI 2017		DESI 2016		DESI 2017
	value	rank	value	rank	value
<b>2a1 Internet Users</b> % individuals	78% ↑	14	74%	17	79%
	2016		2015		2016
<b>2a2 At Least Basic Digital Skills</b> % individuals	55% ↑	12	53%	14	56%
	2016		2015		2016
<b>2b1 ICT Specialists<sup>11</sup></b> % individuals	2.8% →	17	2.8%	18	3.5%
	2015		2014		2015
<b>2b2 STEM Graduates</b> Per 1000 individuals (aged 20-29)	17 ↓	14	18	13	19
	2014		2013		2014

In the Human Capital dimension, Slovakia is making progress. The inhabitants of Slovakia are regular users of the Internet, and possess, on average, a level of digital skills comparable to the EU average. However, in view of the large importance of the manufacturing sector in Slovakia, workers need to be trained to make sure that they remain employable in an increasingly digital workplace. Addressing the shortage of certain ICT specialists remains crucial to support digital transformation.

Stakeholders in Slovakia recently initiated the launch of a national digital skills coalition involving the government, the ICT industry, and other partners.

### Highlight: The IT Academy project

The IT Academy project launched at the end of 2016 aims to boost digital skills in Slovakia and to increase the numbers as well as the level of skills of ICT students. The project targets schools and universities, pupils and students and also aims at training teachers so they can use digital technology and innovative pedagogies.

The project is scheduled to run from 2017 to 2020 and aims to reach 24.000 pupils from a minimum of 300 elementary schools, at least 9,000 students from at least 200 secondary schools and 3.000 students from 5 technical universities. 1250 teachers from elementary and secondary schools shall be trained, including the development and use of of new educational methodologies for elementary and secondary schools in particular for subjects such as mathematics, informatics and natural sciences.

The project also foresees the creation of additional informatics courses in secondary schools and new courses, IT labs at 60 elementary schools, 30 secondary schools, 4 state

<sup>11</sup> Historical data have been revised by Eurostat.

organisations and 8 universities.



### 3 Use of Internet

3 Use of Internet	Slovakia		Cluster	EU
	rank	score	score	score
DESI 2017	15	0.49	0.39	0.48
DESI 2016	17	0.44	0.37	0.45

	Slovakia				EU
	DESI 2017		DESI 2016		DESI 2017
	value	rank	value	rank	value
<b>3a1 News</b> % individuals who used Internet in the last 3 months	74% ↑ 2016	17	65% 2015	23	70% 2016
<b>3a2 Music, Videos and Games<sup>12</sup></b> % individuals who used Internet in the last 3 months	69% 2016	25	NA		78% 2016
<b>3a3 Video on Demand<sup>13</sup></b> % individuals who used Internet in the last 3 months	7% 2016	25	NA		21% 2016
<b>3b1 Video Calls</b> % individuals who used Internet in the last 3 months	57% ↑ 2016	5	55% 2015	6	39% 2016
<b>3b2 Social Networks</b> % individuals who used Internet in the last 3 months	71% ↑ 2016	12	69% 2015	11	63% 2016
<b>3c1 Banking</b> % individuals who used Internet in the last 3 months	56% ↑ 2016	17	48% 2015	18	59% 2016
<b>3c2 Shopping</b> % internet users (last year)	68% ↑ 2016	10	61% 2015	14	66% 2016

In terms of the propensity of individuals to use Internet services, Slovakia over the last year made steady progress and jumped from rank 17 to rank 15. Slovak Internet users read news online (74%), listen to music, watch videos and play games online (69%), watch films (7%) and make Video Calls over the Internet (57%). They use social networks (71%) and online banking (56%). Users in Slovakia tend to use Internet for online shopping more than Europeans (68% of Internet users compared to 66% for the EU28), rank 10 among the 28 Member States.

<sup>12</sup> Break in series due to a change in the Eurostat survey.

<sup>13</sup> Break in series due to a change of data source. New source is Eurostat.

## 4 Integration of Digital Technology

4 Integration of Digital Technology	Slovakia		Cluster	EU
	rank	score	score	score
DESI 2017	21	0.30	0.27	0.37
DESI 2016	19	0.30	0.25	0.35

	Slovakia				EU
	DESI 2017		DESI 2016		DESI 2017
	Value	rank	value	rank	value
<b>4a1 Electronic Information Sharing</b> % enterprises	30% 2015	17	30% 2015	17	36% 2015
<b>4a2 RFID</b> % enterprises	3.0% 2014	20	3.0% 2014	20	3.9% 2014
<b>4a3 Social Media</b> % enterprises	13% 2016	↑ 22	12% 2015	19	20% 2016
<b>4a4 eInvoices</b> % enterprises	15% 2016	↑ 17	11% 2015	17	18% 2016
<b>4a5 Cloud</b> % enterprises	12% 2016	↓ 15	13% 2015	9	13% 2016
<b>4b1 SMEs Selling Online</b> % SMEs	11% 2016	↓ 21	12% 2015	18	17% 2016
<b>4b2 eCommerce Turnover</b> % SME turnover	10.5% 2016	↓ 9	10.9% 2015	8	9.4% 2016
<b>4b3 Selling Online Cross-border</b> % SMEs	6.3% 2015	17	6.3% 2015	17	7.5% 2015

Slovakia made mixed progress over the last year made in Integration of Digital Technology by businesses. Whereas Slovak enterprises increasingly take advantage of the possibilities offered by social media and eInvoicing, progress of eCommerce and the use of cloud services was flat in 2016.

Slovakia has been pursuing public support strategies for digitisation over the last years, in particular in support of its manufacturing industry but also for startups and SMEs. Manufacturing's share in employment in the Slovak economy is one of the highest in the EU. The Slovak Ministry of Economy established the Smart Industry for Slovakia Strategy which focuses on progress in the following areas: awareness-raising and collaboration, research, smart factories and manufacturing, access to finance, labour market, education and skills, future-proof regulation and smart government.

## 5 Digital Public Services

5 Digital Public Services	Slovakia		Cluster	EU
	rank	score	score	score
DESI 2017	23	0.42	0.43	0.55
DESI 2016	27	0.29	0.42	0.51

	Slovakia				EU
	DESI 2017		DESI 2016		DESI 2017
	value	rank	value	rank	value
<b>5a1 eGovernment Users</b> % internet users (last year)	19% 2016	↑ 24	16% 2015	25	34% 2016
<b>5a2 Pre-filled Forms</b> Score (0 to 100)	28 2016	↑ 21	19 2015	24	49 2016
<b>5a3 Online Service Completion</b> Score (0 to 100)	67 2016	↑ 24	59 2015	25	82 2016
<b>5a4 Open Data<sup>14</sup></b> % of maximum score	74% 2016	↑ 9	46% 2015	15	59% 2016

This is the area where Slovakia made very good progress, leaping from rank 27 to 23 in DESI 2017 and improving in all fields measured. Eventually, the considerable investments and efforts of the Slovak government over the last years in this domain are bearing fruit.

Slovakia has made enormous efforts over the last years to catch up with other Member States, with the "National eGovernment Strategy" and an national master plan, built around a vision of an innovative and open state that provides citizens and businesses with user-friendly and easy to use services, while at the same time meeting future challenges.

Slovakia also invests considerable funds from the EU Structural and Investment Funds in the development of electronic services for citizens and businesses, covering complex life events, cross-border interoperability and increasing the availability of government data through open data. At the same time, public administrative reform will be supported through digital technology, including the further extension of the government cloud.

With an ambitious master plan and a bold programme, Slovakia is on track to further improve Digital Public Services for its citizens and businesses.

<sup>14</sup> Change of data source. The historical data have also been restated. The new source is the European Data Portal.