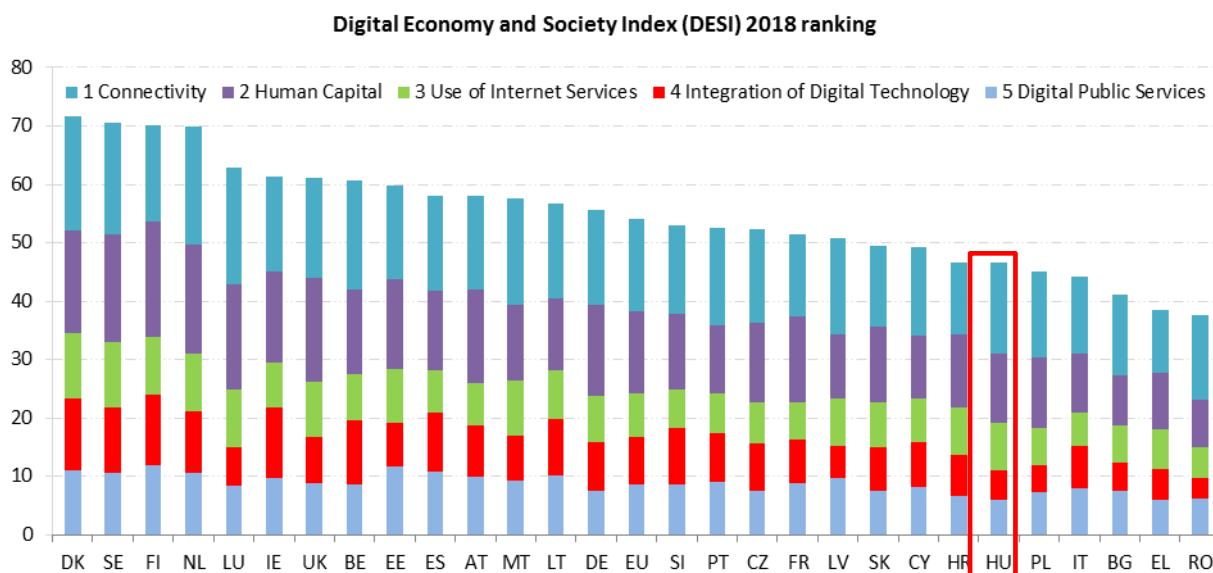# Digital Economy and Society Index (DESI)[1] 2018 Country Report Hungary

The DESI report tracks the progress made by Member States in terms of their digitisation. It is structured around five chapters:

1 Connectivity	Fixed broadband, mobile broadband and prices
2 Human Capital	Internet use, basic and advanced digital skills
3 Use of Internet Services	Citizens' use of content, communication and online transactions
4 Integration of Digital Technology	Business digitisation and e-commerce
5 Digital Public Services	eGovernment and eHealth

The DESI was re-calculated for the previous years 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.


Digital Economy and Society Index (DESI) 2018 ranking

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[1] https://ec.europa.eu/digital-single-market/en/desi

	Hungary		Cluster	EU
	rank	score	score	score
DESI 2018	**23**	**46.5**	**43.5**	**54.0**
DESI 2017	22	44.2	40.4	50.8

Hungary ranks 23rd out of the 28 EU Member States. Overall, it has progressed at an average pace over the last few years.

Hungary performs well on Connectivity, thanks to the wide availability and the high take-up of fast and ultrafast broadband. Hungary scores below the average on human capital, since half of the population does not have basic digital skills, and there is a low number of STEM (science, technology and mathematics) graduates. Although the use of ICTs by businesses and e-commerce has improved, Hungarian companies are still far from fully exploiting the opportunities offered by digital technology. The improvement of digital skills is also vital to enhance the integration of digital technologies within enterprises. As for Digital Public Services including eHealth, the situation has somewhat improved, but Hungary still ranks 27th, scoring below the EU average in all aspects.

Hungary belongs to the Low performing cluster of countries.[2]

In 2014, Hungary adopted its National Info-communication Strategy 2014-2020[3]. The implementation of the strategy started in 2014, and was confirmed with the adoption of the Digital Success Programme (DJP) at the end of 2015, and the DJP 2.0 in 2016, which defines several strategies and a large number of actions in all the key areas of ICT.
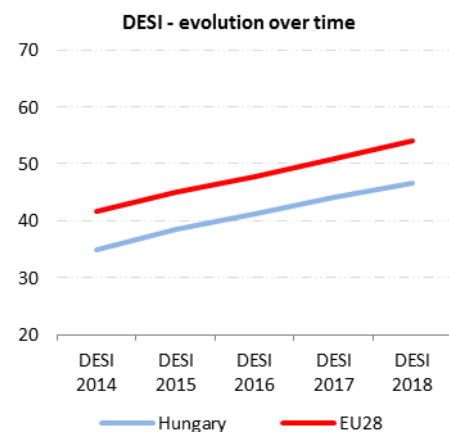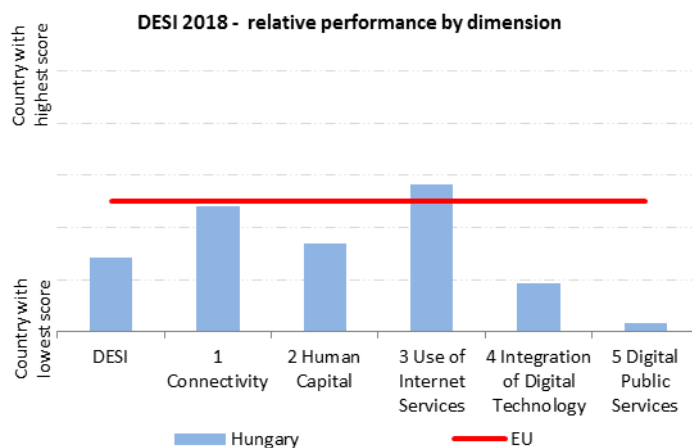
[2] Low-performing countries are Romania, Greece, Bulgaria, Italy, Poland, Hungary, Croatia, Cyprus and Slovakia.
[3] http://www.kormany.hu/hu/nemzeti-fejlesztesi-miniszterium/infokommunikacioert-felelos-allamtitkarsag/hirek/infokommunikacios-akciotervet-fogadott-el-a-kormanyf

1 Connectivity

1 Connectivity	Hungary		Cluster	EU
	rank	score	score	score
DESI 2018	**18**	**61.7**	**55.0**	**62.6**
DESI 2017	18	57.7	50.1	58.5

	Hungary					EU
	DESI 2018			**DESI 2017**		**DESI 2018**
	value		rank	value	rank	value
1a1 Fixed Broadband Coverage % households	95% 2017	→	22	95% 2016	22	97% 2017
1a2 Fixed Broadband Take-up % households	78% 2017	↑	10	72% 2016	11	75% 2017
1b1 4G Coverage % households (average of operators)	91% 2017	↓	18	92% 2016	12	91% 2017
1b2 Mobile Broadband Take-up Subscriptions per 100 people	49 2017	↑	28	43 2016	28	90 2017
1c1 Fast Broadband (NGA) Coverage % households covered by VDSL, FTTP or Docsis 3.0	82% 2017	↑	17	81% 2016	16	80% 2017
1c2 Fast Broadband Take-up % homes subscribing to >= 30Mbps	49% 2017	↑	10	40% 2016	10	33% 2017
1d1 Ultrafast Broadband Coverage % households covered by FTTP or Docsis 3.0	74% 2017		13	NA		58% 2017
1d2 Ultrafast Broadband Take-up % homes subscribing to >= 100Mbps	29.8% 2017	↑	7	21.8% 2016	7	15.4% 2017
1e1 Broadband Price Index Score (0 to 100)	85 2017	↑	18	82 2016	19	87 2017

On Connectivity, Hungary scores slightly below the EU average, and ranks 18th, the same position as last year (as measured in line with DESI 2018 methodology). Although fixed broadband coverage remained at 95 % of homes, fast broadband coverage increased slightly in 2017 to 82 % from 81 % in 2016. In Hungary, there is very strong platform-based competition, which is best illustrated by the fact that two of the three local incumbent telephony operators belong to cable operators. There was significant progress in the take-up of fixed broadband (growth to 78% from 72%), which surpasses the EU average (of 75%). Nearly half (49%) of homes subscribe to at least 30 Mbps, as opposed to the EU average of 33%. In addition, Hungary scores well above the average on ultrafast connectivity mainly as a result of its widespread cable networks: coverage stands at 74 % (58 % in the EU) and take-up at 29.8 % (15.4 % in the EU) In contrast, mobile broadband coverage is not increasing and mobile broadband take-up is the lowest in the EU (49 subscription per 100 people compared with 90 in the EU). This may be due to the fact that prices for mobile phone users are persistently among the highest ones in Europe. At the same time, the fixed broadband price index is close to the EU average.

The development of digital infrastructure is one of the pillars of Hungary's 2014-2020 National Info-communication strategy. This strategy was updated at the end of 2015 with the adoption of the Digital Success Programme and the launch of the Superfast Internet

Programme. The Superfast Internet Programme aims to cover the whole country with NGA networks of at least 30 Mbps by the end of 2018. The programme started in 2016 with a mapping exercise to identify areas in which telecom operators are expected to make the full investment on their own. For areas that are not economically viable, a EUR 250 million State aid scheme has been developed to ensure broadband roll-out. The programme is co-funded by the European Structural Funds and by the Hungarian State, except for Budapest and its suburban area, for which only domestic resources will be used. The vast majority of projects under the Superfast Internet Programme will deploy FTTH technology, enabling speeds in line with the gigabit society targets.

To boost demand, the government has launched two initiatives directly affecting retail prices. First, a preferential VAT rate (18 % as opposed to the general rate of 27 %) has applied to broadband subscriptions since January 2017. Second, a 'digital welfare basic tariff' trademark has been created. This targets non-users by offering them a basic broadband package (fixed or mobile) at a 10-15% price discount.

In June 2017, the 5G Coalition (5GC), initiated by the Digital Success Programme, was formed with the aim of making Hungary a major European centre of 5G developments and taking a leading role in the region in testing 5G-based applications. Hungary intends to be among the first countries in the world introduce 5G. The 5GC consists of domestic and multinational companies, universities and academia, professional organisations, chambers, ministries and government institutions.

While the above initiatives targeting both fixed and mobile markets as well as both demand and supply aim to further increase the coverage and take-up of broadband in Hungary, their effects may be mitigated by the fact that the telecommunication sector in Hungary was subject to extensive taxation and various levies in recent years that may limit the capabilities of telecom operators to invest, and that price competition in mobile broadband appears to be mitigated. Predictability of investment and competitive conditions could have been supported in recent years by a more timely review of wholesale market regulation.

2 Human Capital

2 Human Capital	Hungary		Cluster	EU
	rank	score	score	score
DESI 2018	**21**	**48.0**	**42.2**	**56.5**
DESI 2017	18	49.2	40.6	54.6

	Hungary				EU
	DESI 2018		**DESI 2017**		**DESI 2018**
	value	rank	value	rank	value
2a1 Internet Users	**76%** ↓	**20**	**78%**	**15**	**81%**
% individuals	2017		2016		2017
2a2 At Least Basic Digital Skills	**50%** ↓	**21**	**51%**	**18**	**57%**
% individuals	2017		2016		2017
2b1 ICT Specialists	**3.6%** →	**14**	**3.6%**	**13**	**3.7%**
% total employment	2016		2015		2016
2b2 STEM Graduates[4]	**12.6** ↑	**27**	**12.2**	**27**	**19.1**
Per 1000 individuals (aged 20-29)	2016		2014		2015

On Human Capital, Hungary ranks 21th among EU countries. It is below the EU average and progressed at a relatively slow pace last year. The number of internet users stands at 76 %, compared with 81% in the EU. Only 50% of the population has at least basic digital skills, which is not improving. There is large skills gap: only 21 % of people aged 55 and above (34% in the EU) and only 25 % of people with low education (30 % in the EU) has at least basic digital skills. As for advanced skills, on ICT specialists Hungary is just below the EU average, and the number of STEM graduates (science, technology and mathematics) remained relatively low despite a slight increase.

The Digital Success Programme 2.0 (DJP 2.0) includes both the already ongoing programme elements of the former strategy and the planned new ones. Its key priorities include the digitisation of education, the development of digital competences among adults above the age of 45, small enterprises and micro businesses as well as public servants. Obtaining digital competences is one of the three pillars of the strategy and ensuring that citizens and the workforce are well prepared to meet the challenges of the digital age remains important. Following a comprehensive review of the issue of lack of digital skills, the Digital Success Programme 2.0 provides a plethora of solutions and actions that are necessary to bridge the digital gap in Hungary.

Hungary continued to implement the 'National Infocommunication Strategy', concentrating mainly on the basic digital skills of the working-age population[5] and promoting the use of e-government services. Based on the experiences gained so far, elderly citizens and citizens with a low level of digital skills have mostly been interested in the trainings. These initiatives to increase general digital literacy continue to be underpinned by a growing, country-wide

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[4] The most recent data has been used in DESI 2018. It may refer to 2016 or 2015 depending on the Member State. This is reflected in the 2018 DESI ranking. Historical data has been updated by Eurostat.

[5] See: Decreasing Digital Skills Gap (EDIOP 6.1.2)

network of Community Internet Access Points with the aim of providing the necessary basic IT infrastructure and professional support.

The shortage of ICT professionals is being addressed by a specific programme that aims to increase the number of university and college graduates with IT qualifications and improve the quality of their skills. The programme also builds on the cooperation between training institutions and ICT companies and is supported by promotional activities. The goal of the initiative is to double the number of IT graduates by 2021.

The National Digital Jobs Coalition also takes part in the implementation of the Digital Labour Force Programme and Hungary also participates in the EU Code Week initiative.

The ambitions of the digital competences related parts of the Digital Success Programme 2.0 remain high. The implementation of the different projects is in progress and there is a clear interest from citizens in taking part in the trainings offered. The government expects further results from the remaining stages of the ongoing programmes as well as from the upcoming new ones. Despite the updated comprehensive strategic policy framework and timely implementation of several programme elements, a tangible increase in the level of digital competences has yet to be achieved.

Highlight 2018: Program Your Future!

This programme aims to increase the number of students that graduate in ICT and improving the cooperation between the educational institutions and the ICT sector. In Hungary, there are 22 000 unfilled vacancies in ICT. The project has a budget of HUF 8.2 billion (EUR 26.4 million), and is co-financed by the EU.

The project is built along the following pillars

- develop a knowledge base supporting the renewal of IT education
- develop cooperation between training institutions and ICT businesses (teaching pool, internship programme and training packages)
- increase the socio-economic recognition and popularity of IT professions (orientation events in secondary schools)
- implementation of communication activities (national media campaign)
- create three Demonstration and Experience Centres.

3 Use of Internet Services

3 Use of Internet Services	Hungary		Cluster	EU
	rank	score	score	score
DESI 2018	**12**	**53.6**	**41.0**	**50.5**
DESI 2017	12	51.7	38.7	47.5

	Hungary				EU
	DESI 2018		DESI 2017		DESI 2018
	value	rank	value	rank	value
3a1 News	**85%** ↓	**10**	88%	6	72%
% individuals who used Internet in the last 3 months	2017		2016		2017
3a2 Music, Videos and Games	**81%**	**12**	81%	12	78%
% individuals who used Internet in the last 3 months	2016		2016		2016
3a3 Video on Demand	**8%**	**24**	8%	24	21%
% individuals who used Internet in the last 3 months	2016		2016		2016
3b1 Video Calls	**59%** ↑	**6**	54%	7	46%
% individuals who used Internet in the last 3 months	2017		2016		2017
3b2 Social Networks	**84%** ↑	**2**	83%	1	65%
% individuals who used Internet in the last 3 months	2017		2016		2017
3c1 Banking	**49%** ↑	**22**	44%	22	61%
% individuals who used Internet in the last 3 months	2017		2016		2017
3c2 Shopping	**49%** ↑	**20**	48%	20	68%
% individuals who used Internet in the last 12 months	2017		2016		2017

In general, Hungarian internet users engage in a broad range of activities online. Hungary scores above the EU average in the Use of Internet Services dimension of the DESI. 84 % use social networks, which is the second highest in the EU, 85 % read news (72 % in the EU), and 59 % make video calls (46 % in the EU). Hungary ranks first on the use of social media.

Nevertheless, the uptake of transactional services online remains low: only 49% use eBanking and e-commerce, as opposed to 61% and 68% respectively in the EU.

4 Integration of Digital Technology

4 Integration of Digital Technology	Hungary		Cluster	EU
	rank	score	score	score
DESI 2018	**25**	**25.1**	**29.2**	**40.1**
DESI 2017	24	23.5	26.7	36.7

	Hungary					EU
	DESI 2018			**DESI 2017**		**DESI 2018**
	value		rank	value	rank	value
4a1 Electronic Information Sharing	**14%**	↓	**28**	**16%**	**27**	**34%**
% enterprises	2017			2015		2017
4a2 RFID	**2.8%**	↓	**23**	**3.9%**	**16**	**4.2%**
% enterprises	2017			2014		2017
4a3 Social Media	**15%**	↑	**22**	**13%**	**21**	**21%**
% enterprises	2017			2016		2017
4a4 eInvoices	**8.4%**	↑	**26**	**8.1%**	**25**	**NA**
% enterprises	2017			2016		2017
4a5 Cloud	**10.7%**	↑	**22**	**8.0%**	**23**	**NA**
% enterprises	2017			2016		2017
4b1 SMEs Selling Online	**12.5%**	↑	**20**	**11.7%**	**20**	**17.2%**
% SMEs	2017			2016		2017
4b2 E-commerce Turnover	**10.0%**	↑	**14**	**7.6%**	**18**	**10.3%**
% SME turnover	2017			2016		2017
4b3 Selling Online Cross-border	**5.2%**	↑	**24**	**4.5%**	**23**	**8.4%**
% SMEs	2017			2015		2017

On the Integration of Digital Technology by businesses, Hungary's ranks 25th, well below the EU average. Hungary has an alarmingly low share of enterprises sharing information electronically (14 % compared with 34 % in the EU). Although, the use of social media, eInvoices and cloud services all grew, Hungary did not manage to close the gap with the EU. The same applies to e-commerce: only 12.5 % of SMEs sell online, which is slightly higher than a year ago, but still below the EU average of 17.2 %.

The Digital Success Programme 2.0 (DJP 2.0) aims to increase the digital preparedness of micro-enterprises and SMEs and to define digital strategies for the different sectors of the economy (such as agriculture and tourism) in 2018. In the Modern Businesses Programme – which focuses on awareness-raising activities and help businesses becoming digital, more than 6.000 company audits had been conducted and 128 events organised by November 2017. In addition, in the Support of Business Digital Developments project more than one thousand SMEs received grants and loan financing to carry out investment in ICT developments.

The government is planning to continue and extend its programmes to digitise companies, which is absolutely vital to improve the competitiveness of the Hungarian economy.

5 Digital Public Services

5 Digital Public Services	Hungary		Cluster	EU
	rank	score	score	score
DESI 2018	**27**	**40.4**	**48.0**	**57.5**
DESI 2017	28	33.6	44.2	53.7

	Hungary					EU
	DESI 2018			**DESI 2017**		**DESI 2018**
	value		rank	value	rank	value
5a1 eGovernment Users[6]	**45%**	↑	**24**	**38%**	**26**	**58%**
% internet users needing to submit forms	2017			2016		2017
5a2 Pre-filled Forms	**28**	↑	**23**	**23**	**23**	**53**
Score (0 to 100)	2017			2016		2017
5a3 Online Service Completion	**75**	↑	**25**	**63**	**25**	**84**
Score (0 to 100)	2017			2016		2017
5a4 Digital Public Services for Businesses	**73**	↑	**24**	**68**	**23**	**83**
Score (0 to 100) - including domestic and cross-border	2017			2016		2017
5a5 Open Data	**48%**	↑	**26**	**43%**	**23**	**73%**
% of maximum score	2017			2016		2017
5b1 eHealth Services	**7%**		**26**	**NA**		**18%**
% individuals	2017					

In Hungary, Digital Public Services remain one of the most challenging areas of the digital economy and society. Hungary ranks 23rd on the re-use of information across administrations to make life easier for citizens (Pre-filled Forms) and 25th on the sophistication of services (Online Service Completion). eGovernment users stood at 45 % in 2017 (EU average: 58 %). As for open data, Hungary went up by 5 percentage points, but did not manage to close the gap with the EU. At the same time, the use of electronic health services was low as of March 2017.

In 2017, the Central Governmental Service Bus (KKSzB) was launched. It aims to ensure a service-oriented and standardised connection between the base registries and the different specific public administration information systems, which can contribute to increasing the pre-filling of forms. In January 2018, the Municipality ASP system at the local government level was extended to cover 93 % of the Hungarian municipalities. As for the user side, the former Java based forms (ÁNYK) are gradually being replaced by the application of user-friendly online forms. In addition, the new customisable electronic administration user interface (SZÜF) was launched in January 2018, which will be the new single point of contact portal. According to the E-Administration act, all public administration bodies providing eGovernment services are obliged to publish their services on the SZÜF portal. Also in January 2018, a new digital post service for businesses (Cégkapu) was launched.

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[6] The definition of this indicator has been changed. The new indicator measures eGovernment users as a percentage of those internet users needing to submit forms to the public administration.

The impact of all these developments and the forthcoming user-facing improvements are to be evaluated during the next eGovernment benchmarking process.

As for eHealth, a new nationwide eHealth platform (EESZT) was launched in November 2017. All pharmacies, general practitioners and public inpatient and outpatient health care providers are now obliged to use the platform. This platform manages also ePrescriptions.