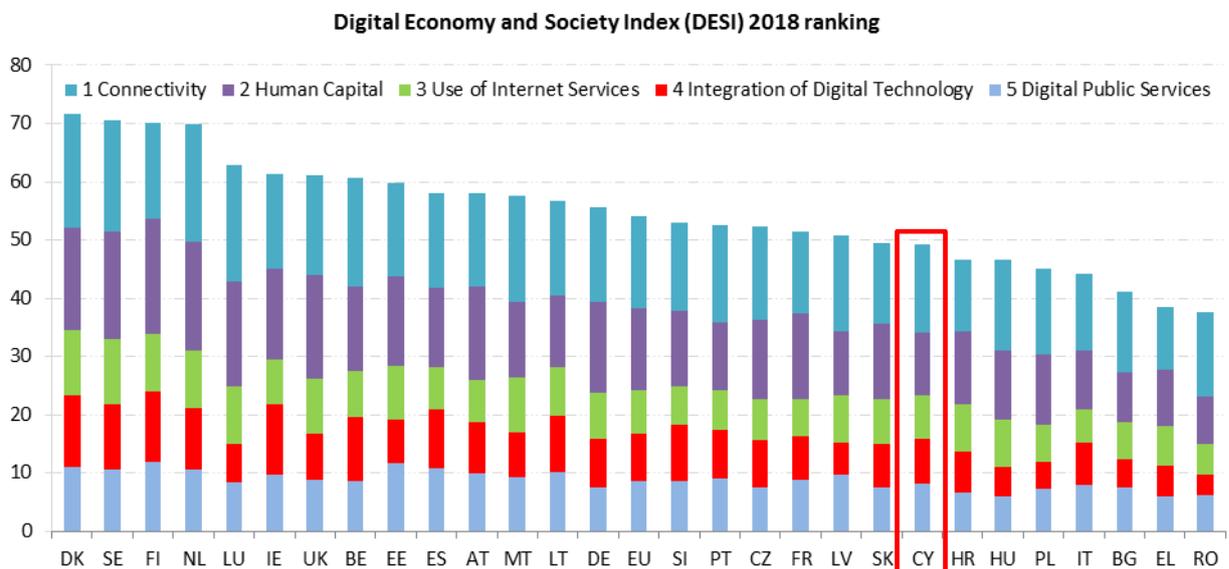


Digital Economy and Society Index (DESI)¹ 2018 Country Report Cyprus

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>.



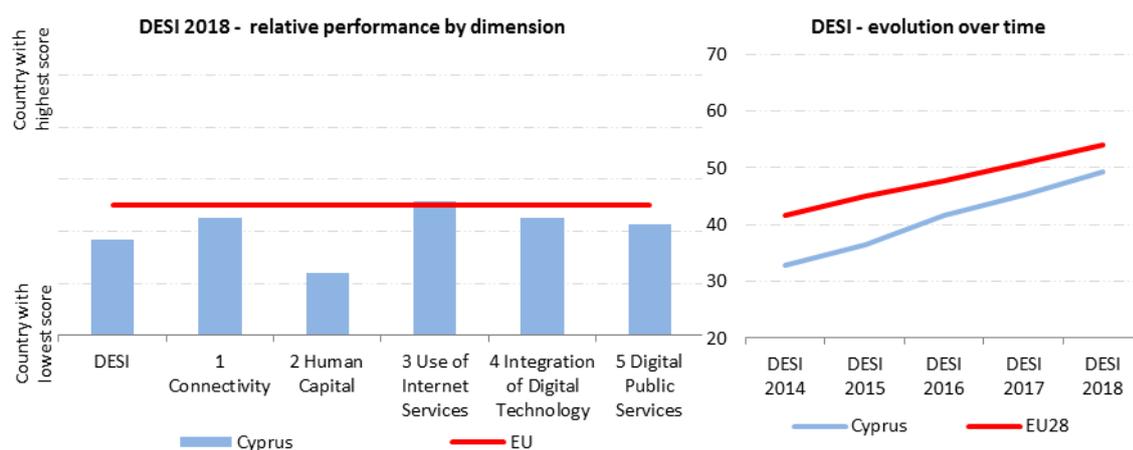
¹ <https://ec.europa.eu/digital-single-market/en/desi>

	Cyprus		Cluster	EU
	rank	score	score	score
DESI 2018	21	49,3	43,5	54,0
DESI 2017	21	45,2	40,4	50,8

Cyprus ranks 21st out of the 28 EU Member States. Overall, Cyprus is progressing slowly but steadily. It shows improvement in all aspects of DESI. Even though it is ranked 21st, Cyprus is relatively close to the EU average. Improvement in digital skills is crucial, since, although internet users engage in a wide variety of online activities, low levels of digital skills could hold back its digital economy and society. Moreover, despite some progress in the past few years, Cyprus still lags behind the EU average in supply and demand for eGovernment services.

Cyprus belongs to the low performing cluster of countries².

In 2017, “Cyprus’ new holistic and integrated national industrial strategy 2017-2030”³ was announced by the Ministry of Energy, Commerce, Industry and Tourism (MoECIT). The strategy focuses on increasing industry’s innovation and productivity through digitisation and the development of digital skills.



² Low-performing countries are Romania, Greece, Bulgaria, Italy, Poland, Hungary, Croatia, Cyprus and Slovakia.

³ <http://www.mcit.gov.cy/mcit/sit/sit.nsf/All/FBC207AE9BC8BE69C225819C0040030F?OpenDocument>

1 Connectivity

1 Connectivity	Cyprus		Cluster	EU
	rank	score	score	score
DESI 2018	19	60.6	55.0	62.6
DESI 2017	20	55.5	50.1	58.5

	Cyprus				EU
	DESI 2018		DESI 2017		DESI 2018
	value	rank	value	rank	value
1a1 Fixed Broadband Coverage % households	100% →	4	100%	3	97%
	2017		2016		2017
1a2 Fixed Broadband Take-up % households	76% ↑	12	72%	12	75%
	2017		2016		2017
1b1 4G Coverage % households (average of operators)	77% ↑	25	64%	27	91%
	2017		2016		2017
1b2 Mobile Broadband Take-up Subscriptions per 100 people	101 ↑	8	89	9	90
	2017		2016		2017
1c1 Fast Broadband (NGA) Coverage % households covered by VDSL, FTTP or Docsis 3.0	88% →	12	88%	10	80%
	2017		2016		2017
1c2 Fast Broadband Take-up % homes subscribing to >= 30Mbps	9% ↑	27	3%	28	33%
	2017		2016		2017
1d1 Ultrafast Broadband Coverage % households covered by FTTP or Docsis 3.0	85%	8	NA		58%
	2017				2017
1d2 Ultrafast Broadband Take-up % homes subscribing to >= 100Mbps	0.2% ↑	27	0.1%	27	15.4%
	2017		2016		2017
1e1 Broadband Price Index Score (0 to 100)	65 ↑	27	62	26	87
	2017		2016		2017

Cyprus ranks 19th for connectivity (compared to 20th in 2017) and this position reflects its overall DESI ranking (20th). It performs well in fixed, fast and ultrafast broadband coverage and in fixed and mobile broadband take-up. In all these categories, Cyprus is above the EU average and its scores are improving (with the exception of fixed broadband coverage, which is close to 100%). On the other hand, it lags behind in 4G coverage, fast and ultrafast broadband uptake and the broadband price index. In all these categories, it ranks among the lowest (25th for 4G coverage and 27th for the other three indicators). Improvements in 4G coverage are visible and promising (77% in 2017, from 64% in 2016, up two positions). Taking into account investment by mobile network operators, Cyprus is likely to further bridge the gap in the next few years. Fast broadband take-up is also improving, reaching 9% in 2017 compared to 3% in 2016. On the other hand, ultrafast broadband uptake remains negligible (0.2% in 2017), despite very widespread coverage of networks with such capacity, and this is unlikely to change as long as the current retail offerings remain unattractive.

The current Cyprus Broadband Plan sets targets in line with the Digital Agenda for Europe but is not yet adjusted to the targets of the European Gigabit Society⁴ or the 5G Action Plan⁵.

⁴ Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: Connectivity for a Competitive Digital Single Market — Towards a European Gigabit Society (COM (2016) 587 final).

⁵ Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions — 5G for Europe: An action plan (COM (2016) 588 final).

The Plan does not provide for supply side measures, taking into account the market players' stated intention to expand their broadband networks. However, it is acknowledged that the deployment of fast and ultrafast broadband networks in remote, rural areas is not commercially viable. Most actions, ongoing and planned, focus on stimulating demand. The relevant Action Plan for 2015-2017 for the Digital Strategy included awareness campaigns, training programmes, and measures to build confidence in the security of online transactions, reduce broadband prices (a crucial measure), digitalise government and provide (limited) free wi-fi access in public buildings and all villages. Implementation of the plan is behind schedule and for some of the projects the money has yet to be committed. Among the challenges to carrying out the plan quickly are the court actions customarily brought in the course of most public tenders, delaying matters such as eGovernment projects, until the relevant rulings are issued.

Fixed network coverage is among the factors boosting Cyprus' ability to benefit from the digital economy. Implementation of the Broadband Cost Reduction Directive (already transposed into national law) and additional spectrum assignment starting in the first half of 2018 will reinforce fixed and mobile coverage, particularly for high and ultra-high-speed networks, and boost coverage in rural areas. The main challenge, however, is still to encourage take-up of high-speed broadband, which is influenced by factors such as pricing, a lack of compelling content and low digital literacy. The launch of new, high-speed products and the corresponding wholesale VULA offering (recently announced by the incumbent operator, CYTA) can promote competitive uptake of fast and especially ultrafast services. The expected update of the Broadband Plan provides a good opportunity to bring it in line with the objectives of the Gigabit Society and the 5G action plan, to list specific actions, making effective use of tools available at European level, and to set out arrangements for efficient execution and close monitoring.

2 Human Capital

2 Human Capital	Cyprus		Cluster	EU
	rank	score	score	score
DESI 2018	24	43,0	42,2	56,5
DESI 2017	25	37,5	40,6	54,6

	Cyprus				EU	
	DESI 2018 value	rank	DESI 2017 value	rank	DESI 2018 value	rank
2a1 Internet Users % individuals	79% 2017	↑ 14	74% 2016	19	81% 2017	
2a2 At Least Basic Digital Skills % individuals	50% 2017	↑ 19	43% 2016	26	57% 2017	
2b1 ICT Specialists % individuals	2,2% 2016	→ 25	2,2% 2015	24	3,7% 2016	
2b2 STEM Graduates⁶ Per 1000 individuals (aged 20-29)	9,8 2016	↑ 28	7,5 2014	28	19,1 2015	

In human capital, Cyprus' performance is below the EU average, but progress is being made. In 2017, 79% of the Cypriot population used the internet regularly (versus 74% in 2016), but only 50% possessed at least basic digital skills. Nowadays, digital skills and competencies are needed for nearly all jobs where digital technology complements existing tasks, and shortages can be an important barrier to the country's economic development. Moreover, Cyprus has a low share of Science, Technology, Engineering and Math (STEM) graduates (9.8), ranking lowest among EU countries. The country has also a lower share of ICT specialists in the workforce (2.2%) than the EU average (3.7%).

The National Coalition for Digital Jobs⁷ is the main lever working to address the shortage of digital skills. Students can acquire digital certification at no cost. Additionally, it holds various competitions for coding, robotics, etc., in schools.

The Ministry of Education and Culture (MoEC) places particular emphasis on helping younger people acquire necessary digital skills: computer science is taught as a subject in primary schools, for example, and the ministry helps stage the Cyprus Digital Championship. In this endeavour, Cyprus has some important barriers to overcome. ICT professionals do not receive the necessary IT training, because the academic programmes do not meet the needs of the industry with regard to ICT qualifications. To solve this, the ministry has set up a committee to analyse in depth the performance of Cyprus' students. After discussion with academic stakeholders, an action plan has been drafted to improve educational outcomes, prioritising STEM graduates. It will begin in the 2018-2019 school year.

⁶ 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.

⁷ <http://www.digitaljobs.cyprus-digitalchampion.gov.cy/el/page/home>

3 Use of Internet

3 Use of Internet	Cyprus		Cluster	EU
	rank	score	score	Score
DESI 2018	17	51,1	41,0	50,5
DESI 2017	13	50,9	38,7	47,5

	Cyprus				EU
	DESI 2018		DESI 2017		DESI 2018
	value	rank	Value	rank	value
3a1 News % individuals who used Internet in the last 3 months	80% ↑	14	73%	19	72%
	2017		2016		2017
3a2 Music, Videos and Games % individuals who used Internet in the last 3 months	86%	7	86%	7	78%
	2016		2016		2016
3a3 Video on Demand % individuals who used Internet in the last 3 months	12%	20	12%	20	21%
	2016		2016		2016
3b1 Video Calls % individuals who used Internet in the last 3 months	70% ↓	3	72%	2	46%
	2017		2016		2017
3b2 Social Networks % individuals who used Internet in the last 3 months	78% ↓	6	79%	4	65%
	2017		2016		2017
3c1 Banking % individuals who used Internet in the last 3 months	34% ↓	26	37%	25	61%
	2017		2016		2017
3c2 Shopping % internet users (last year)	39% ↑	26	38%	26	68%
	2017		2016		2017

Cypriots are active internet users engaging in a wide range of online activities, such as reading news online, listening to music, watching films and playing games online, using the internet to communicate via voice or video calls and participating in social networks. For most of these activities, engagement among Cypriots is higher than overall in the EU.

On the other hand, regarding online interactions Cyprus is not progressing compared to last year, with 34% of individuals using eBanking services and 39% shopping online. The “ICT Household Survey for Cyprus” carried out by the Statistical Service of Cyprus (Cystat), shows that the main factor holding back the development of e-commerce is that 48.3% of Cypriots using the Internet prefer to shop in person. The second is the lack of a payment card for payments over the Internet, at 25.3%. The third is the lack of digital skills, at 18.4%, while security and privacy concerns are fourth, at 15.6%.

Cyprus ranks 17th in the Use of Internet Services, the area in which it has declined most since the previous year (it was 13th in 2016). In order to increase the number of online transactions, it is important that the national Cybersecurity strategy⁸ places particular emphasis on action to improve confidence in the security of online transactions.

⁸ <http://www.ocecpr.org.cy/content-menu/7-stratigiki/3-kyvernoasfaleia>

4 Integration of Digital Technology

4 Integration of Digital Technology	Cyprus		Cluster	EU
	rank	score	score	score
DESI 2018	17	37,7	29,2	40,1
DESI 2017	18	34,2	26,7	36,7

	Cyprus				EU
	DESI 2018		DESI 2017		DESI 2018
	value	rank	value	rank	value
4a1 Electronic Information Sharing % enterprises	35% 2017	↓ 14	43% 2015	6	34% 2017
4a2 RFID % enterprises	6,1% 2017	↑ 5	3,1% 2014	18	4,2% 2017
4a3 Social Media % enterprises	37% 2017	↑ 3	35% 2016	4	21% 2017
4a4 eInvoices % enterprises	8,8% 2017	↑ 25	6,0% 2016	26	NA 2017
4a5 Cloud % enterprises	12,3% 2017	↑ 20	8,7% 2016	22	NA 2017
4b1 SMEs Selling Online % SMEs	11,4% 2017	↓ 21	12,4% 2016	19	17,2% 2017
4b2 E-commerce Turnover % SME turnover	6,3% 2017	↑ 23	4,7% 2016	25	10,3% 2017
4b3 Selling Online Cross-border % SMEs	8,8% 2017	↑ 13	8,3% 2015	14	8,4% 2017

In integration of digital technologies by businesses, Cyprus is progressing slowly. Companies do engage in the use of social media and do trade online, but are less inclined to take up new technologies such as Cloud and RFID. SMEs' online selling services declined, to 11.4% from 12.4% the previous year. On the other hand, e-commerce turnover increased from 4.7% to 6.3%.

E-commerce is considered one of the top priorities of the MoECIT. With a one-year delay, the Action Plan for Growth⁹, drafted by the Presidency's Unit for Administrative Reform and approved by the Council of Ministers in February 2015, was again approved, as updated, in November 2016. It includes e-commerce support actions with the aim of enhancing the competitiveness of the economy. The main goal is to establish a competitive and dynamic environment to develop basic infrastructure, by encouraging enterprises to take advantage of the new technological opportunities. The strategy will be co-financed by the Republic of Cyprus and the European Union, with a total budget of EUR 3.3 million (for 2014-2020), and the first call should be announced in the first half of 2018.

Cypriot companies would also benefit from specific digitalisation plans for industry. A unified industry strategy is currently being drafted by the MoECIT in cooperation with the Cyprus Chamber of Commerce and Industry (CCCI). Finally, a new law approved in December 2016 includes tax incentives for investing in innovative SMEs and start-ups.

⁹ <https://ec.europa.eu/info/sites/info/files/2017-european-semester-national-reform-programme-cyprus-en.pdf>

5 Digital Public Services

5 Digital Public Services	Cyprus		Cluster	EU
	rank	score	score	score
DESI 2018	18	54,8	48,0	57,5
DESI 2017	17	50,0	44,2	53,7

	Cyprus				EU
	DESI 2018		DESI 2017		DESI 2018
	value	rank	value	rank	value
5a1 eGovernment Users¹⁰ % internet users needing to submit forms	49% ↑	21	48%	20	58%
	2017		2016		2017
5a2 Pre-filled Forms Score (0 to 100)	58 ↑	13	52	14	53
	2017		2016		2017
5a3 Online Service Completion Score (0 to 100)	76 ↑	23	73	22	84
	2017		2016		2017
5a4 Digital Public Services for Businesses Score (0 to 100) - including domestic and cross-border	91 →	10	91	8	83
	2017		2016		2017
5a5 Open Data % of maximum score	75% ↑	15	57%	14	73%
	2017		2016		2017
5b1 eHealth Services % individuals	9%	25	NA		18%
	2017				

In digital public services, Cyprus remains, overall, below the EU average. However, regarding pre-filled forms offered for public services, Cyprus has progressed compared to last year, scoring 58, while the EU average is 53. Online service completion and digital public services for businesses that are active across borders remained at the same level as in 2016. Open data, on the other hand, is steadily advancing, with Cyprus scoring 75%, almost 20 percentage points (pp.) higher than last year's scores. The number of users of eGovernment services remained at the same level compared to last year, while the EU average is 9 pp. higher.

Cyprus considers eGovernment a priority, in tandem with Public Service Administration Reform. Thus, one of the pillars of the Growth Reform is eGovernment. Within this context, the Presidency has established an eGovernment Team, which is part of the Unit of Administrative Reform, and which is responsible for coordinating and facilitating the provision of eGovernment, to accelerate the implementation of the actions of the eGovernment strategy and to support the eGovernment Board. The eGovernment Board, with membership at the highest level, is responsible for approving eGovernment actions, monitoring their progress, finding solutions to significant problems that affect the implementation of eGovernment actions and taking political decisions regarding eGovernment.

The goal of the eGovernment strategy in Cyprus is threefold: offer even more e-services in a simple and user-centric way; satisfy citizens, businesses and public administrations by providing services through different channels (e.g. end-to-end public services, call centres, use of the Point of Single Contact for businesses); and increase the efficiency of public

¹⁰ 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.

administrations by reducing the administrative burden, simplifying the Regulatory Framework and improving administrative procedures.

The government has already started an awareness campaign to inform citizens and businesses about the benefits of using ICT and internet in order to increase take-up. In addition, training programmes will be introduced to improve citizens' digital skills, putting emphasis on the use of digital services.

Highlight 2018: Cyprus Government Secure Gateway “ARIADNI”¹¹

ARIADNI provides the foundation for delivery of the vision for ‘Joined-up Government’. ARIADNI will constitute the central passage of all electronic transactions between citizens, businesses, institutions and government, available 24/7. Currently, the system provides around 65 e-services. The Action Plan on digitisation that is in progress includes new public e-services to be provided through ARIADNI.

ARIADNI is enriched with information related to governmental procedures and services that are provided to both citizens and businesses. Users are able to find a full set of information for each governmental procedure including its description, relevant legislation, required certifications, fees, etc. The government procedures are categorised by sector.

¹¹ <https://cge.cyprus.gov.cy/re/public/>