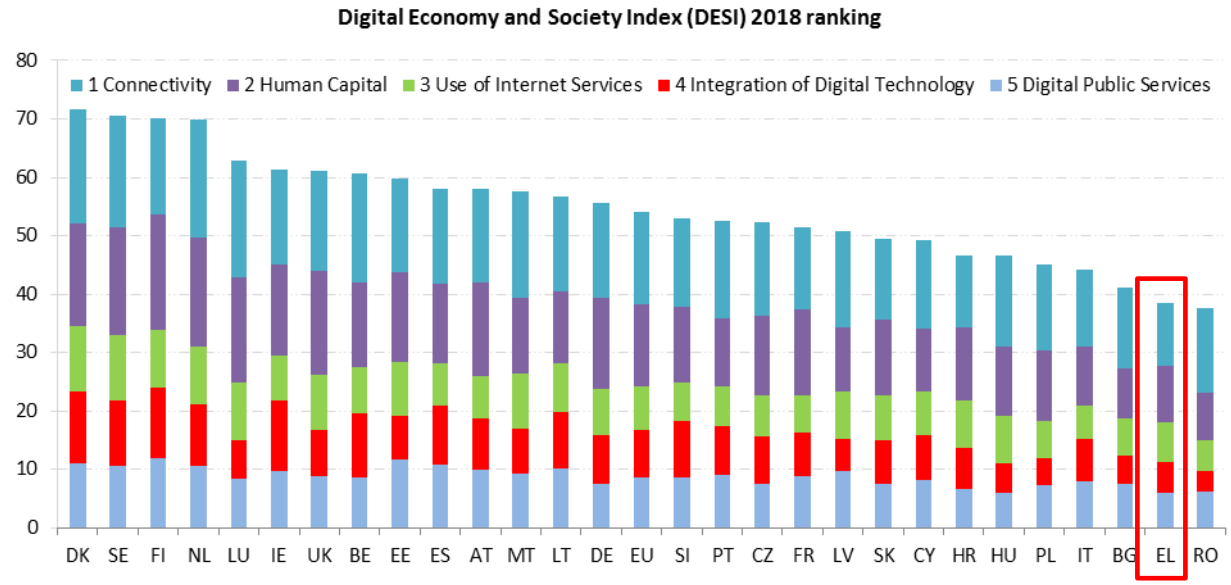
Digital Economy and Society Index (DESI)[1] 2018 Country Report Greece

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

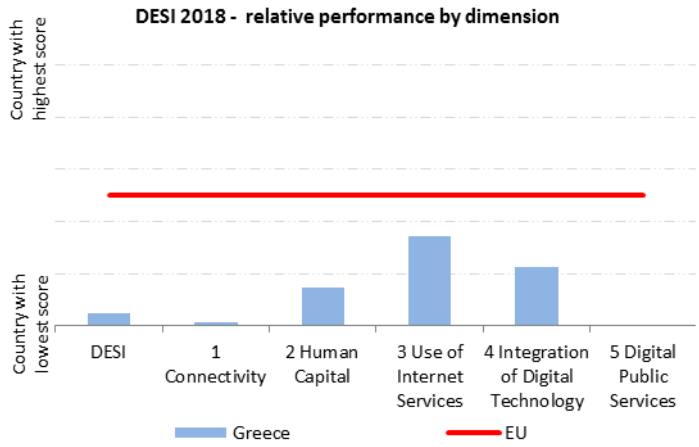
	Greece		Cluster	EU
	rank	score	score	score
DESI 2018	**27**	**38.4**	**43.5**	**54.0**
DESI 2017	27	35.5	40.4	50.8

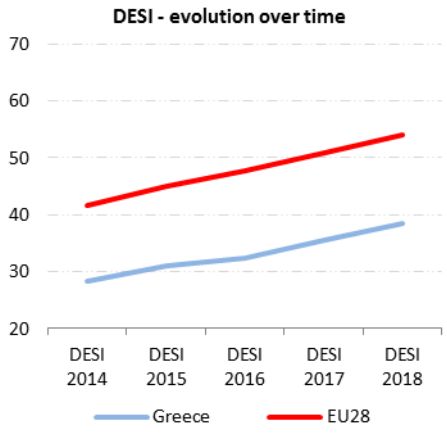
Greece ranks 27th out of the 28 EU Member States. Overall, in recent years, Greece has not made much progress relative to other Member States. It progressed slightly slower than the EU average over the last year.

In connectivity, the transition to fast broadband connections is slower than in other EU Member States. On the positive side, 4G coverage has increased in Greece and is now close to the EU average. Greeks are active users of internet services, and company use of social media is in line with the EU average. But the integration of more sophisticated digital technologies remains low, though the use of eInvoices has progressed to some extent. Greece's performance in digital public services and digital skills remains low and can act as a brake on the further development of the digital economy and society.

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

Greece has had a Ministry of Digital Policy, Telecommunications and Media since November 2016, and a National Digital Strategy (2016-2021),[3] as well as a National Strategy for Administrative Reform (2017-2019), including guidelines for eGovernment and the development of digital skills for all.





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

[3] http://www.mindigital.gr/index.php/κείμενα-στρατηγικής/220-digital-strategy-2016-2021

1 Connectivity

1 Connectivity	Greece		Cluster	EU
	rank	score	score	score
DESI 2018	**28**	**43.1**	**55.0**	**62.6**
DESI 2017	28	39.8	50.1	58.5

	Greece					EU
	DESI 2018			DESI 2017		DESI 2018
	value		rank	value	rank	value
1a1 Fixed Broadband Coverage % households	**99%** 2017	→	**11**	**99%** 2016	**10**	**97%** 2017
1a2 Fixed Broadband Take-up % households	**69%** 2017	↑	**21**	**66%** 2016	**21**	**75%** 2017
1b1 4G Coverage % households (average of operators)	**88%** 2017	↑	**22**	**80%** 2016	**22**	**91%** 2017
1b2 Mobile Broadband Take-up Subscriptions per 100 people	**59** 2017	↑	**27**	**50** 2016	**27**	**90** 2017
1c1 Fast Broadband (NGA) Coverage % households covered by VDSL, FTTP or Docsis 3.0	**50%** 2017	↑	**28**	**44%** 2016	**28**	**80%** 2017
1c2 Fast Broadband Take-up % homes subscribing to >= 30Mbps	**7%** 2017	↑	**28**	**5%** 2016	**27**	**33%** 2017
1d1 Ultrafast Broadband Coverage % households covered by FTTP or Docsis 3.0	**0.4%** 2017		**28**	**NA**		**58%** 2017
1d2 Ultrafast Broadband Take-up % homes subscribing to >= 100Mbps	**0.01%** 2017	→	**28**	**0.01%** 2016	**28**	**15.4%** 2017
1e1 Broadband Price Index Score (0 to 100)	**67** 2017	↓	**25**	**69** 2016	**24**	**87** 2017

With an overall connectivity score of 43.1 Greece ranks lowest among the Member States. Greece features wide availability of fixed broadband with 99 % coverage (EU average - 97 %) but take-up (69 %) is still progressing slowly. Prices remain relatively high compared to the EU average and did not improve over the year. The transition to fast broadband connections is slower than in other Member States. In mobile broadband: 4G coverage has increased by 8 percentage points to 88 %, close to the EU average of 91 %. In take-up however despite a 9 point increase (59/100), it remains below the EU average of 90/100. Subscriptions to fast broadband have increased by 2 percentage points to 7 %, remaining well below the EU average of 33 %. Despite an increase of 6 percentage points, Greece remains last among the Member States in NGA coverage per household (50 %), far below the EU average of 80 %. Finally, Greece has almost no ultrafast broadband coverage and take-up compared to the EU average, which has progressively increased since last year.

However, it can reasonably be expected that as far as NGA network deployment is concerned, there will be positive developments in the near future, because the market has already entered a phase of deployment, thanks to the new regulatory measures adopted with regard to the markets for wholesale local access and wholesale central access to mass-market products. The initially accepted next generation network (NGN) plan included two main projects, none of which have started yet: a "Superfast Broadband Project" for individuals and another one for business (small and medium-sized enterprises) and the

extension of the Rural Broadband Project. The Greek authorities and the European Commission have had a number of discussions about the "Superfast Broadband Projects".[4] All parties involved are still discussing the projects, the financial allocations and the form.

Greece lags considerably behind in relation to the Digital Agenda for Europe targets set in the Broadband Strategy. To close the gap between Greece and the other Member States, the right conditions for private investment and for prompt release of public financing resources need to be created. Having completely transposed the Broadband Cost Reduction Directive in 2017, Greece now needs to focus on tackling the big delays in permit granting proceedings and on promoting synergies across sectors to effectively implement the Directive, harnessing the benefits for the rollout of NGA.

Highlight 2018: Broadband Network Development in White Rural Areas:[5] Winner of a European Broadband Award 2017.

The Greek RURAL Project is a public-private partnership expected to be finalised in May 2018, but more than 80 % of the project has already been implemented. The project provides remote and sparsely populated areas (white areas) with broadband coverage, gradually increasing to 30 Mbps, and a future-proof infrastructure for greater speeds. So far, it has provided more than half a million people with connectivity. The total cost of the project is EUR 199.7 million (of which EUR 143.8 million from EU Structural funds). The project aims to close the 'broadband gap' between remote, disadvantaged, traditionally 'white rural areas' and the rest of the country, by providing good, affordable connectivity services.

[4] Planning has been updated, taking account of the new Gigabit Society 2025 connectivity targets and the experience gained from developing the operators' network and broadband penetration so far.

[5] https://ec.europa.eu/digital-single-market/en/content/broadband-network-development-white-rural-areas-greece

2 Human Capital

2 Human Capital	Greece		Cluster	EU
	rank	score	score	score
DESI 2018	**26**	**38.2**	**42.2**	**56.5**
DESI 2017	26	36.7	40.6	54.6

	Greece					EU
	DESI 2018			DESI 2017		DESI 2018
	value		rank	value	rank	value
2a1 Internet Users	**67%**	↑	**26**	**66%**	**26**	**81%**
% individuals	2017			2016		2017
2a2 At Least Basic Digital Skills	**46%**	→	**25**	**46%**	**22**	**57%**
% individuals	2017			2016		2017
2b1 ICT Specialists	**1.4%**	↑	**28**	**1.2%**	**28**	**3.7%**
% total employment	2016			2015		2016
2b2 STEM Graduates[6]	**NA**			**16.2**	**18**	**19.1**
Per 1000 individuals (aged 20-29)	2015			2014		2015

In Human Capital, Greece's performance remains well below the EU average, but it is making progress. In 2017, the percentage of the Greek population using the internet on a regular basis (67 %) was one of the lowest in the EU (the EU average is 81 %). At 46 %, the number of people with at least a basic level of digital skills is stagnating and Greece remains far below the EU average (57 %) in this area. Greece still has the lowest proportion of ICT specialists (1.4 %) in the EU, but the share of ICT specialists has been relatively steady over the last few years.

With Greece continuing to suffer from a brain drain, addressing the shortage of ICT specialists is crucial for supporting the digital transformation of the economy. According to estimations, the use of ICT is needed in more than 90 % of workplaces. The low percentage of people with at least basic digital skills can slow down the country's economic development. In March 2017, a protocol of cooperation was signed between the Ministry of Digital Policy and the Hellenic Open University on setting up activities (i.e. massive open online courses for people) to acquire basic digital skills. SEPE[7] is implementing a programme to train and certify young unemployed 18-24 year olds in the ICT sector.

Greece would benefit from accelerating the implementation of the strategy for the development of digital skills, by getting all public sector authorities involved in developing digital skills and the relevant market players to work together. The proposed Greek National Coalition for Digital Skills and Jobs[8] if rapidly translated into actions could help address the digital skills gap, in particular the 50 % of people who do not have basic digital skills. It could also help digitally transform the economy and society.

[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] SEPE is the Association of the Information and Communication Technology industry in Greece.
[8] http://www.nationalcoalition.gov.gr

3 Use of Internet Services

3 Use of Internet Services	Greece		Cluster	EU
	rank	score	score	score
DESI 2018	**22**	**45.2**	**41.0**	**50.5**
DESI 2017	22	42.0	38.7	47.5

	Greece					EU
	DESI 2018			DESI 2017		DESI 2018
	value		rank	value	rank	value
3a1 News % individuals who used Internet in the last 3 months	**87%** ↑ 2017		**8**	**85%** 2016	**9**	**72%** 2017
3a2 Music, Videos and Games % individuals who used Internet in the last 3 months	**77%** 2016		**20**	**77%** 2016	**20**	**78%** 2016
3a3 Video on Demand % individuals who used Internet in the last 3 months	**12%** 2016		**19**	**12%** 2016	**19**	**21%** 2016
3b1 Video Calls % individuals who used Internet in the last 3 months	**48%** ↑ 2017		**17**	**46%** 2016	**13**	**46%** 2017
3b2 Social Networks % individuals who used Internet in the last 3 months	**72%** ↑ 2017		**14**	**68%** 2016	**17**	**65%** 2017
3c1 Banking % individuals who used Internet in the last 3 months	**36%** ↑ 2017		**25**	**28%** 2016	**26**	**61%** 2017
3c2 Shopping % internet users (last year)	**45%** → 2017		**23**	**45%** 2016	**22**	**68%** 2017

A large percentage of internet users in Greece engage in online activities such as reading news online, listening to music, watching films and playing games online, or using the internet to communicate with voice or video calls and participating in social networks. For many of these activities, Greece is above or equal to the EU average.

However, even if more people did their banking online in 2017 (36 %) than in 2016 (28 %), the percentage remains far below the EU average of 61 %. The same applies to shopping online, which stagnates at 45 % of internet users.

4 Integration of Digital Technology

4 Integration of Digital Technology	Greece		Cluster	EU
	rank	score	score	score
DESI 2018	**24**	**26.9**	**29.2**	**40.1**
DESI 2017	23	24.4	26.7	36.7

	Greece					EU
	DESI 2018			DESI 2017		DESI 2018
	value		rank	value	rank	value
4a1 Electronic Information Sharing	**37%**	→	**12**	**37%**	**11**	**34%**
% enterprises	2017			2015		2017
4a2 RFID	**3.1%**	↑	**21**	**2.6%**	**26**	**4.2%**
% enterprises	2017			2014		2017
4a3 Social Media	**21%**	↑	**12**	**20%**	**11**	**21%**
% enterprises	2017			2016		2017
4a4 eInvoices	**6.5%**	↑	**27**	**2.7%**	**28**	**NA**
% enterprises	2017			2016		2017
4a5 Cloud	**5.5%**	→	**28**	**5.5%**	**25**	**NA**
% enterprises	2017			2016		2017
4b1 SMEs Selling Online	**10.7%**	↑	**22**	**10.0%**	**22**	**17.2%**
% SMEs	2017			2016		2017
4b2 E-commerce Turnover	**3.4%**	↓	**27**	**5.9%**	**23**	**10.3%**
% SME turnover	2017			2016		2017
4b3 Selling Online Cross-border	**6.6%**	↑	**21**	**3.5%**	**26**	**8.4%**
% SMEs	2017			2015		2017

Greece's overall performance in the integration of digital technology by businesses is below par, progressing slower than the EU average. However, at 37 %, the use of electronic information sharing is above the EU average of 34 %. Enterprises use social media as much as on average in the EU (21 %). In 2017, the percentage of enterprises using eInvoices (6.5 %) increased, but their use of cloud services stagnated at a low level of 5.5 %. The e-commerce turnover of Small and Medium Size Enterprises (SMEs) is low, but 60 % of companies selling online sell to other countries.

The integration of digital technologies by businesses is an important driver of labour productivity and growth that needs to be strengthened in order to reap all the benefits of digital transformation. An Industry 4.0 strategy for developing specific digitisation plans for industry would give businesses a nudge towards seizing digitization opportunities in all sectors of the economy. The Ministry of Digital Policy, Telecommunications and Media plans to boost investment in developing a strong national network of digital innovation hubs, and two digital manufacturing platforms have already been developed to help digitise the manufacturing process.

In November 2017, Greece was the 12th country to join the European effort in building the next generation of computing and data infrastructures by signing the High-Performance Computing declaration (the EuroHPC declaration).

5 Digital Public Services

5 Digital Public Services	Greece		Cluster	EU
	rank	score	score	score
DESI 2018	**28**	**39.2**	**48.0**	**57.5**
DESI 2017	27	35.0	44.2	53.7

	Greece					EU
	DESI 2018			DESI 2017		DESI 2018
	Value		rank	value	rank	value
5a1 eGovernment Users[9] % internet users needing to submit forms	**38%** ↓ 2017		**26**	**42%** 2016	**24**	**58%** 2017
5a2 Pre-filled Forms Score (0 to 100)	**14** ↑ 2017		**27**	**5** 2016	**28**	**53** 2017
5a3 Online Service Completion Score (0 to 100)	**75** ↑ 2017		**24**	**63** 2016	**25**	**84** 2017
5a4 Digital Public Services for Businesses Score (0 to 100) - including domestic and cross-border	**60** ↑ 2017		**27**	**59** 2016	**26**	**83** 2017
5a5 Open Data % of maximum score	**72%** ↓ 2017		**16**	**73%** 2016	**10**	**73%** 2017
5b1 eHealth Services % individuals	**10%** 2017		**23**	**NA**		**18%**

In Greece, Digital public services remain one of the most challenging areas of the digital economy and society. Greece is making progress, but its performance is well below the EU average and it ranks last of the 28 Member States. eGovernment users stood at 38 % (EU average 58 %). On the supply side, in the provision of online public services, Greece made some progress in 2017, with 14/100 pre-filled forms compared to 5/100 in 2016, but it remains far below the EU average of 53/100, ranking 27th.

In July 2017, the Ministry of Administrative Reconstruction published a National Strategy for Administrative Reform 2017-2019.[10] The strategy includes measures for smart administration and the development of an e-public sector, including developing digital skills for human resources in public administration and using ICT for administrative and public services. The eGovernment strategy and Action Plan (2014-2020) is being revised.

In September 2017, the Ministry of Digital Policy continued its work on preparing the new authentication system, with the launch of a project to set up a digital system for managing documents and workflow, incorporating the remote digital signatures of future users (citizens and enterprises). Once implemented, it will allow users to submit a request using an electronic signature, ensuring that digital transactions are secure, valid and legal.

In May 2016, the "National Telemedicine Network" began operation to connect remote locations with regional and central hospitals. The network consists of 43 telemedicine units connecting healthcare centres in the Aegean islands with central hospitals of the Second Regional Healthcare Administration of Piraeus and the Aegean. The telemedicine units are

[9] 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.

[10] http://www.minadmin.gov.gr/?p=24473

installed in 30 healthcare centres on the Aegean islands and in 12 regional and central hospitals.

Continuing the effort undertaken to modernise public administration using ICT could be of great benefit in gaining the trust of citizens. Plans for the future, such as setting up digital systems for managing human resources in public administrations, interlinking information systems throughout Greece's public sector and giving people the possibility to use all eGovernment services from a single access point will be a big step forward.