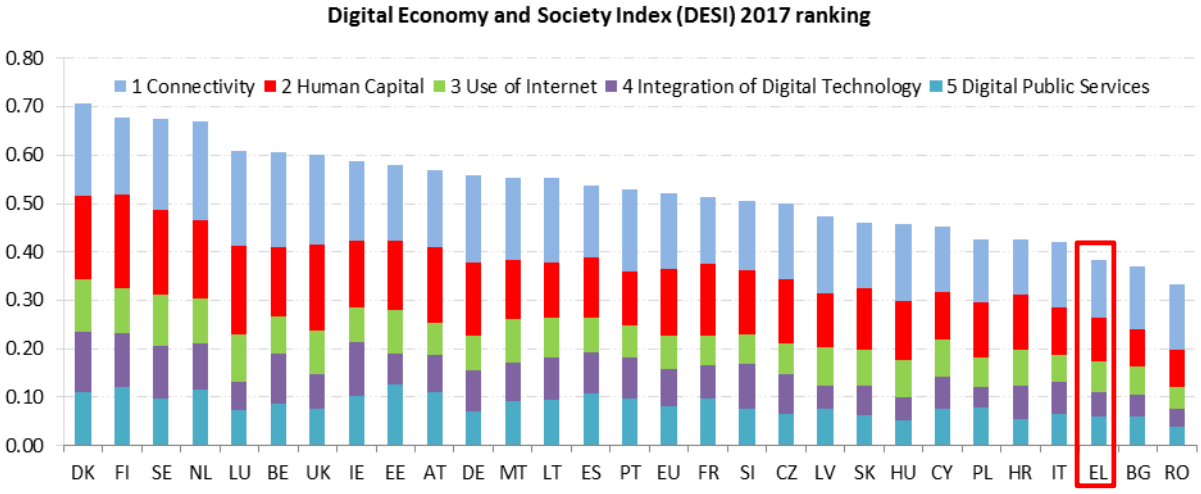
Europe's Digital Progress Report (EDPR) 2017 Country Profile Greece

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)[1] with qualitative information on country-specific policies. It is structured around five chapters:

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



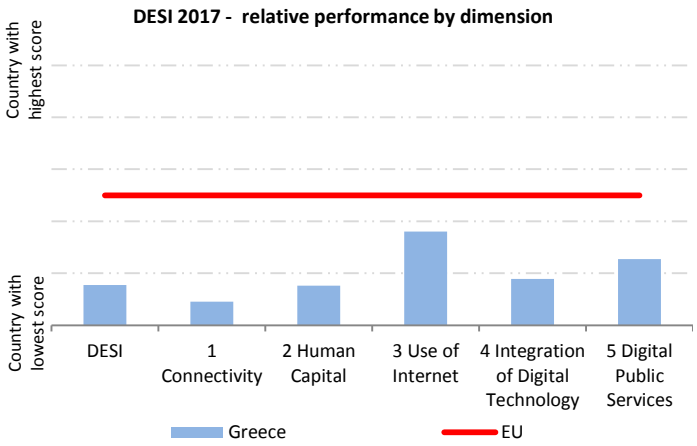
[1] https://ec.europa.eu/digital-single-market/en/desi

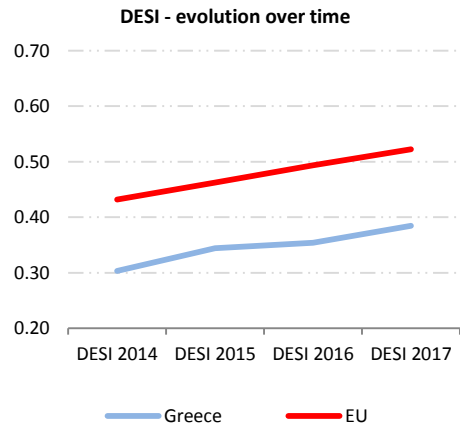
	Greece		Cluster	EU
	rank	score	score	score
DESI 2017	**26**	**0.38**	**0.41**	**0.52**
DESI 2016[2]	26	0.35	0.38	0.49

Greece ranks 26th out of the 28 EU Member States. Overall Greece did not make much progress compared with other EU Member States. In Connectivity, Greece features wide availability of fixed broadband but take-up is progressing slowly. Price remains relatively high and the transition to fast broadband connections is slower than in other EU Member States. On the positive side, Greeks are more actively using internet for online content and video calls. However, its low performance in digital skills risks acting as a brake on the further development of its digital economy and society. In integrating digital technology, companies use social media at the level of EU average, but don't use more sophisticated technology such as cloud services or eInvoices.

Greece belongs to the Low performing cluster of countries[3].

In 2016, in the context of the ex-ante Conditionalities of the European Structural and Investment Funds (ESIF), the Greek Government set up in May a General Secretariat for Digital Policy with responsibility for the policy-making, design, overall coordination and monitoring of implementation of the ICT investments in the country. This triggered the creation of a new Ministry for Digital Policy, Telecommunications, and Media in November. Greece has also updated its National Digital Strategy, set up a new governance structure, and developed a new framework of the production of ICT projects. As such, Greece is at a very early stage in implementing the roughly EUR one billion investments planned for ICT investment under ESIF for the period 2014-2020.





[2] 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.

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

1 Connectivity

1 Connectivity	Greece		Cluster	EU
	rank	score	score	score
DESI 2017	**27**	**0.48**	**0.53**	**0.63**
DESI 2016	26	0.45	0.46	0.59

	Greece					EU
	DESI 2017			DESI 2016		DESI 2017
	value		rank	value	rank	value
1a1 Fixed Broadband Coverage % households	**99%** 2016	→	**10**	**99%** 2015	**9**	**98%** 2016
1a2 Fixed Broadband Take-up % households	**66%** 2016	→	**21**	**66%** 2015	**18**	**74%** 2016
1b1 Mobile Broadband Take-up Subscriptions per 100 people	**50** June 2016	↑	**27**	**44** June 2015	**27**	**84** June 2016
1b2 4G coverage[4] % households (average of operators)	**80%** 2016		**21**	**NA**		**84%** 2016
1b3 Spectrum[5] % of the target	**68%** 2016	↓	**16**	**71%** 2015	**15**	**68%** 2016
1c1 NGA Coverage % households	**44%** 2016	↑	**28**	**36%** 2015	**28**	**76%** 2016
1c2 Subscriptions to Fast Broadband % subscriptions >= 30Mbps	**7%** June 2016	↑	**27**	**4%** June 2015	**27**	**37%** June 2016
1d1 Fixed Broadband Price[6] % income	**1.7%** price 2016, income 2015	↑	**21**	**1.8%** price 2015, income 2015	**22**	**1.2%** price 2016, income 2015

In Connectivity, Greece features wide availability of fixed broadband but take-up is progressing slowly. Price remains relatively high and the transition to fast broadband connections is slower than in other EU Member States. Despite some progress Greece lost one place, now ranking 27th among EU countries. While 99% of the Greek households are covered by basic fixed broadband, the country has done little to address major challenges. First, in terms of take-up, despite a 6 point increase, mobile broadband take-up lies at 50 subscriptions per 100 people, well below the EU average of 84 subscriptions per 100 people. Fixed broadband take-up remained stable at 66% per household, below the EU average of 74%. While subscriptions to fast broadband have progressed by 3 percentage points to 7%, they remain well below the EU average of 37%. Secondly, despite a progress of 8%, Greece remains last amongst the Member States in NGA coverage per household, far from the EU average of 76%. Greece is performing better in terms of 4G. 4G coverage lies at 80% of households, close to the EU average of 84%.

[4] This is a new DESI indicator measuring the average coverage of telecom operators' 4G networks.

[5] There is a decrease in most of the Member States due to the additional EU harmonisation of the 700 MHz band in April 2016.

[6] Due to a slight methodological change, historical data was re-calculated.

Pro-competitive measures recently adopted in the markets for wholesale local access and wholesale central access for mass-market products are expected to facilitate the upgrade of VDSL to vectoring and the deployment of fibre. In preparation for this phase of NGA deployment, the market moves towards strategic co-investing agreements, without however excluding a new round of consolidation.

The transposition of the Broadband Cost Reduction Directive - once completed - should enable the providers to maximise the impact of private investment in terms of NGA coverage to help Greece catch up. It is of particular importance for Greece, since its broadband strategy relies on the private sector to provide most of the investment in high speed networks, limiting public intervention mainly to areas where market failure has been identified.

Greece is programming EUR 304 million of ESI Funds (2014-2020) for the deployment of broadband infrastructure and more specifically for High Speed networks - access/local loop with capacity of 30 Mbps or more - where two projects are envisaged. Currently there are no plans for other financial instruments to be used in broadband deployment.

The updated Digital National Strategy relies on seven priority actions, the deployment of NGA network infrastructures being the first. It adjusts the National Plan Next Generation Broadband Access 2014-2020 to the new Gigabit targets and reaffirms the intention of Greece to finance NGA infrastructure in white areas, as well as in grey areas.

Greece could benefit a lot from creating the right conditions for private investment to occur, in particular by completing the transposition of the Broadband Cost Reduction Directive.

2 Human Capital

2 Human Capital	Greece		Cluster	EU
	rank	score	score	score
DESI 2017	**26**	**0.37**	**0.40**	**0.55**
DESI 2016	26	0.35	0.38	0.53

	Greece					EU
	DESI 2017			DESI 2016		DESI 2017
	value		rank	value	rank	value
2a1 Internet Users % individuals	**66%** 2016	↑	**26**	**63%** 2015	**26**	**79%** 2016
2a2 At Least Basic Digital Skills % individuals	**46%** 2016	↑	**22**	**44%** 2015	**23**	**56%** 2016
2b1 ICT Specialists[7] % employed individuals	**1.2%** 2015	↓	**28**	**1.3%** 2014	**28**	**3.5%** 2015
2b2 STEM Graduates Per 1000 individuals (aged 20-29)	**16** 2014	→	**16**	**16** 2013	**17**	**19** 2014

In Human Capital, Greece's performance is well below EU average but it is slightly progressing. In 2016, the percentage of the Greek population using the internet on a regular basis (66%) is one of the lowest among European countries (EU average is 79%). But compared with 2015 (63%), it improved by 3 percentage points. The number of individuals having at least a basic level of digital skills is also progressing with 46% in 2016 compared with 44% in 2015. The share of the Science, Technology, Engineering and Math (STEM) graduates remains relatively high and this is promising for Greece's digital future. Currently, Greece has the lowest proportion of ICT specialists in the workforce (1.2%) in the EU.

Greece continues to suffer from a "brain drain", but addressing the shortage of ICT specialists remains crucial for supporting the digital transformation of industry. Nowadays digital skills and competences are needed for nearly all jobs where digital technology complements existing tasks. Shortages can be a significant barrier for the country's economic development. Furthermore, the fact that about one third of the population has never used internet also limits the possibilities offered by the digital economy and society.

Greece needs to address its severe digital skills gaps. It will benefit from implementing initiatives to address the chronic skills mismatch observed between the ICT industry's needs and the skills offered by formal education, as well as by providing leadership and cooperation between diverse stakeholders and key resources for digital skills development. If successfully implemented, the Greek National Coalition for the Digital Skills and Jobs could also help to build digital skills capacity with industrial relevance and could enable better collaboration, especially between the public sector, the education sector and industry.

[7] Historical data have been revised by Eurostat.

Highlight 2017:[8] "Innovation and Employability for Women" (project ieWomen[9])

In January 2016, a consortium of five partners from Greece and Norway started the project ieWomen to research the benefits of ICT skills for the employability and entrepreneurship of women.

It focuses on investigation, analysis and documentation of the possibilities offered by the Internet, social networks and other communication technologies to reduce labour inequalities and promote new opportunities for entrepreneurship and employment for women of all ages.

The project includes an assessment of existing opportunities offered through online networks, tools and markets, as well as professional and educational social networking platforms and e-learning. It analyses the current use of the Internet for purposes of employment and vocational education and training; and young Greek women's awareness of employment opportunities offered by the internet, social networks and new technology. The main results of the project are expected to be: (a) the design and preparation of training packages that meet current trends and needs; (b) the organisation of webinars for upgrading the skills of women and to encourage the use of the internet and social networks in particular in terms of employability and entrepreneurship; (c) The development of standards and the establishment of a research and innovation centre for women.

[8] Highlight 2016: ePrescription helps to modernise Greece's medical care network The "ePrescription" project is a digital social service which aims to connect and render interoperable all national social insurance funds through a fully integrated platform that helps to manage, monitor and control the drug prescription lifecycle. This cycle begins with the prescription or laboratory test referrals, and monitors them from issuance through to payment of the final beneficiaries, and encompasses the clearance of the transactions of all national social insurance funds, medical consultations and electronic medical act referrals. The total investment in the project “ePrescription” was almost €12 Million, of which the European Regional Development Fund contributed €10 Million, for the 2007-2013 programming period. The first pilot project was initiated in 2010 and, thus far, ePrescription is the most important eHealth application. It has a high rate of coverage and penetration throughout the country and is positively affecting the public health and public finance systems. By using ePrescription patients benefit from reduced difficulties affecting their prescription insurance coverage and enjoy a simpler process, especially when it comes to renewal of prescriptions. Furthermore, health authorities are relieved of excess paperwork and bureaucratic procedures. From the doctor's point of view the project offers a clear overview of the patient’s medical history and better alignment with guidelines.

[9] http://www.iewomen.eu/ (project funded by the EEA Grants).

3 Use of Internet

3 Use of Internet	Greece		Cluster	EU
	rank	score	score	score
DESI 2017	**21**	**0.42**	**0.39**	**0.48**
DESI 2016	22	0.39	0.37	0.45

	Greece					EU
	DESI 2017			DESI 2016		DESI 2017
	value		rank	value	rank	value
3a1 News % individuals who used Internet in the last 3 months	**85%** 2016	→	**8**	**85%** 2015	**8**	**70%** 2016
3a2 Music, Videos and Games[10] % individuals who used Internet in the last 3 months	**77%** 2016		**20**	**NA**		**78%** 2016
3a3 Video on Demand[11] % individuals who used Internet in the last 3 months	**12%** 2016		**19**	**NA**		**21%** 2016
3b1 Video Calls % individuals who used Internet in the last 3 months	**46%** 2016	↑	**13**	**44%** 2015	**11**	**39%** 2016
3b2 Social Networks % individuals who used Internet in the last 3 months	**68%** 2016	↑	**17**	**66%** 2015	**14**	**63%** 2016
3c1 Banking % individuals who used Internet in the last 3 months	**28%** 2016	↑	**26**	**21%** 2015	**26**	**59%** 2016
3c2 Shopping % internet users (last year)	**45%** 2016	↓	**22**	**47%** 2015	**21**	**66%** 2016

A significant percentage of Greek Internet users engage 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 Greeks is higher or equal than overall in Europe.

It is also to be noted that over the past year, more and more users have been engaging in online banking (28% compared to the previous year 21%) even if the percentage of Greeks using this service remains below EU average (59%). Practice of putting extra fees for online banking might be part of the reason of a low percentage of users.

[10] Break in series due to a change in the Eurostat survey.

[11] Break in series due to a change of data source. New source is Eurostat.

4 Integration of Digital Technology

4 Integration of Digital Technology	Greece		Cluster	EU
	rank	score	score	score
DESI 2017	**23**	**0.24**	**0.27**	**0.37**
DESI 2016	25	0.21	0.25	0.35

	Greece				EU
	DESI 2017		DESI 2016		DESI 2017
	value	rank	value	rank	value
4a1 Electronic Information Sharing % enterprises	**37%** 2015	**12**	**37%** 2015	**12**	**36%** 2015
4a2 RFID % enterprises	**2.6%** 2014	**26**	**2.6%** 2014	**26**	**3.9%** 2014
4a3 Social Media % enterprises	**20%** ↑ 2016	**11**	**19%** 2015	**11**	**20%** 2016
4a4 eInvoices % enterprises	**3%** ↓ 2016	**28**	**4%** 2015	**28**	**18%** 2016
4a5 Cloud % enterprises	**6%** ↓ 2016	**25**	**7%** 2015	**23**	**13%** 2016
4b1 SMEs Selling Online % SMEs	**10%** ↑ 2016	**22**	**6%** 2015	**27**	**17%** 2016
4b2 eCommerce Turnover % SME turnover	**5.9%** ↑ 2016	**23**	**1.2%** 2015	**28**	**9.4%** 2016
4b3 Selling Online Cross-border % SMEs	**3.4%** 2015	**26**	**3.4%** 2015	**26**	**7.5%** 2015

Greece's overall industry performance in integrating digital technology is below par although it progresses. Companies in Greece use social media to the same level (20%) as the EU average (20%). More and more Small and Medium Size Enterprises (SMEs) use electronic sales channels. And in 2016, the average turnover from online sales for SMEs progresses quickly (5.9%), when it represented only 1.2% in 2015. However, the percentage of enterprises using technologies such as eInvoices (3%) or cloud services (6%) is low. While in terms of digital intensity (ICT users and eCommerce) companies in manufacturing sector are scoring slightly higher (12%) compared with the EU average (11%), showing the importance of developing an Industry 4.0 strategy for Greece's digital potential.

On the positive side, the Greek startup ecosystem is viewed very favourably worldwide and investments in digital companies have multiplied over the last few years. In December 2016, a new EU-backed Fund-of-Funds[12] initiative to boost equity financing for high-growth Greek SMEs has been announced. It will facilitate access to finance for startups and entrepreneurs and boost innovative businesses.

The adoption of digital technologies by businesses is an important driver of labour productivity growth and needs to be strengthened to benefit even more from taking advantage of the possibilities offered by online commerce. Greece would also benefit from an Industry 4.0 scheme to develop specific digitisation plans for the industry.

[12] http://www.eif.org/what_we_do/resources/esif-fund-of-fund-greece/index.htm

5 Digital Public Services

5 Digital Public Services	Greece		Cluster	EU
	rank	score	score	score
DESI 2017	**24**	**0.41**	**0.43**	**0.55**
DESI 2016	22	0.35	0.42	0.51

	Greece				EU
	DESI 2017		DESI 2016		DESI 2017
	value	rank	value	rank	value
5a1 eGovernment Users	**38%** ↑	**14**	**37%**	**12**	**34%**
% internet users (last year)	2016		2015		2016
5a2 Pre-filled Forms	**5** ↓	**28**	**8**	**27**	**49**
Score (0 to 100)	2016		2015		2016
5a3 Online Service Completion	**63** ↑	**25**	**54**	**27**	**82**
Score (0 to 100)	2016		2015		2016
5a4 Open Data[13]	**73%** ↑	**10**	**63%**	**6**	**59%**
% of maximum score	2016		2015		2016

In Digital Public Services, the percentage of internet users that have exchanged forms with the public administration online is above the EU average (38%). Greece has also progressed with the provision of Open Data (73%), now well above the EU average (56%). However, on the supply side, in the provision of online public services, Greece performs low: only 5/100 forms are prefilled, while the EU average is 49/100.

Actions for instilling more transparency into public services and making the government more accessible to all citizens have been taken. A number of eGovernment portals are already in place. Notably, *Ermis*, the Governmental Public Administration Portal, aims to inform citizens and businesses and ensure the safe use of eGovernment services through digital certificates. The new authentication system in preparation for the users, citizen or enterprise, will allow submitting a request to the portal with an electronic signature. In this way the security, validity and legality of digital transactions are being ensured.

Continuing the effort to modernise public administration using ICT could be highly beneficial to enable greater citizen trust and accountability. The eGovernment Strategy of Greece appears to be comprehensive and offers a path towards the design of effective online services and tools that will increase transparency and efficiency. It could benefit from being further aligned to underlying principles and policy priorities of the EU eGovernment Action Plan 2016-2020, for example through the interconnection of high quality digital registers which would also boost usage of pre-filled forms.

In any case, as part of its revised Digital Strategy, the Greek Government intends to update its eGovernment strategy by the end of the first semester of 2017.

[13] Change of data source. The historical data have also been restated. The new source is the European Data Portal.