



# **Digital Economy and Society Index (DESI)**

2019 Country Report

**Spain**

---

## About the DESI

---

*The European Commission has been monitoring Member States' digital competitiveness with the Digital Economy and Society Index (DESI) reports since 2015. The set of reports includes both country profiles and thematic chapters.*

*The DESI country reports combine quantitative evidence from the DESI indicators across the five dimensions of the index with country-specific policy insights and best practices. An in-depth telecoms chapter is annexed to the reports for each Member State.*

*The thematic chapters present a European-level analysis of broadband connectivity, digital skills, use of the internet, digitisation of businesses, digital public services, the ICT sector and its R&D spending, and Member States' use of Horizon 2020 funds.*

*To improve the methodology and take account of the latest technological developments, a number of changes have been made to the DESI for 2019. The DESI now covers:*

- *5G readiness,*
- *Above basic digital skills,*
- *At least basic software skills,*
- *Female ICT specialists,*
- *ICT graduates,*
- *People who never used the internet,*
- *Professional social networks,*
- *Doing an online course,*
- *Online consultations and voting,*
- *Individuals selling online,*
- *Big data,*
- *Medical data exchange and*
- *e-Prescriptions.*

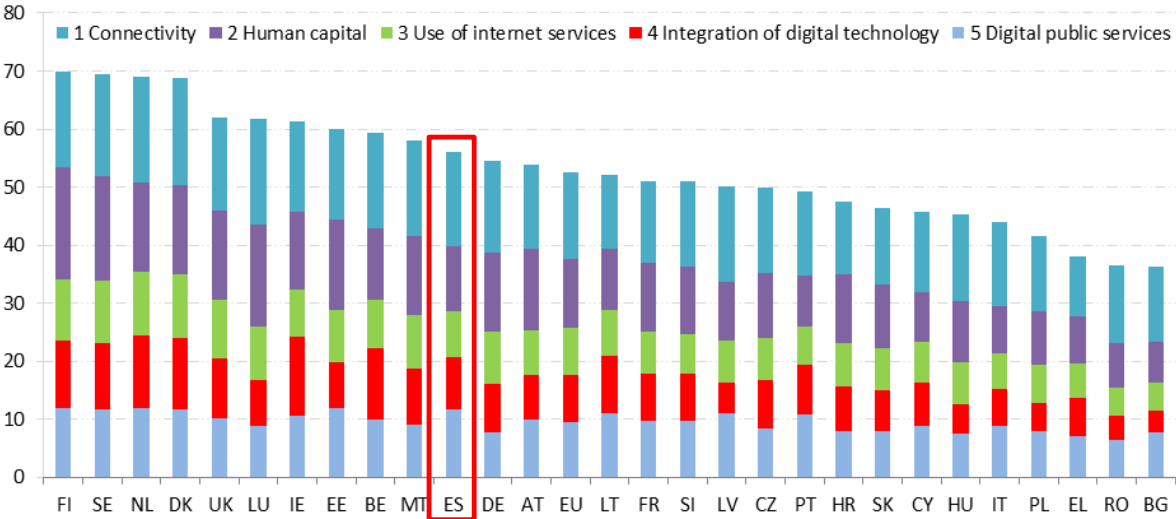
*The DESI was re-calculated for all countries for previous years to reflect the above changes in the choice of indicators and corrections to the underlying data. Country scores and rankings may thus have changed compared with previous publications.*

*For further information, please consult the DESI website: <https://ec.europa.eu/digital-single-market/en/desi>.*

# Spain overview

	Spain		EU
	rank	score	score
<b>DESI 2019</b>	<b>11</b>	<b>56.1</b>	<b>52.5</b>
DESI 2018	11	53.2	49.8
DESI 2017	13	49.1	46.9

Digital Economy and Society Index (DESI) 2019 ranking



Spain ranks 11<sup>th</sup> out of 28 EU Member States in the Digital Economy and Society Index (DESI) 2019.

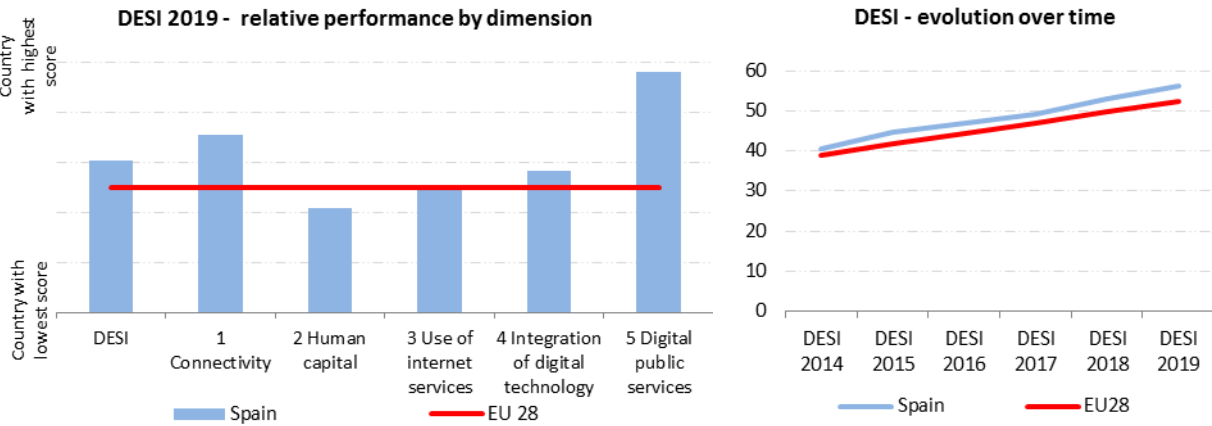
The improvement is due to a better performance in some of the DESI dimensions measured, namely Connectivity and Digital Public Services. Spain performs well in connectivity, thanks to the wide availability of fast and ultrafast fixed and mobile broadband networks and to the increasing take-up. With regards to Human capital, Spain ranks at the same level as last year, and still scores below the EU average in this dimension.

In particular, around one fifth of people in Spain are not yet online and close to half of them still lack basic digital skills. Despite growing demand on the labour market, the supply of ICT specialists is still below the EU average. Most progress has been made with Connectivity. As regards the Integration of digital technologies, while more Spanish businesses use social media and big data than in previous years, but cloud and e-commerce stagnated compared with last year.

Spain is doing best in the area of digital public services, having implemented its e-government strategy in good time. It ranks fourth in the EU in this area.

The current Spanish Digital Agenda dates back to 2013. The Government is currently working on the 'Spain Start-up Nation' strategy<sup>1</sup> as an overarching strategy to embed innovation and digitalisation in all aspects of the economy and society. This strategy would include the following elements: 1) a new plan for the deployment of digital infrastructure; 2) investment in enabling digital technologies; 3) programs to promote skills and talent, and 4) a national Artificial Intelligence strategy. In addition, new initiatives such as the "Retail modernization plan 2019-2020", included in the "Agenda for Change"<sup>2</sup> or the planned "Strategy for sustainable tourism"<sup>3</sup> will promote innovation and digitalisation in specific economic sectors. These new policies are expected to be carried out during 2019.

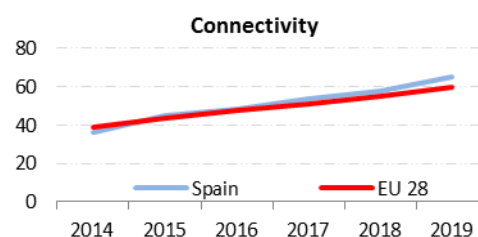
New general elections took place in April 28<sup>th</sup> 2019.



<sup>1</sup> <http://www.mineco.gob.es/portal/site/mineco/>  
<sup>2</sup> <http://www.lamoncloa.gob.es/consejodeministros/referencias/Paginas/2019/refc20190208.aspx>  
<sup>3</sup> <https://www.agenda2030.gob.es/>

# 1 Connectivity

1 Connectivity	Spain		EU
	rank	score	score
DESI 2019	9	65.2	59.3
DESI 2018	10	57.3	54.8
DESI 2017	12	53.3	51.2



	DESI 2017	Spain		EU	
	value	DESI 2018	DESI 2019	rank	DESI 2019
<b>1a1 Fixed broadband coverage</b>	<b>95%</b>	<b>96%</b>	<b>96%</b>	<b>18</b>	<b>97%</b>
% households	2016	2017	2018		2018
<b>1a2 Fixed broadband take-up</b>	<b>71%</b>	<b>73%</b>	<b>77%</b>	<b>10</b>	<b>77%</b>
% households	2016	2017	2018		2018
<b>1b1 4G coverage</b>	<b>86%</b>	<b>92%</b>	<b>94%</b>	<b>21</b>	<b>94%</b>
% households (average of operators)	2016	2017	2018		2018
<b>1b2 Mobile broadband take-up</b>	<b>86</b>	<b>92</b>	<b>97</b>	<b>13</b>	<b>96</b>
Subscriptions per 100 people	2016	2017	2018		2018
<b>1b3 5G readiness</b>	<b>NA</b>	<b>NA</b>	<b>30%</b>	<b>8</b>	<b>14%</b>
Assigned spectrum as a % of total harmonised 5G spectrum			2018		2018
<b>1c1 Fast broadband (NGA) coverage</b>	<b>81%</b>	<b>85%</b>	<b>88%</b>	<b>13</b>	<b>83%</b>
% households	2016	2017	2018		2018
<b>1c2 Fast broadband take-up</b>	<b>35%</b>	<b>43%</b>	<b>54%</b>	<b>11</b>	<b>41%</b>
% households	2016	2017	2018		2018
<b>1d1 Ultrafast broadband coverage</b>	<b>NA</b>	<b>84%</b>	<b>87%</b>	<b>7</b>	<b>60%</b>
% households		2017	2018		2018
<b>1d2 Ultrafast broadband take-up</b>	<b>15%</b>	<b>18%</b>	<b>30%</b>	<b>9</b>	<b>20%</b>
% households	2016	2017	2018		2017
<b>1e1 Broadband price index</b>	<b>70</b>	<b>75</b>	<b>76</b>	<b>22</b>	<b>87</b>
Score (0 to 100)	2016	2017	2018		2017

Spain's overall connectivity has improved further and now ranks 9<sup>th</sup> in the DESI. The country performs particularly well in fast and ultrafast coverage. Currently, 88 % of households have access to ultrafast broadband networks, although there are significant differences between urban and rural areas. The deployment of FTTP networks continues to be an important feature of the Spanish digital market, covering 77.4 % of households. Fast and ultrafast broadband take-up rates are two of the main drivers of improvement in the connectivity section of DESI in 2018. 4G coverage reached 94 %, the EU average. Although the fixed broadband price index for Spain shows a slight improvement, the country still ranks 22<sup>nd</sup> as in year 2017. The context is a market dominated by convergent bundles, including mobile services as well as pay TV services and characterised by increasing internet access speeds (supported by the above-mentioned deployment of FTTP networks) where price increases in the flagship-bundled products of the main operators are generally linked to different improvements.

Mobile broadband prices for handset offers<sup>4</sup> have fallen over the past year (from EUR 20.8 to EUR 20), and are even below the EU average (EUR 22.3).

The national Programme for the extension of next-generation broadband networks (*'Programa de Extensión de la Banda Ancha de Nueva Generación'*, PEBA-NGA<sup>5</sup>), continues to provide financial support for the roll-out of broadband networks in underserved areas. Since 2013, this programme has provided high-speed connectivity to 2.8 million households. In 2018, Spain announced an ambitious plan reinforcing the budget of PEBA-NGA in order to bring 300 Mbps connectivity to all population centres (95 % of the total population) between 2018 and 2121.

Following the publication of the 5G National Plan for 2018-2020, the Ministry of Economy and Business (*Secretaría de Estado para el Avance Digital*, SEAD) guaranteed the use of certain frequency bands for 5G pilots and established the regulatory basis for granting subsidies to 5G technology pilot projects. On that legal basis, the Public Entity *Red.es* issued an invitation to tender for granting subsidies for two 5G pilots<sup>6</sup>. In Spain, 47 % of the spectrum harmonised at EU level for wireless broadband has been assigned. The 700 MHz roadmap, approved in June 2018, will involve the migration of Digital Terrestrial Television (DTT) services between January 2019 and March 2020<sup>7</sup>. As the roadmap states, the process of releasing the band should be completed by 30 June 2020, but no specific date is given for the auction process. The 3.4-3.8 GHz band was auctioned off in July 2018 and granted to three of the four largest mobile operators (Vodafone: 90 MHz, Orange: 60 MHz and Telefónica: 50 MHz). In the summer of 2018, Masmovil purchased 40 MHz on the secondary market reaching in total 80 MHz. The assignment process has enabled the acquisition of spectrum at reasonable prices (EUR 0.5 pop/MHz) with a view to the forthcoming investment challenge. Spain thus ranks sixth in 5G readiness, with 30 % of 5G pioneer bands assigned; by the end of 2018, it had assigned spectrum in the 3.4-3.8 GHz band in accordance with Commission Decision (EU)2019/235, and the spectrum is expected to become available for use for 5G by 2020. In April 2018, the National Frequency Allocation Table was updated introducing the provisions needed to have the relevant bands including the 26 GHz band available for the provision of 5G services.

Spain is one of the top performers in the roll-out of ultrafast broadband as well as the take-up of ultrafast broadband connections. Deployment is driven by commercial investment made up by several telecom operators, a regulatory framework focused on supporting deployments through effective regulated duct-access and supported by an ambitious national strategy that provides subsidies in sparsely populated and rural areas. The ground for 5G deployment is being prepared, with several pilot projects under way. The assignment of pioneer spectrum is well under way and the 700 MHz auction is expected in early 2020.

---

<sup>4</sup> 1 GB + 300 calls basket.

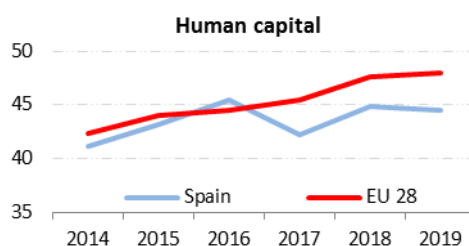
<sup>5</sup> <http://www.mincotur.gob.es/PortalAyudas/banda-ancha/Paginas/Index.aspx>

<sup>6</sup> <https://sede.red.gob.es/procedimientos/c00718-sp>

<sup>7</sup> June 2020 according to the proposed new DTT Technical plan.

## 2 Human capital

2 Human capital	Spain		EU
	rank	score	score
DESI 2019	17	44.5	48.0
DESI 2018	17	44.9	47.6
DESI 2017	17	42.2	45.4



	DESI 2017	Spain		EU	
	value	DESI 2018	DESI 2019	rank	DESI 2019
<b>2a1 At least basic digital skills</b>	<b>53%</b>	<b>55%</b>	<b>55%</b>	<b>17</b>	<b>57%</b>
% individuals	2016	2017	2017		2017
<b>2a2 Above basic digital skills</b>	<b>31%</b>	<b>32%</b>	<b>32%</b>	<b>14</b>	<b>31%</b>
% individuals	2016	2017	2017		2017
<b>2a3 At least basic software skills</b>	<b>56%</b>	<b>58%</b>	<b>58%</b>	<b>14</b>	<b>60%</b>
% individuals	2016	2017	2017		2017
<b>2b1 ICT specialists</b>	<b>2.4%</b>	<b>3.0%</b>	<b>2.9%</b>	<b>18</b>	<b>3.7%</b>
% total employment	2015	2016	2017		2017
<b>2b2 Female ICT specialists</b>	<b>0.9%</b>	<b>1.0%</b>	<b>1.0%</b>	<b>18</b>	<b>1.4%</b>
% female employment	2015	2016	2017		2017
<b>2b3 ICT graduates</b>	<b>4.0%</b>	<b>4.0%</b>	<b>3.9%</b>	<b>14</b>	<b>3.5%</b>
% graduates	2014	2015	2016		2015

In the Human capital dimension, Spain ranks 17<sup>th</sup> out of 28 EU countries and is thus below the EU average. Basic digital skills levels remain below the EU average. Only 55 % of people between 16 and 74 years of age have basic digital skills (the figure is 57 % in the EU as a whole). The proportion of ICT specialists represents a lower percentage of the workforce compared to the EU average (2.9 % compared to 3.7 % in the EU). ICT graduates in Spain account for 3.9 % of the total. Female ICT specialists account for a mere 1 % of total female employment

In 2018, the Ministry of Education and Vocational Training proposed including in all VET programmes at all levels (basic, intermediate and high) a set of specific modules designed to support students in acquiring skills and competencies in Industry 4.0, Big Data, Communication networks 5.0, and other ICT-related skills. The Ministry aims to design new VET programmes or modify existing ones to ensure that the needs of the new digital sectors are covered.

Spain has launched a new project called the 'School of Computational Thinking'<sup>8</sup>. This is designed to help teachers throughout Spain to incorporate computational thinking into their daily practice through programming and robotics. Around 800 teachers and 20,000 students from primary, middle and high school are expected to participate over 2018-2019. In October 2018, Spain also presented the conclusions of the working group on programming, robotics and computational thinking in the

<sup>8</sup> <https://intef.es/tecnologia-educativa/pensamiento-computacional/>

classroom<sup>9</sup>. This group consisted of 14 Autonomous Communities joining forces with universities, pioneering companies and civil society entities to develop a normative proposal on the teaching of these skills. The Ministry of Education and Vocational Training has also launched an initiative called STEMGirls, consisting of a repository online tool providing an overview of international and national initiatives. This will help and motivate women and girls to choose studies related to STEM, and to overcome the gender gap in technology.

The Spanish National Coalition for Digital Skills and Jobs, run by AMETIC, was established in July 2017<sup>10</sup>. This group of national-level actors engaged in digital skills development, including industry, employer's associations and labour unions and representatives of the education sector. The Coalition awarded the first digital skills awards in June 2018 with several categories (in line with the EU proposal)<sup>11</sup>.

The Ministry of Education is involved in three main areas of the Code Week initiative: 1) by joining the network of Code Week coordinators; 2) by creating a specific website to encourage educators to take part in the initiative<sup>12</sup>; and 3) by offering a nano massive open online course (NOOC) on Code Week for educators<sup>13</sup>. The latter, with over 430 teachers enrolled, aims to help teachers in the organization of activities for Code Week in their schools. Spain ranked fourth in the 2018 Code Week, with more than 1,000 events organised.

A high degree of skills mismatches in companies' workforces limit their capacity to innovate and capitalise from innovation. Increasing the number of Spanish ICT specialists, narrowing the gender gap and re-skilling the labour force are of great importance if Spain is to tap into the full potential of the Digital Economy.

**Highlight 2019: Call for the training of workers and unemployed people in Digital and Technological Skills**

The Government (through the Ministry of Employment) has set up a training plan in digital and technological competencies<sup>14</sup>. Its budget is EUR 60 million.

This plan will focus on 12 areas considered to be priorities in 23 sectors of the economy: 1) broadband communications; 2) cybersecurity; 3) management and maintenance of 3D printers; 4) artificial intelligence; 5) robotics; 6) drones; 7) automotive with electric motor or autonomous driving; 8) cloud computing; 9) Internet of things; 10) advanced analytics; 11) cognitive computing; and 12) location services.

The Priority groups identified are women, people with disabilities, low-skilled workers and workers aged above 45.

<sup>9</sup> <https://www.educacionyfp.gob.es/prensa-mecd/actualidad/2018/10/20181022-escuelacomputacional.html>

<sup>10</sup> <http://ametic.es/es/proyectos/digital-skills-jobs-coalition>

<sup>11</sup> <https://ametic.es/en/prensa/pedro-duque-senala-que-las-companias-espanolas-necesitan-un-entorno-mejor-para-poder-crecer>

<sup>12</sup> <http://code.intef.es/codeweek/>

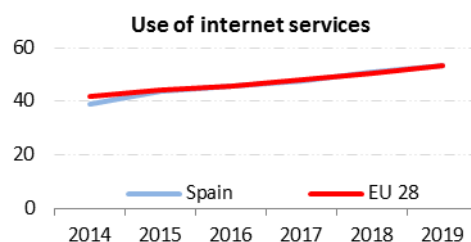
<sup>13</sup> [http://enlinea.intef.es/courses/course-v1:INTEF+SomosCodeEU+2018\\_ED1/about](http://enlinea.intef.es/courses/course-v1:INTEF+SomosCodeEU+2018_ED1/about)

<sup>14</sup> <https://www.sepe.es/contenidos/comunicacion/noticias/aprobado-programa-competencias-digitales.html>



### 3 Use of internet services

3 Use of internet services	Spain		EU
	rank	score	score
<b>DESI 2019</b>	<b>11</b>	<b>53.4</b>	<b>53.4</b>
DESI 2018	11	50.8	50.7
DESI 2017	11	47.7	47.8

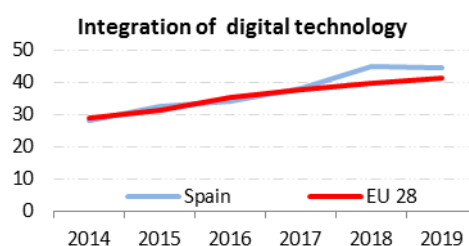


	DESI 2017	Spain		EU	
	value	DESI 2018	DESI 2019	rank	DESI 2019
<b>3a1 People who never used the internet</b> % individuals	<b>17%</b> 2016	<b>14%</b> 2017	<b>13%</b> 2018	<b>13</b>	<b>11%</b> 2018
<b>3a2 Internet users</b> % individuals	<b>76%</b> 2016	<b>80%</b> 2017	<b>83%</b> 2018	<b>14</b>	<b>83%</b> 2018
<b>3b1 News</b> % internet users	<b>78%</b> 2016	<b>77%</b> 2017	<b>77%</b> 2017	<b>17</b>	<b>72%</b> 2017
<b>3b2 Music, videos and games</b> % internet users	<b>83%</b> 2016	<b>83%</b> 2016	<b>86%</b> 2018	<b>9</b>	<b>81%</b> 2018
<b>3b3 Video on demand</b> % internet users	<b>27%</b> 2016	<b>27%</b> 2016	<b>39%</b> 2018	<b>8</b>	<b>31%</b> 2018
<b>3b4 Video calls</b> % internet users	<b>31%</b> 2016	<b>35%</b> 2017	<b>38%</b> 2018	<b>27</b>	<b>49%</b> 2018
<b>3b5 Social networks</b> % internet users	<b>67%</b> 2016	<b>68%</b> 2017	<b>67%</b> 2018	<b>20</b>	<b>65%</b> 2018
<b>3b6 Professional social networks</b> % internet users	<b>16%</b> 2015	<b>16%</b> 2017	<b>16%</b> 2017	<b>12</b>	<b>15%</b> 2017
<b>3b7 Doing an online course</b> % internet users	<b>13%</b> 2016	<b>15%</b> 2017	<b>15%</b> 2017	<b>3</b>	<b>9%</b> 2017
<b>3b8 Online consultations and voting</b> % internet users	<b>12%</b> 2015	<b>13%</b> 2017	<b>13%</b> 2017	<b>9</b>	<b>10%</b> 2017
<b>3c1 Banking</b> % internet users	<b>54%</b> 2016	<b>55%</b> 2017	<b>57%</b> 2018	<b>19</b>	<b>64%</b> 2018
<b>3c2 Shopping</b> % internet users	<b>54%</b> 2016	<b>59%</b> 2017	<b>62%</b> 2018	<b>17</b>	<b>69%</b> 2018
<b>3c3 Selling online</b> % internet users	<b>15%</b> 2016	<b>15%</b> 2017	<b>13%</b> 2018	<b>20</b>	<b>23%</b> 2018

Overall, the use of internet services in Spain is broadly comparable with the EU average. People in Spain are keen to engage in a variety of online activities in line with the rest of the EU. Compared to the EU, the higher ranked activities are watching videos on demand and taking online courses. 77 % of Spanish internet users read news online (72 % in the EU). 38 % of Spaniards use video calls, well below the EU average, but online consultations and e-voting are above the EU average. The online consumption of music, videos and games online is also more widespread than in other EU countries, with 86 % of internet users engaging in these activities.

## 4 Integration of digital technology

4 Integration of digital technology	Spain		EU
	rank	score	score
DESI 2019	10	44.6	41.1
DESI 2018	9	44.7	39.6
DESI 2017	12	38.2	37.6



	Spain		EU	
	DESI 2017	DESI 2018	DESI 2019	DESI 2019
	value	value	value	rank
<b>4a1 Electronic information sharing</b>	<b>35%</b>	<b>46%</b>	<b>46%</b>	<b>4</b>
% enterprises	2015	2017	2017	2017
<b>4a2 Social media</b>	<b>24%</b>	<b>28%</b>	<b>28%</b>	<b>7</b>
% enterprises	2016	2017	2017	2017
<b>4a3 Big data</b>	<b>8%</b>	<b>8%</b>	<b>11%</b>	<b>16</b>
% enterprises	2016	2016	2018	2018
<b>4a4 Cloud</b>	<b>13%</b>	<b>18%</b>	<b>16%</b>	<b>13</b>
% enterprises	2016	2017	2018	2018
<b>4b1 SMEs selling online</b>	<b>19%</b>	<b>20%</b>	<b>18%</b>	<b>11</b>
% SMEs	2016	2017	2018	2018
<b>4b2 e-Commerce turnover</b>	<b>9%</b>	<b>10%</b>	<b>10%</b>	<b>16</b>
% SME turnover	2016	2017	2018	2018
<b>4b3 Selling online cross-border</b>	<b>6%</b>	<b>7%</b>	<b>7%</b>	<b>20</b>
% SMEs	2015	2017	2017	2017

As regards the integration of digital technology in businesses' activities Spain ranks 10<sup>th</sup> among EU countries. Compared with last year, Spain has gone down one step in the ranking. Spanish enterprises are taking advantage of the opportunities presented by online commerce: 18 % of SMEs sell online (slightly above the EU average of 17 %); 7 % of all SMEs are selling cross-border and 10 % of turnover comes from the online segment. 28 % of enterprises use social media (up from 24 % in 2016), 16 % use cloud services and 11 % of them access big data services.

Spain is committed to the advancement of new digital technologies and to investing strategically in digital technologies through EU-coordinated programmes (e.g. the country is a member of the EuroHPC Joint Undertaking; it has also signed the Declaration on European Blockchain Partnership, as well as the Declaration on cooperation on Artificial Intelligence).

The Spanish Secretary General for Industry and SMEs (SGIPYME), through its Industry 4.0. Strategy<sup>15</sup>, has proposed several measures to boost digitisation in companies. The HADA platform<sup>16</sup>, a free online application that allows companies to obtain an assessment of their digital maturity, is particularly noteworthy. There are over 2,000 companies in its registry so far (25 % of them from the food and beverage industry). Other measures include a new Master in Industry 4.0, designed by

<sup>15</sup> <http://www.industriaconectada40.gob.es/>

<sup>16</sup> <https://hada.industriaconectada40.gob.es/hada/register>

'Escuela de Organización Industrial (EOI)' in collaboration with the Connected Industry Plan 4.0<sup>17</sup>. This master programme is designed to train generalist experts in emerging technologies in the productive processes of connected factories 4.0, and in the design of new connected products.

The proposal announced to foster the Spanish start-up ecosystem<sup>18</sup> has three main goals:

- 1) to boost tax incentives for investment in R&D&I;
- 2) to reinforce networks of accelerators and incubators' networks by improving their connectivity and number; and
- 3) to host more international forums so as to strengthen the contacts with investors for talent.

The National Security Strategy<sup>19</sup>, set up in 2017, has a section on cybersecurity that is designed to guarantee a safe and reliable digital environment. This section focuses on strengthening the ability to prevent, detect and respond to cyber-attacks, and on boosting and adopting specific measures to help promote a secure and reliable cyberspace. The public and business sectors are included, as well as civil society.

To boost the digital transformation of the Spanish economy, it is important to raise awareness on the relevance of digitisation of SMEs and their needs. This will enable SMEs to reap the full range of rewards from adopting digital technologies.

---

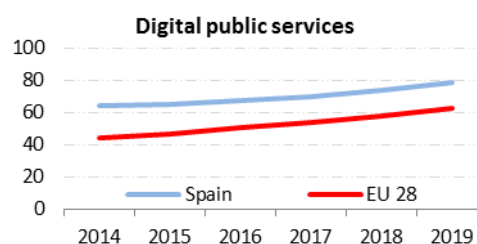
<sup>17</sup> <https://www.eoi.es/es/cursos/26560/master-executive-en-industria-40-madrid>

<sup>18</sup> <http://www.lamoncloa.gob.es/presidente/actividades/Paginas/2018/051018sanchez-summit.aspx>

<sup>19</sup> <https://www.dsn.gob.es/es/2017-spanish-national-security-strategy>

## 5 Digital public services

5 Digital public services	Spain		EU
	rank	score	score
DESI 2019	4	78.4	62.9
DESI 2018	6	73.7	57.9
DESI 2017	6	69.3	54.0



	DESI 2017	Spain		EU	
	value	DESI 2018	DESI 2019	rank	DESI 2019
<b>5a1 e-Government users</b> % internet users needing to submit forms	66%	67%	76%	10	64%
	2016	2017	2018		2018
<b>5a2 Pre-filled forms</b> Score (0 to 100)	67	72	74	10	58
	2016	2017	2018		2018
<b>5a3 Online service completion</b> Score (0 to 100)	89	95	95	8	87
	2016	2017	2018		2018
<b>5a4 Digital public services for businesses</b> Score (0 to 100) - including domestic and cross-border	88	95	93	7	85
	2016	2017	2018		2018
<b>5a5 Open data</b> % of maximum score	NA	NA	87%	2	64%
			2018		2018
<b>5b1 e-Health services</b> % individuals	NA	29%	29%	5	18%
		2017	2017		2017
<b>5b2 Medical data exchange</b> % of general practitioners	NA	NA	68%	6	43%
			2018		2018
<b>5b3 e-Prescription</b> % of general practitioners	NA	NA	74%	12	50%
			2018		2018

In Digital public services, Spain ranks 4<sup>th</sup> among EU countries, well above the EU average. This is the dimension in which it performs best. The country performs very well in the open data indicator on which it is ranked 2<sup>nd</sup>. There is a high level of online interaction between public authorities and members of the public. 76 % of Spanish internet users actively engage with e-government services. In 2018, Spain performed better than the previous year for pre-filled forms. However, the availability of e-government services for businesses performed slightly worse, although positioning Spain as the seventh best performer in the EU with a score of 93 out of 100. For e-health services, Spain ranks 5<sup>th</sup> in the EU.

The country's investment in the area of open government data is particularly noteworthy. Most of the digital-by-default strategy – the ICT Strategic plan for 2015-2020<sup>20</sup> - is already in place. This implies that almost all services are already available for members of the public to use in a fully digitised public administration environment. However, the adaptation of administrative procedures to this new paradigm and to the design of optimal management processes needs investments to

<sup>20</sup> [http://administracionelectronica.gob.es/pae/Home/pae\\_Estrategias/Estrategia-TIC-AGE.html#.Vuklmf4UV9A](http://administracionelectronica.gob.es/pae/Home/pae_Estrategias/Estrategia-TIC-AGE.html#.Vuklmf4UV9A)

ensure all technological and legal requirements are in place. A consensus was reached between the different layers of the competent public authorities (general, regional and local bodies) which required an extension of the deadline for the integration of certain services<sup>21</sup>.

In the area of e-health, the measures taken by the Autonomous Communities include the creation of comprehensive health web portals. Several Autonomous Communities have already implemented e-health mobile applications that allow patients access to information concerning them through their smartphones<sup>22</sup>. The Andalusian and Catalan health systems, in particular, have created apps, called '*App Salud Responde*' and '*AppSalut*', respectively, with very positive results. The Ministry of Health, Consumer and Social Welfare classes e-health information systems as medium-security. Every two years, the Ministry must undergo an audit to verify it fulfils the requirements set up in the National Security Scheme.

Full implementation of the Digital Transformation plan, by all public actors involved - central, regional and local government and other bodies - could lead the way to even more significant improvements in the area of digital public administration. Additional measures to facilitate the use of e-health mobile services by all members of the public, regardless of their geographical location, could help improve take-up further.

---

<sup>21</sup> Real Decreto-ley 11/2018

<sup>22</sup> For example, Extremadura, Galicia, La Rioja, Navarra and the Basque Country.