

Digital Economy and Society Index¹ 2016²

Country Profile

The Netherlands

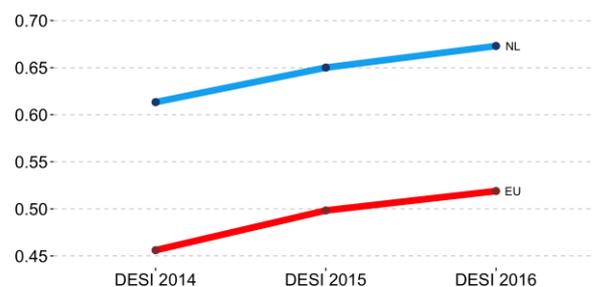
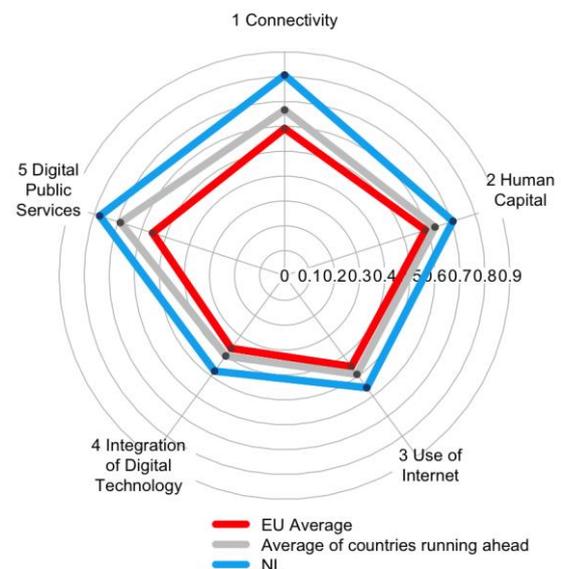
With an overall score³ of **0.67** the Netherlands is a top performer, ranking this year 2nd out of the 28 EU Member States.

Raking 1st in terms of Connectivity, with fast broadband (at least 30 Mbps) available to practically all households (98%) and as many as 62% subscribers to it, the country ranks very high in Use of Internet (6th), Human Capital (6th), Integration of Digital Technology (5th), and Digital Public Services (4th).

The Netherlands' digital economy and society could thrive even more, if the country further invests in human capital development to counter the shortage of ICT professionals, and if businesses were to use digital technologies even more to enhance their efficiency and productivity and to reach costumers and realise sales. Also spectrum harmonisation and mobile broadband take-up could be further improved to also expand the reach of internet services over this infrastructure.

The Netherlands' DESI score is above the EU average and the country developed faster than the EU over the last year, which places it in the running ahead cluster of countries⁴.

DESI	Netherlands		Cluster score	EU score
	rank	score		
DESI 2016	2	0.67	0.58	0.52
DESI 2015	4	0.65 ⁵	0.57	0.5



¹ The Digital Economy and Society Index (DESI) is a composite index developed by the European Commission (DG CNECT) to assess the development of EU countries towards a digital economy and society. It aggregates a set of relevant indicators structured around 5 dimensions: Connectivity, Human Capital, Use of Internet, Integration of Digital Technology and Digital Public Services. For more information about the DESI please refer to <http://ec.europa.eu/digital-agenda/en/digital-agenda-scoreboard>

² The DESI 2016 is constructed from indicators referring mostly to the calendar year 2015 (except when data is not available for that calendar year, in which case the latest prior data was used).

³ DESI scores range from 0 to 1, the higher the score the better the country performance.

⁴ In the DESI 2016, The Netherlands is part of the running ahead cluster of countries: countries that score above the EU average and whose score grew faster than that of the EU as a whole (in comparison to the DESI 2015). Other running ahead countries are. Other running ahead countries are Austria, Germany, Estonia, Malta, and Portugal.

⁵ The DESI 2015 was re-calculated for all countries to reflect updates and corrections to the underlying indicator data (which took place between May 2015 and January 2016). As such, country scores and rankings may have changed from the previous publication. For further information please consult the DESI methodological note.

1 Connectivity

1 Connectivity	Netherlands		Cluster score	EU score
	rank	score		
DESI 2016	1	0.81	0.67	0.59
DESI 2015	2	0.74	0.6	0.57

Connectivity is the DESI 2016 dimension where the Netherlands performs best. With an overall Connectivity score of 0.81, the country now ranks 1st among EU countries.

	Netherlands				EU DESI 2016 value	
	DESI 2016 value		rank	DESI 2015 value		rank
1a1 Fixed BB Coverage % households	100% (June 2015)	→	2	100% (December 2014)	3	97% (June 2015)
1a2 Fixed BB Take-up % households	94% (2015)		2	n.a.	-	72% (2015)
1b1 Mobile BB Take-up Subscribers per 100 people	80 (June 2015)	↑	9	77 (December 2014)	9	75 (June 2015)
1b2 Spectrum % of the target for spectrum to be harmonised at EU level	65% (December 2015)	↓	19	68% (December 2014)	19	69% (December 2015)
1c1 NGA Coverage % households, out of all households	98% (June 2015)	→	3	98% (December 2014)	3	71% (June 2015)
1c2 Subscriptions to Fast BB % of subscriptions >= 30Mbps, out of fixed BB subscriptions	62% (June 2015)	↑	3	46% (December 2014)	8	30% (June 2015)
1d1 Fixed BB Price % individual gross income spent for the cheapest standalone Fixed Broadband subscription (lower values are better)	1% (Access cost: 2015; Income: 2014)	→	8	1% (Access cost: 2014; Income: 2014)	7	1.3% (Access cost: 2015; Income: 2014)

The Netherlands is performing overall very well in terms of Connectivity. Both with regard to broadband and fast broadband coverage, the Netherlands is in the top 3.

Every Dutch household has access to broadband Internet. Next Generation Access networks capable of providing at least 30 Mbps are available to practically all Dutch households (98%) (71% in the EU). Of all fixed broadband subscriptions in the Netherlands, 62% are to a fast broadband connection, up from 46% last year and significantly above the average for the EU (30%).

Compared to last year also the number of mobile broadband subscribers increased in the Netherlands. Nonetheless, spectrum harmonisation in the Netherlands is lagging behind the EU average and still a fifth of all citizens do not yet use mobile broadband.

2 Human Capital

2 Human Capital	Netherlands		Cluster	EU
	rank	score	score	score
DESI 2016	6	0.71	0.63	0.59
DESI 2015	5	0.73	0.72	0.58

With a Human Capital score of 0.71, the Netherlands ranks very high in the EU and scores higher than the "running ahead" cluster score. Dutch people are overall active Internet users compared to the EU average.

	Netherlands				EU
	DESI 2016		DESI 2015		DESI 2016
	value	rank	value	rank	value
2a1 Internet Users % individuals (aged 16-74)	91% (2015) →	3	91% (2014)	3	76% (2015)
2a2 Basic Digital Skills % individuals (aged 16-74)	72% (2015)	4	n.a.	-	55% (2015)
2b1 ICT Specialists % employed individuals	5% (2014) ↑	4	4.7% (2013)	7	3.7% (2014)
2b2 STEM Graduates Graduates in STEM per 1000 individuals (aged 20 to 29)	9.5 (2013) ↓	26	11 (2012)	25	18 (2013)

To fully exploit the benefits of the digital economy, a high-skilled and adaptive workforce is key to the capacity to innovate and to competitiveness. Although skills mismatches in the Netherlands are relatively limited, the potential of the digital economy for growth and jobs is easily hampered by a shortage of ICT professionals and by reluctance to use the Internet.

Although 5% of all persons employed in the Netherlands were ICT professionals in 2014, in 2015, more than half (53%) of the companies in the Netherlands trying to recruit ICT specialists found it hard to fill their vacancies.⁶ By 2020 the lack of ICT specialists could be as high as 56.000⁷. This is likely due to stagnating science and technology graduate numbers since 2006 as not enough young people, including women, are being attracted to careers in ICT.⁸ While the Netherlands seeks to address this gap with a range of programmes⁹, further efforts to reduce actual or potential digital skills shortages could help to meet growing demand for digitally skilled professionals and increase the competitiveness of the Dutch economy. The "Human Capital Agenda ICT" recently launched to link demand and supply of ICT professionals in the Dutch 'Top sectors' and to stimulate life-long learning should at least in part address the digital skills gap.

⁶ Digital Agenda Scoreboard, based on Eurostat.

⁷ empirica, e-Skills in Europe, Trends and Forecasts for the European ICT Professional and Digital Leadership Labour Markets (2015-2020), Nov. 2015.

⁸ Digital agenda scoreboard; Statistics NL (The Netherlands on the European Scale 2016); EU Skills Panorama (Focus on STEM skills).

⁹ e.g. through the Commission's Grand Coalition initiative on digital skills, Techniekpact, Digivaardig & Digiveilig.

3 Use of Internet

3 Use of Internet	Netherlands rank	Netherlands score	Cluster score	EU score
DESI 2016	6	0.56	0.49	0.45
DESI 2015	3	0.56	0.47	0.43

In terms of the propensity of individuals to use internet services, the Netherlands still scores very well, although the country has dropped in ranking from 3rd to 6th. Dutch people appear to adopt eagerly in particular Internet banking and shopping.

	Netherlands				EU DESI 2016 value
	DESI 2016		DESI 2015		
	value	rank	value	rank	
3a1 News % individuals who used Internet in the last 3 months (aged 16-74)	59% (2015) ↓	25	61% (2014)	25	68% (2015)
3a2 Music, Videos and Games % individuals who used Internet in the last 3 months (aged 16-74)	65% (2014) →	2	65% (2014)	2	49% (2014)
3a3 Video on Demand % households that have a TV	69% (2014) →	4	69% (2014)	4	41% (2014)
3b1 Video Calls % individuals who used Internet in the last 3 months (aged 16-74)	34% (2015) ↓	23	35% (2014)	22	37% (2015)
3b2 Social Networks % individuals who used Internet in the last 3 months (aged 16-74)	64% (2015) ↑	20	63% (2014)	17	63% (2015)
3c1 Banking % individuals who used Internet in the last 3 months (aged 16-74)	91% (2015) ↑	3	90% (2014)	3	57% (2015)
3c2 Shopping % individuals who used Internet in the last year (aged 16-74)	76% (2015) ↑	7	75% (2014)	6	65% (2015)

In the Netherlands, online engagement of consumers is high, fuelling the digital economy and society. Dutch people increasingly use the Internet to communicate via social networks (64%). The Netherlands ranks in the top 5 when it comes to using their broadband connections for video on demand (69%), listening to music, watching videos and playing games (65%), and on-line banking (91%). With regard to on-line shopping, the country ranks in the top 10 with 76% of people having ordered goods and services in the last year.

Instead, 59% of the Dutch read news online, down from 61% last year. This is below the EU average (68%). Also the online service of video calls does not score high.

4 Integration of Digital Technology

4 Integration of Digital Technology	Netherlands		Cluster	EU
	rank	score	score	score
DESI 2016	5	0.48	0.4	0.36
DESI 2015	6	0.42	0.36	0.33

In Integration of Digital Technology by businesses, the Netherlands scores 0.48, its worst score among the five DESI 2016 dimensions.

Nonetheless, the country has improved its overall ranking to 5th on the EU scale, up from 6th last year.

	Netherlands				EU DESI 2016 value
	DESI 2016		DESI 2015		
	value	rank	value	rank	
4a1 Electronic Information Sharing % enterprises (no financial sector, 10+ employees)	45% (2015) ↑	4	40% (2014)	5	36% (2015)
4a2 RFID % enterprises (no financial sector, 10+ employees)	3.1% (2014) →	19	3.1% (2014)	19	3.8% (2014)
4a3 Social Media % enterprises (no financial sector, 10+ employees)	37% (2015) →	1	37% (2014)	1	18% (2015)
4a4 eInvoices % enterprises (no financial sector, 10+ employees)	15% (2015) ↑	7	11% (2014)	13	n.a.
4a5 Cloud % enterprises (no financial sector, 10+ employees)	n.a.	-	23% (2014)	4	n.a.
4b1 SMEs Selling Online % SMEs (no financial sector, 10+ employees)	17% (2015) ↑	11	13% (2014)	15	16% (2015)
4b2 eCommerce Turnover % turnover of SMEs (no financial sector, 10-249 employees)	8.3% (2015) ↑	13	6.5% (2014)	21	9.4% (2015)
4b3 Selling Online Cross-border % SMEs (no financial sector, 10+ employees)	10% (2015) ↑	7	8.4% (2013)	10	7.5% (2015)

A true digital economy is one where businesses take full advantage of the possibilities and benefits offered by digital technologies to improve their efficiency and productivity as well as to reach costumers and realise sales.

The Netherlands has particularly improved in terms of online selling by SMEs, including cross-border, the use of eInvoicing and electronic information sharing, areas in which the country scores above the EU average. As to the use by enterprises of two or more social media to support their business, the Netherlands ranks, like last year, first in the EU. As a result, also turnover from these sources has increased. More specifically, the country now ranks 13th up from 21st on the EU scale. Notwithstanding this there is still scope for improvement when comparing to the EU average turnover derived from eCommerce.

5 Digital Public Services

5 Digital Public Services	Netherlands		Cluster	EU
	rank	score	score	score
DESI 2016	4	0.78	0.69	0.55
DESI 2015	2	0.76	0.66	0.54

Digital Public Services is the DESI 2016 dimension in which the Netherlands performs second best, after Connectivity. With a score of 0.78, the Netherlands ranks 4th among EU countries.

	Netherlands				EU DESI 2016 value
	DESI 2016		DESI 2015		
	value	rank	value	rank	
5a1 eGovernment Users % individuals returning filled forms, out of Internet users in the last year (aged 16-74)	56% (2015)	↓ 5	61% (2014)	2	32% (2015)
5a2 Pre-filled Forms Score (0 to 100)	76 (2015)	↑ 6	69 (2014)	8	49 (2015)
5a3 Online Service Completion Score (0 to 100)	91 (2015)	↑ 8	85 (2014)	10	81 (2015)
5a4 Open Data Score (0 to 700)	505 (2015)	→ 4	505 (2014)	4	351 (2015)

Modern public services offered online in an efficient manner are a vehicle for efficiency gains for enterprises, citizens, and the public administration itself.

The Netherlands already last year appeared to have put in place the necessary digital infrastructures to kick-start a comprehensive set of government-related services for its citizens and businesses. The availability of pre-filled forms¹⁰ is considerably above the EU average and also in terms of online service completion¹¹ the country has considerably improved its score. Also with respect to Open Data the Netherlands performs very well in the EU.

The decrease in eGovernment users compared to last year is likely due to an improved automation of services at a higher level and a subsequent lesser need for end-users to submit forms.

¹⁰ The Pre-filled Forms indicator measures the extent to which data that is already known to the public administration is pre-filled in the forms that are presented to the user.

¹¹ The Online Service Completion indicator measures the extent to which the various steps in an interaction with the public administration – life event – can be performed completely online.