

Digital Economy and Society Index¹ 2016²

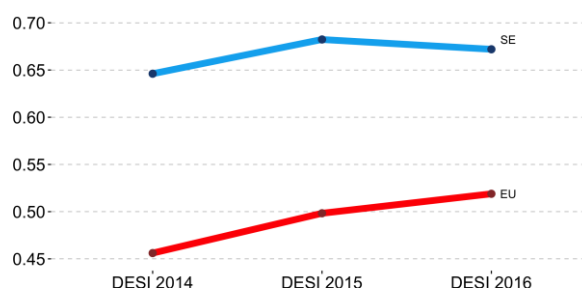
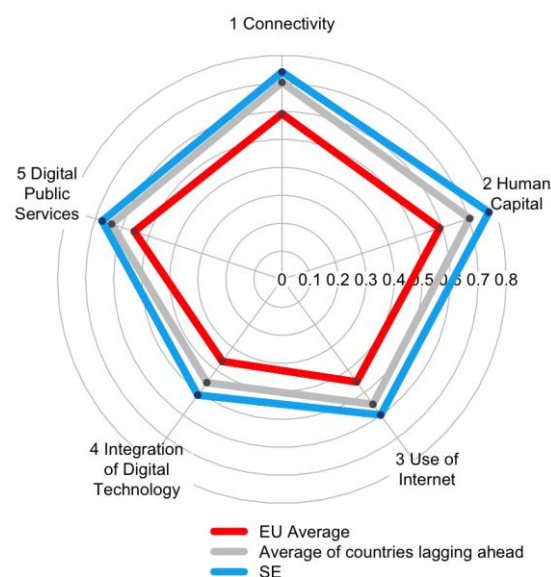
Country Profile

Sweden

In DESI 2016, Sweden has an overall score³ of **0.67** and ranks **3rd** out of the 28 EU Member States. It scores high in all DESI dimensions. Fixed broadband is available to 99% of homes, a remarkable outcome given Sweden's geographical configuration. High speed broadband is available to 76% of homes and 99% of homes are covered by mobile 4G/LTE technology. 92% of Swedes use the internet. 6% of the workforce are ICT specialists, well above the EU average. Still, demand for ICT professionals in Sweden outstrips supply. 78% of internet users shop online, and 35% of them buy online from other countries. A quarter of Sweden's SMEs sell online.

Sweden falls into the cluster of **lagging ahead⁴** countries, scoring above the EU average but with below average growth from last year.

	Sweden rank	Sweden score	Cluster score	EU score
DESI 2016	3	0.67	0.62	0.52
DESI 2015	1	0.68	0.6	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, Sweden is part of the lagging ahead cluster of countries: countries who score above the EU average but whose score grew slower than that of the EU as a whole (in comparison to the DESI 2015). Other lagging ahead countries are Belgium, Denmark, Finland, Ireland Lithuania, Luxemburg and United Kingdom.

1 Connectivity

1 Connectivity	Sweden		Cluster score	EU score
	rank	score		
DESI 2016	3	0.74	0.7	0.59
DESI 2015	3	0.73	0.7	0.57

With an overall Connectivity score of 0.74 Sweden ranks 3rd among EU countries.

	Sweden		Sweden		EU DESI 2016 value
	DESI 2016 value	rank	DESI 2015 value	rank	
1a1 Fixed BB Coverage % households	99% (June 2015) →	13	99% (December 2014)	13	97% (June 2015)
1a2 Fixed BB Take-up % households	68% (2015) ↑	17	67% (2014)	14	72% (2015)
1b1 Mobile BB Take-up Subscribers per 100 people	115 (June 2015) ↑	2	111 (December 2014)	3	75 (June 2015)
1b2 Spectrum % of the target for spectrum to be harmonised at EU level	92% (December 2015) ↓	3	96% (December 2014)	4	69% (December 2015)
1c1 NGA Coverage % households, out of all households	76% (June 2015) →	18	76% (December 2014)	15	71% (June 2015)
1c2 Subscriptions to Fast BB % of subscriptions >= 30Mbps, out of fixed BB subscriptions	57% (June 2015) ↑	6	52% (December 2014)	6	30% (June 2015)
1d1 Fixed BB Price % individual gross income spent for the cheapest standalone Fixed Broadband subscription (lower values are better)	0.92% (Access cost: 2015; Income: 2014) ↑	7	0.97% (Access cost: 2014; Income: 2014)	5	1.3% (Access cost: 2015; Income: 2014)

In the middle of 2015, fixed broadband was available to 99% of homes in Sweden (97% in the EU). In rural areas, fixed broadband covered 94% of homes. At the same time, Next Generation Access capable of providing at least 30 Mbps download was available to 76% of homes (71% in the EU) and 4th generation (LTE) networks to 99%. These results are remarkable given the geographical configuration of the country.

The take up of fixed broadband have been close to flat during the past years. However the share of high speed connections (providing at least 30 Mbps) is higher than the EU average (57% compared to 30% in the EU) and has increased since last year. Further sustained roll-out of Next Generation Access broadband networks could further developments in the Swedish digital economy. Take up of mobile broadband is at high level and increased further in 2015.

2 Human Capital

2 Human Capital	Sweden		Cluster	EU
	rank	score	score	score
DESI 2016	2	0.78	0.7	0.59
DESI 2015	2	0.82	0.67	0.58

With a Human Capital score of 0.78, Sweden ranks, like last year, 2nd among EU countries. Swedish citizens are overall active internet users compared to the EU average and overall have a good basic set of skills.

	Sweden				EU
	DESI 2016 value	rank	DESI 2015 value	rank	DESI 2016 value
2a1 Internet Users % individuals (aged 16-74)	89% (2015) ↓	6	91% (2014)	4	76% (2015)
2a2 Basic Digital Skills % individuals (aged 16-74)	72% (2015)	5	n.a.	-	55% (2015)
2b1 ICT Specialists % employed individuals	6% (2014) ↑	2	5.9% (2013)	2	3.7% (2014)
2b2 STEM Graduates Graduates in STEM per 1000 individuals (aged 20 to 29)	15 (2013) ↓	19	16 (2012)	16	18 (2013)

Overall, 89% of Swedish people use the internet and 72% of them have the basic digital skills that allow them to partake in the possibilities offered by the internet and to benefit from the opportunities offered by a digital society and economy.

Furthermore, Sweden also avails of the second highest number of ICT specialists in the workforce⁵ in Europe, 60% above the EU average value. This allows Sweden to further increase the competitiveness of the Swedish economy. However, results from a representative survey of CIO's and HR managers in eight European countries in 2012⁶ shows that demand for ICT professionals in Sweden outstrips supply. Relative to its ICT workforce, the excess demand in Sweden is large (one vacancy is reported per 13 existing ICT-jobs). Hence it is important that Sweden upholds efforts in human capital development.

⁵ The definition of the ICT Specialists' occupations from 2011 onwards is based on the new ISCO-08 classification. It includes codes 25, 35, 742, 133, 2152, 2153, 2166, 2356, 2421, 2434, 3114, 3139, 3155, 3211, 3252, 8212. Where 4-digit data was not available, the share of computing graduates in the corresponding 3-digit data was estimated.

⁶ [http://eskills-lead.eu/fileadmin/LEAD/Working Paper - Supply demand forecast 2015 a.pdf](http://eskills-lead.eu/fileadmin/LEAD/Working_Paper_-_Supply_demand_forecast_2015_a.pdf)

3 Use of Internet

3 Use of Internet	Sweden		Cluster score	EU score
	rank	score		
DESI 2016	2	0.6	0.55	0.45
DESI 2015	1	0.63	0.54	0.43

Use of Internet is the DESI 2016 dimension in which Sweden performs second best among the EU countries, with its population actively engaging in a multitude of on-line services.

	Sweden				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)	83% (2015) ↓	10	88% (2014)	3	68% (2015)
3a2 Music, Videos and Games % individuals who used Internet in the last 3 months (aged 16-74)	57% (2014)	6	57% (2014)	6	49% (2014)
3a3 Video on Demand % households that have a TV	49% (2014)	8	49% (2014)	8	41% (2014)
3b1 Video Calls % individuals who used Internet in the last 3 months (aged 16-74)	43% (2015) ↓	12	52% (2014)	7	37% (2015)
3b2 Social Networks % individuals who used Internet in the last 3 months (aged 16-74)	69% (2015) ↓	12	70% (2014)	6	63% (2015)
3c1 Banking % individuals who used Internet in the last 3 months (aged 16-74)	88% (2015) →	5	88% (2014)	4	57% (2015)
3c2 Shopping % individuals who used Internet in the last year (aged 16-74)	78% (2015) ↓	5	80% (2014)	4	65% (2015)

A digital economy is partly fuelled by its citizens' consumption in the online channel and Swedish Internet users engage in a broad range of online activities. They read news online (83%), listen to music, watch films and play games online (57%), use the Internet to communicate via video calls (43%) or through social networks (69%), and obtain video content using their broadband connections (49% of households subscribe to Video on Demand). 78% of internet users shop online, but they have a preference for shopping at home, since only 35% of them do so cross border.

4 Integration of Digital Technology

4 Integration of Digital Technology	Sweden		Cluster	EU
	rank	score	score	score
DESI 2016	3	0.51	0.46	0.36
DESI 2015	2	0.49	0.42	0.33

Sweden ranks 3rd among EU countries with regard to business digitisation and eCommerce activities. Despite losing a rank, its score has improved from 0.49 to 0.51.

	Sweden				EU DESI 2016 value
	DESI 2016		DESI 2015		
	value	rank	value	rank	
4a1 Electronic Information Sharing % enterprises (no financial sector, 10+ employees)	n.a.	-	43% (2014)	3	36% (2015)
4a2 RFID % enterprises (no financial sector, 10+ employees)	2.7% (2014)	23	2.7% (2014)	23	3.8% (2014)
4a3 Social Media % enterprises (no financial sector, 10+ employees)	21% (2015) ↑	6	20% (2014)	7	18% (2015)
4a4 eInvoices % enterprises (no financial sector, 10+ employees)	n.a.	-	23% (2014)	3	n.a.
4a5 Cloud % enterprises (no financial sector, 10+ employees)	n.a.	-	27% (2014)	3	n.a.
4b1 SMEs Selling Online % SMEs (no financial sector, 10+ employees)	26% (2015) ↑	2	24% (2014)	4	16% (2015)
4b2 eCommerce Turnover % turnover of SMEs (no financial sector, 10-249 employees)	14% (2015) →	5	14% (2014)	4	9.4% (2015)
4b3 Selling Online Cross-border % SMEs (no financial sector, 10+ employees)	9.7% (2015) ↑	10	7.7% (2013)	14	7.5% (2015)

A true digital economy is one where businesses take full advantage of the possibilities and benefits offered by digital technologies, both to improve their efficiency and productivity, as well as to reach costumers and realise sales. Swedish businesses are performing very well in this area. They adopt cloud computing, sell online and use electronic invoicing.

The adoption of digital technologies is an important driver of labour productivity growth. Swedish companies should continue to integrate their internal processes using electronic information sharing and to use social media as a communication tool.

5 Digital Public Services

5 Digital Public Services	Sweden		Cluster	EU
	rank	score	score	score
DESI 2016	7	0.71	0.6	0.48
DESI 2015	6	0.71	0.55	0.47

Digital Public Services is the dimension where Sweden performs the weakest of all its DESI 2016 dimensions, still maintaining the 7th place in the EU.

	Sweden				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)	49% (2015)	↓	6	54% (2014)	5	32% (2015)
5a2 Pre-filled Forms Score (0 to 100)	75 (2015)	→	7	75 (2014)	6	49 (2015)
5a3 Online Service Completion Score (0 to 100)	89 (2015)	↑	10	87 (2014)	9	81 (2015)
5a4 Open Data Score (0 to 700)	305 (2015)	→	19	305 (2014)	18	351 (2015)

Modern public services offered online in an efficient manner are a vehicle for reducing spending in the public administration as well as for driving efficiency gains for enterprises, citizens and the public administration. Its indicator scores⁷ illustrate that Sweden is performing well above the EU average with regard to the provision of eGovernment services as well as with the uptake thereof. Sweden and Denmark for example have a well-functioning eGovernment portal for citizens wanting to work in each other's country. However, given the country's leading position in the digital economy and society, a further improvement of eGovernment services provision would produce a greater benefit and raise usage figures as well.

⁷ 75/100 in the Pre-filled Forms indicator (measuring 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), and of 87/100 in the Online Service Completion indicator (measuring the extent to which the various steps in an interaction with the public administration – life event – can be performed completely online).