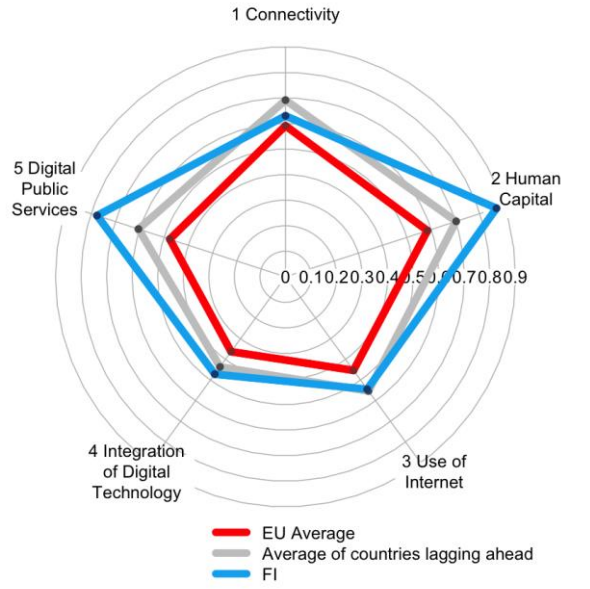
Digital Economy and Society Index[1] 2016[2]

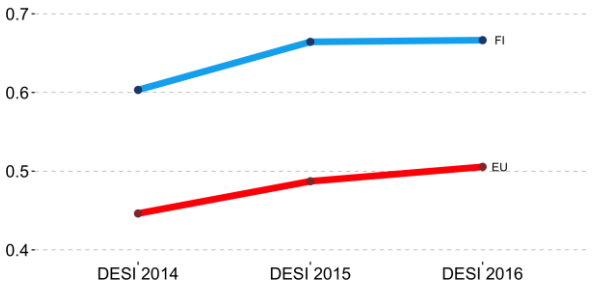
Country Profile

Finland

In DESI 2016[3], Finland has an overall score[4] of **0.67** and ranks 4th out of the 28 EU Member States. Whilst Finland is generally among the more advanced countries, it is outstanding as far as "human capital" is concerned: 91% of the population are regular internet users and the Finish workforce has by far the highest proportion of ICT specialists in the EU (6.7%). Finland is also very good at using digital technologies for online public services. However, even in Finland only 15% of SMEs sell online, below EU average, despite their citizens' propensity for eCommerce.

Finland belongs to the cluster of countries with high scores but slow improvements called "lagging ahead"[5], even there outperforming its peers.





	Finland		Cluster	EU
	rank	score	score	score
DESI 2016	**4**	**0.67**	**0.62**	**0.51**
DESI 2015	3	0.66[6]	0.60	0.49

[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] 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

[4] DESI scores range from 0 to 1, the higher the score the better the country performance.

[5] In the DESI 2016, the lagging ahead cluster of countries comprises Belgium, Denmark, Estonia, Finland, Ireland, Lithuania, Luxemburg, Sweden and the UK

[6] 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	Finland rank	Finland score	Cluster score	EU score
DESI 2016	**11**	**0.63**	**0.70**	**0.59**
DESI 2015	11	0.64	0.70	0.57

With an overall Connectivity score of 0.63, Finland ranks 11th among EU countries. Finland has historically performed very well in mobile solutions, perhaps leading to a lower fixed broadband take-up than in other countries.

	Finland DESI 2016 Value		Finland DESI 2016 rank	Finland DESI 2015 value	Finland DESI 2015 rank	EU DESI 2016 value
1a1 Fixed BB Coverage % households	97% (June 2015)	→	17	97% (Dec 2014)	17	97% (June 2015)
1a2 Fixed BB Take-up % households	59% (2015)	↓	25	61% (2014)	21	72% (2015)
1b1 Mobile BB Take-up Subscribers per 100 people	139 (June 2015)	↑	1	138 (Dec 2014)	1	75 (June 2015)
1b2 Spectrum % of the target for spectrum to be harmonised at EU level	75% (Dec 2015)	↓	9	78% (Dec 2014)	8	69% (Dec 2015)
1c1 NGA Coverage % households, out of all households	75% (June 2015)	→	19	75% (Dec 2014)	17	71% (June 2015)
1c2 Subscriptions to Fast BB % of subscriptions >= 30Mbps, out of fixed BB subscriptions	31% (June 2015)	↑	16	27% (Dec 2014)	16	30% (June 2015)
1d1 Fixed BB Price % individual gross income spent for the cheapest standalone Fixed Broadband subscription (lower values are better)	0.83% (Access cost 2015, income 2014)	↑	2	0.84% (Access cost 2014, income 2014)	2	1.3% (Access cost 2015, income 2014)

Fixed broadband is available to 97% of Finnish homes, which is remarkable given the geographical characteristics of the country. It is also very cheap: relative to income, broadband is more affordable only in Lithuania. Nevertheless, fixed broadband take-up is among the lowest in the EU. Even high-speed broadband subscriptions are only average. One of the reasons for the relatively weak performance in terms of fixed broadband is the excellent performance in mobile broadband. Finland leads the ranks in mobile broadband take-up with quite a distance (139 subscriptions per 100 people compared to 114 for Sweden and 112 for Denmark) and is not far away from twice the EU average.

2 Human Capital

2 Human Capital	Finland		Cluster	EU
	Rank	score	score	score
DESI 2016	**1**	**0.87**	**0.70**	**0.59**
DESI 2015	1	0.89	0.67	0.58

With a Human Capital score of 0.87, Finland continues to be the top performer among EU countries. Together with Digital Public Services, this is the great digital strength of Finland.

	Finland					EU
	DESI 2016			DESI 2015		DESI 2016
	value		rank	value	rank	value
2a1 Internet Users % individuals (aged 16-74)	91% (2015)	↑	4	90% (2014)	5	76% (2015)
2a2 Basic Digital Skills % individuals (aged 16-74)	75% (2015)		2			55% (2015)
2b1 ICT Specialists % employed individuals	6.7% (2014)	→	1	6.7% (2013)	1	3.7% (2014)
2b2 STEM Graduates Graduates in STEM per 1000 individuals (aged 20 to 29)	22 (2013)	→	4	22 (2012)	4	18 (2013)

The share of regular Internet users reaches 91% of the population, placing Finland in 4th position only marginally behind Denmark and the Netherlands. Only Luxemburg has a significantly higher score (97%). Finland also has the second-highest indicator of basic digital skills, again only behind Luxemburg.

The high digital sophistication of Finland's workforce is reflected in the extremely high share of ICT specialists: with 6.7% Finland has by far the highest percentage of workers in these occupations, partly due to the important role Nokia played in the past in the economy. Second-placed Sweden stands at 6.0%, and in third-placed Luxemburg 5.1% work as ICT specialists.

3 Use of Internet

3 Use of Internet	Finland		Cluster	EU
	rank	score	score	score
DESI 2016	**7**	**0.54**	**0.55**	**0.45**
DESI 2015	8	0.53	0.54	0.43

While the overall score for the use of internet is in the upper middle ranks (7th place with 0.54), Finland has an unusual profile in that it has very high scores in some indicators and very low scores in others.

	Finland					EU
	DESI 2016			DESI 2015		DESI 2016
	value		rank	value	rank	value
3a1 News % individuals who used Internet in the last 3 months (aged 16-74)	90% (2015)	↑	3	85% (2014)	9	68% (2015)
3a2 Music, Videos and Games % individuals who used Internet in the last 3 months (aged 16-74)	70% (2014)		1	70% (2014)	1	49% (2014)
3a3 Video on Demand % households that have a TV	12% (2014)		22	12% (2014)	22	41% (2015)
3b1 Video Calls % individuals who used Internet in the last 3 months (aged 16-74)	28% (2015)	↓	28	30% (2014)	25	37% (2015)
3b2 Social Networks % individuals who used Internet in the last 3 months (aged 16-74)	63% (2015)	↑	22	60% (2014)	19	63% (2015)
3c1 Banking % individuals who used Internet in the last 3 months (aged 16-74)	93% (2015)	→	1	93% (2014)	1	57% (2015)
3c2 Shopping % individuals who used Internet in the last year (aged 16-74)	76% (2015)	↑	6	73% (2014)	7	65% (2015)

Finnish residents routinely use the Internet for gathering new and accessing music, videos and games. Nor have they major hesitations to use it for transactions such as shopping and banking – indeed online banking is nearly universal in Finland, as it is in most of its immediate neighbours. More than half of the online shoppers also buy from other Member states. However, when it comes to video-on-demand, video calls and social networks they appear to be quite reluctant, as least compared to most other member states.

4 Integration of Digital Technology

4 Integration of Digital Technology	Finland		Cluster	EU
	rank	score	score	score
DESI 2016	**6**	**0.47**	**0.46**	**0.36**
DESI 2015	4	0.45	0.42	0.33

In Integration of Digital Technology by businesses, Finland scores 0.47. Finnish businesses take advantage of the possibilities offered by digital technologies to improve their efficiency and productivity, but much less to increase their sales.

	Finland					EU
	DESI 2016			DESI 2015		DESI 2016
	value		rank	value	rank	value
4a1 Electronic Information Sharing % enterprises (no financial sector, 10+ employees)	37% (2015)	↓	13	39% (2014)	8	36% (2015)
4a2 RFID % enterprises (no financial sector, 10+ employees)	5.8% (2014)		6	5.8% (2014)	6	3.8% (2014)
4a3 Social Media % enterprises (no financial sector, 10+ employees)	21% (2015)	↑	8	16% (2014)	6	18% (2014)
4a4 eInvoices % enterprises (no financial sector, 10+ employees)	n.a.			n.a.		n.a.
4a5 Cloud % enterprises (no financial sector, 10+ employees)	37% (2015)	↑	1	33% (2014)	-	n.a.
4b1 SMEs Selling Online % SMEs (no financial sector, 10+ employees)	15% (2015)	↑	16	14% (2014)	12	16% (2015)
4b2 eCommerce Turnover % turnover of SMEs (no financial sector, 10-249 employees)	n.a.			n.a.		9.4% (2015)
4b3 Selling Online Cross-border % SMEs (no financial sector, 10+ employees)	5.8% (2015)	↑	21	4.8% (2013)	20	7.5% (2015)

Perhaps surprisingly for a highly digitised society, Finland has low scores when it comes to selling online. In fact, despite some progress, Finland is below the EU average both for selling online and for selling online cross-border. On the other hand, Finnish companies are eager adopters of technologies to make their processes more efficient; they are the most active in adopting cloud solution and they also make ample use of RFID. When it comes to using digital technologies for networking and marketing, either by social media or by electronic information sharing between companies, Finnish businesses are neither reluctant nor enthusiasts but somewhere in-between.

5 Digital Public Services

5 Digital Public Services	Finland rank	Finland score	Cluster score	EU score
DESI 2016	**3**	**0.79**	**0.64**	**0.55**
DESI 2015	3	0.76	0.62	0.54

Digital Public Services are together with Human Capital the strength of Finland's performance. With a score of 0.79, Finland continues to rank 3rd among EU countries, behind only Estonia, Denmark and the Netherlands. Finland has one of the highest shares of eGovernment users and users of eHealth services.

	Finland DESI 2016 Value		Finland DESI 2016 rank	Finland DESI 2015 value	Finland DESI 2015 rank	EU DESI 2016 value
5a1 eGovernment Users % individuals returning filled forms, out of Internet users in the last year (aged 16-74)	63% (2015)	↑	3	60% (2014)	3	32% (2015)
5a2 Pre-filled Forms Score (0 to 100)	87 (2015)	↑	3	81 (2014)	3	49 (2015)
5a3 Online Service Completion Score (0 to 100)	93 (2015)	↑	6	90 (2014)	7	81 (2015)
5a4 Open Data Score (0 to 700)	390 (2015)	↓	12	395 (2014).	13	351 (2015)

Modern public services offered online in an efficient manner are a vehicle towards reducing public spending as well as driving efficiency gains for enterprises, citizens, and the public administration itself. Providing such services has been a priority of the Finnish government in the recent past.

Although Finland was already among the best in the EU, it has managed to further improve its score significantly and continues to show a high level of sophistication of its online public services. In particular, Finland has increased the use of pre-filled forms twice as fast as the EU average, despite the high starting point. The continuing solid increase in the share of eGovernment users also displays an ability to reach out ever larger shares of the population. Since this increase is three times larger than the increase in Internet use, it is to a great extent the result of attracting Internet users which had previously not used eGovernment.