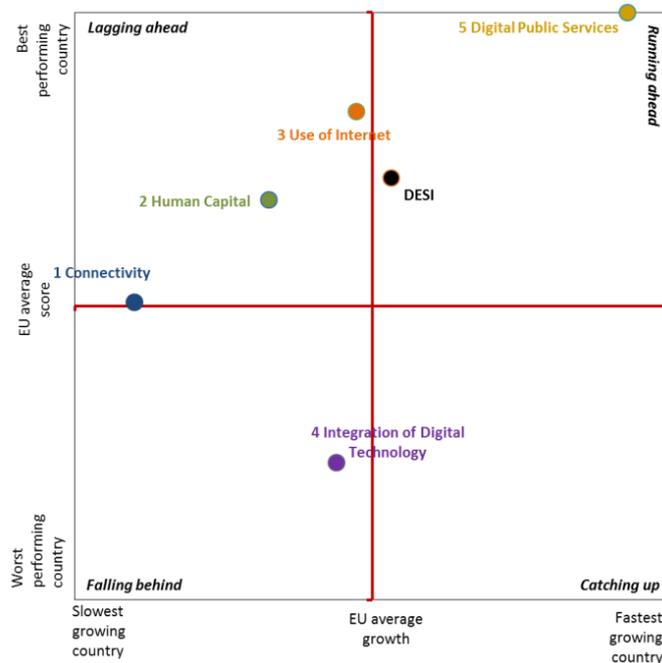


# Europe's Digital Progress Report (EDPR) 2016

A report complementing the Digital Economy and Society Index (DESI) <sup>1</sup> country profile

## ESTONIA

Estonia ranks 7<sup>th</sup> out of the 28 Member States in the European Commission's Digital Economy and Society Index (DESI) 2016<sup>2</sup>. Overall Estonia falls into the cluster of **running ahead** countries,<sup>3</sup> scoring above the EU average and with rapid growth from last year. Estonia is at the forefront in supply and use of Digital Public Services and Estonians are well-skilled in the use of digital technologies and keen users of a variety of internet services. 22% of Estonians shop cross-border, a higher rate than the European average. Despite progress, the greatest challenge in terms of digitisation is the Integration of digital technology by businesses.



Estonia's performance in the five DESI dimensions relative to other EU countries

The current Estonian Digital Agenda<sup>4</sup> sets out the general objective to “contribute to achieving higher growth, more jobs and increased welfare by creating an environment supporting the use and development of ICT solutions”. It’s an ambitious strategy that sets out a vision, principles, sub-objectives and measures with targets, indicators and action lines. The implementation of the strategy in Estonia is steered by the e-Estonia Council led by the Prime Minister.

### 1 – Connectivity

With an overall Connectivity score of 0.59, on a par with the EU average, Estonia ranks 16th among EU countries, down from 14th a year ago. Uptake of mobile Internet (3G and 4G) is among the highest in the EU, around 86% of the population. This includes multiple subscriptions, and illustrates the high diffusion of mobile technologies to access the Internet. With an increase in take up of fixed broadband, there has also been an increase in the share of subscriptions to fast broadband (at least 30 Mbps) from 24% to 27%, thereby closing in on the

<sup>1</sup> 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. It clusters countries in four groups: Running ahead, Lagging ahead, Catching up and Falling behind. For more information about the DESI please refer to <https://ec.europa.eu/digital-single-market/en/desi>

<sup>2</sup> DESI Country Profile for Estonia: <https://ec.europa.eu/digital-single-market/scoreboard/estonia>

<sup>3</sup> Other running ahead countries are Austria, Germany, Malta, the Netherlands and Portugal

<sup>4</sup> [https://www.mkm.ee/sites/default/files/digital\\_agenda\\_2020\\_estonia\\_engf.pdf](https://www.mkm.ee/sites/default/files/digital_agenda_2020_estonia_engf.pdf)

EU average of 30%. The level of assigned spectrum in the ranges harmonised by the European Union, has gone down in Estonia (also due to the newly harmonised 1500MHz band) but still remains well above average (84% vs an EU average of 69%). While Estonia scores well in the take up of broadband, both mobile and fixed, Estonia occupies the third to last position in terms of availability of fixed broadband in rural areas (89% of homes).

In early 2014, Estonia updated its targets and measures for broadband development as part of its new Digital Agenda 2020 for Estonia. The country aims at providing all residents with internet access of > 30 Mbps, and achieving at least 60 % household subscription rates for speeds > 100 Mbps. Funding is expected to come from private and public sources, state budget as well as EU structural funds.<sup>5</sup>

Estonia's challenge is to get universal coverage of fast broadband, although, the current fixed broadband network is of a high standard with a high proportion of fast connections. In this regard, it is key to secure the final and timely completion of the Estwin middle mile project, designed in 2009 with the aim of ensuring that after completion, 98 % of all households in Estonia will be located no further than 1.5 km from the nearest network fibre access point, in line with the newly planned deadline of 2020. Estonia still has to transpose the Cost Reduction Directive<sup>6</sup> which could help to speed up broadband roll-out.

## **2 – Human Capital**

In the Human Capital dimension Estonia is performing well. They rank 7<sup>th</sup> but progress from previous year is limited. The share of ICT Specialists as a percentage of the workforce is above the EU average but Estonia is falling in the ranking. The number of graduates in science and technology is increasing but Estonia still falls well behind the EU average. Given that 51% of companies reported difficulties in recruiting ICT specialists, addressing this skills gap would help the country to remain competitive in the digital economy. Estonia recognises the importance of digital skills for competitiveness and economic growth and prioritised digital skills for over a decade. Estonia believes that there is a lack of motivation among people, entrepreneurs and all levels of education to fully embrace a digital mind-set.

One of the four sub-objectives in the current Digital Agenda is “better ICT skills for more jobs with higher added value, increased international competitiveness and higher quality of life”. It covers both skills needed for everyday life as well as skills for the workforce. There are several action lines that will be implemented through the Estonian Lifelong Learning Strategy 2020.

Part of the long term solution to address digital skills gaps lies within formal education. In order to improve the quality of teaching and learning in the ICT field in higher education, the Estonian ministry of education and research, in cooperation with the private sector, launched an IT academy programme in 2012. To expand and further build on the IT Academy programme Estonians can establish National Coalitions for Digital Jobs. These are multi-stakeholder partnerships developed in Member States to enhance digital skills at national, regional or local level.

These actions should have a positive impact on digital skills in Estonia. A national coalition for digital skills and jobs could very well act as an implementation and follow up mechanism for the Estonian Government.

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<sup>5</sup> atene KOM GmbH, Outline of National Broadband Plans in the EU-28

<sup>6</sup> Directive 2014/61/EU of the European Parliament and of the Council of 15 May 2014 on measures to reduce the cost of deploying high-speed electronic communications networks (OJ L155, 23 May 2014, p. 1)

### **3 – Use of Internet**

Estonia ranks 5<sup>th</sup> among all the EU countries in this dimension and while the consumption of music, video and games content by Estonians is at levels comparable to the EU average, there has been a considerable increase in online shopping. High levels of Internet service usage among citizens constitutes part of a good foundation for businesses and public administration to transform their operations into effective, digital operations. Estonians are also in the forefront of Europe in online banking and the consumption of news content. In general Estonians are placed above the EU average in almost all categories, with the exception of video on demand and social media. In eCommerce, both domestic and cross-border, they are above the European average but slightly below their own levels in other dimensions.

### **4 – Integration of Digital Technology**

In Integration of Digital Technology by businesses, Estonia ranks 22 in DESI 2016, its weakest score among the five dimensions. The progress of digital technologies and practices by businesses is below EU average, and Estonia's businesses are only starting to exploit the possibilities offered by on-line commerce.

An important source of growth and innovation is digitally based, potentially fast-growing and global companies - Internet startups. The Startup Manifesto<sup>7</sup> tracker monitors the national implementation of 22 actions in the Startup Manifesto to boost digital entrepreneurship and innovation. In implementing the 22 actions, Estonia ranks below the European average on three dimensions, Skills & education, Better Access to Capital and Thought Leadership, while above it on Institutional Framework, Access to talent and Data Policy and Privacy. Startup Estonia is a governmental initiative,<sup>8</sup> operational since 2015, to support Estonian entrepreneurs and create a startup friendly environment. Its tasks include developing the startup ecosystem, educating founders, employees and local investors as well as eliminating regulatory barriers.

The Estonian Entrepreneurship Growth Strategy 2020<sup>9</sup> sets out the vision that by 2020: "The Estonian innovation and entrepreneurial policy will have considerably improved the welfare of Estonian citizens and enhanced Estonia's integration in the international economy as well as the competitiveness of its enterprises". It focuses on three main challenges: increasing productivity, stimulating entrepreneurship and encouraging innovation.

These strategies are comprehensive and in some instances complemented by other sector-specific initiatives. Given that Estonia currently lags behind in this dimension, these recently adopted initiatives are needed for the Estonian society and economy.

### **5 – Digital Public Services**

Estonia has been at the forefront of online public services for a few years and is now the best performing country in Europe in 2016 according to DESI, with significant progress since last year. The share of eGovernment users (80%) returning filled-in electronic forms is far above the EU average (32%); this is also facilitated by the possibility to complete online almost all the steps for a required service. Estonia is also strongly committed to the implementation of the

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<sup>7</sup> The Startup Manifesto was created by the Leaders Club, a group of founders of technology companies based in Europe, by invitation of the European Commission in 2013. It contains 22 policy actions to boost entrepreneurship and innovation to power growth in the EU.

<sup>8</sup> <http://www.startupestonia.ee/>

<sup>9</sup> [http://kasvustrateegia.mkm.ee/index\\_eng.html](http://kasvustrateegia.mkm.ee/index_eng.html)

once-only principle, reusing previous information to lower the burden to citizens by using pre-filled forms, surpassing every other EU country.

The Estonian government has introduced a wide variety of e-services, accessed through the electronic identity (eID) of its citizens. This card enables electronic authentication, and serves as a digital signature to allow Estonians to sign contracts, vote, submit their tax declarations, purchase tickets for public transport and check their children's progress at school electronically. That user-centric approach is reflected in the popularity of e-services: 96% of tax declarations in 2015 were filed electronically. In their digital agenda for 2020, eGovernment has a prominent place, and related targets and actions feature several sub-objectives and measures. Something that looks promising for the future is the further modernisation of Estonian public administration. There is a strong focus on cross-border capability of eServices such as eIdentities and digital signatures, something that is manifested in the possibility to become an Estonian eResident.

**Highlight: e-Residency in Estonia**

Estonia is the first country to offer e-Residency — a digital identity available to anyone in the world interested in administering a location-independent business online. eResidents receive a smart ID card which provides digital identification and authentication, signing of documents, verification of document authenticity and document encryption. A holder of e-residence may for example register his or her business electronically and sign business documents without having to physically be in Estonia. For more, visit <https://e-estonia.com/e-residents/welcome/>

In the health sector Estonia has developed the Electronic Health Record - a nationwide system that integrates data from Estonia's different healthcare providers to create a common online medical record for each patient. All primary care offices, hospitals and pharmacies are also connected to the ePrescription system – a paperless system for issuing and handling medical prescriptions.

With a high level of digitisation in the public sector, the importance of security and privacy has increased. Estonia has a separate cyber security strategy that spans 2014-2017. The outcomes as measured in DESI are the result of ambitious work within the field of modernising the public administration in Estonia. There is no evidence suggesting a lowering of future ambition and Estonia will most certainly be a role model and pilot in Europe when it comes to implementing digital solutions in and for the public sector.