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EUROPEAN UNION

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Inspire Policy Making with Territorial Evidence

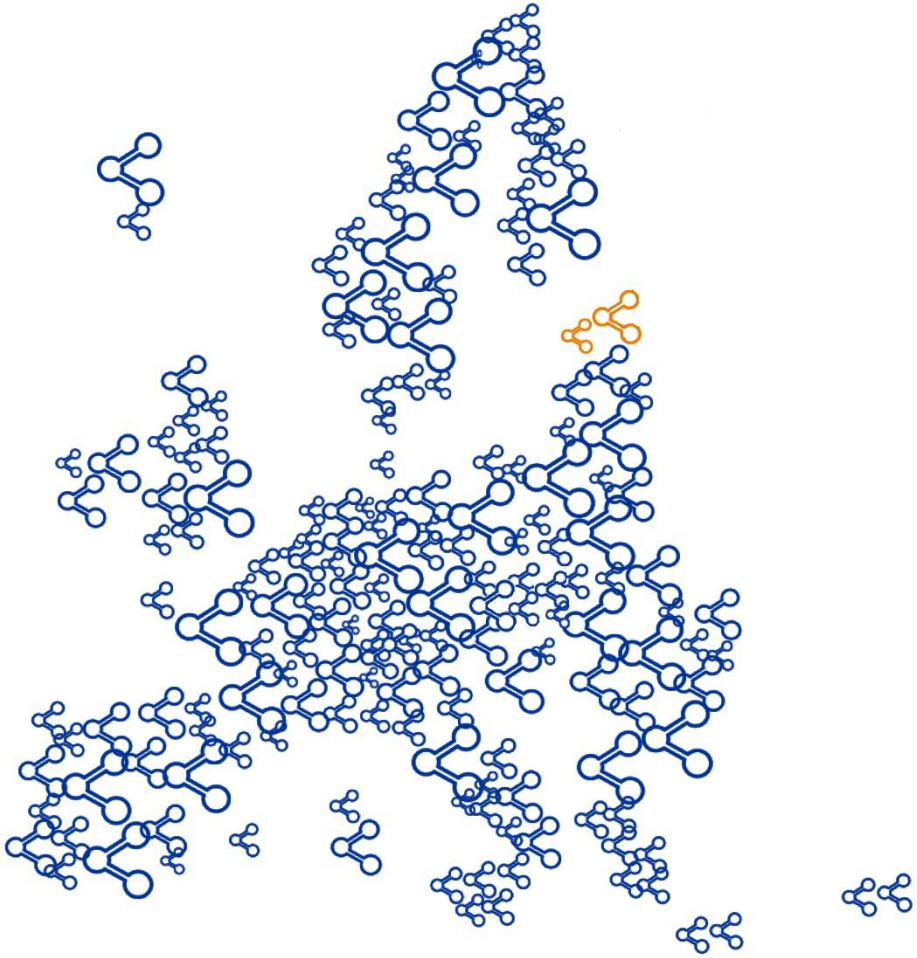
Territorial fiche

Territorial patterns and relations in Estonia

Demography and migration

Regional entrepreneurship

Digital transformation



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Introductory remarks

The content of the following overview is a summary of research results from different thematic applied research projects under the ESPON 2020 programme. As a consequence, most indicators and analyses are not based on most recent data but represent the data availability at the time when the research was undertaken. Only in a few cases, for some rather basic indicators that could easily be reproduced, more up-to-date information was used.

It is therefore important to note that this overview is mainly a collection of available findings with different time stamps and not an up-to-date, comprehensive analysis. Its main goal is to showcase the wide range of ESPON research and, by zooming-in on a specific country, to raise interest for the scientific results at a more national and even regional scale.

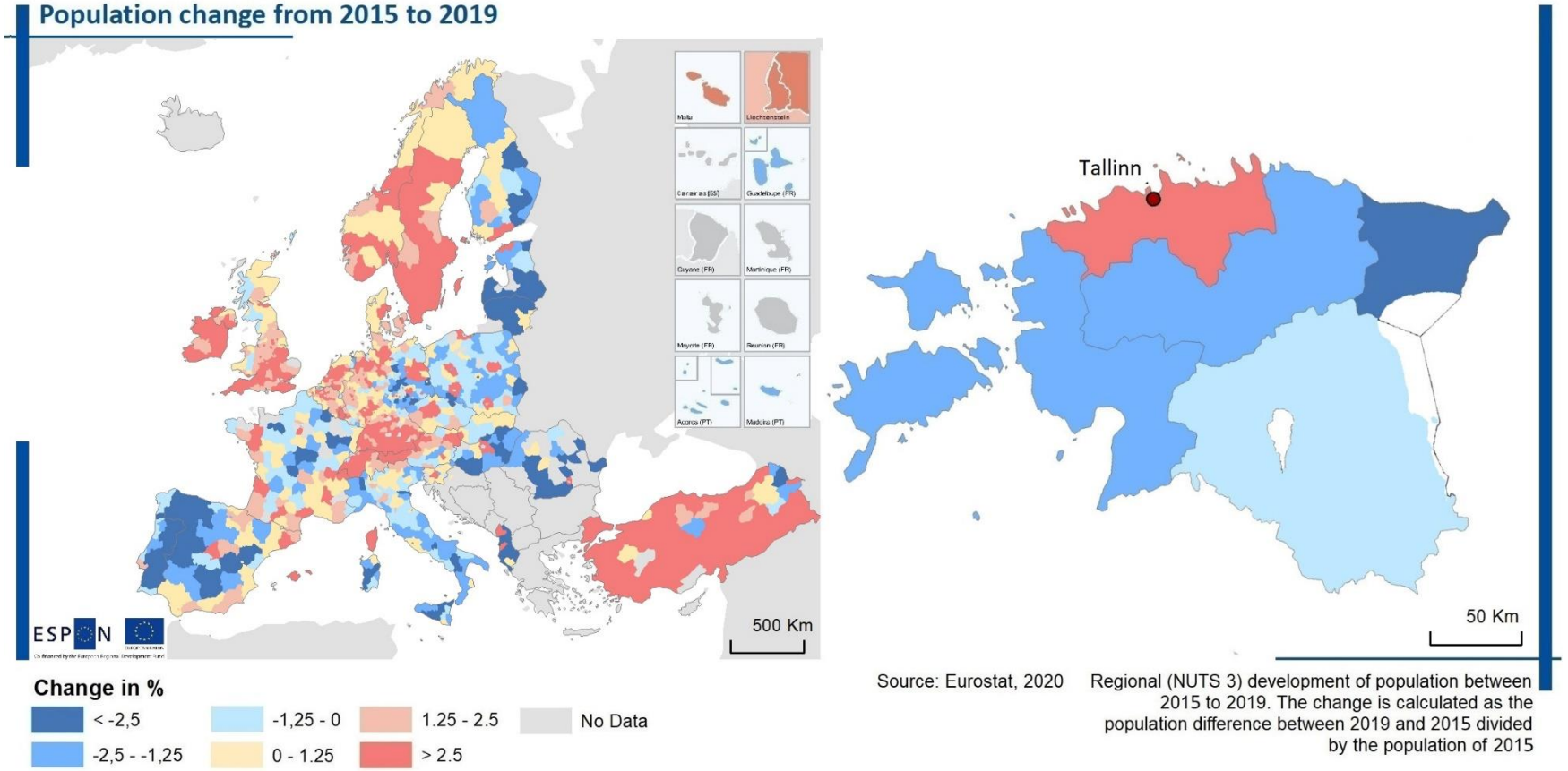
Demography and social

Demographic changes

In- and out-migration

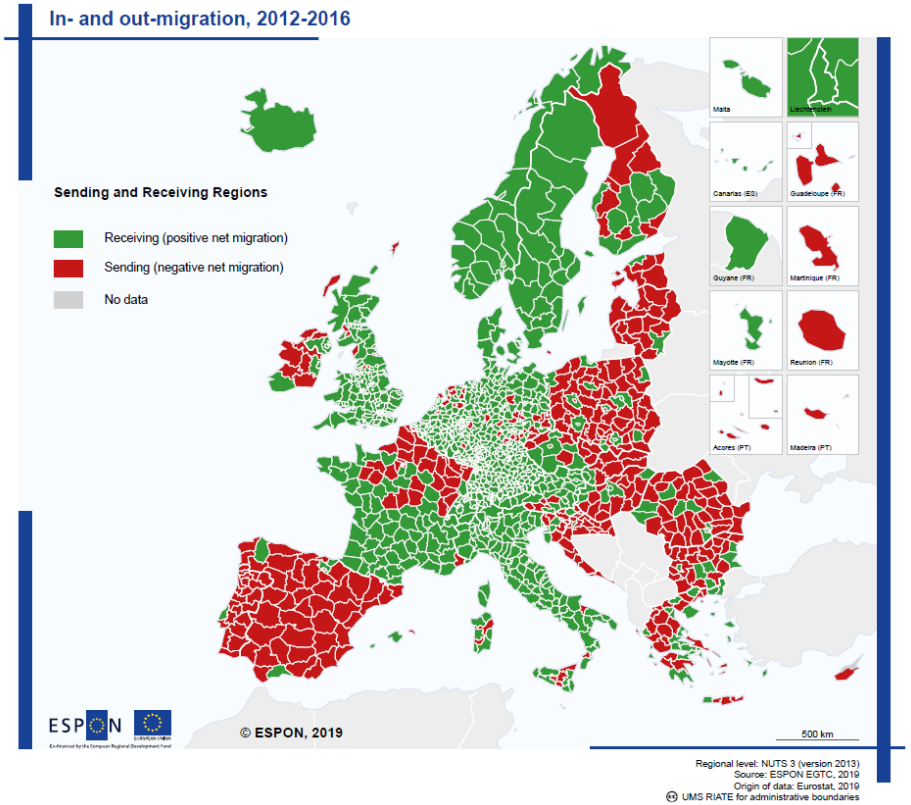
Projected share of elderly people

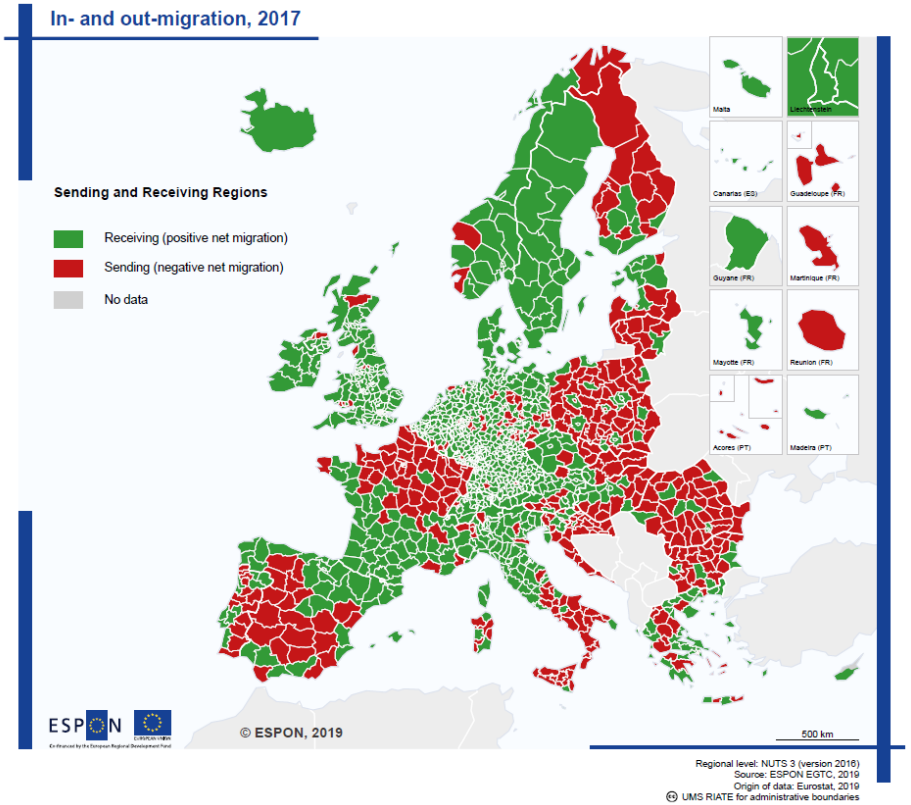
Sparsely populated areas



The direction and speed of population change varies across European countries. From 2015 to 2019, the trends in the Scandinavian countries, the Netherlands, UK, Switzerland, Ireland, and Germany are characterised by an increasing population. In many of these countries this increase is a result of an increasing in-migration (see map no.2). At the same time, large portions of Eastern Europe, Italy, Spain and France have a decreasing population.

Estonia, reflecting the situation in most other Eastern European countries, observes an increasing population and economic role of the capital region. In Harju County the population is increasing, but other regions of Estonia are seeing a loss of population. The demographic change will increase regional disparities within Estonia and growth of the urban-rural divide. Regional policies must find a new balance between economic and demographic development trends in rural areas and small towns in order to mitigate the effects of depopulation.

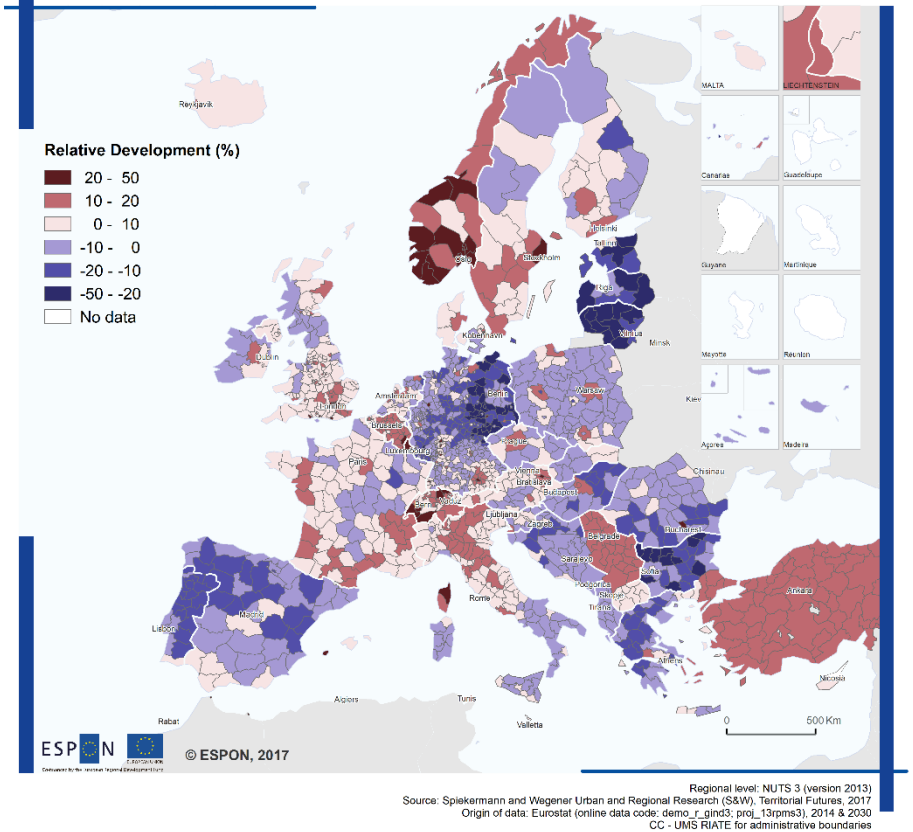




European Union (EU) member states show different patterns in terms of in-migration and out-migration. Between 2012 and 2016, countries labelled as “receiving” (number of immigrants is higher than the number of emigrants) included Sweden, Norway, the UK, Germany, Italy, Austria, Switzerland, and a large part of France. Eastern European and Balkan countries, Spain and central Ireland are listed as “sending” regions.

Since 2015, Estonia has gone through a migration turn, which was a moment when out-migration was replaced by a higher rate of in-migration. So far this phenomenon is generally experienced by older and wealthier member states in the EU. In Estonia, this migration turn took place due to slowing out-migration in the aftermath of the 2008-2010 economic crisis, while in-migration increased slightly. Low out-migration can be seen as a proof that dynamic economic development and boosting ICT industries are effective tools for tackling out-migration of young age groups.

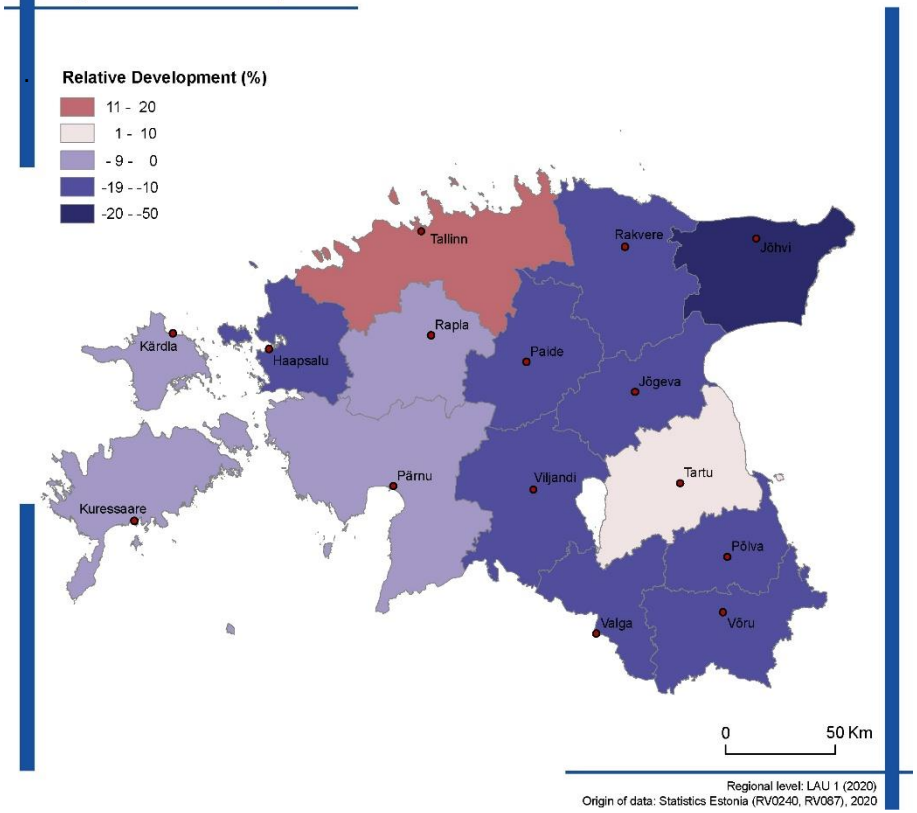
Population development 2014 - 2030



Regional level: NUTS 3 (version 2013)
Source: Spiekermann and Wegener Urban and Regional Research (S&W), Territorial Futures, 2017
Origin of data: Eurostat (online data code: demo_r_gind3; proj_13rpms3), 2014 & 2030
CC - UMS RIATE for administrative boundaries

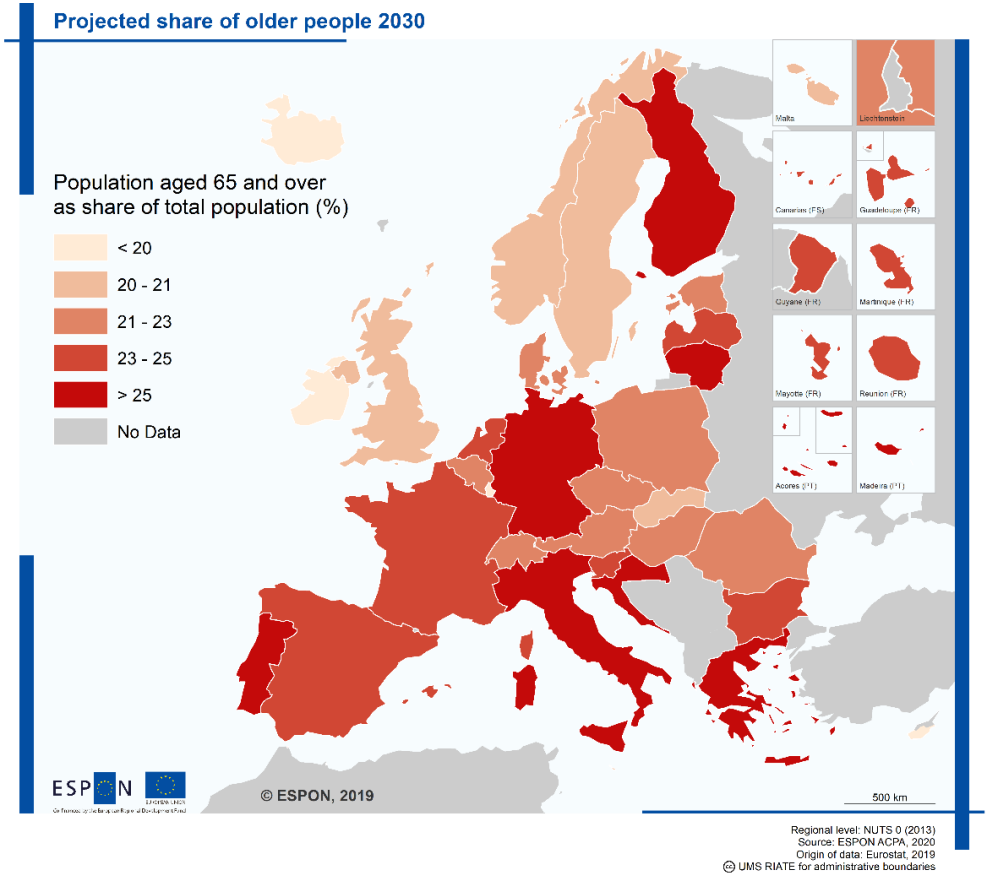
Population developments in Europe indicate growing disparities between regions within countries in the coming years. By 2030, populations are predicted to decline predominantly in regions along Europe's external borders and in Germany. The highest population growth is foreseen in wealthy regions, such as Switzerland, Luxembourg, Norway, large parts of Sweden, Belgium, and Northern Italy. Most large city regions are expected to grow even in countries where the majority of their regions are facing population decline.

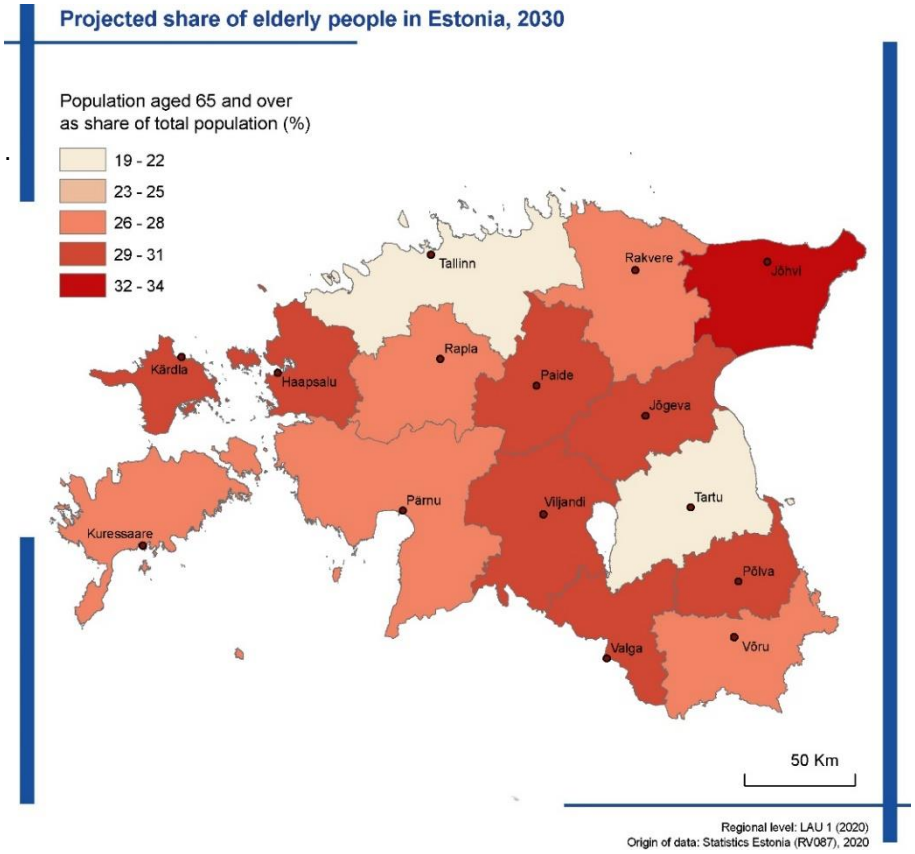
Population development for Estonia 2015 - 2030



Regional level: LAU 1 (2020)
Origin of data: Statistics Estonia (RV0240, RV087), 2020

This map shows the data from Statistics Estonia on county-level population data for 2020 compared with the regional population predictions for 2030. The projection by Statistics of Estonia shows the continuous growth of the population in Tallinn and its hinterland and predicts a small increase in Tartu County. Targeted policies for the Ida-Viru County are needed as this region must tackle the restructuring of the declining oil shale industry. In order to address the challenges, several state-level policies, such as the Ida-Viru program, need to include the necessary investments in infrastructure and aim to improve people's quality of life. From a longer perspective, the capable use of transition funds and opportunities offered by EU Green Deal policies have a potential here.

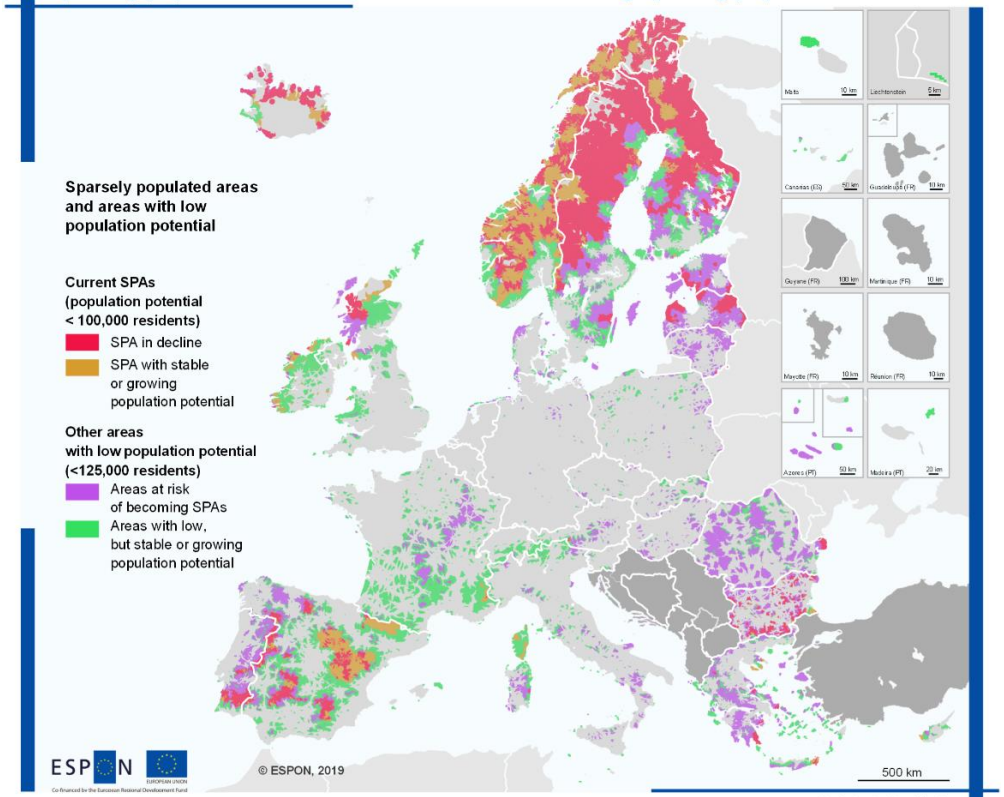




By 2030, nearly 24% of the population in the European Union is expected to be aged 65 or older. In southern Europe (Italy, Greece, and Portugal) will continue to have an older population than the average for EU countries. In fact, Italy is projected to have the highest share of elderly people in the EU in 2030. Germany and Finland also show relatively high shares of the population aged 65+. Currently, these countries have a share of the elderly population which is already higher than the European average. The most significant change among all European countries can be seen in Lithuania, which had a relatively young population in 2000, but where ageing has occurred at a much faster speed there than in other countries, largely driven by low fertility and out-migration.

The projected share of people older than 65 will generally follow the trend of younger people moving to urban areas. Ida-Viru County, from where the out-migration is the highest, is also losing young adults and families. As a result, the projected age structure will consist of 32-34% of the population aged 65 and over. A higher share of the elderly can be also found in counties where the central town has weaker economic and educational role, and less employment opportunities, such as Hiiu, Lääne, Järva, Jõgeva, Valga, or Põlva. The ratio of active workers to pensioners is continually declining and this will have impacts on these regional economies in the future. Regions witnessing steep out-migration should invest in developing strategic and tactical goals related to population ageing instead of running occasional pilot projects without continuation.

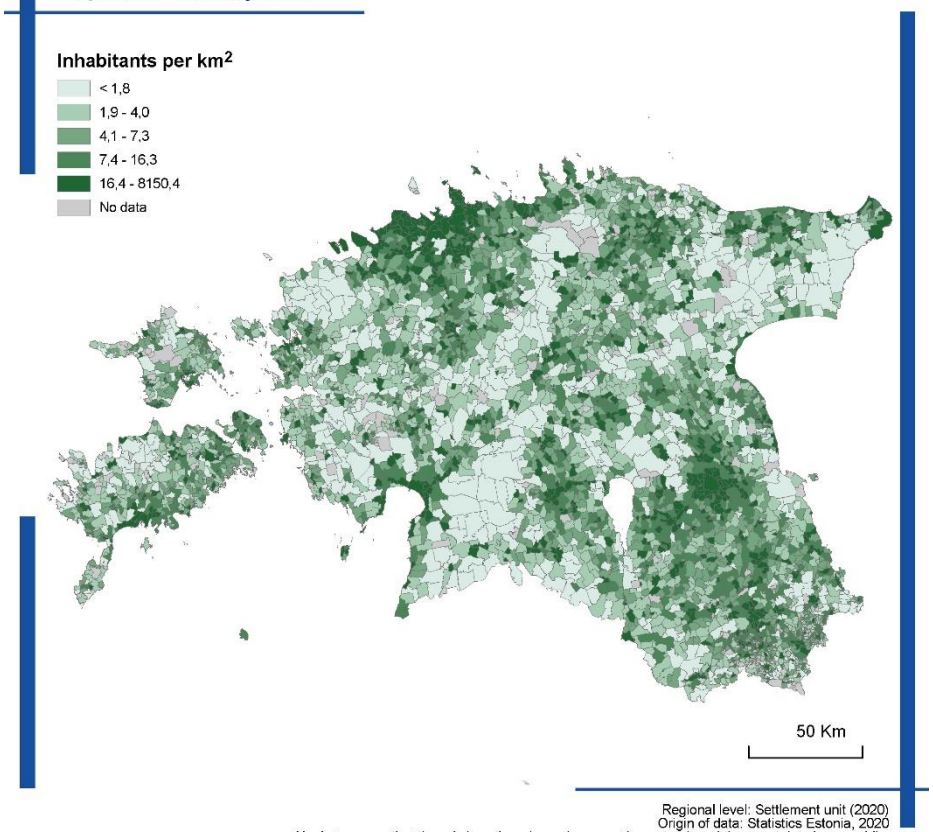
Sparsely populated areas and areas at risk of becoming sparsely populated



Resolution: 1x1 km grid cells
Source: ESPON BRIDGES, 2019
Origin of data: TCP International, 2019; ESPON GEOSPECS, 2012, RRG GIS Database, 2018
UMS RIATE and University of Geneva for administrative boundaries

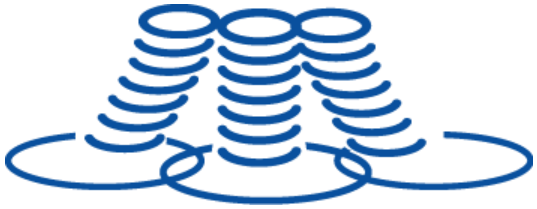
Interacting with a city has a major impact on employment opportunities, access to services and local development opportunities. 45 minutes is the average time for maximum tolerated daily mobility distance. Sparsely populated areas are at the risk of further depopulation and a decrease of services and jobs. This map shows the trends between 2012 and 2018 in sparsely populated European areas. In general, Scandinavian and Baltic countries, mountain areas, specific regions in Romania, and Bulgaria have sparse populations. The ongoing peripheralisation of European fringes is obvious. The lowering densities along the EU borders can be considered as a major security threat due to increasing migration pressure from the south and east.

Population density 2020



Regional level: Settlement unit (2020)
Origin of data: Statistics Estonia, 2020
No data means that there is less than 4 people per settlement unit and the exact data is not public.

This map shows the population density in villages based on 2020 registry data. Half of the surface area in Estonia does not have any people at all, including about 200 villages that lost their permanent inhabitants years ago. Population density is lower than 1.8 inhabitants per square kilometre in north-eastern, central, western and south-western large wetland and forestry areas. According to the Estonian Human Development report 2019/2020, the lower population density in the periphery inhibits internal migration, and signs of migration decrease are already noticeable. According to the present categorisation and the population change trends in Estonia, central and north-eastern Estonia, the islands and a large part of southern border areas are at the risk of becoming sparsely populated.



Regional entrepreneurship

GDP per capita and regional innovation

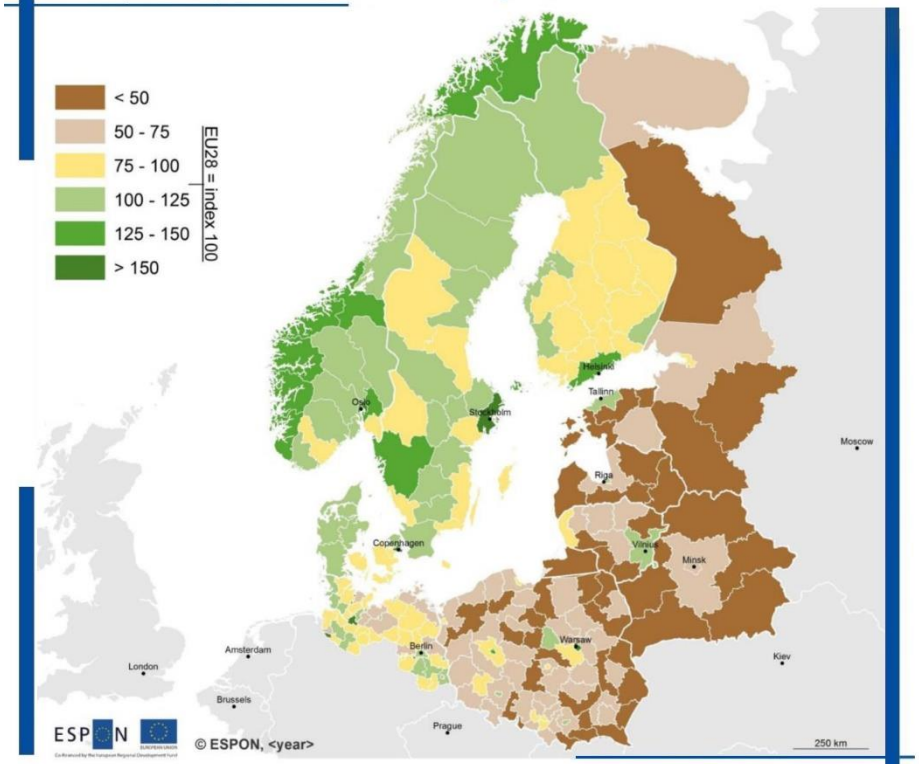
Post-crisis development of GVA

Post-crisis development of employment

Extra FDI inflows across European regions

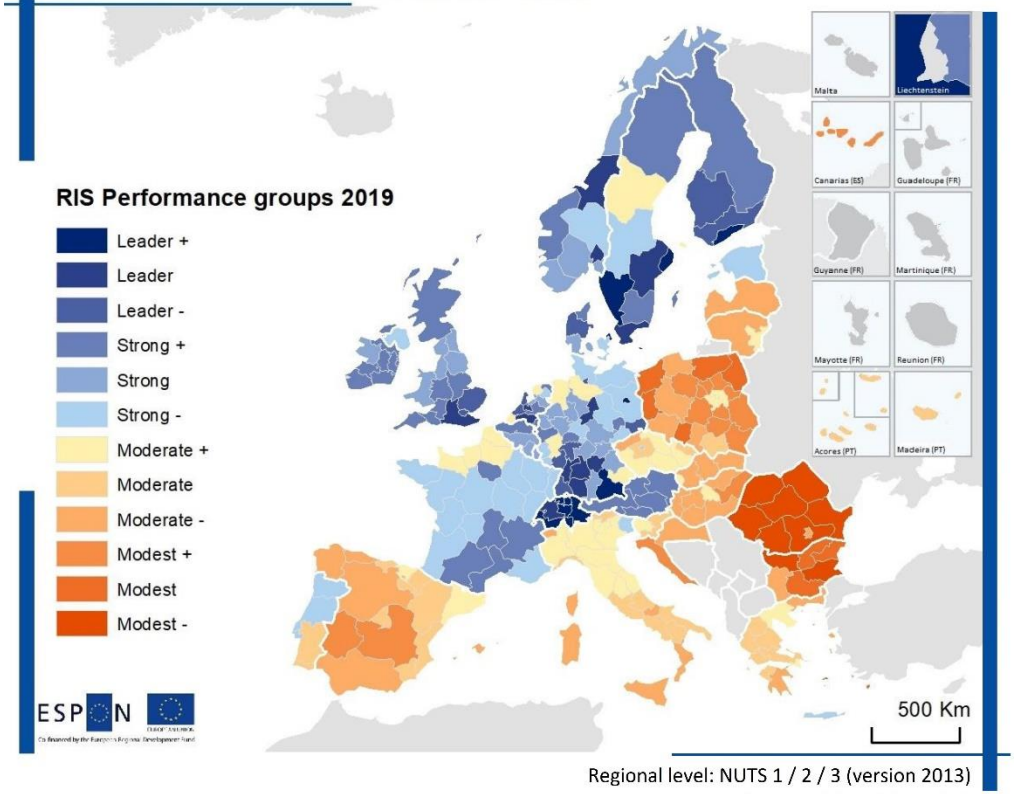
Projected GDP per capita

GDP per capita in the Baltic Region, 2016



Regional level: NUTS 3 (version 2016)
Source: ESPON BT2050, 2019
Origin of data: Eurostat, World bank, NSI'r, 2019

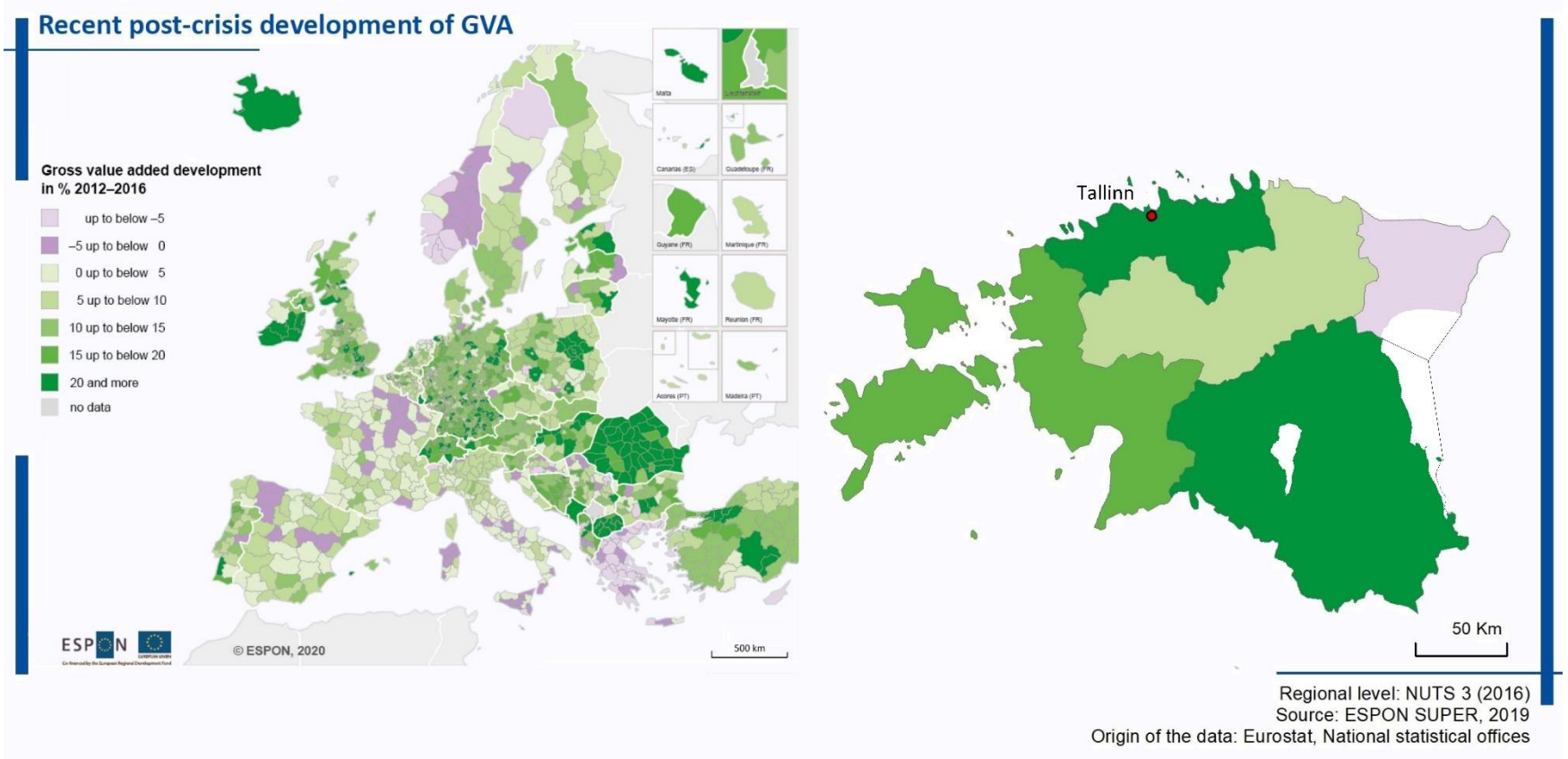
Regional Innovation Scoreboard 2019



Regional level: NUTS 1 / 2 / 3 (version 2013)
Source: ESPON SOET 2019
Origin of the data : Regional Innovation Scoreboard, 2019

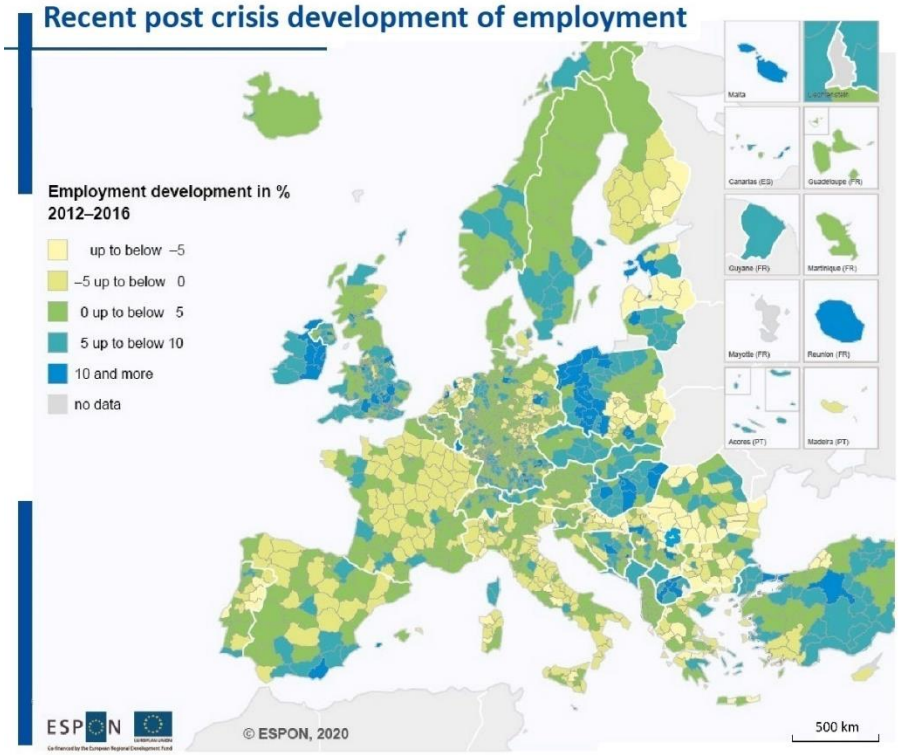
European integration has been the main trend over the past decades: the Single European Market was implemented, trans-European transport networks were developed, and efforts were put in place aiming to reduce political, social and cultural barriers. However, remarkable disparities in GDP still exist in the north and east of Europe. In the Baltic Region, the GDP has grown fast but only the capital city regions reach the level of Scandinavian standards. Poland is in a somewhat better position and has shown fast GDP growth over the past years.

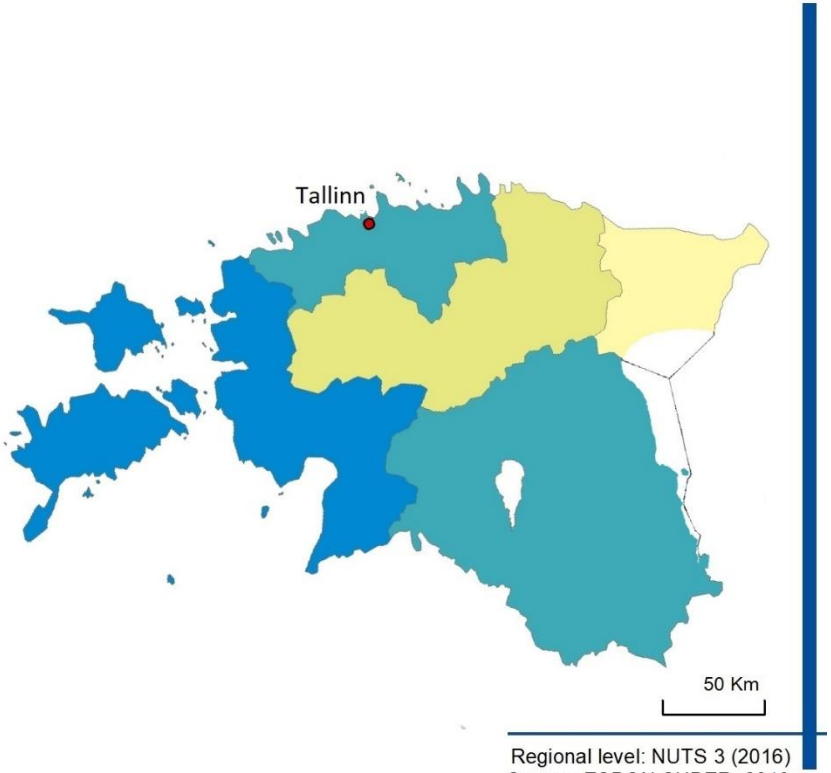
The Regional Innovation Scoreboard approach emphasises the performance of regions with respect to innovation based on the 18 indicators elaborated with the European innovation scoreboard methodology. Europe's most innovative regions are located in the most innovative countries: Helsinki-Uusimaa in Finland, Stockholm in Sweden, Hovedstaden in Denmark, and Zürich in Switzerland. Some regional innovative hubs also exist in moderate innovator countries: Prague in the Czech Republic, Crete in Greece, and Friuli-Venezia Giulia in Italy. Estonia has shown progress for the first time in 2019 and the European Commission sees the country as part of Europe's strong innovators.



Gross value added (GVA) means a value for the amount of goods and services that have been produced in a country, minus the cost of all inputs and raw materials that are directly attributable to that production. GVA can be used to see how much value is added or lost from a particular region but it only reflects macro-economic conditions and the effects of regional price differences. Eastern European countries show a decent growth in GVA because cheap production factories have attracted new investments there.

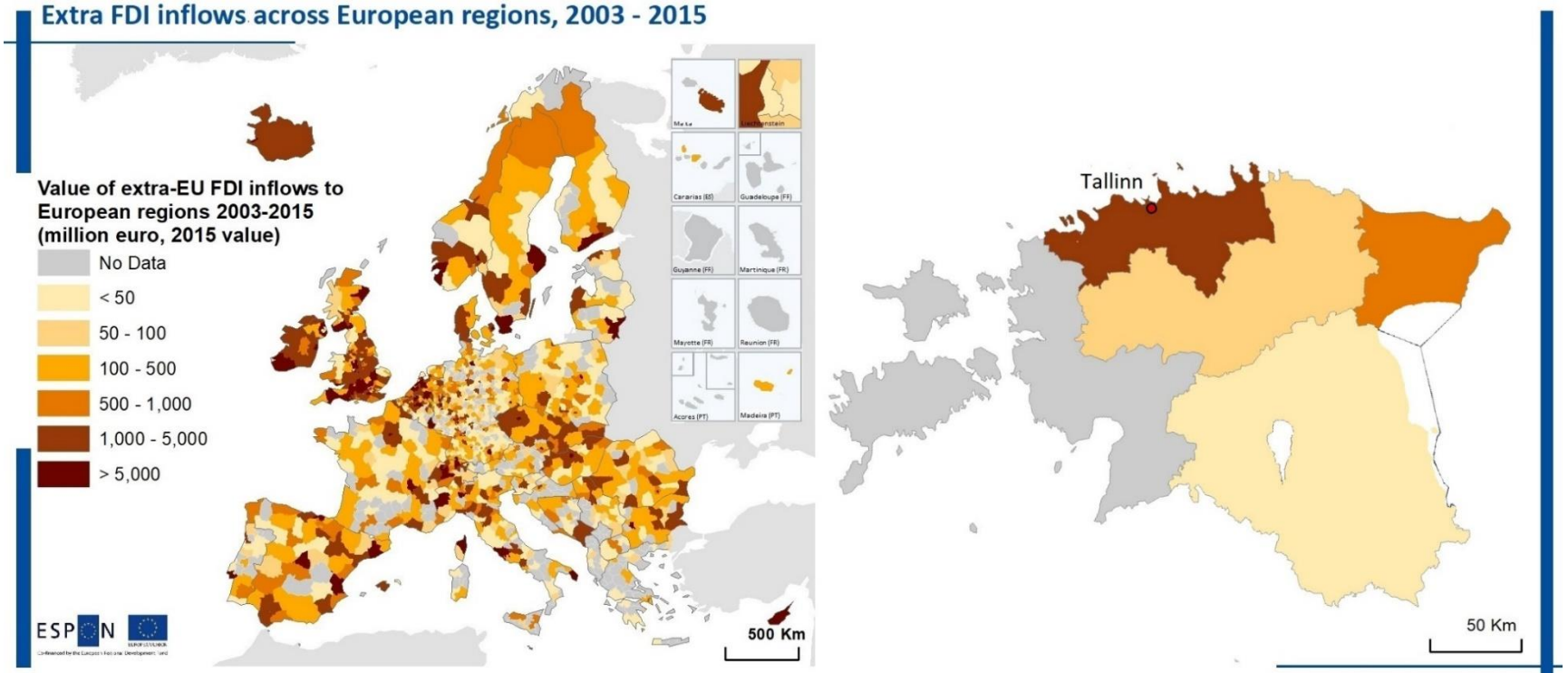
The trends in GVA in Estonia mostly show the situation in the service sector because roughly 70% of the GVA of Estonia is created by services. The share of services was the biggest in Harju County at 77% and in Tartu County at 69%. Tallinn and Tartu have booming ICT industries and interrelated numerous tourism and creativity sector firms. The relatively low value of GVA in the Ida-Viru county between 2012-2016 draws particular attention to the low added value of industrial production (low oil prices) that accounts for an important part of the region's GDP. In order to boost the added value in the region, local potential for smart growth and innovation must be developed to support the region’s move towards a more climate-neutral economy and employment.





Recent post-crisis employment development shows to what extent regions have survived from the economic crises and the speed at which they have managed to increase their employment rates. These numbers can indicate to some degree the regions' resilience to the economic crisis. Not just being able to adapt to changes but being able to withstand and quickly recover from various unforeseen challenges is seen as important for economic development. In general, capital regions and urban areas show the greatest economic resilience. It is also evident that some non-capital city regions, including Eastern European countries, that experienced a sharp increase in unemployment during the economic crisis in 2008 - 2010, have recovered faster from the crisis.

In Estonia, the post-crisis development of employment highlights the resilience of western Estonia in particular. The western regions are highly dependent on tourism which faced a sharp decrease during the economic crisis. These regions have shown a U-shaped recovery when employment levels rebounded and then started to quickly grow again after a period of economic crisis. There has been less out-migration from western Estonia and the shares of the working age population and second homeowners have increased. Southern Estonia responded to the economic crisis with slower employment increase and showed greater out-migration particularly from the counties of Valga, Jõgeva and Võru.

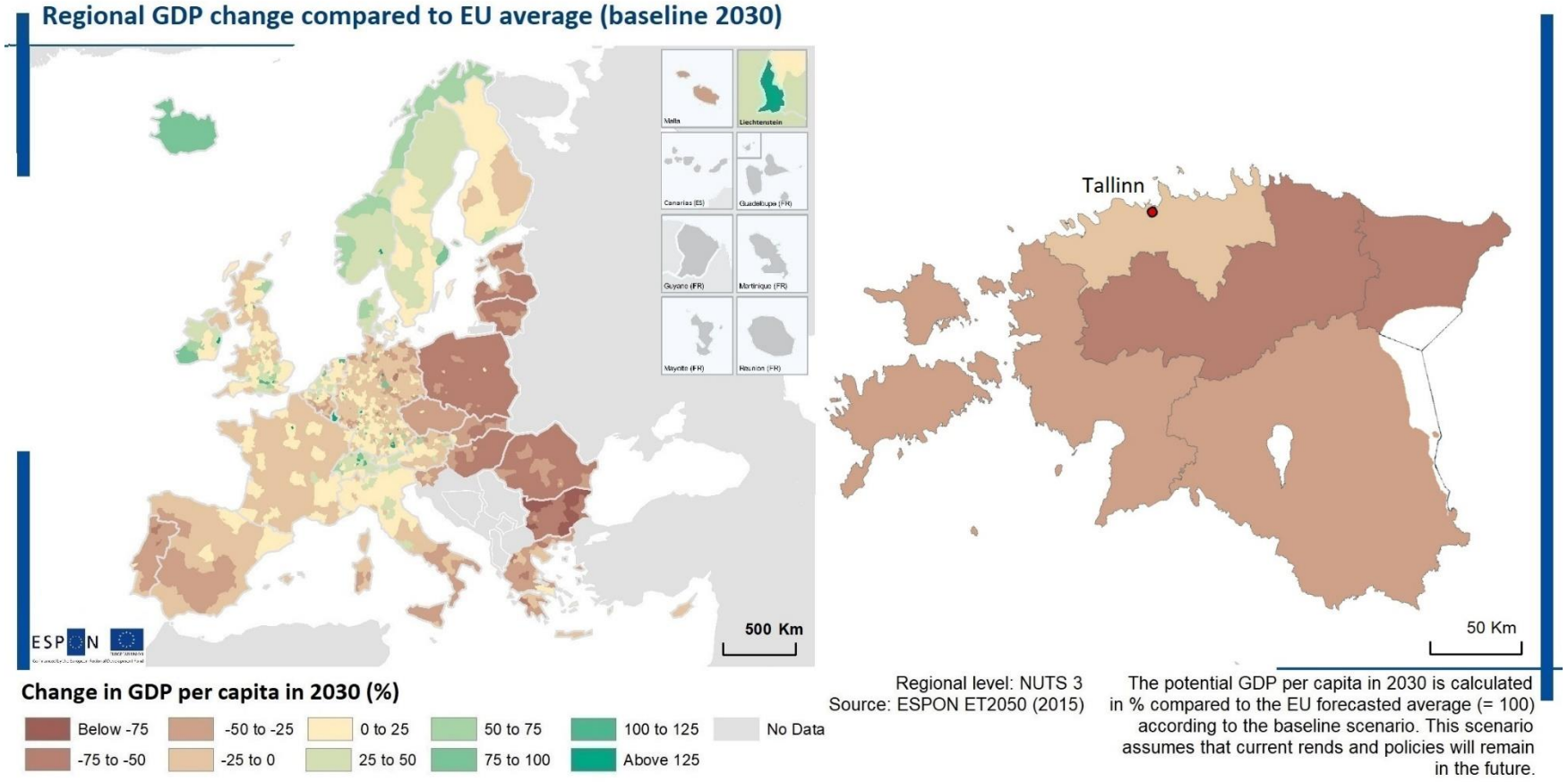


Regional level: NUTS 3
Source: The world in Europe, global flows towards Europe, 2017
Origin of the data: Copenhagen Economics based on BvD's Zephyr and the Financial Times databases, 2016

Deal value originating from outside Europe, both Greenfield projects and M&A deals (around half of the M&A deals did not have a reported deal value – the total deal value is reported for the GF and M&A projects that had a reported deal value).

Foreign direct investment (FDI) is considered as a key factor in economic growth. This map shows the extra-EU inflows of greenfield FDIs (when foreign companies set up new production facilities, infrastructure or buildings) investments from 2003-2015. This type of FDI stimulates economic activity during the construction phase and expands the capital stock in the region. In general, capital metropolitan regions are more likely to be attractive for FDI but greenfield investments tend to also take place in rural or peripheral areas in the case of available resources. FDI originating outside Europe brings new capital to Europe, stimulates employment, and boosts productivity in local firms.

In the period of 2003 - 2015, the highest value of extra-EU FDI inflows of greenfield investments into Estonia can be found in the capital region, Harju County. The second-highest value of extra-EU FDI inflows can be seen in Ida-Viru County, which is the main location for energy production and industry. Greenfield investments have a positive impact on the employment as new, previously non-existing positions are created. Since Ida-Viru County has the highest rate of unemployment and the highest percentage of people living in relative poverty, this region badly needs investments and job creation. However, despite the potential of greenfield FDIs to reverse the increase of unemployment and shrinking population trend of Ida-Viru County, there has not been enough FDI to compensate for the job losses following the decline of heavy industry.



According to the forecasts of European GDP per capita by 2030, the gaps between north and south, and east and west will expand. Regions that are currently lagging behind, such as eastern Europe, the Balkan countries, and southern Italy, are expected to see their wealth rise but probably won't reach the EU average. GDP per capita grows at faster rates in western Europe and mostly in richer economies, such as Norway, Iceland, Switzerland, and some regions in Sweden. All over the Europe, the regional economic disparities are increasing within countries. The capital city region commonly benefits from the biggest growth in GDP.

A growing urban-rural divide will mostly likely guide regional development. About half of Estonian GDP is made in Tallinn and Harju County. Together, two major cities of Tallinn and Tartu currently generate more than 70% of Estonia's GDP. The lowest GDP per capita is generated in the Põlva, Jõgeva, and Valga Counties. This trend is supported by a growing share of the service economy, and technology- and knowledge-intensive companies located in Tallinn and Tartu regions. In order to decrease the metropolitanisation of capital and to balance regional wage differences, the variety and productivity of the economic activities should be served as the basis for regional economic development policies.

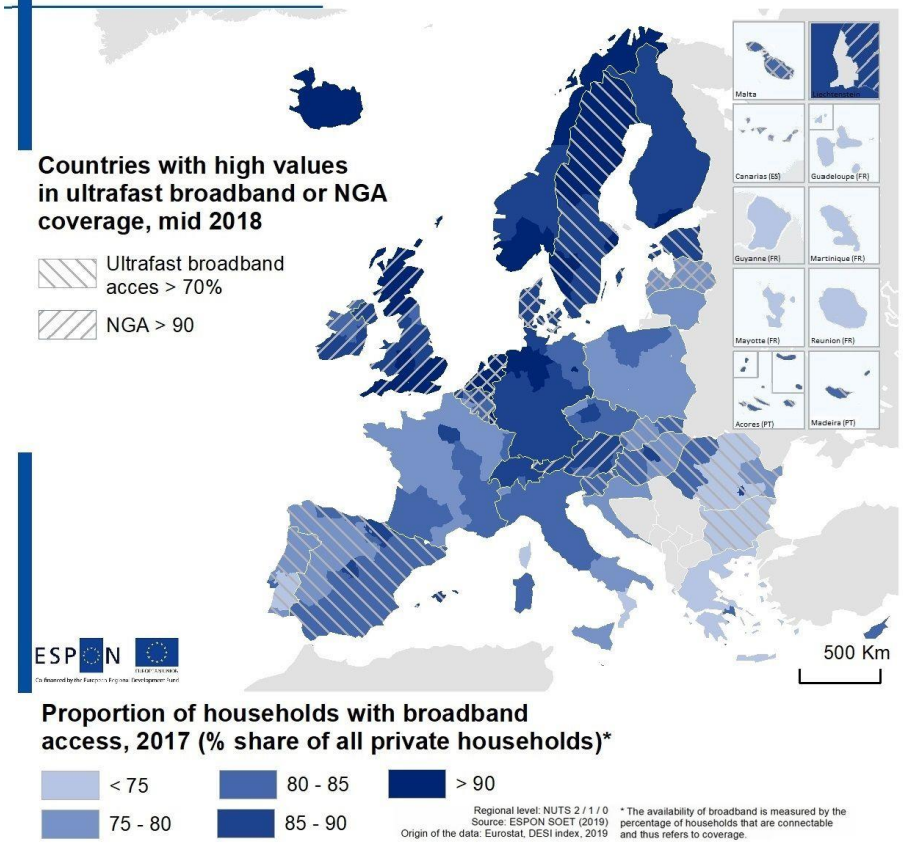
Digital transformation

Broadband access and high-speed internet

eGovernment interactions and internet voting

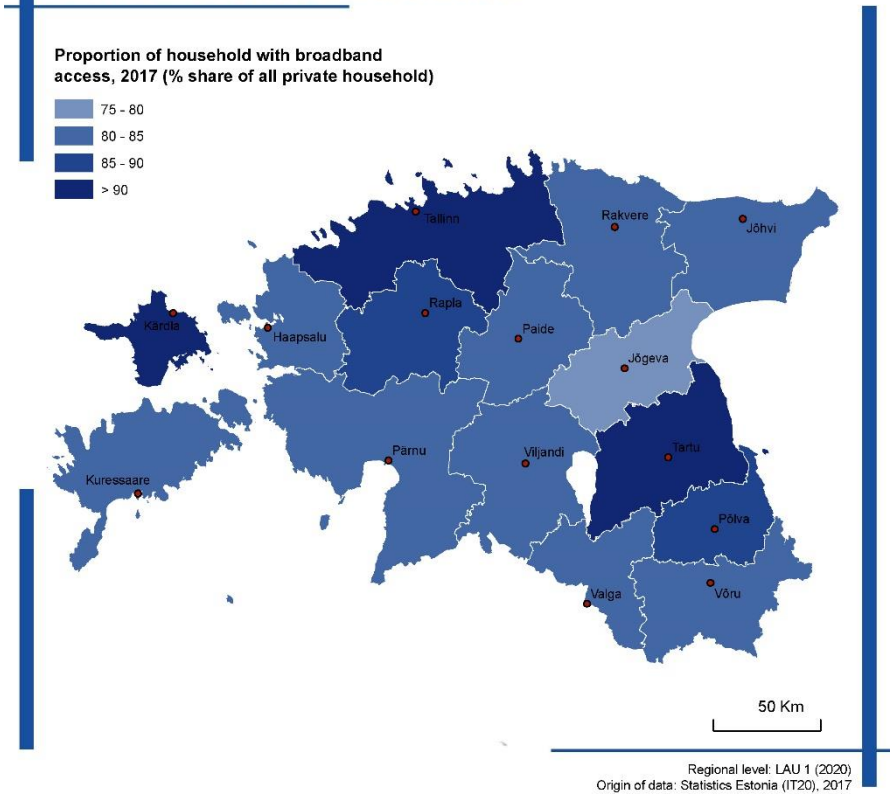
4.0 technology and automation of manufacturing sector

Broadband access in households and high speed internet coverage



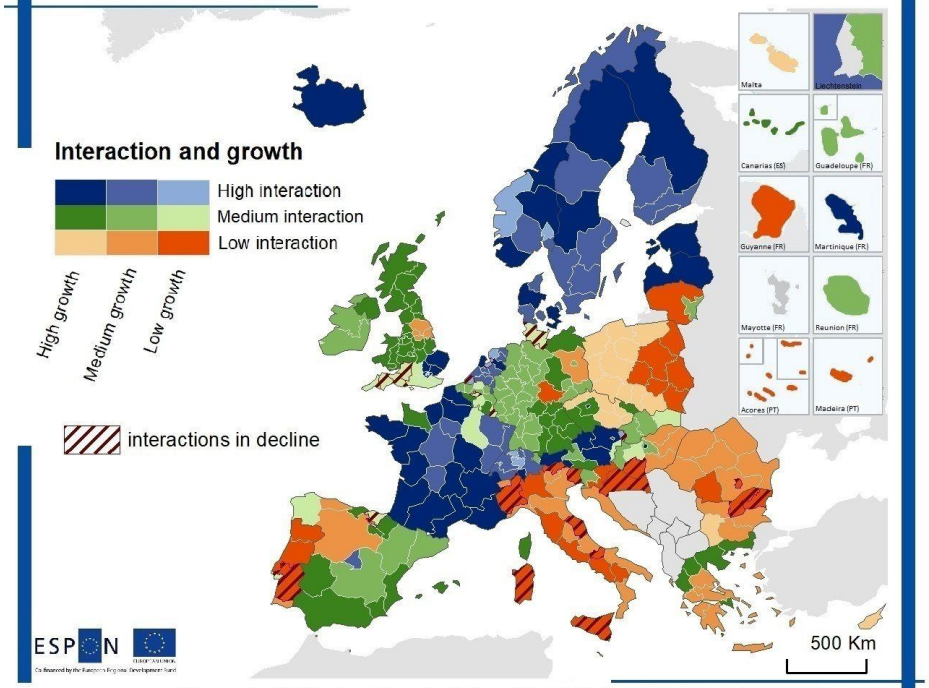
In 2010 the EU set three targets for broadband access: to bring basic broadband (up to 30 Megabits per second (Mbps)) to all Europeans by 2013; to provide all Europeans with fast broadband (over 30 Mbps) by 2020; and to ensure up-take by 50% (or more) of European households to ultra-fast broadband (over 100 Mbps) by 2020.
Despite some progress, not all the Europe 2020 targets will be met. By 2017, the core countries are generally well connected with up to over 90% of households having broadband access while southern and eastern European countries only cover 75-85% of households.

Broadband access in households



When comparing country-level data, Estonia is among the countries with a high proportion of households with broadband coverage although there are still remarkable disparities between regions. Over 90% of households can enjoy broadband access; however, these are situated only in the counties of Harju, Tartu, and Hiiu. Jõgeva County lags furthest behind with only 75-80% of households equipped with broadband connection. Regional disparities within Estonia can be linked to income disparities and demographic factors. These are important to overcome in order to increase the share of the regional knowledge economy and potential for teleworking. More public support is needed to speed up the provision of the broadband access and last-mile connections in rural areas.

Regional typology of eGovernment interactions

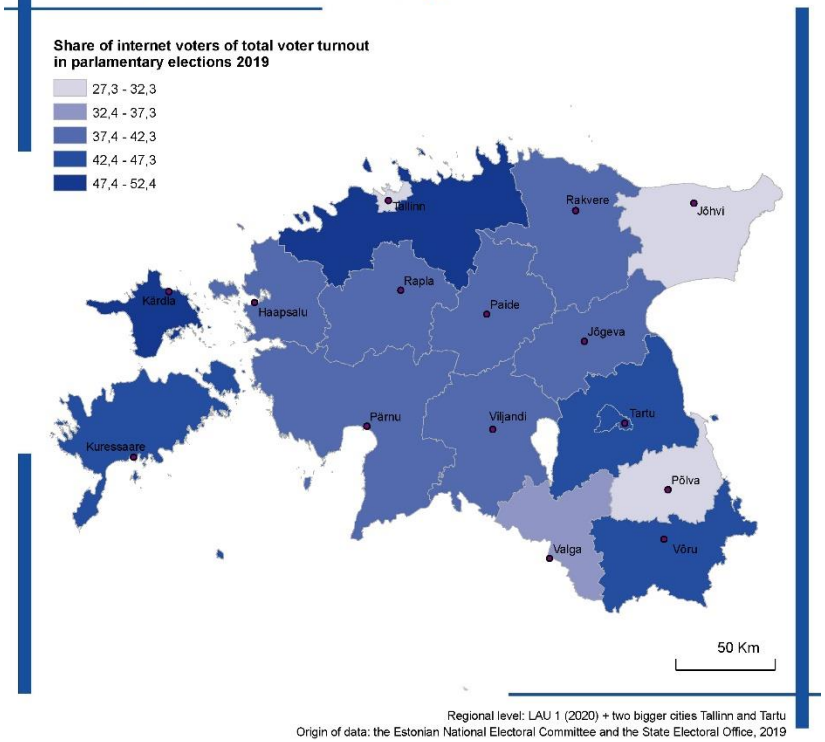


The map depicts the share of people who have interacted with public authorities online in 2019 and the annual change, 2014 - 2019. Regions filled with lines had a negative growth between 2014 and 2019

Regional level: NUTS 1 / 2
Source: ESPON EGTC, 2019
Origin of the data : Eurostat, 2020

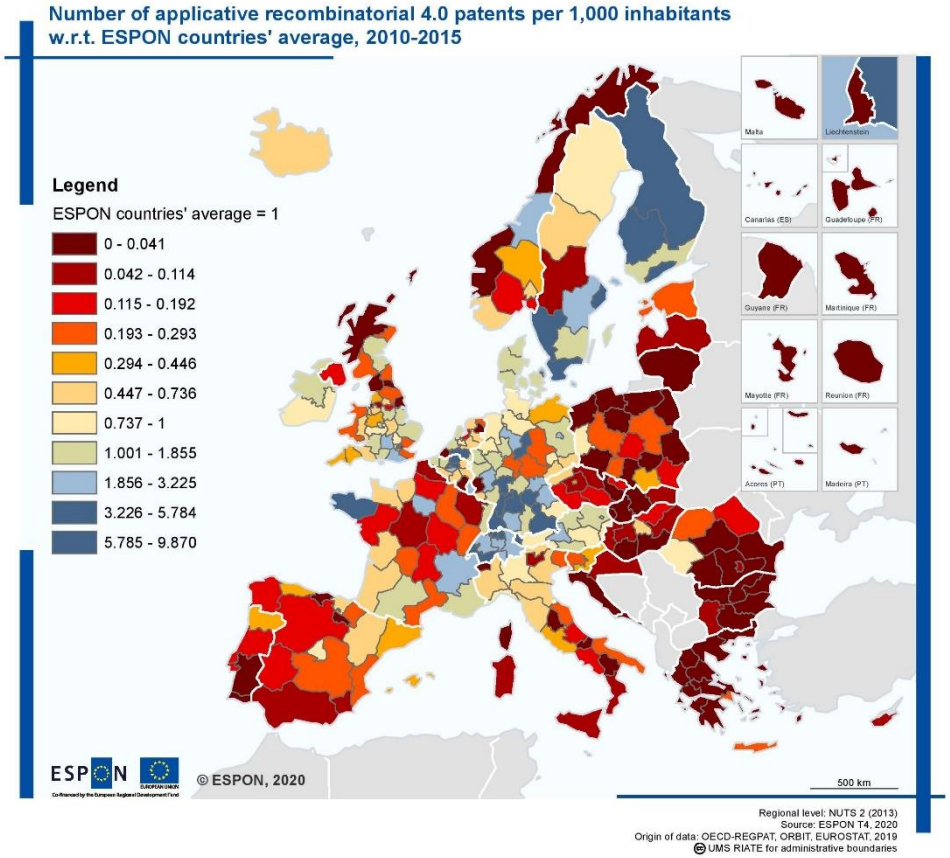
Digital transformation is fundamental for the future of socio-economic growth in Europe. This map shows the share of people who have interacted with public authorities online between 2014 - 2019. Nordic countries, the Netherlands, France, and Austria generally have high e-government interactions. Southern and most Eastern European countries have low activity in terms using digital public services. Estonia shows high e-government interactions and growth of e-governance services when compared to the rest of Europe.

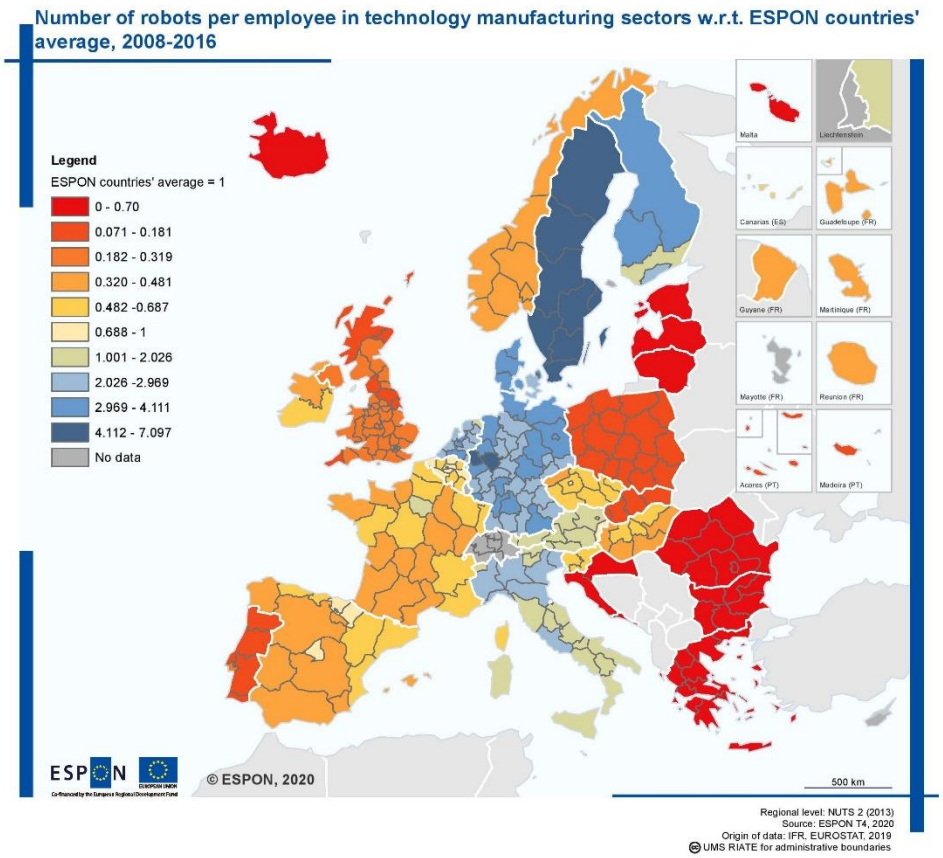
Participation in online voting



Regional level: LAU 1 (2020) + two bigger cities Tallinn and Tartu
Origin of data: the Estonian National Electoral Committee and the State Electoral Office, 2019

Estonia is widely known by its e-governance solutions and has also been a frontline innovator for online voting and digital identity. In 2005, Estonia became the first country in the world to hold nationwide online elections. Online voting is meant to supplement, not replace traditional methods of voting. However, the share of internet voters has risen over the years. This map shows the share of internet voters in 2019 parliamentary elections. Similar trends can be seen with broadband access and also with the geography of ethnic composition across Estonia. Digital systems can provide access to voting for people living in rural municipalities and remote areas. In order to provide digital public and private services in low-density rural areas and in the context of aging population, there is an urgent need to develop internet access and provide digital services that are high quality.





While Estonia may have a forerunner's position in public digital services and shows progress in online sales by local companies, this "digital country'" is lagging behind in automation of traditional manufacturing and industrial practices while using modern smart technology. Regarding industry 4.0 patents in Europewide comparison, the Eastern and Southern European countries show lower rates of industry 4.0 innovations. However, Estonia and Poland show better results here than other eastern European counterparts.

With regard to the number of robots in the technology manufacturing sector, Estonia shows relatively poor results in technological automation similar to other Baltic countries, Romania, Bulgaria, Greece, and Iceland. To maintain and increase Estonia's competitiveness in manufacturing, significant investments must be made in automatisation and digitalisation of industrial sector in the following years.

ESPON EGTC

4 rue Erasme, L-1468 Luxembourg
Phone: +352 20 600 280
Email: info@espon.eu
www.espon.eu

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Authors: Ingmar Pastak, Madli-Johanna Maidla, Garri Raagmaa and Tom Goosse

With contributions from:
Sepp Eedi,
Jushkin Kadri

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