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2016
ANNUAL REPORT

STATISTICS ESTONIA

CONTENTS

DEAR READER!

Statistics Estonia continues its consistent and dutiful work and produces statistics according to the agreed statistical programme. Amid the rush, in 2016, we also celebrated the 95th anniversary of the Estonian statistical system with a conference, where we glanced back at what was, evaluated what is and peeked at what will be. The development has been impressive, especially considering the international context.

We have continuously improved our systems with the help of the Lean methodology. The first positive outcome is very promising and we can be quite sure that we are doing the right thing. The best confirmation of that is the large number of outside visitors to Statistics Estonia in 2016, interested in our working arrangements and changes applied. Statistics Estonia is a statistical office with one of the smallest of budgets in the European statistical system. Knowing that we are more effective makes us take a look at challenges of the future. The efficiency we have achieved may be impressive, but it comes with a price, which manifests itself in a more limited capacity to deal with the problems of the hour.

In the coming years, the focus must be on the activities which help to decrease the administrative burden of entrepreneurs, e.g. to implement ideas aiming to reduce bureaucracy, or to develop the project “Reporting 3.0”. The volume of statistical actions will increase as well, as there will be new international and national demands, which Statistics Estonia should measure. On the domestic front, the demands include the ongoing administrative reform and the ensuing new administrative division, and outside Estonia, the sustainable development objectives set by heads of states, which translates into calculating a large number of indicators in the coming years. Nevertheless, the plans of the government and tasks assigned to Statistics Estonia are not limited to such examples. The idea to conduct the next population and housing census as a register-based census took a step closer to becoming true with the first trial census, which generally went well. The collected data show that the census methodology works; in the future, more attention has to be paid to the quality of registers and automatic data capture. In addition to current activities of Statistics Estonia, preparations will continue for the Estonian presidency of the Council of the European Union, started in 2016, and Statistics Estonia’s presidency team shall have to test its work in practice already in a few months.

All this, though, is but a tiny fragment of the every-day activities of Statistics Estonia, about which the present report provides ample information.

Andres Oopkaup
Director General in 2012–2016

MAIN EVENTS IN 2016

- Statistics Estonia celebrated the 95th anniversary of the Estonian statistical system with various events. The biggest event was an international conference “Official Statistics in a Changing World“, on 25 April in the Estonia theatre, organised in cooperation with Eesti Pank (the central bank of Estonia) and the National Institute for Health Development.
- Preparations for the Estonian presidency of the Council of the European Union were started. The main task of Statistics Estonia during the period is to lead the Council’s statistics working group.
- A joint project “Reporting 3.0“ of the Tax and Customs Board, Statistics Estonia and Eesti Pank was launched, the purpose of which is to reduce the data provision burden of enterprises for these institutions.
- The first trial census of the register-based population and housing census took place. The moment of census was 31.12.2015.
- Statistics Estonia continued with the operative planning project launched in 2015, the aim of which is to enhance the institution’s performance with the help of the Lean methodology. After the preparatory process in 2015, in 2016, the main focus was on team creation and training.
- In May, Statistics Estonia published on its website a name statistics application, which proved hugely successful. On the day of its publication, a record number of visits per day to Statistics Estonia’s website was recorded – 155,000 visits.
- On 1 June, the Director General of Statistics Estonia, Andres Oopkaup, awarded Lagle Sammelsaar the Albert Pullerits young statistician’s grant for her Master’s thesis “Estimating the ‘Probability of Default’ on a dataset from a lending platform Bondora” in the field of financial mathematics, completed at the University of Tartu.
- On 12 and13 August, Statistics Estonia participated in the Opinion Festival with a discussion “What is the use of statistics to us?“. Participants included Siim Krusell, Principal Analyst of Statistics Estonia, Riin Aljas, Head of the Scientific Editorial Board of the newspaper Postimees, Helir-Valdor Seeder, Member of the Riigikogu (parliament of Estonia), Peter Wüthrich, entrepreneur and owner of Eesti Valgus OÜ and Sami Seppänen, CEO at Elisa Eesti AS.
- The best of 2016 were chosen:
  - Best Achievement 2016 – name statistics application: Kaja Sõstra, Alis Tammur, Krista Türk, Andrus Aru, Alan Vask, Anu Ots
  - Best Team 2016 – the team responsible for organising the conference of the 95th anniversary of the Estonian Statistical System: Jaanus Kroon (Eesti Pank), Reet Kirt (Eesti Pank), Mare Ruuge (National Institute for Health Development), Andres Oopkaup, Tuulikki Sillajõe, Kaja Sõstra, Ene-Margit Tiit, Diana Beltadze, Remi Prual, Anne Nuka, Ene Palo, Anu Ots, Birgit Hansson, Maret Aarla-Kask
  - Best Blogger 2016 – Kaja Sõstra and Alis Tammur with the article “Heal lapsel mitu nime” (“Good children have many names”)
  - Best In-House Training Provider – Elo Parveots
  - Best in implementing Statistics Estonia’s environmental policy – Heidy Roosimägi
  - Best Respondent 2016 – Eesti Energia AS
  - Best Partner 2016 (among registers) – Ministry of the Interior
  - Best Partner 2016 (among research institutions) – Professor Tõnu Kollo

FULFILMENT OF THE 2016 STATISTICAL PROGRAMME

The main task of Statistics Estonia is to provide reliable and objective information about the environmental, demographic, social and economic situation and trends in Estonia. This information – official statistics – is produced based on the needs of statistics users. Statistics are essential input for Estonian ministries, the European Union's (EU) institutions, research institutions, enterprises, trade associations, etc. The official statistics of Estonia are available to everyone in Estonia and abroad, usually through various media. Generally, Estonian users need more detailed statistics than organisations of other countries and international organisations.

There are two producers of official statistics in Estonia – Statistics Estonia and Eesti Pank. In order to produce statistics, Statistics Estonia performs statistical actions, which are submitted to the Government of the Republic for approval as a list of statistical actions. The list of statistical actions of Eesti Pank is approved by the Governor of Eesti Pank. The statistical programme comprises the statistical actions of Statistics Estonia and Eesti Pank.

The statistical programme is prepared every year for the following five years. The programme includes statistical actions from the population, social, economic and environmental domains and is prepared based on national or international statistical needs. Statistics Estonia's statistical actions divide into six sections: main statistics, cyclical statistics, non-regular statistics, development actions, statistical analysis and statistical registers. The programme also includes projects funded by the Structural Funds and the European Commission with grants.

The statistical programme is based on the needs of the users. User needs are considered in the course of the preparation of the statistical programme by the representatives of public interest, i.e. mostly ministries and professional associations. Representatives of public interest ensure that there are quality official statistics in their field, which is necessary for promoting life in Estonia and for making national decisions. From among the representatives of public interest, the Ministry of Economic Affairs and Communications, the Ministry of Finance and the Ministry of Social Affairs are the most active users of official statistics. The producers of official statistics also fulfil orders for information outside the programme (See Statistical actions not included in the programme on p 8).

Changes in the principles for preparing the statistical programme for 2016–2020

Arising from the need to make the statistical programme more understandable, in 2016, cyclical statistics began to be distinguished from non-regular statistics. Cyclical statistics is produced at a fixed cost and frequency but not every year. Non-regular statistics is statistics produced with unknown frequency and capacity.

For the purpose of harmonising statistical actions, the following changes were made:

- non-regular modules of surveys were created as separate statistical actions;
- in case of significant discrepancies between the collected and published sets of indicators, a separate action was created for each period (e.g. year and quarter);
- statistical actions were combined in the cases when it was reasonable to process and analyse the data together.

Since the principles of statistical actions were updated, some statistical actions were combined and some were separated, the statistical programme for 2016–2020 included 35 statistical actions less than the statistical programme for 2015–2019. Also, to improve clarity, the names of statistical actions were revised (the codes of actions remained the same). The changes, however, did not change the amount of statistics produced and published.

Fulfilment of the 2016 statistical programme

In the statistical programme for 2016–2020, there were 158 statistical actions listed for 2016, the total cost of which was 6.5 million euros[a]. The largest action – totalling 0.8 million euros – included preparations for the Register-Based Population and Housing Census (REGREL) of 2020. In 2016, there were 132 annual statistical actions classified under main statistics, 10 cyclical statistical actions, 3 non-regular statistical actions, 3 development actions, 8 statistical analysis actions and 2 statistical registers.

Fulfilment of the statistical programme in 2016 was successful – all the planned actions were completed. There were a total of 989 releases (832 statistical database objects, 144 news releases, 13 publications). The produced statistics are made available to users first in the statistical database and then in other products. Users are informed about produced statistics via the release calendar. There were 25 deviations from the release calendar in 2016 (22 statistical database objects, 1 news release and 2 publications), which constitutes 2.5% of the total number of releases. The reason for the majority of deviations was the delayed receipt of data and extended period of data processing.

[a] The total costs in 2016 amounted to 8 million euros. The cost of the list of statistical actions does not include rent paid to Riigi Kinnisvara AS (a million euros in 2016), statistical actions not included in the programme (0.3 million euros), own contribution for external funding (0.1 million euros) and IT development financed from the Structural Funds (0.1 million euros).

Deviations from the release calendar, 2011–2016

Year	Statistical database	News releases	Statistical publications	Total	Share in the total number of releases, %
2011	6	0	0	6	0.5
2012	8	2	0	10	0.9
2013	11	4	0	15	1.5
2014	32	2	1	35	3.6
2015	18	2	1	21	2.1
2016	22	1	2	25	2.5

Preparations for REGREL in 2016

In 2016, the most important task regarding the preparations for the Register-Based Population and Housing Census (REGREL) was the conducting of the first trial census. The census moment was 31.12.2015, activities of the trial census took place during the period of 02.01.–08.12.2016. The aim was to test the register-based population and housing census, following the quality requirements for the census and Eurostat rules. Data were captured from 24 state databases and processed and analysed. The population of the trial census consisted of the resident population of Estonia and dwellings in Estonia regardless of occupancy and occupied non-dwellings.

With the trial census of the REGREL census, the quality of registers used for the formation of census indicators, the functioning of the methodology and software readiness for the register-based census were tested. In order to eliminate the discovered shortcomings, necessary measures shall be taken, the result of which shall be checked during the next trial census in 2019. The trial census included the census indicators mandatory for EU member states, excl. the indicators “occupation” and “location of job”. Also, the indicators “ethnic nationality“ and “mother tongue“ were analysed.

The trial census was successful and the set goals and tasks were achieved. The census results were presented at two press conferences: in November, an overview of the existence and quality of dwelling data and in December, of the existence and quality of data on persons and families and households in registers was given. The result of the first trial census confirms the readiness of Statistics Estonia for a register-based census.

In the formation of census indicators, the following aims have been achieved:

- the relationship between the definition and value scales used in the census and those in the registers has been analysed;
- quality of registers has been checked and efforts have been made for managers of registers to eliminate the shortcomings;
- the number of registers needed for the formation (and, if necessary, checking) of each census indicator has been determined, or if there is no information for some indicator in registers, steps have been taken for creating such a register or part of register;
- optimal rules for the formation of each indicator based on register data have been formulated and the required software, using the output indicator quality as the basis for optimisation, created.

Thanks to the listed achievements, by the end of 2016, the methodology for register-based census-taking was developed, almost all census indicators can be taken from registers and the data transmission environment X-road works. On the administrative level, there is a joint wish to reduce the data provision burden (the necessity to increase data quality is acknowledged, there is a preparedness to collect data on occupation and location of job into the employment register). The interoperability of Estonian registers is ensured by three code systems, which enable to easily use all the important registers for the census (personal identification, address object and the Commercial Registry codes). Careful attention was paid to the improvement of the interoperability of information systems. The ICT development activities and work on data quality were systematically monitored together with the managers of databases under the jurisdiction of nine ministries. In 2016, the focus was also on the analysis of the interoperability of the information systems of public authorities and assessing the data capture based on the results of the first trial census. Entrepreneurs and their representatives have asked that for the production of statistics, the data already submitted to the state should be used, so that entrepreneurs would not be burdened with excessive reporting. The priority was to reach an agreement between the entrepreneurs and the state about the collection of indicators missing for REGREL into the employment register. In 2016, after four years of negotiations with the Tax and Customs Board, Statistics Estonia reached an agreement, according to which, for the conducting of the census, the indicators “occupation” and “location of job” are received from the employment register.

The pace of ensuring the interoperability of the information systems of databases has thus far, unfortunately, been unsatisfactory. The biggest challenge is the time required for capturing data from databases and the mode of data transmission and the slow pace of data organisation. There are many reasons for this situation: for example, the data format does not comply with the standard (address data); institutions use different means for data exchange; data quality is unstable and the offset requires the use of additional data sources, which in turn increases the time spent on and the administrative cost of data organisation.

In 2016, a lot of information work was done to explain the importance of REGREL. In April, a REGREL user survey was conducted, the results of which were introduced also to cooperation partners and users. The events organised to celebrate the 95th anniversary of the Estonian statistical system and the 135th anniversary of census taking were also important. Also,

briefings on REGREL were given to factions of the Riigikogu. Internationally, the REGREL project was introduced in UNECE, UNSD, Eurostat, a quality conference in Spain, census related conference in England and seminar of the Baltics.

The second trial census of REGREL is planned to be conducted in 2019 (as at 31.12.2018). Before the second trial census, it is important to improve the census methodology to help specify the composition of households and improve the data quality in registers. For this, Statistics Estonia got two grants for 2017–2018. In addition, for the second trial census, data capture has to be improved and the number of registers used in the automatic data capture increased. The quality of census data is worsened most by the difference between the registered and actual place of residence data. This has a considerable impact on the assembly of households and families based on register data. The problem can be solved by implementing the new, index-based methodology for census activities and using big data as an additional data source in the production of statistics. The technological-substantive solution is the use of big data for the creation and checking of various models. Solutions must be found by the second trial census.

The biggest problems that need to be solved in the future are the difference between the registered and actual place of residence data and the insufficient quality of data in the register of construction works.

New statistical actions performed in 2016

In 2016, two new statistical actions were added to the statistical programme.

To the 2017 Labour Force Survey, the module “Entrepreneurs and Sole proprietors“ (40713) was added.

The aim of the additional module is to provide information about the participation of entrepreneurs and sole proprietors in the labour market, specific characteristics of their employment and work conditions compared to employees. The European Commission needs statistics on entrepreneurs and sole proprietors for achieving the aims of the strategy “Europe 2020”, to increase the employment rate by promoting and supporting sole proprietorship. Based on the survey, it is possible to describe the situation of Estonian entrepreneurs, the main difficulties the entrepreneurs face in Estonia and the main reasons for setting up a business. From the perspective of strategic planning, the survey results are useful to both the Ministry of Economic Affairs and Communications and the Ministry of Finance, but also to the Ministry of Education and Research, Ministry of Rural Affairs, Estonian Chamber of Commerce and Industry and other organisations that deal with creating jobs and business development.

There has not been a separate module for entrepreneurs in the Labour Force Survey before, which is why the information received from the module is unique. Entrepreneurs and sole proprietors have been a much discussed topic during the past 10 years. Internationally comparable quantitative data on them is seriously lacking and the mentioned module is the first comprehensive effort to identify and classify them. Entrepreneurs are in the centre of attention due to the political aims of creating jobs and promoting economic growth.

The module has three major themes: economic independence of entrepreneurs and sole proprietors, work conditions of entrepreneurs and sole proprietors and comparison of employees, entrepreneurs and sole proprietors (incl. their work satisfaction). In 2016, the questionnaire was prepared and preparatory work was done. Data are collected and results are published in 2017–2018.

The need for the statistical action “Data transmission to international organisations“ (50018) arose from the increasing data submission requirements.

The international organisations that Estonia has joined (the OECD, UN, FAO, UNESCO, etc.) need official statistics for comparing states’ information. For this, they regularly send questionnaires to Statistics Estonia for official statistics in different fields. International comparisons are published in the databases of international organisations, interactive applications, publications, reports, etc. The statistical action covers the completing and submitting of questionnaires in different fields. A large part of data submitted are published in the Statistical Database.

Statistical actions left out from the 2016 list of statistical actions

Due to budget restrictions, four statistical actions with a total cost of 89,300 euros were left out from the list of statistical actions for 2016. Three of these were mandatory actions arising from EU legislation. It was possible, though, to add two actions in the environmental field into the 2017–2021 statistical programme.

Statistical actions left out from the list of statistical actions due to budget restrictions, 2016

Name	Type	Field	Main representative of public interest	Cost, thousand euros
Development of the service producer price index[a] (20413)	Main statistics	Economy	Ministry of Economic Affairs and Communications	23.0
Environmental protection expenditure accounts, macro level[a] (10107)	Main statistics	Environment	Ministry of the Environment	10.0
Environmental protection goods and services sector accounts[a] (10106)	Main statistics	Environment	Ministry of the Environment	37.0
Restoration of time series (50017)	Development	Other areas	Ministry of Finance	19.3
Total				**89.3**

[a] Mandatory action arising from EU legislation.

The aim of the statistical action “Development of the service producer price index“ (20413) is to develop economic indicators that would provide information about the changes in the business services consumer price over time. The share of services in the GDP is nearly 70% and it has grown at the expense of manufacturing activities year after year. Therefore, it would be very important to know about the changes in service prices, to use these to compare the volume change of services provided and monitor the development of the Estonian economy. The Regulation (EC) No 1158/2005 provides the calculation of 20 indexes for business service activity areas. As of December 2016, there are 14 indexes in production and 2 in development.

Due to budget restrictions, two statistical actions in the environmental field – “Environmental protection expenditure accounts, macro level“ (10107) and “Environmental protection goods and services sector accounts“ (10106) – which were financed in the 2013–2015 programme from external funding were left out from the statistical programme of 2016. It was possible, though, to add these statistical actions to the statistical programme for 2017–2021. It was possible to perform these statistical actions after the production of output indicators for other fields was stopped. In agreement with the main representative of public interest, the following statistical actions will be left out:

- in the social domain, “Health care“ (40604) and “Legal system“ (40801); also the share of national order for the statistical action “Crime“ (40802) will be reduced;
- in the economic domain, “Communications“ (20507), “Communication services“ (20508), “Transactions in real estate“ (20803) and “Border crossings registered at border checkpoints“ (22102) and the share of national order for statistical actions “Traffic accidents“ (22025), “Transport infrastructure“ (22026) and “Registered motor vehicles“ (22027). The share of national order shall be reduced for statistical actions “Transport of passengers and goods by transport enterprises“ (22029) and “Air transport“ (22032);
- in multidomain statistics, “Statistical Yearbook of Estonia“ (50003), “Portal of regional statistics“ (50102), “Estonia. Numbers and facts“ (50005) and “Sustainable development indicators“ (50203).

Within the framework of the statistical action “Environmental protection expenditure accounts, macro level“ (10107), after the development phase (grant in 2014–2015), the regular environmental protection expenditure account shall be produced, which enables to make detailed integrated analyses of environmental protection expenditure and highlight environmental calculations in national accounts. Upon the creation of the account, the data on current expenditure of environmental protection investments and revenues earned from environmental protection activities are collected and processed according to Regulation (EU) No 538/2014.

As a result of the statistical action “Environmental protection goods and services sector accounts“ (10106), data about the capacity of the environmental protection services and goods sector can be published, which enable to analyse the developments in the sector producing environmental protection services and goods. According to the Regulation (EU) No 538/2014, the first year of the account is 2014. If the statistical action is not performed, there will be no information about the environmental indicators that can be compared with economic indicators (added value, participation rate, output, exports, the size of the waste water and waste management sector, etc), no data about the size of the sector producing green products (e.g. the share of organic farming or renewable energy) and it would be impossible to measure the income from environmental protection and there would be important input missing from the GDP calculations.

With the statistical activity “Restoration of time series”, the data of previous periods important for Estonia could be made available to the user. The aim of the action is to collect statistics that has previously been published only in print, to check and digitise the data and compare definitions. The dataset would enable to provide overviews and analyses of several statistical areas. Statistics Estonia plans to publish a compendium, which, in addition to trends describing various fields, would also include analysis, placing the highlighted changes into the context of different eras. The action is important for describing the long-term development of the Estonian healthcare, education, social insurance, population, economy and other fields. The restored time series could be published in the Statistical Database and would be available for everyone.

Statistical actions not included in the programme

Statistics Estonia also performs actions that are not included in the statistical programme but are ordered by users. Everyone interested in statistics can address Statistics Estonia to get access to statistics. If the statistics requested by the user are not yet produced, it can be ordered. Orders can be placed with regard to all statistical areas. Conditions for orders for information are specified in the service standard published on the website of Statistics Estonia (http://www.stat.ee/teenusstandardid; in Estonian).

In 2016, Statistics Estonia fulfilled more than 400 non-programme orders placed by enterprises, institutions and private individuals, which is about 10% more than in 2015. Last year, the revenue from orders was 396,800 euros – 11% less than in 2015.

More than half of the statistical actions not included in the programme were small-scale orders for statistics that are more detailed than the material already published. The volume of standardised orders in 2016 slightly decreased. These are orders that can be placed for commodity groups or companies based on specific characteristics (e.g. foreign trade statistics, data on economic units). To facilitate orders for statistics, Statistics Estonia has a separate price list for standardised orders for information. 20% of all orders concerned foreign trade statistics, which are ordered mostly by industrial enterprises in Estonia and neighbouring countries. The share of orders for financial key ratios was 11%. Compared to 2015, the number of orders performed based on hourly work and preparation of individual data for scientific research increased.

Non-programme orders fulfilled by Statistics Estonia and incurred income, 2015–2016

	Total, euros		Number	
	2015	2016	2015	2016
Foreign Visitors Survey	79,200	90,800	1	1
Youth data reusing project	–	69,980	–	1
Household Finance and Consumption Survey	3,000	65,000	1	1
Survey on Health, Ageing and Retirement in Europe (SHARE)	211,800	55,000	1	1
Data harvesting from participants of the European Social Fund activities in Statistics Estonia 2014–2025	14,900	48,600	1	1
Using individual data collected for statistical purposes for research	12,400	12,700	34	26
Orders for information based on hourly work	9,900	11,850	179	135
Training statistical experts from Kazakhstan and Mongolia	–	5,250	–	1
Establishment of integrated individual data database for monitoring integration and publication of indicators	18,000	5,000	1	1
European Social Survey (ESS)	27,700	4,000	1	1
Publication „Viljandi vald – positiivne. Strateegia, ettevõtted, statistika“ (“Viljandi parish – positive. Strategy, enterprises, statistics”)	–	3,900	–	1
Overview of Pärnu county in the quarterly bulletin	–	2,660	–	1
Booklet „Business opportunities in eastern Estonia“	–	2,200	–	1
Ex post evaluation of the rural development plan	–	1,000	1	1
Standardised orders for information				
Orders for publications	9,500	9,300	190	133
Orders for external trade statistics	5,900	9,000	77	77
Financial key ratios	700	560	43	42
TOTAL	446,100	396,800	539	534

Foreign Visitors Survey

The aim of the Foreign Visitors Survey is to determine the expenditures incurred by foreign visitors in Estonia, their travel motivation and behaviour and satisfaction. The survey was ordered by Enterprise Estonia who uses the information to develop the tourism sector. The data obtained from the survey is also important for Eesti Pank in order to calculate Estonia's revenue from tourism and present it in the Estonian balance of payments. In addition to Enterprise Estonia and the tourism sector, the collected data are used by the Ministry of Economic Affairs and Communications and local authorities. Data by type of expenditure are necessary for assessing the impact of tourism on the Estonian economy in a wider sense (direct impact on sectors benefiting from tourism, such as accommodation and travel agents, and indirect impact on the providers of other goods and services). For the purposes of the survey, the tourists leaving Estonia were surveyed at the border crossing points and outside border crossing points over two periods: from July to mid-August 2016 and from mid-November to mid-December 2016. Survey results were published in an article in the third issue of the 2016 Quarterly Bulletin of Statistics Estonia (www.stat.ee/publication-download-pdf?publication_id=42576). The survey will continue in 2017.

Youth data reusing project

The aim of the project ordered by the Estonian Youth Work Centre is to increase knowledge about the Estonian youth in order to offer young people better services mainly via youth policy and youth work. The project lasts more than two years (November 2016 – December 2018) and is carried out in four stages. First, an overview is provided of the data collected on the youth (7–26-year-olds) in state databases, large social surveys and other available quality data sources. In the second stage, in cooperation with the Ministry of Education and Research and the Estonian Youth Work Centre, a survey reusing the

already collected data is planned. In the third stage, a product is created on the website of Statistics Estonia enabling the user (mainly someone who offers/administers youth services) to search and visualise youth data and links between data. In the final stage of the project, positions are formulated on the basis of the work completed and development proposals are prepared in three fields: activities of the state in the collection of youth data, supporting the strategic management of the youth field and systematic development of youth monitoring.

Household Finance and Consumption Survey

The Household Finance and Consumption Survey (HFCS) is conducted in cooperation with Eesti Pank. The aim of the survey is to collect information about the assets, liabilities, income and expenses of households. The collected data are used by Eesti Pank for economic surveys and policy analysis, for example, for assessing the impact of the monetary policy or financial stability and tax systems analysis. The data can also be used by researchers outside central banks. Similar surveys are carried out by all the central banks in the euro zone, coordinated by the European Central Bank. The survey has permanent respondents, which means that the same households are planned to be surveyed every three years. The survey was first conducted in 2013, the next round will take place in 2017. In 2013, the number of households surveyed was 2,220. The overview of the results of the 2013 Household Finance and Consumption Survey are published on the website of Eesti Pank (http://www.eestipank.ee/en/household-finance-and-consumption-survey).

SHARE

SHARE (Survey on Health, Ageing and Retirement in Europe) is a pan-European longitudinal study involving the elderly population (50+). The survey is commissioned by Tallinn University. On the one hand, the survey focuses on the individual ageing process and the causal relations affecting it, and on the other hand, it is an important source both for monitoring existing policy measures and initiating new science-based measures. SHARE results have helped to study European demographic changes since 2004. Surveys have been carried out in 20 countries and more than 100,000 people in the relevant age group have given information about their living conditions, family, friends, health and economic state. Estonia has participated in the project since 2010, i.e. since the fourth survey wave. The survey is intended to be continued until 2024. In Estonia, approximately 6,900 SHARE interviews were carried out in 2011; in 2013, the number of interviews was 6,100 and 6,000 interviews were conducted in 2015. In 2016, the data was cleaned and codified and trial surveys were conducted for the survey period of 2017.

Survey results of the previous years are available on the website of Tallinn University at http://www.tlu.ee/public/SHARE/.

Establishment of integrated individual data database for monitoring integration and publication of indicators

The aim of integration indicators is to determine whether people living in Estonia with different ethnic, cultural and linguistic background and origin have equal opportunities for successful coping and well-being. These indicators could also prove useful in the measuring of integration in Estonia. Integration indicators reflect the attainment of education, participation in employment, socio-economic performance and living conditions of groups of people with different domestic languages, nationality and origin.

The action was ordered by the Ministry of Culture. Statistics Estonia identified its existing integration-related surveys and data collections and analysed the usability of these for the production of integration statistics. For the production of integration indicators, data from different sources were linked and additional variables were calculated. Integration indicators are published in the Statistical Database. The existing time series are planned to be continued in cooperation with the Ministry of Culture, supplementing them with data for the coming years.

European Social Survey

European Social Survey (ESS) is an international social survey and a social sciences infrastructure, the objective of which is to enable the study of social development patterns. The state coordinator of the project is the University of Tartu, which ordered the ESS eighth wave data collection from Statistics Estonia in 2016. The survey is conducted from spring 2016 until spring 2017 with data collected from September 2016 until January 2017. Participants of the survey are asked questions about their lives and their attitudes are investigated with various statements. The survey has been conducted since 2002. Survey results from previous years are available on the survey website at www.ess.ut.ee.

Publication „Viljandi vald – positiivne. Strateegia, ettevõtted, statistika“

In cooperation with Viljandi parish government, a publication on Viljandi parish was compiled, giving an overview of the strategic aims of the parish development plan and characterising the parish via official statistics. The majority of the publication consists of stories of enterprises in Viljandi parish. Every story about the successful activities of an enterprise is a success story. Every success story confirms that it is possible to be successful in Viljandi parish and that Viljandi parish is viable. The compilation of the publication was ordered by Viljandi parish and was published in February 2016 (www.stat.ee/valjaanne-2016_viljandi-vald-positiivne-strateegia-ettevotted-statistika).

Overview of Pärnu county in the quarterly bulletin

In cooperation with Pärnu county government, a collection of articles was compiled about Pärnu county, published in the first 2016 Quarterly Bulletin of Statistics Estonia. The collection provides a thorough overview of the demographic situation, labour market and households of Pärnu county. The overall economic development of the county, development potential and main bottlenecks and competitiveness in Estonia are examined separately. In addition, a short overview is provided of the revenues and expenditures of local administrations of Pärnu county, comparing these with the average of all the local authorities in Estonia, and the changes that have taken place during the past ten years are monitored. The compilation of the collection was ordered by Pärnu county government and it was published in April 2016. The publication is available on the website of Statistics Estonia (www.stat.ee/valjaanne-2016_eesti-statistika-kvartalikiri-1-16).

Booklet „Business opportunities in eastern Estonia“

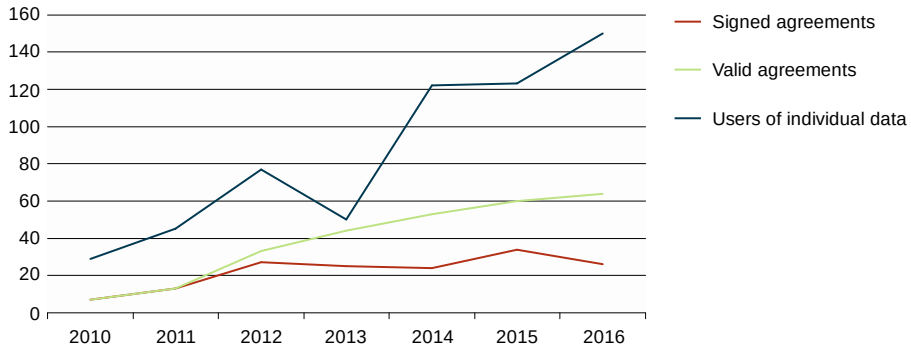
The aim of the publication that appeared only in English is to introduce the region of Eastern Estonia (Ida-Viru, Lääne-Viru, Jõgeva and Järva counties) via statistics, figures, maps and photos. The booklet provides an overview of the economy, labour market, tourism, business and investment opportunities of Eastern Estonia. The brochure was compiled at the request of Foundation Lääne-Viru Development Centre and was published in December 2016.

Using individual data collected for statistical purposes for research

To generate more value in the society by reusing available data, research institutions can access the individual data collected by Statistics Estonia, provided that the data is used for scientific purposes. The decision to grant access is made by Statistics Estonia on a case-by-case basis, taking into account the risk of identification of individuals and data confidentiality. The type of access to individual data depends on these two factors. References to such research can be found on Statistics Estonia's website.

Research institutions are showing increasing interest in the use of individual data. In 2016, a total of 29 applications for using the data were submitted and 26 agreements were concluded. Two-thirds of such users of statistics do so via the VPN-connection, the remaining third in the premises of Statistics Estonia. Agreements for use of confidential data are concluded for five years at most. At the end of 2016, there were 64 valid agreements for the use of confidential data with 22 research institutions and 150 researchers.

Agreements for using individual data and users, 2010–2016



The data most often used for research purposes include those of personal surveys, i.e. the Estonian Social Survey, the Population and Housing Census, the Labour Force Survey and the Innovation Survey and financial indicators of enterprises.

NEW STATISTICAL ACTIONS IN 2017–2021

The list of statistical actions for 2017–2021 contains two new statistical actions. Both arise from European Union legislation.

No	Name of statistical action	Expected cost, thousand euros					Explanation of the need for the statistical action	Type of statistical action
		2017	2018	2019	2020	2021		
1	Module „Reconciliation of work and family life“ of the Labour Force Survey (40714)	7.5	16.0	7.5	–	–	Arising from EU legislation	Non-regular statistics
2	Module „Health“ of the Social Survey (40615)	52.7	12.7	–	–	–	Arising from EU legislation	Non-regular statistics

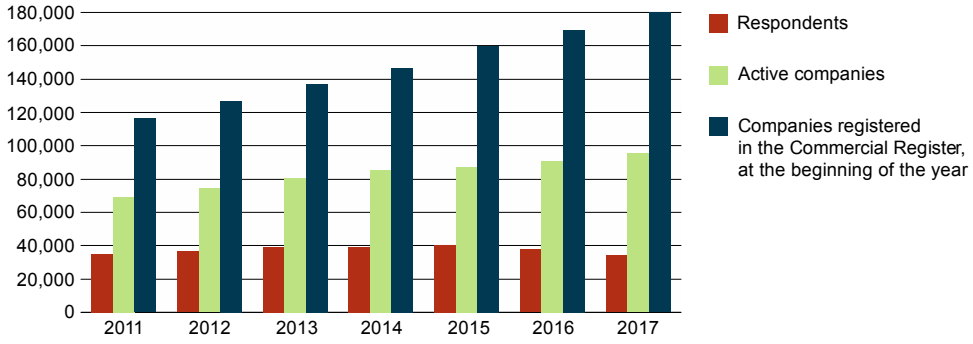
The aim of the module „Reconciliation of work and family life” of the Labour Force Survey (40714) is to provide information about the possibilities of reconciling work and family life in different population groups, including information about the flexibility of working time and work conditions, childcare and help from close persons, etc. The action is based on Commission Regulation (EU) No 220/2010. A flexible reconciliation of work and family life is one of the quality indicators of working life and is connected to the EU employment programme according to which, the employment of women should be increased and gender equality should be promoted. In 2017, the preparatory work will begin. In 2018, the module will be included in all the labour force surveys conducted in the EU member states. The potential users of the datasets on work and family life in Estonia are the Ministry of Social Affairs, the Ministry of Economic Affairs and Communications, the Ministry of Finance and research institutions. The results of the survey are published in 2019.

The aim of the module “Health” of the Social Survey (40615) is to examine the residents’ health status and health-related behaviour, use of health services and healthcare resources and use thereof. The action is based on Regulation (EC) No 1177/2003 of the European Parliament and of the Council. The health statistics produced based on the data collected with the module have important common elements with the social cohesion, residents’ life expectancy, social protection, occupational health care and other important subject area statistics. In the preparatory phase of data collection, Statistics Estonia cooperates with the Ministry of Social Affairs, National Institute for Health Development, Office of the Chancellor of Justice and other state authorities who shall later use and analyse the results of the module and develop policies in the particular field. The results are published in 2018.

ADMINISTRATIVE BURDEN OF RESPONDENTS

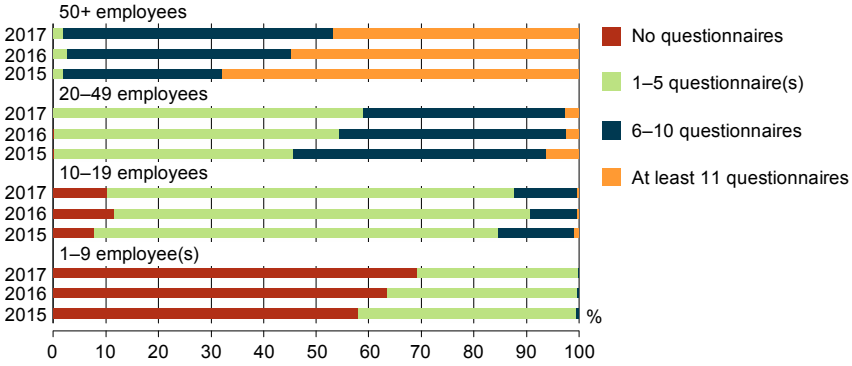
In Statistics Estonia, two indicators are used to assess the reporting burden: the number of questionnaires per respondent and the time spent on completing questionnaires. To distribute the burden of respondents more evenly, sample surveys are used, if possible, in which case data are submitted by only a part of the target group. Also, survey samples are coordinated so that samples of different surveys would not overlap. In 2012–2017, the number of registered companies in the Commercial Register has increased by a third and the number of active enterprises by nearly a quarter. At the same time, the number of reporting entities has remained at 40,000 for the past few years due to the use of sample surveys and introduction of database data. Although the number of respondents in 2017 is so far preliminary, we may estimate a slight decrease in their number compared to previous years.

Companies registered in the Commercial Register, enterprises in the statistical profile and enterprises with data reporting obligation, 2011–2017



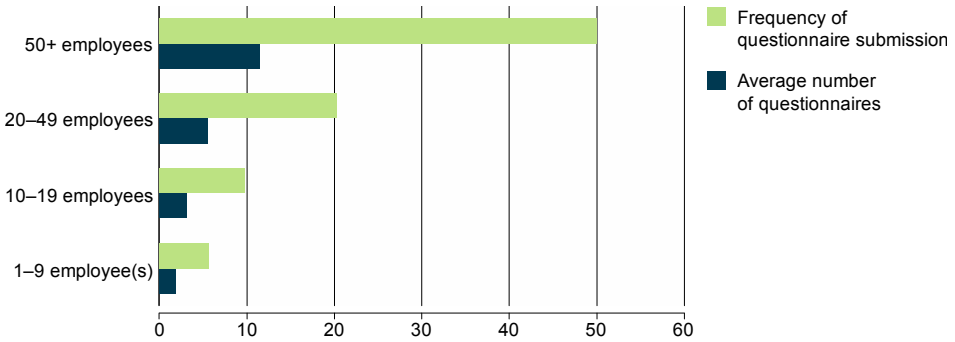
Samples can be coordinated better in the group of small enterprises (1–9 employees), where the number of enterprises is high and relatively small samples will suffice. 63.5% of small enterprises in 2016 did not have to submit any questionnaires, 36% completed up to five questionnaires and only a small proportion had to complete more than five questionnaires. The burden of enterprises with 1–9 employees in 2016 was smaller than in 2015 when 58% of small enterprises did not have to submit any questionnaires. In the group of enterprises with 10–19 employees, 88% of enterprises were required to complete a questionnaire of some kind. The burden is considerably bigger for enterprises with 50 or more employees: 55% of these enterprises had to submit more than 10 questionnaires a year.

Companies by size and number of questionnaires to be completed, 2015–2017



The average number of questionnaires per respondent was 2.5, remaining at the same level as a year before. One enterprise had to submit 26 questionnaires at most. Considering the questionnaire completion frequency, i.e. 12 separate completions of monthly questionnaires and 4 completions of quarterly questionnaires, the average number of questionnaires to be completed is as follows: enterprises with 1–9 employee(s) complete fewer than 6 questionnaires per year on average, while enterprises with 50 or more employees have to complete more than 4 questionnaires per month on average.

Number and frequency of questionnaires completed in a year by size of company, 2016



In 2016, a cyclical statistical action “Adult in-house training” was conducted, increasing the administrative burden of enterprises. In 2017, cyclical statistical actions “Labour costs” (sample size of 10,000 enterprises and institutions) and “Innovation in enterprises” (sample size of 2,175 enterprises) are planned to be carried out, which also increase the burden of enterprises somewhat.

Statistics Estonia has done the following to reduce the administrative burden of enterprises:

- started using database data for the pre-filling of questionnaires and for partial or full substitution of questionnaires;
- cross-used data collected from enterprises;
- reduced the number of small enterprises subject to submitting questionnaires if the impact of the reduction on the quality of statistics is minimal;
- improved the quality of questionnaires.

Questionnaires are pre-filled with data from the annual reports of enterprises, the register of taxable persons and ARIB (Agricultural Registers and Information Board). Data of annual reports were first used in 2012, other sources in 2014.

With the introduction of the annual report, the sample for the EKOMAR questionnaire has been consistently reduced. In four years, the sample has decreased from 11,000 to 9,500. This has significantly decreased the response burden of micro-enterprises. In 2017, the sample for EKOMAR is somewhat larger than in 2016, as for the production of reliable statistics, the sample for smaller activity groups had to be increased. With the use of the value added tax return data, the monthly collection of financial data of trade enterprises was completely stopped, which meant that 800 enterprises were no longer subject to reporting.

The burden of enterprises has also decreased as a result of cross-using the collected data within Statistics Estonia, which means that questionnaires are pre-filled with data from the same questionnaire of the previous period or from other questionnaires. In order to improve the quality of questionnaires, a specialist on questionnaires started working in Statistics Estonia in 2015 to revise the problematic questionnaires and test these on respondents.

In 2017–2018, the following activities have been planned in Statistics Estonia to reduce the administrative burden:

- optimise data collection within the framework of the project “Reporting 3.0”; starting from 2018, the enterprises that have joined the project can submit labour force and wages/salaries information automatically from accounting systems;
- extend the use of database data already used in the production of statistics to other statistical actions and investigate possibilities for using new databases. In 2018, the data from the register of taxable persons are planned to be used for the production of wages/salaries statistics and the enterprises are asked to provide only three indicators missing in the register (pensions and allowances paid by the employer, irregular bonuses and gratuities, average wages/salaries paid upon failure to assign work or hindrance to work);
- analyse the possibility for using other data sources besides state databases. Hourly datasets for electricity consumption have been received from the data warehouse of Elering and data is being analysed to assess its suitability for producing statistics. Vehicle counters data are used to assess the number of foreign visitors on the Latvian border for the Foreign Visitors Survey; in 2017, the possibility for using employment portals’ data for performing the statistical activity “Occupied posts and job vacancies” is planned to be investigated.

Reduction of the sample for the questionnaire EKOMAR[a], 2013–2017

	2013	2014	2015	2016	2017
Total population	66,500	69,970	72,392	75,575	79,210
Sample	11,139	10,559	10,174	7,946	9,501
Decrease in sample compared to 2013		–580	–965	–3,193	–1,638

[a] Statistical action „Annual economic indicators of enterprises“

Size of sample of the questionnaire EKOMAR in economic activities with reduced sample sizes and size groups, 2013–2016

Economic activity	Size group	2013	2014	2015	2016	2017
Manufacturing	1–9 employee(s)	917	124	0	0	0
Construction	1 employee	303	336	39	0	0
Retail trade	1 employee	182	222	18	0	0
Mining and quarrying, energy, water supply	1–9 employee(s)	146	190	187	0	0
Wholesale trade activities and retail sale of motor vehicles	1 employee	386	384	328	0	0
Service activities	1 employee	1,205	1,199	1,413	1	1

The number of questionnaires to be completed in 2017 is a preliminary estimate because over the course of the year, new entities will be subjected to reporting (for example, an enterprise may be added to the samples of foreign trade questionnaires if the enterprise's exports or imports turnover exceeds the set threshold). Also, the samples for some questionnaires are drawn at a later time.

To assess the administrative burden, Statistics Estonia has since 2008 asked respondents to indicate the time spent on completing a questionnaire submitted through the eSTAT electronic data transmission channel. Starting from 2016, the marking of time spent on completing a questionnaire is mandatory for one period of each questionnaire. The answers for one period will be applied to the rest of the periods of the same questionnaire. The missing or improbable values are imputed.

Foreign trade questionnaires are an exception, because most of them are received through a special channel, in which case respondents are not asked to specify the time spent on questionnaire completion. The time spent on completion was asked also in the case of the promoter index survey. The total completion time for foreign trade questionnaires is estimated based on received questionnaires and number of entries.

Average time spent on completing a questionnaire by frequency of questionnaire completion, 2012–2016 (minutes)

Frequency of questionnaire completion	2012	2013	2014	2015	2016
1–2 times a year	120	116	125	136	104
4 times a year	34	33	36	35	40
12 times a year	79	71	73	73	77
Total	73	70	70	73	70

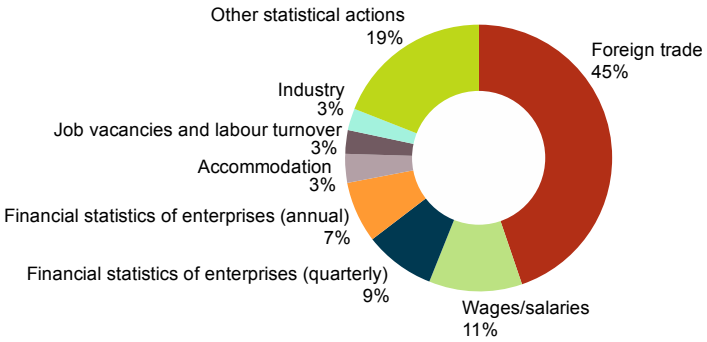
In 2016, on average, less time was spent on completing questionnaires than in 2015. On average, the completion of a questionnaire took 73 minutes. Annual questionnaires take more time, while the quarterly questionnaires are less time-consuming. The average time spent on completing monthly questionnaires is primarily affected by the extensive foreign trade questionnaires. The average time spent on an Intrastat form was 2.5 hours. Other monthly questionnaires take 0.5 hours, on average. All in all, Estonian enterprises, institutions and organisations spent 39,100 working days, or 153 working years on the completion of questionnaires in 2016.

Total completion time of questionnaires, 2010–2016
(working days)

	2010	2011	2012	2013	2014	2015	2016
Main statistics	48,000	49,000	43,900	40,200	41,000	38,300	38,900
incl Intrastat	22,000	23,000	20,900	19,400	19,800	18,500	17,500
Non-regular statistics	1,200	6,200	200	3,200	0	4,000	200
Total	49,200	55,200	44,100	43,400	41,000	42,300	39,100

The following figure outlines those statistical actions, the data submission burden for which exceeded 1,000 working days in 2016.

Distribution of time spent on data submission by statistical action, 2016



The discussion about the administrative burden has made the entrepreneurs think that they do not have to submit data. The main purpose of Statistics Estonia is to provide reliable and objective information to users about Estonia, including quickly measuring the changes. Reliable and fast statistics can only be produced based on quality source datasets. In producing statistics, Statistics Estonia mainly uses the data of the registers and state databases. Statistics Estonia regularly receives data from the databases in agreed amounts and on specified dates. The databases, though, do not include all the data required by the state, which means that additional information has to be collected from enterprises and private persons.

Statistics Estonia performs about 160 statistical actions a year, of which for about a third, data are collected from enterprises with 140 different questionnaires. 43,000 economic units (companies, state and local government authorities, non-profit associations, sole proprietors, etc) a year must submit data to Statistics Estonia and in total they have to submit about 340,000 questionnaires. The economic units submit about a half of the required data by time and a quarter by the end of the data collection and processing period. 25% of questionnaires are not submitted.

Submitting data later than required or not submitting data altogether lengthen the process of data processing and the quality of statistics suffers. In the worst case, the dissemination of statistics may be delayed and the reputation of Statistics Estonia may be damaged. The questionnaires' response rate is an important quality indicator of statistics. International organisations monitor the quality indicators on a regular basis. A low response rate negatively affects the macro-economic indicators. In many statistical regulations, minimum response rates have been set and if the rate is not met, a precept may be issued to or penalty may be imposed on the state. The reputation of Estonia is damaged if Estonian data is not available at the same time as that of other countries. Low response rates are a problem with almost every statistical action; for this reason, Statistics Estonia processes and analyses datasets many times and in doing so, wastes the tax payer's money.

Since Statistics Estonia is not able to achieve acceptable response rates with the currently mild data collection practices, more effective methods had to be brought into use. One option is to implement coercion money. The Tax and Customs Board and Eesti Pank have already done this to improve data collection and it has proved effective.

In 2016, Statistics Estonia implemented coercion in the case of EKOMAR. EKOMAR is the most important statistical action covering the data of economic activities of the year, based on which, Statistics Estonia prepares business overviews, obtains information for the estimation of economic growth and about structural changes in the economy. After the submission of the annual report to the Commercial Register, Statistics Estonia pre-fills, on average, 80% of the EKOMAR questionnaire. Pre-filling has thus far been possible in the case of nearly 88% of respondents. Nevertheless, less than half of the enterprises submitted EKOMAR questionnaires in time. In 2016, the low reception rate of data forced Statistics Estonia to implement coercion money on those who failed to submit their data. For Statistics Estonia, the implementation of coercion money is the last data collection measure used after repeated notifications and phone calls to enterprises.

In 2016, Statistics Estonia issued a precept-warning to 48 enterprises that had not submitted their EKOMAR questionnaires, after which, 29 of the enterprises submitted the required data. Coercion money was imposed on the nine enterprises that did not submit their data by the given deadline. If coercion money was imposed in the case of all questionnaires and enterprises, the response rate could rise from the current 75% to 90% and the quality of statistics and the publication speed would improve accordingly.

Coordination of classifications

In 2016, via RIHA (administration system of the state information system), 183 new classifications were submitted for Statistics Estonia's approval, of which 85 were approved and 34 disapproved. 63 classifications were withdrawn from approval by the managers.

Cooperation between entrepreneurs and the state in reducing bureaucracy

In October 2015, the Minister of Economic Affairs and Communications, the Minister of Entrepreneurship, the Minister of Finance and the Minister of Public Administration invited business organisations to make proposals about how the state could reduce the administrative burden of enterprises.

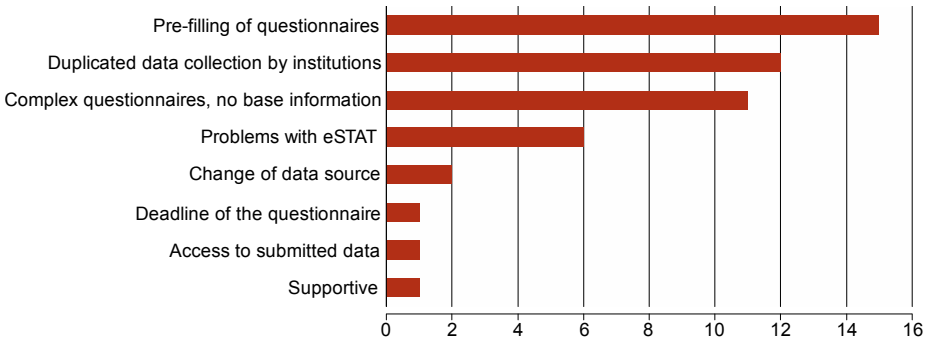
By 1 December 2015, a total of 253 proposals were received, 67 of which concerned the production of statistics, incl. the combined collection of data required by the state (e.g. the declaration of income and social tax (TSD) of the Tax and Customs Board could enable the submission of the data required for the production of statistics). Of the 67 proposals, 49 were given to Statistics Estonia for implementation.

The largest number of proposals concerned the pre-filling of statistical questionnaires with either the sum of data provided for shorter periods or with data available in administrative registers (in particular, the TSD and the employment register). Another larger group of proposals concerned asking for data that are already available in various registers. Examples given included data submitted via the Estonian Maritime Document Exchange, energy efficiency audit reports, accounting balances database for state and local authorities managed by the Ministry of Finance, the employment register, tax declarations, etc. Statistics Estonia regularly monitors the composition and quality of administrative databases and currently the composition and quality of most of the aforementioned databases is not good enough for the production of internationally comparable statistics. Statistics Estonia has proposed that the managers of databases supplement their data compositions so that these could be used for the production of statistics.

Among the proposals was an opinion of the Estonian Forest and Wood Industries Association, which supported statistics. According to the proposal, the reduction of bureaucracy must be carefully planned and there is no point in abolishing the part in the data capture process based on which important feedback (e.g. statistical overviews) is given to economic sectors. In analysing data capture, attention must be paid to ensuring that data are used to provide the society and the business sector with as broad a statistical overview as possible about the situation of Estonian economic sectors.

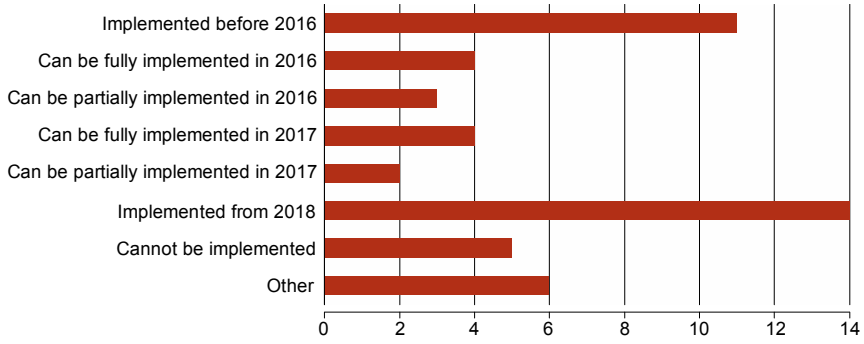
In the following diagram, proposals are listed according to contents.

Proposals by contents



11 of the 49 proposals had already been implemented by Statistics Estonia before they were received. Most of the implemented proposals concerned pre-filling of questionnaires with data in annual reports or VAT returns. From 2012, annual statistical reports are pre-filled with data from the annual reports submitted to the Commercial Register and the respondent only needs to provide the information not included or not provided in the annual report. From 2014, in the quarterly questionnaire “Economic activity“, the sales revenue calculated based on the data provided in the VAT return is displayed in a separate column as additional information. It is included as additional information because the data do not match due to difference in definitions.

Feasibility of proposals



One of the proposals planned to be implemented in 2016 concerned making the data submission channel eSTAT more user friendly, but the project was not carried out. The eSTAT design procurement in 2016 was not successful because the lodged tenders were nearly twice the price of the project's budget. In summer 2016, a new application was submitted to the analysis round of the Structural Funds and it was granted. As a result of the analysis, eSTAT design prototypes will be produced and the cost of the project will be known. The deadline for the analysis procurement is March 2017. After the end of the analysis procurement, Statistics Estonia shall apply for funding to develop the prototypes. As a result, using eSTAT should become more convenient, which is something respondents have been eagerly anticipating.

Project „Reporting 3.0"

The proposals made by the representatives of business organisations on reducing bureaucracy expressed the following expectations:

- entrepreneurs' burden of submitting data to the state must be reduced;
- only minimal amount of data should be collected from entrepreneurs;
- data already submitted to the state should not be asked for again;
- data submission should be easy and convenient.

The zero-bureaucracy project gave rise to the project "Reporting 3.0", which should take data collection onto a new level both technologically and in essence – automatic capture of transaction-based data.

In the first phase of the project, the wages/salaries and labour force data submitted to the Tax and Customs Board and Statistics Estonia were reviewed and the optimal amount of data, needed for both tax collection and production of official statistics for fulfilling the justified orders of statistics users, was agreed. The justified orders by statistics users are approved by the Government of the Republic with an order. A prerequisite for the success of the project is cooperation with business software developers and representatives of enterprises to work out a technological solution for the movement of data from the respondents' accounts to the data users. Those enterprises who do not use accounting software in their work will still have the opportunity to submit data by filling in forms on the screen.

In order to reduce the efforts made by enterprises upon filling in statistical questionnaires and tax returns and making modifications in case of changes, it is most efficient to collect data in a way as similar as possible to how it is stored in the accounting systems, i.e. to collect data entry-by-entry. For this, certain group identifiers that the Tax and Customs Board and Statistics Estonia have agreed on and have provided the respondents with need to be added upon describing operations. These identifiers are described in such detail that based on these, it is possible to sum the entries to the level required by the Tax and Customs Board and Statistics Estonia for their work. Adding identifiers does not mean that accountants always need to do this by hand but that accounting programmes can be configured so that taxonomy lists are pre-selected for existing client, wages/salaries, product and other data. For example, the country list has to be attached to a client's entry only once and from there on, it is automatically read, or a combined nomenclature code of a product has to be marked on the product card only once, after which, this part of the taxonomy can already be found according to the product. If the needs of data collectors change over time, only an upgrade of taxonomy elements is needed for enterprises to be able to continue submitting data. At the moment, enterprises need to configure the new form and the included formulas for calculating variables.

Entry-based accounting presupposes quality accountancy, i.e. instead of the current compilation of reports, the emphasis will shift to precise and in some cases more detailed recording of economic transactions.

Data are not captured from the environment of economic transactions without the consent of the enterprise. With a push of a button, the respondent can give permission for continuous data capture. From 2018, the possibility to automatically submit labour force and wages/salaries information and afterwards, data on all other transactions shall be applied.

DATA QUALITY IN STATE DATABASES

In 2016, the data quality in databases was analysed mainly during the preparation for the register-based population and housing census (REGREL).

There are three main identifiers in state databases: the personal identification code, commercial registry code and address object code. With the help of these codes, it is possible to ensure the interaction of different databases. The first two codes have been in use for a long time, the identifier of the address is the most recent. Address identifiers are managed by the address data system (ADS) and the main state databases (Population Register, State Register of Construction Works, land register, etc) are interfaced with ADS and use the address standard and identifiers.

Identification, or matching of residential buildings

The aim of the Address Data System (ADS) is to ensure a clear identification of address objects both in their location and in different databases. The ADS includes all the address objects in Estonia – which is why the ADS has been chosen as the base dataset for creating the dwelling population. Of help is the State Register of Construction Works (EHR) from where technical dwelling data are taken for the creation of REGREL indicators, and the Population Register, which holds data about dwelling occupancy.

Data in the ADS, managed by the Land Board, are based on two datasets – the State Register of Construction Works (EHR) and Estonian Topographic Database (ETAK). From the EHR, buildings have been received (as much as there are) and from the ETAK, buildings that have been received with aerial photography (all the buildings in Estonia). For identification, buildings in the EHR must be matched with those in the ETAK. At the beginning of the identification process, all the EHR buildings had double entries in the ADS and for every EHR building, an equivalent had to be found in the ETAK. The matching of buildings means that two buildings, one in the EHR and the other in the ETAK are identified as one and the same building and from there on, there is only one building instead of two in the ADS. After the matching of all EHR buildings with ETAK buildings, the data quality in the ADS improves, because there are no double entries and the buildings missing in the EHR can be identified more specifically.

Local authorities participated in the address correction project initiated by the Land Board in the middle of 2013. Thanks to this project, the identification of buildings in the ADS has significantly improved. The pace of matching buildings in databases has been presented in the following table.

Matching of buildings in the address correction project

	01.07.2013		01.01.2016		01.01.2017	
	No of buildings, thousand	Matched buildings, %	No of buildings, thousand	Matched buildings, %	No of buildings, thousand	Matched buildings, %
Residential buildings	292.6	53.5	292.1	82.5	291.1	86.7
Non-residential buildings	484.8	4.2	497.8	16.7	503.6	21.4
Total	777.4	22.8	789.9	41.0	794.7	45.3

As can be seen from the table, the pace of matching residential and non-residential buildings is very different. The situation has been caused by the fact that residential buildings are important for the REGREL project and for this reason, the matching of buildings concentrated on identifying residential buildings.

Taking information about an unidentified building from the EHR means that it has double entries in the ADS and the equivalent building is among the unidentified buildings in the ETAK. In 2017, the buildings identification project is going to continue and the aim is to match all the residential buildings. When all the residential buildings in the EHR are matched with those in the ETAK, there will be no double residential building entries in the ADS.

Inserting parts of buildings straight into the database

Initially, parts of buildings, or dwellings and non-dwellings were inserted into the ADS database together with the EHR buildings. There is an under-coverage in the EHR regarding both buildings and parts of buildings. If a resident of Estonia wishes to register his/her place of residence, the address object must be in the ADS. As of 1 January 2012, it is possible to insert a part of a building (dwelling or non-dwelling) straight into the ADS database with no mention of it in the EHR. Parts of buildings inserted straight into the ADS with no mention in the EHR have been pointed out in the following table.

Parts of buildings inserted straight into the ADS

Part of building, type	01.01.2016	01.06.2016	01.01.2017
Dwellings, thousand	17.2	16.6	16.5
Non-dwellings, thousand	22.7	23.7	23.7
Total, thousand	39.9	40.3	40.2

The number of parts of buildings inserted straight into the ADS has somewhat decreased in time. This is the result of the identification of buildings. If, after identification, the parts of buildings in the EHR and the ETAK are found to be the same, the matched building will only have those in the EHR and those in the ETAK are annulled.

Parts of buildings inserted straight into the ADS by location, 01.01.2017

Parts of buildings in matched buildings, thousand	35.3
Parts of buildings in unmatched EHR buildings, thousand	1.3
Parts of buildings in unmatched ETAK buildings, thousand	3.6
Total, thousand	40.2

There is a certain under-coverage in the EHR concerning the parts of buildings of the first two rows (36,600) but this is not necessarily the case with the third row (3,600) – this will be know after the buildings are matched.

Population Register – place of residence and interpersonal relationships

One of the most important components of the register-based population statistics is the place of residence of a person, which is the basis for all indicators connected to the location of the population. The place of residence entered at dwelling level is vital for the identification of register-based households and families. In addition to the place of residence at dwelling level, it is necessary to know the interpersonal relationships. The main source of information about the place of residence and interpersonal relationships is the Population Register, which means that the quality of data in the Population Register is very important.

The most important technical quality indicator of the place of residence information is the linking of the dwelling with the address identifier (ADS_ID) and the address object code (ADS_OID) in the Address Data System (ADS). This is important for the identification of register-based households, because persons registered to the address with no dwelling data cannot be tied to households. During the past five years, the technical quality of residential data has improved. Every year, the share of persons whose place of residence address and address object indicators are completed has increased.

Technical quality improvement of the residential data of Estonian residents[a] in the Population Register, 2013–2017

	2013		2014		2015		2016		2017	
	No	%	No	%	No	%	No	%	No	%
ADS_ID existent	1,224,866	90	1,260,210	93	1,319,495	97	1,319,575	98	1,338,965	99
ADS_OID existent	1,195,816	88	1,232,901	91	1,257,480	93	1,262,201	93	1,289,782	95
Total	1,360,382		1,354,889		1,352,140		1,352,432		1,353,588	

[a] Those whose country of residence in the Population Register is Estonia.

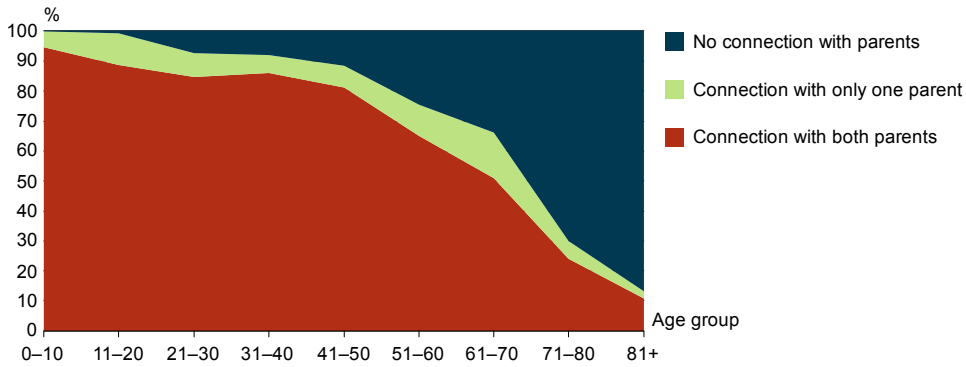
The prerequisite for the identification of families is the place of residence entered at dwelling level, which determines the household and interpersonal relationships within the household (connection with mother, father and spouse). According to the Population Register, the share of persons who have a connection with both parents has increased during the past five years.

Person's connection with mother and father in the Population Register, 2013–2017

	2013		2014		2015		2016		2017	
	No	%	No	%	No	%	No	%	No	%
No connection with parents	331,442	24	308,618	23	297,184	22	285,858	21	275,608	20
Connection with only one parent	124,000	9	119,839	9	117,587	9	114,911	8	112,292	8
Connection with both parents	904,940	67	926,432	68	937,369	69	951,663	70	965,688	71
Total	1,360,382		1,354,889		1,352,140		1,352,432		1,353,588	

A person's connection with mother and father depends heavily on the age of the person. Connection with one or both parents exists for a little more than 99% of under 20-year-olds, 92% of 21–40-year-olds, 88% of 41–50-year-olds and 76% of 51–60-year-olds. As the identification of a family starts with the youngest member of the household, mainly the connections of the youngest ensure the correct establishment of family connections.

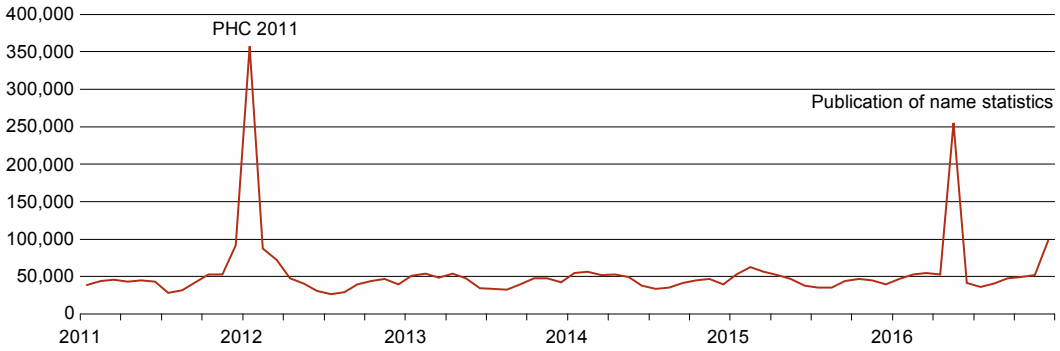
A person’s connection with mother and father by age group, 01.01.2017



USERS' SATISFACTION WITH OFFICIAL STATISTICS

All the information published by Statistics Estonia is available to the public for free on the website of Statistics Estonia at www.stat.ee. In 2016, the number of visitors to the website increased by almost a half compared to 2015, almost reaching the level seen during the last population census – 826,000 visitors a year. The reason for this was the popular name statistics application, which was published in May and received very positive feedback from users. The average number of visitors per week was about 15,900, with 84% of visits made from Estonia. Access via mobile phone or tablet among visits to Statistics Estonia's website increased noticeably during a year and was 23% in 2016 (9% in 2015). The number of visitors peaked in May and December and was the lowest in July and August.

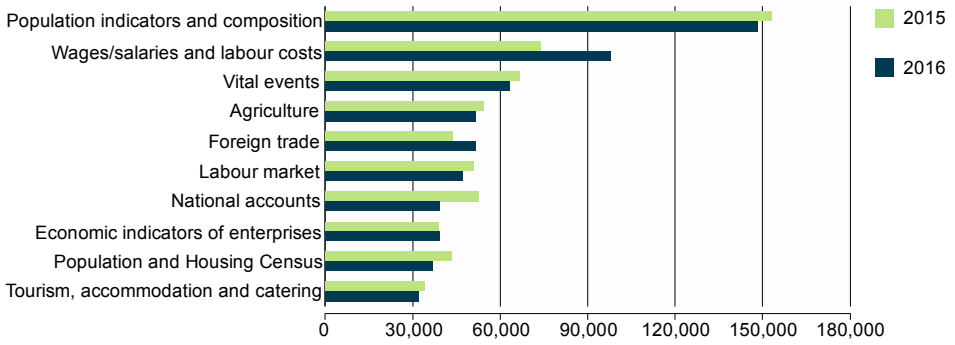
Number of visits to the website by month, 2011–2016



The most popular source for statistical information is the Statistical Database, with 92,600 visits in 2016. Compared to 2015, the growth was minimal. Interest in pre-defined tables of Estonian statistics, on the other hand, increased by a third – these were viewed 120,500 times. The number of users of the news releases, the portal of regional statistics and the e-publication „Piirkondlik portree Eestist" ("Regional Portrait of Estonia") remained at the same level as in 2015. The number of downloads of publications has decreased, but at the same time, also the number of publications of Statistics Estonia has decreased – there were 15 publications in 2015 and 11 in 2016. The number of users of the main indicators published on the website decreased in 2016, because Statistics Estonia began to display five most important main indicators on the front page of its website and users no longer have search for these in the pre-defined tables. The decrease was also affected by the increased use of pre-defined tables. The number of requests for information submitted to Statistics Estonia in 2016 decreased by a fifth compared to 2015.

As in the previous years, the most popular subject areas in 2016 were population indicators and vital events, wages/salaries and labour costs, agriculture, national accounts and the labour market. The ranking of the most popular subject areas has remained unchanged for years.

Most popular fields of statistics[a], 2015, 2016



[a] According to the number of views of the database and pre-defined tables.

User surveys

eSTAT user satisfaction survey

From April to December 2016, Statistics Estonia organised a satisfaction survey for respondents to determine the assessment of eSTAT, the electronic data submission channel of Statistics Estonia. A total of 12,800 letters were sent to respondents, inviting them to participate in the promoter index survey. We received more than 3,600 responses (28%), allowing assessment of more than 60 questionnaires.

Satisfaction was examined by using the promoter index methodology, which is based on the presumption that when people recommend someone or something to their friends, they assume responsibility for the quality of the recommended object.

The promoter index may range from –100 to 100. "Excellent" ranges from 100 to 60, "very good" from 59 to 20, "good" from 19 to 0, "satisfactory" from –1 to –40, "poor" from –41 to –70 and "very poor" from –71 to –100. The overall negative assessment of the use of eSTAT has increased compared to the previous year – the average promoter index in 2016 was –37 (–7 in 2015), which can be considered a result on the border of poor and satisfactory.
More highly were assessed the completing of questionnaires "Financial indicators" (+20), "Export price" (+5) and "Producer price" (+8); users were the least satisfied with the questionnaires "Questionnaire for entrepreneurs" (–69), "Research and development" (–60) and "Non-profit organisations" (–67).

The lowest scores are usually given to eSTAT by managers of small-scale enterprises, who fill out the questionnaires only a couple of times a year, and also respondents who fail to submit data in time. Higher grades were given, for example, by accountants, who submit data more frequently and are thus more familiar with the system.

Respondents pointed out the following positive aspects:

- data submission is quick, convenient, easy;
- questionnaires are pre-filled;
- the accuracy of submitted data can be checked immediately.

The reasons for not recommending eSTAT can be dividend into three:

- problems with the data submission environment (the environment is not user-friendly, it is difficult to find the questionnaires, etc);
- problems with questionnaires to be filled out (the questionnaire is complex, the same data has to be submitted twice, instructions are lacking);
- reasons concerning the reputation of Statistics Estonia (submission of data is considered annoying and time-consuming).

Statistics Estonia asked respondents for feedback and proposals on eSTAT. Most of the improvement activities can be carried out already in 2017. Improvement activities of the eSTAT environment are planned for the years 2018–2019.

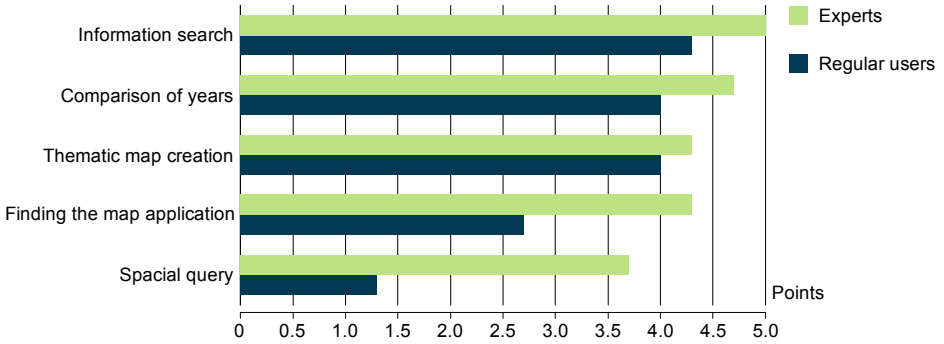
Survey on the use of the statistics map application

The statistics map application has been available to users since 2014. In the survey, two methods were used: a web-based questionnaire (quantitative method) and usability testing (qualitative method). The aim was to identify the main problems of the map application and background information and positive and negative aspects of the application. The aim of testing the map application usage was to study how people in the application's target group use the map application, how they manage the assigned tasks and where they get stuck.

The questionnaire was sent to those clients of Statistics Estonia who have previously submitted a request for information or an order for information to Statistics Estonia for geo-referenced statistics or have participated in any event introducing the map application. The questionnaire was also sent to the University of Tartu geographers' mailing list, which is used by both students and graduates. Replies were received from 39 people, 22 of whom had used the map application.

Most of the respondents were satisfied with the graphical content of the map application, 14% of respondents rather were not. Based on the responses, it can be said that people like the graphical content of the map application. As positive aspects of the map application, the users named the large number of options, the possibility for acquiring geo-referenced data and visualisation options. Respondents were less satisfied with the data download speed, limited design options of the thematic map, limited amount of data and non-existent option of saving information as an image. The participants testing the map application were most satisfied with the information search and least satisfied with the spacial query. An average assessment was given to how easily the application can be found.

Average satisfaction with solving the usability testing assignments by user group



Register-based population and housing census user survey

The next, 2020/2021 population and housing census in Estonia is planned to be conducted as a register-based census (REGREL), without interviewing the people counted. Preparations for this have been made since 2010, when it became apparent that the situation of Estonian registers does not allow to conduct the 2011 population and housing census based solely on register data.

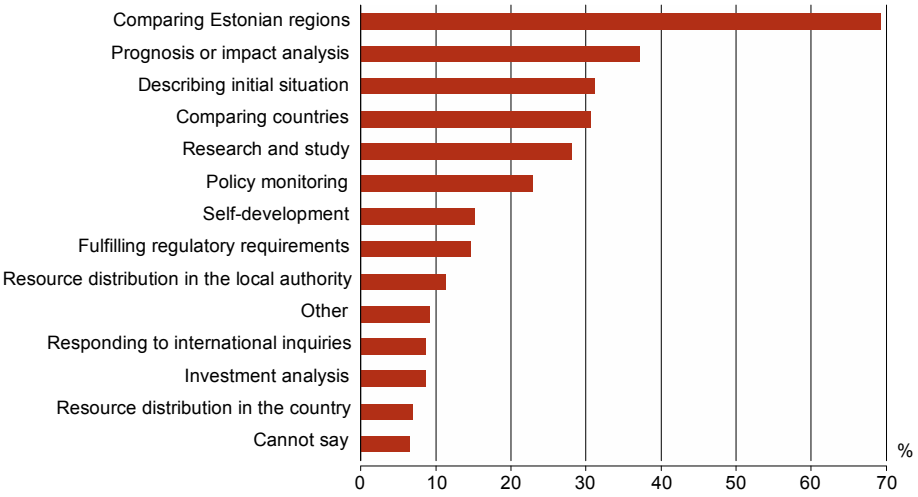
The aim of the user survey was to find out what kind of census data and for which purposes the users would wish to use. The questionnaire was web-based and the target group included researchers and lecturers, local authority representatives, legislators and journalists.

Responses were received from 231 persons, the largest share being analysts or researchers (29%), middle managers (22%) and specialists (21%); 12% of the respondents were top managers.

The questionnaire had separate blocks. First, all the subject areas planned to be included in the REGREL form were listed (mandatory Eurostat indicators) and the respondents were asked to mark whether they had used the respective information in their work. The respondents were also asked whether they feel that more subject areas should be covered with the census and how often censuses should be conducted in the future.

The next block of questions dealt with the matter of using the information received from the population and housing census. A number of activities were listed and respondents were asked whether they had used census data for these activities. Even though only 18% of all the respondents said that the census could cover more subject areas than the mandatory international output indicators, the list of proposals was quite long and diverse.

The purpose of previous use of census data among the respondents of the user survey



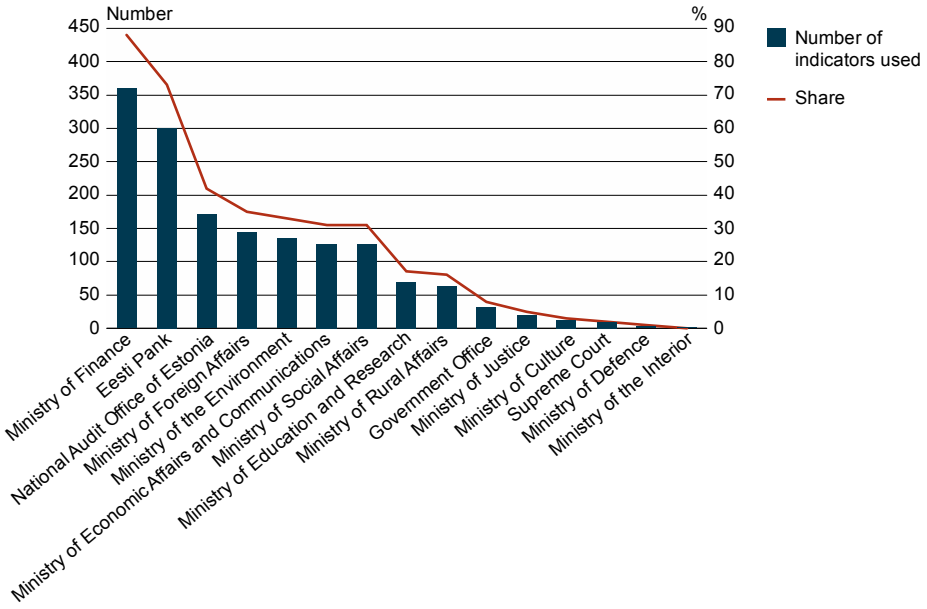
Identification of the value of wages/salaries and labour force statistics

Within the framework of the project "Reporting 3.0", the value of wages/salaries and labour force statistics produced in Statistics Estonia was identified. The aim was to find out the purpose for which state institutions use the output indicators or groups of indicators and whether the administrative burden caused by the mandatory submission of data is sufficiently justified.

In order to measure the value, Statistics Estonia asked the respondents to state which wages/salaries and labour force output indicators or groups of such indicators they use. Respondents were asked also about their internal necessity – for which purpose and for which decisions the indicator is used and what happens if the production of the output indicator is stopped. 411 output indicators of 18 statistical actions were under scrutiny.

The survey was conducted in all the ministries (the ministries included institutions in their area of government), National Audit Office of Estonia, Government Office, Supreme Court, Eesti Pank, Association of Municipalities of Estonia and Association of Estonian Cities. The questionnaire was sent to 17 respondents and feedback was received from all of them.

Use of indicators according to survey participants



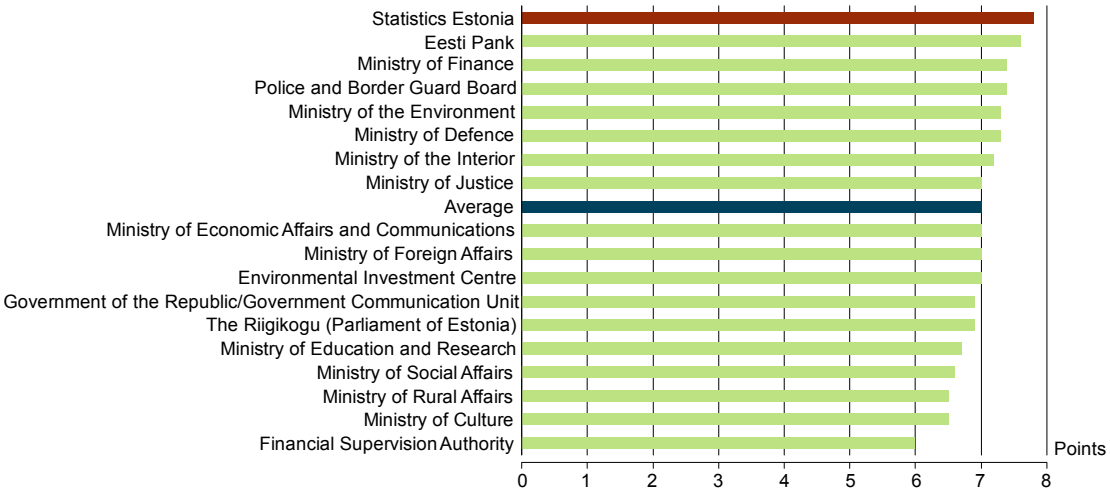
The results of the survey showed that all the wages/salaries and labour force output indicators are used.

State authorities' media relations survey

In the beginning of 2017, the market research company Kantar Emor conducted a survey among journalists to assess the media work of the government, ministries and some state authorities in 2016. Statistics Estonia was assessed by 78 journalists. The survey was web-based with ratings given on the scale from 1 (the lowest rating) to 9 (the highest rating).

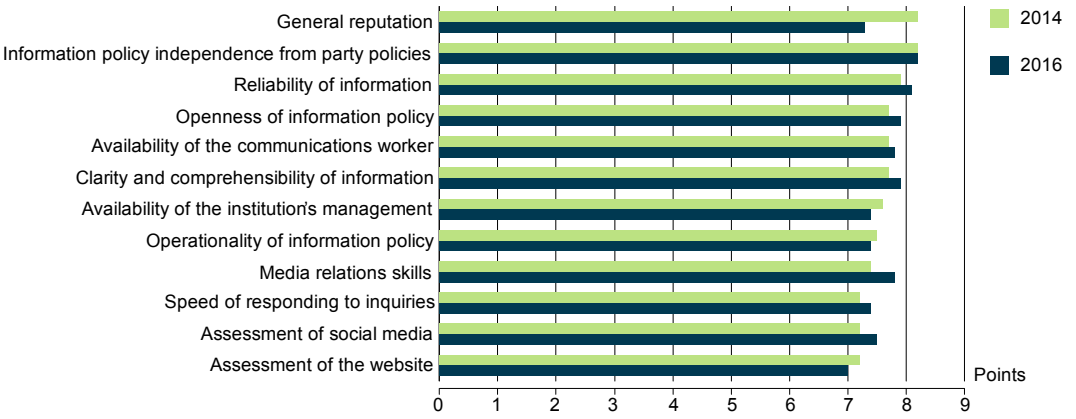
Based on the opinion of the journalists, Statistics Estonia was rated best in terms of media relations skills, reliability of information and openness of information policy.

Media relations skills, 2016



The highest ratings (over 8 points) were given for Statistics Estonia's reliability of information and information policy independence from party policies. Compared to the other state authorities, the ratings given by journalists for different sections of Statistics Estonia's communication work were a lot higher than the average (all sections received more than 7 points) and Statistics Estonia remained in the top three in all the components. The overall rating given for Statistics Estonia's media work was 7.6 points, which is second best among those assessed.

Ratings for Statistics Estonia's media relations, 2014, 2016



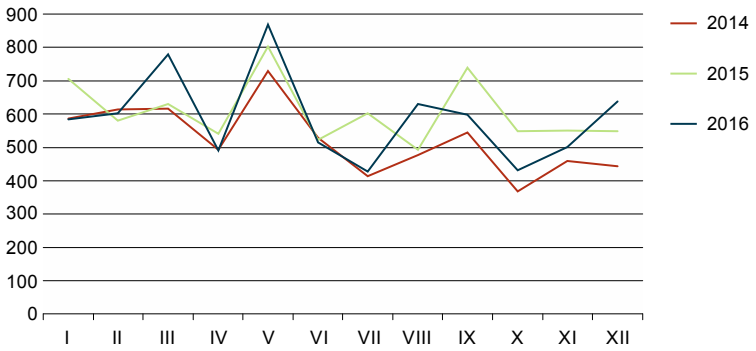
Media coverage

There were 7,068 media mentions concerning the activities of Statistics Estonia and official statistics in 2016. This is 3% less than a year ago. 3,528 mentions concerned Statistics Estonia's news releases and 315 mentions concerned blog posts. In 2016, compared to the same month in 2015, more mentions occurred in March, May and December. March is usually a month with a large number of mentions because during this month, summaries for most statistical fields for the previous year are published. In May, the number of mentions was affected by the launching of a new product – the name statistics application. The name application proved very popular among users and also got media attention. In May, also a press conference on migration trends was held, where an overview was given both of the new methodology used in population statistics, using the residence index, and of the impact of the methodological change on the calculation of migration. In 2016, the trial census of the Register-Based Population and Housing Census was conducted and at the end of the year, Statistics Estonia published the trial census report. Statistics Estonia introduced the results of the trial census at the end of the year at two press conferences, which also increased the media interest compared to December of the previous year.

Media mentions, 2012–2016

	Total No of mentions	Average per month	Average per day	Change in the total No of mentions compared to the previous year, %
2012	8,941	745	24	18
2013	7,853	654	22	–12
2014	6,275	523	17	–20
2015	7,262	605	20	16
2016	7,068	589	19	–3

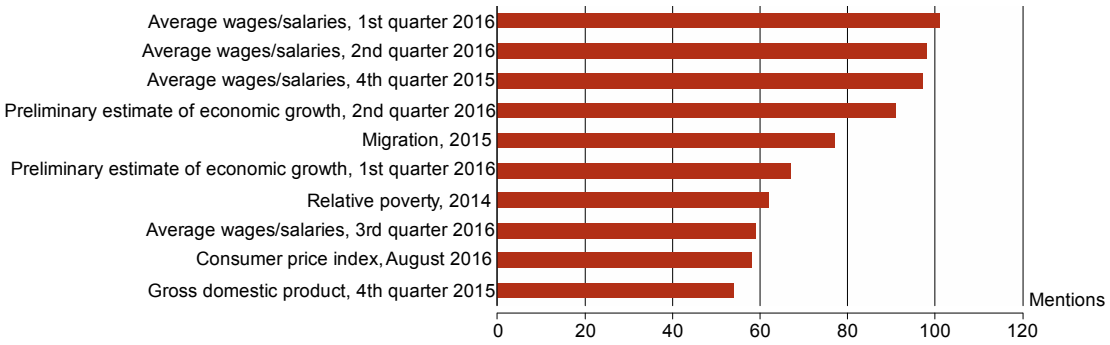
Media mentions by month, 2014–2016



News releases

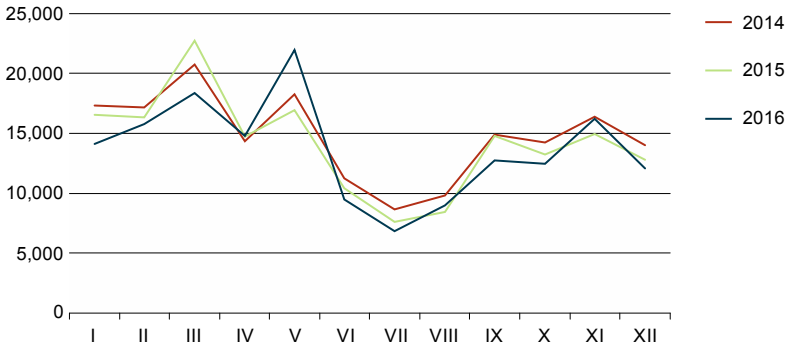
In 2016, Statistics Estonia published 144 news releases, all of which received media coverage. According to the media monitoring, each news release received 25 media mentions on average, which is the same as last year. The media was most interested in news releases concerning wages/salaries and economic growth. Media reporting on news releases accounted for over half of all media mentions.

Top ten news releases by media mentions, 2016



During a year, the news releases were viewed 166,800 times on Statistics Estonia's website, which means approximately 465 views per day (the corresponding numbers in 2015 were 169,300 and 464).

News release views on Statistics Estonia's website, 2014–2016



Articles

In 2016, eight articles by the employees of Statistics Estonia were published in the media (seven articles in 2015). The most prolific authors were Andres Oopkaup and Ene-Margit Tiit – both authored three articles. Five of the eight articles introduced official statistics and the aim of three articles was to rebut the erroneous interpretation of official statistics.

Press conferences

In 2016, Statistics Estonia held six press conferences.

In May, a press conference on migration trends was held. Principal Methodologist Ene-Margit Tiit gave an overview of the new methodology used in population statistics, where the residence index is used, and explained how the methodological change affects the migration calculations. Senior Analyst Alis Tammur provided an overview of external migration in 2015, i.e. of those who come to Estonia and those who leave, and Principal Analyst Mihkel Servinski spoke about Estonia's internal migration in 2015. After the conference, there were 77 media mentions on the subject.

In July, traditionally, the Statistical Yearbook of Estonia was presented to the press. Statistics Estonia has published the yearbook for over 25 years and in 2016, when the Estonian statistical system celebrated its 95th anniversary, the yearbook appeared for the last time. The information of the yearbook will be available on the website of Statistics Estonia also in the future – in the Statistical Database, map application and on subject area pages – but the yearbook itself will no longer be published. At the yearbook presentation, Principal Analyst Siim Krusell gave an overview of the changes on the Estonian labour market and in the coping of households and Senior Analyst Alis Tammur of population trends. After the yearbook presentation, in two weeks, there were 41 media mentions – mentions of the news release, interviews conducted at the press conference and facts picked from the yearbook by journalists.

In October, Statistics Estonia published the preliminary results of the 2015 Household Budget Survey and organised a press conference for the presentation of the results. Analyst Tiiu-Liisa Rummo gave an overview of the compulsory expenditures of households (expenditure on food, non-alcoholic drinks and housing) and Leading Statistician-Methodologist Karl Viilmann of the other larger expenditure groups, incl. expenditure on free time, tourism, health and education. After the press conference, there were 43 media mentions.

In 2016, the first trial census of the Register-Based Population and Housing Census (REGREL) took place and in order to present the REGREL project and the results of the trial census, Statistics Estonia organised three press conferences. In June, Director General Andres Oopkaup gave an overview of the preparations for REGREL and the manager of the REGREL project Diana Beltadze explained how the trial census is conducted. Enel Pungas, Head of the Population Facts Department of the Ministry of the Interior, spoke about improving data quality in the Population Register. The press conference was

mentioned in the media 23 times. At the end of the year, Statistics Estonia published the trial census report and organised two press conferences to present the results. At the press conference in November, Statistics Estonia gave an overview of the existence and quality of dwelling data in the registers (9 media mentions) and in December, of the existence and quality of the data on private persons and family and household data in registers (19 media mentions).

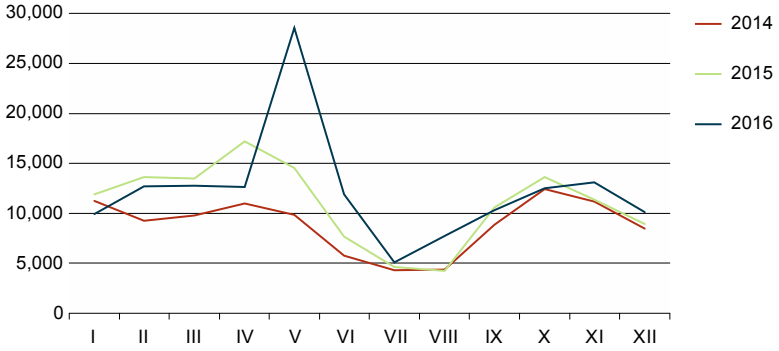
Statistics Estonia in social media

Statistics blog

In 2016, Statistics Estonia published 47 blog posts, which were mentioned in the media 315 times (in 2015, the respective numbers were 40 and 441). Many records regarding visits to the blog were recorded – record number of visits were recorded for year, month and publication day.

Over the course of the year, the blog received 147,300 visits. The previous record dates back to 2015 (132,000 visits).

Visits to the statistics blog by month, 2014–2016



The most popular blog post was "Heal lapsel mitu nime" ("Good children have many names"), written by Kaja Sõstra and Alis Tammur to introduce the name statistics application, which was read on the publishing day nearly 11,000 times. The post was read many times over in May, resulting in the record number of blog visits per month – 28,600. Within five working days, the post reached approximately 47,500 people in Facebook and received 45 media mentions.

Based on the number of visits on the day of publication, another popular article was "Eesti põnevad paigad ootavad avastamist" ("Interesting places in Estonia waiting to be discovered") written by Ülle Valgma in June, giving recommendations for summer holidays based on the name statistics application and geo-referenced statistics. On the publication day, the article was read nearly 3,000 times, taking the post to the top three according to the number of visits on the publication day. Within five working days, the post reached 41,700 people in Facebook and received 9 media mentions.

Third in popularity was the post "Huvitavaid fakte Eesti maakondade elust" ("Interesting facts about life in Estonian counties") written by the same author for 1 April, using real data in unreal associations. The post was read on the publication day 1,300 times and reached 6,800 people in Facebook in five working days.

In 2016, the most active contributors to the blog were Evelin Puura and Märt Leesment – both wrote four articles in a year. Altogether, nearly 20 people wrote articles for the blog.

Statistics Estonia on Facebook

In Estonia, there are 1.3 million inhabitants. Facebook is the most popular social media channel, which is used by about 600,000 people in Estonia. Therefore, generally speaking, we may say that every other Estonian uses Facebook. Statistics Estonia has had a Facebook account since 2010. The account has been used for mediating news releases, blog posts, publications and news by Eurostat and statistical organisations of other countries. During the past two years, Statistics Estonia's Facebook account has acquired 900 additional fans a year; by the end of 2015, the total number of fans was almost 2,200, and at the end of 2016, the number was 3,100. From among state authorities of Estonia, by far the most popular is the Estonian Rescue Board with nearly 42,900 fans. Within the Ministry of Finance area of government, the Tax and Customs Board Facebook account has the most followers (nearly 7,800).

During the time that Statistics Estonia has been using Facebook, we have discovered that posts with images (photo, graph, map, infographic) spread better in Facebook. At the same time, a lot depends also on the field of statistics, i.e. how interesting the particular field is for people. Social and population statistics are more popular than, for example, economic statistics, and posts concerning these statistics are also shared more and reach a larger number of people.

In the European statistical system, the visualisation of statistics and making statistics interactive are currently very popular topics. Many countries have made short videos to present statistics, introduced an interactive map application or created a smart application. They are trying to use interactive means to make statistics as simple as possible but also illustrate it and make it more interesting. Using infographics for the popularisation of statistics is quite a new idea in Statistics Estonia. Statistics Estonia had the plan to create infographics for a long time but in 2015, specialists were invited from the Data Visualisation Centre for the UK Office for National Statistics to share their experience and train us. In 2016, the acquired

knowledge was put into practice. In Statistics Estonia, infographics have been created mainly for anniversaries (the 95th anniversary of the Estonian statistical system, the 25th anniversary of Estonia's re-independence, teachers' day) and the spreading of these is monitored in Facebook. In total, Statistics Estonia published 17 infographics in 2016. Statistics Estonia plans to create infographics also when regular statistics are published.

Considering the number of inhabitants of Estonia and the fact that Statistics Estonia's posts are in Estonian (although, we also share English posts by e.g. Eurostat and neighbouring countries and Eurostat product information), based on our practice thus far, we have created the following scale regarding the spreading of our posts – the number of people that the post reaches:

500 people – regular

1,000+ people – good

2,000+ people – very good

Top ten Facebook posts that reached the largest number of people in five working days, 2016

Title	Author	Number of people[a]
Blog post: Heal lapsel mitu nime (Good children have many names) (name statistics application)	Kaja Sõstra and Alis Tammur	47,500
Blog post: Eesti põnevad paigad ootavad avastamist (Interesting places in Estonia waiting to be discovered)	Ülle Valgma	41,700
Infographic: Üks statistiline päev 1991. ja 2015. aastal (A statistical day in 1991 and 2015)	Egle Madiste and Alar Telk	15,900
Blog post: Eesti isa statistiline portree (Statistical portrait of the Estonian father)	Eve Telpt	11,600
Infographic: Mardipäev (Martinmas)	Anu Ots and Irmela Klooster	7,900
Blog post: Huvitavaid fakte Eesti maakondade elust (Interesting facts about life in Estonian counties)	Ülle Valgma	6,800
Blog post: Üle poole Eesti viljapuudest ja marjapõõsastest kasvab koduaedades (More than half of fruit trees and berry bushes in Estonia grow in home gardens)	Andres Klaus	6,000
Infographic: Teachers' day	Kaja Sõstra and Irmela Klooster	4,700
Infographic: Ülalpeetavate arv saja tööealise elaniku kohta suureneb (The number of dependants per a hundred working-age residents increases)	Siim Krusell and Irmela Klooster	4,600
Blog post: Kuidas valida ettevõttele võimalikult edukat asukohta? (How to choose the most successful location for your business)	Kreet Solnask	4,500

[a] The number of Facebook users who received Statistics Estonia's post directly or via friends.

Information days and training

The year 2016 was eventful. Statistics Estonia organised 24 training sessions for statistics users, including state officials, teachers, pupils, university students, librarians and other people interested in statistics. More than 550 people participated in the trainings. In addition, 46 conferences, seminars or information days were held, where Statistics Estonia introduced its products and services. A total of 1,600 people participated in these events.

The most significant events in 2016 were the following:

In 2016, Statistics Estonia cooperated with Tallinn University Baltic Film, Media, Arts and Communication School, as a result of which, four films were produced introducing official statistics and possibilities of use of these statistics. Statistics Estonia gave a lecture to Tallinn University, gave the relevant statistical material and advise and Tallinn University wrote the script and produced the films. Statistics Estonia wished to spread statistical knowledge among the students and was very interested in their views about how to introduce the possibilities of using official statistics to other young people. The videos are used in training sessions for the youth.

At the end of January, Statistics Estonia organised an information day "Lahkame lõhet" ("Examining the gap"), where the results of surveys conducted on the pay gap were introduced and the gender pay gap in and outside of Estonia was discussed. There were more than 100 participants.

In February, the second seminar was held under the lecture series for the mathematics teachers of Tallinn, introducing the use of statistics, sample survey methodologies and the map application of Statistics Estonia.

In April, Statistics Estonia, Eesti Pank and National Institute for Health Development organised an international conference in Tallinn to celebrate the 95th anniversary of the Estonian statistical system. Speakers from Estonia and other countries gave an overview of how the production of statistics has changed during the past century and what the future of the Estonian statistical system holds. There were over 500 people participating in the conference.

In September, the third seminar was held in the lecture series for the mathematics teachers of Tallinn, this time introducing regional statistics and the definitions and methodology of GDP calculations.

On 20 October, Statistics Estonia celebrated the European statistics day under the guidance of the United Nations. On this occasion, during a week, many events took place: Open Doors Day in Statistics Estonia, statistical quiz on Facebook and for those participating in the Open Doors Day.

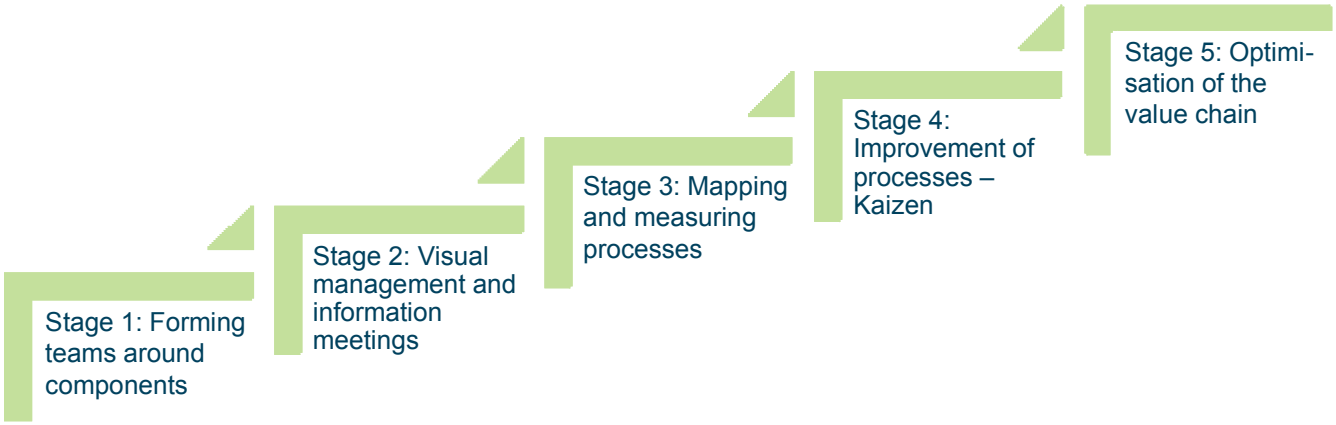
In November, Statistics Estonia and the Estonian Statistical Society organised a conference "Leibkond uuringutes ja registrites" ("The Household in Surveys and Registers"), with speakers including international experts and managers of Estonian registers and databases. At the conference, an answer was sought to the question about how to make sure who is who in the household and family based on register data. A 100 people participated in the conference.

At the end of the year, employees of statistical organisations of other countries – Kazakhstan, Mongolia and Finland – were trained.

In addition to the above-mentioned events, Statistics Estonia participated with presentations and information desk in annual Town and Parish Days, the GIS-day, Tallinn Enterprise Day and other information days and seminars.

MID-TERM REVIEW OF THE OPERATIVE PLANNING PROJECT

In 2016, the focus in achieving greater efficiency for the organisation and work processes was on the operative planning project OP 2.0. While the preparatory phase of OP 2.0 took place at the end of 2015, the year 2016 was ground-breaking and brought about great changes. In 2017, the focus is on the reinforcement of the changes and training of in-house training providers. The following diagram shows the general movement.



What was done?

The changes were visualised on paper at the end of 2015, i.e. a preliminary scheme of the planning and management system (according to the Lean terminology, *Hoshin Kanri*) was outlined and teams were formed. The next step was to test the changes in selected teams. This was done in January–February and at the same time, funding for the project was sought from the Ministry of Finance.

The created planning and management system has three levels and consists of the strategic, tactical, or delivery and operational plans. The strategic plan comprises activities of the following five years, i.e. statistical actions and strategic development activities. The tactical plan includes activities for up to 12 months, e.g. the release calendar of statistics, time schedule for the compilation of questionnaires, etc. The operational plan includes the activities for 3–4 weeks on team level and 1–2 weeks on employee level.

The plans for each level are planned and managed. The strategic plan, or planning is the responsibility of the Director General and Deputy Directors General and it is prepared once a year. Management meetings of the strategic plan take place four times a year. Also heads of departments take part in both planning and managing.

The activities for the following year in the strategic plan must be split into parts in the tactical plan. This is the responsibility of component managers. The component manager positions are reserved for heads of departments or deputy heads of departments, with one exception. In total, there are 16 component managers. Each component manager makes tactical plans for his/her components together with the owners of particular components. The management meeting of the tactical plan takes place once a week and additional planning every two months.

The operational plan includes the most detailed work schedule. The operational plan on team level is made by the owner of the component, based on the tactical plan of the particular component. This takes place once a week together with the team of the particular component during the Monday planning meeting. The owner of the component is usually a team member who consolidates for the team the needs of interest groups and prioritises assignments. There are about 40 component owners, i.e. somewhat less than teams. Another important role in the team is played by the team leader, who is responsible for the breaking up of assignments (if necessary) given to the team and distribution between team members.

According to the preliminary plan, a training partner from outside Statistics Estonia was to be found with funding from the EU structural funds. In cooperation with the training provider, training materials were to be compiled and the training of in-house training providers and first teams started. As funding was not received for the project, we had to proceed without external support.

After testing the new working arrangements, the first component managers began preparing a delivery plan for their components. The tactical plan is the work schedule of Statistics Estonia for the following 12 months, which is usually prepared at the end of each year for the following year, but this time, though, the plan had to be prepared in the middle of the year. The transition from the old tactical plan to the new plan took place step by step one component at a time.

Of central focus was the training of freshly created teams. For this, teams also had to be created physically, i.e. members of one team had to be moved into one room. Removals took place from February to April in multiple stages. At the same time, training materials were being prepared, and in April, after the removals, team training started immediately. Training began with the first elements of visual management and team work, such as the visualisation of the work schedule, identification of competencies and arrangement of team planning and management meetings.

The first wave of training was delivered in April–June, which was followed by a pause of a few months in summer and training continued in September. As Statistics Estonia is a living and developing organisation, the number of teams will change in time, but at the moment there are a bit less than 50 teams of which about a half received training last year. Statistics Estonia's two in-house training providers had a total of 278 training sessions and workshops, with more than 890 participants in 2016.

A critical factor in the success of the project was the training of in-house training providers. As there was no money for finding an external training provider, the OP 2.0 team had to prepare training materials and train teams themselves. During 2016, the number of in-house training providers grew to three persons. The development programme for in-house training providers included three study visits to other statistical offices – to the UK, Norway and Sweden. A presentation was made also at the Q2016 conference in Madrid.

Main victories

The production of statistics is a slow process and the results of changes made at the end of 2015 cannot be fully measured until at the beginning of 2018. Nonetheless, some results are already visible:

- according to the component managers, the overview of the tactical plan is better;
- questionnaires are described faster and better;
- data collecting and processing is organised in a more efficient manner and time spent on data collecting has decreased;
- the sampling process has been considerably simplified;
- movement of information has improved.

Plan for 2017

The keyword for 2017 in the implementation of the Lean methodology is increasing the number of in-house training providers, i.e. training the training providers. The aim is to increase their numbers at least three to four times to 9–12 people. All the in-house training providers provide training in addition to their main jobs.

Three teams managed to begin mapping their processes already last year. This must be continued at a fast pace. For this, people in departments must be trained so that they would be able to organise workshops on this matter in teams.

The other priority is the development of component managers and owners and team leaders. What has been learned, has to be reinforced and new skills must be acquired. Also the growth of the team of in-house training providers should come from among these people. We must start, though, with making sure that the leaders feel confident in their teams. After that, those who already feel confident can start training other teams.

NEW GENERATION E-SERVICES

Estonia is known in the world as a small and capable e-country with many a thing to be learned from. Also the survey commissioned by the Ministry of Economic Affairs and Communications on the effectiveness of use and impact of e-services revealed that according to users, the introduction of e-services has saved a lot of time and has made dealing with the state easier.

Estonia, though, has not rested on its laurels, but has started developing a new generation of e-services. These are services that do not copy the old paper area processes with people having to fill in forms by hand. Ideally, a smart e-service offered by the state should be entirely invisible to the citizen. Development of such of services requires a lot of preparatory work in the service design phase and capacity for data processing and analysis.

Yet, the information systems of Statistics Estonia are quite innovative compared to those of other countries. In the UK, for example, the e-services that the clients of Statistics Estonia have been using for years are being developed.

E-statistics vision working group

In order to also upgrade the e-services related to producing official statistics, in 2016, Statistics Estonia initiated preparations for the new e-statistics vision and its development plan. For this, a working group was convened, consisting of opinion leaders in the field of statistics, the state IT-architect and representatives of users of statistics and respondents.

The aim of the working group was to find a way for overcoming the hardships experienced by the producers of official statistics (Statistics Estonia and Eesti Pank) and the producers of departmental statistics (many ministries and state authorities), e.g. the continuously increasing demand for additional statistics. The statistics are requested more quickly and at a lower cost than before. At the same time, the data cannot be asked straight from the source, but have to be acquired via other means.

The working group began work on the assignment and at times, the discussions were quite heated. There were many ideas and sometimes the ideas contradicted each other. During active group work and prioritising of ideas, the working group was able to formulate common positions in more important areas.

E-statistics vision

The solution to the task could be the creation of a unified e-statistics system. The system would encompass the main e-services related to statistics both for the production of official and departmental statistics in the most innovative way.

The aims of developing new e-statistics are the following:

- by 2025, e-statistics should be the most important tool in the governing of the country, with the help of which, data from all the departmental and most important private sector sources are gathered, scientifically analysed, scenarios are projected in real time and the impact of policies is explained to the interest groups in an understandable manner;
- e-statistics should be the primary information channel in Estonia for every researcher, state official and entrepreneur;
- Statistics Estonia is the centre of excellence in Europe in the production of real-time statistics.

At the heart of new e-statistics is a self-service environment for all the producers of official and departmental statistics. This is a place, where all the statistics are published, state officials can monitor indicators of development plans or impact of tax changes, professional associations can monitor developments in their field and the performance of enterprises, and private entrepreneurs can get input for the creation or change of a business plan, etc.

New e-statistics gets the main input data from public and private databases. These can be Elering data, databases of employment services, bank operations, mobile positioning data, etc. In addition, the working group suggested that Statistics Estonia could in the future assume the coordination of the data content of state registers. The aim of the task is to align the data content of registers with statistical and analytical needs, which would significantly decrease data collection with questionnaires.

In order to fulfil all those ideas, it is important, at the same time that new e-services are being designed, that the methodology for producing statistics is developed in cooperation with Eurostat and existing information systems are modernised.

In regard to the needs of producers of departmental statistics, an analysis project, which would be carried out by a private sector service provider, has been planned to specify the development plan. A request for financing the project has been sent to the Ministry of Economic Affairs and Communications.

The e-statistics vision working group has done its work, Statistics Estonia has also prepared a development plan and a request for funding additional analysis. Because at the time of writing this overview, the Director General of Statistics Estonia is rotating and the competition for the post of new Director General is still ongoing, the prepared e-statistics vision shall wait for the new Director General.

INTERNATIONAL COOPERATION

In 2016, international cooperation clearly peaked in autumn. From September to November, Statistics Estonia welcomed guests from three countries. The longest visit – a whole week – was made by statisticians of the Agency of Statistics of the Republic of Kazakhstan. Their study visit "Introduction of the quality management system" was part of a larger international programme "Improvement of the functioning of the statistical system and institutional framework of Kazakhstan". As a result of the visit, the Kazakhs were able to compare their quality management system with that of Statistics Estonia and get new ideas for improvement.

At the same time, Statistics Estonia had guests from Belarus. The guests included statisticians from the National Statistical Committee of the Republic of Belarus and officials of the Sports and Tourism Ministry of the Republic of Belarus. The main purpose of the study visit was to get acquainted with Estonia's tourism statistics, and mainly with tourism satellite accounts. Therefore, the guests spent most of their time in Statistics Estonia but among other places also visited Eesti Pank and Enterprise Estonia.

Clearly the biggest delegation that visited Statistics Estonia in 2016 consisted of 54 persons. The Marketing and Dissemination Department gave and overview of the activities of Statistics Estonia to Kazakhstan's Master's students holding public office, who were in Tallinn for a one-day field trip.

The last study visit was scheduled by Directors General of Statistics Estonia and the National Statistics Office of Mongolia upon meeting at a plenary session of the United Nations Statistical Commission in March. Thus, on 23–24 November, Statistics Estonia had high-level visitors: half of the eight visitors were members of the Mongolian parliament (the State Great Khural) and the other half were representatives of the National Statistics Office of Mongolia. The delegation was led by Ariunzaya Ayush, the Director General of the National Statistics Office of Mongolia. In particular, the visitors wished to acquaint themselves with Statistics Estonia's experience of using administrative data in the production of statistics, but also the matter of public data. The Mongolian delegation also visited the Riigikogu and Estonian Chamber of Commerce and Industry.

Statistics Estonia also invited guests to learn from the experience of others. Speakers at the seminar for environmental accountants of the Economic and Environmental Statistics Department included Belgian Federal Planning Bureau environmental accounting expert Lies Janssen and the head of Eurostat's field of physical accounts Stephan Möll.

In October, Statistics Estonia was visited by an IMF delegation. The discussions mainly concerned GDP calculations, population projections and migration data.

Many employees of Statistics Estonia contributed to the development of statistical systems by participating in international working groups. For example, the Director General Andres Oopkaup participated in the high-level quality working group of the European statistical system. The fact that he received a personal invitation to join the working group from the Eurostat's Director-General showed that his participation was highly valued. Remi Prual, the Head of the General Department, participated in the working group for the development of the statistical systems' Modernisation Maturity Model and its action plan. The testing of the above-mentioned model in Statistics Estonia contributed to the official approval of the action plan and tools by UNECE group for the modernisation of official statistics. Diana Beltadze, the manager of the Register-Based Population and Housing Census project, in turn, participated in the meetings of the UNECE steering group on Population and Housing Censuses and the task force in Geneva, but also in a meeting in Amman, the capital of Jordan, where the United Nations statistical division discussed the use of various technologies in census taking.

Another far-away destination was the capital of Japan, Tokyo. There, in November 2016, Svetlana Šutova, Leading Statistician-Methodologist of the Data Processing and Registers Department registers team, participated in the 25th conference meeting of the Wiesbaden Group (the 22nd meeting of the Wiesbaden Group, organised by Statistics Estonia, took place in 2010 in Tallinn). The Wiesbaden Group of statistical business registers is an international expert group convened under the United Nations Statistical Commission that develops statistical business registers. Participants included 77 persons from 41 countries and 6 international organisations. Representatives of different countries shared their experience on the development and management of statistical registers and presented their plans at a special session. During the four days, the increasing role of statistical registers in the production of statistics, cooperation with administrative information sources, register data quality and coverage, implementation of new technologies and methodologies, the impact of globalisation on statistics, etc were discussed.

Another exotic destination was Seoul in South Korea, where those in the field of input-output tables shared their experience.

In 2016, employees of Statistics Estonia made a total of 204 international trips and visited more than 150 events. There were eight trips to OECD events, three trips related to the United Nations Economic Commission of Europe (UNECE), but also five consultations of the Council of the European Union statistical working group.

PREPARATIONS FOR THE PRESIDENCY OF THE COUNCIL OF THE EUROPEAN UNION

The fact that Estonia holds presidency of the Council of the European Union in the second half of 2017 affects Statistics Estonia as much as it affects every other state institution. For Statistics Estonia, the presidency mainly means that Statistics Estonia will be leading the Council's statistics working group. This, in turn, means that we need to find the content and wording for EU draft legislation that is acceptable for the Member States, the European Commission and the European Parliament.

In 2016, the preparations included the following activities:

- identification of draft legislation processed in the second half of 2017;
- identification of obligations connected to the presidency (excl. leading the Council's working group);
- establishment of the presidency team and working routine;
- team training;
- budgeting.

Preparations for the presidency began at the beginning of 2016, affecting an increasing number of Statistics Estonia's employees each month. At the beginning of the year, the main members of the presidency team participated in trainings organised by the Government Office. The trainings concentrated on EU institutions and decision-making processes, the EU judicial system, negotiations and cross-cultural communication, cooperation and negotiations with the European Parliament and preparation and leading of Council meetings. In April, the head of the presidency team of Statistics Estonia trained at the Permanent Representation of Estonia to the EU. During the training, while job-shadowing the presidency team of Statistics Netherlands, the preliminary list of draft legislation processed during the second half of 2017 was prepared and cooperation with the other members of the presidency trio, the statistical offices of the UK (Office for National Statistics) and Bulgaria (National Statistical Institute) was started. True, the cooperation with the Office for National Statistics of the UK in the context of preparing for the presidency of the Council, which had made significant progress, was to no avail after Brexit. Instead, Statistics Estonia needed to begin cooperation with Statistics Austria, and not as the second, but as the first presidency holder of the trio, which, in turn, means leadership and more responsibility for the preparation of the cooperation programme of the trio.

In June, some presidency team members together with colleagues from Malta and the UK participated in the more statistics specific training for the preparation for the presidency, where colleagues from Statistics Denmark shared their experience of multiple presidencies. The main value of the training was placing the finalising of draft legislation into a wider context than simply coping with the six-month Council presidency. Also the drafting process was discussed, starting with the information needs of Commissioners, council configurations and directorates-general of the European Commission, Eurostat task forces and working groups up to the approval of the draft legislation by the European Statistical System Committee. In December, the same training session was successfully brought to Estonia and about 25 employees of Statistics Estonia were trained on the topic. International dimension was added to the training in Tallinn by the representative of the National Statistical Institute of Bulgaria, who left Tallinn with a plan to take the same training session to Sofia.

According to current information, during the Estonian presidency, the Council working group of statistics will be processing up to seven draft regulations in different stages of procedure: the Framework Regulation on social statistics (1), Regulation extending the European statistical programme to 2018–2020 (2), Framework Regulation on integrated farm statistics (3), Regulation on the classification of territorial units (4), Framework Regulation on business statistics (5), Regulation on gross national income statistics (6) and Regulation adapting existing Regulations to the Lisbon Treaty (7). The first four have been handed by the European Commission to the Council and the European Parliament for procedure, the rest are planned to be introduced in the first half of 2017. A lot depends on the success of finding consensus on the first framework regulation, i.e. the Framework Regulation on social statistics. As it is possible to use the agreements reached and solutions found in social statistics also in the case of other framework regulations, the particular tasks of Estonia depend on the progress made with these draft regulations by Malta during its presidency.

PERSONNEL

The objective of Statistics Estonia's personnel policy is to ensure the recruitment of employees required for performing the tasks of the organisation, their successful induction and development, valuation and motivation and the functioning of a transparent and understandable wage system.

Number of employees

The number of employees of Statistics Estonia has decreased over the last few years. The number of employees is viewed separately with and without interviewers because the number of interviewers may differ considerably each year due to cyclical statistical actions. Compared to 2012, the average number of employees in full-time equivalent has decreased by 8%, without interviewers, the decrease is 11%. At the same time, the number of posts has decreased by nearly 10%.

There are 397 posts in the staff fixed on 1 June 2016. As a result of staff changes, nine post were excluded, and the tasks of these posts were distributed between other employees. Another nine post were left out due to their expiry in 2015. The existing fixed-term posts were replaced with permanent posts with no money planned for these in the wages budget. To these so-called reserve positions, employees are hired for the fulfilment of grant agreements or orders for information and their work is funded from the budget of the grant or order.

Staff of Statistics Estonia, 2012–2016

	Number of posts in the staff, 31.12	Number of employees, 31.12		Yearly average number of employees		Average number of employees in full time equivalents in a year	
		Total	Without interviewers	Total	Without interviewers	Total	Without interviewers
2012	357[a]	441	385	427	351	363	332
2013	439	407	347	421	348	358	324
2014	419	434	348	413	331	349	313
2015	415	402	336	397	321	337	302
2016	397	392	329	398	319	335	295

[a] The staff fixed in 2012 is not comparable to later years because it does not cover non-staff employees (in addition to staff positions, there are about 70 non-staff employees).

84% of the staff (incl. interviewers) of Statistics Estonia are women and 16% are men, the average length of service in the organisation is 10 years and the average age is 49 years. 78% of employees have higher education (89% without interviewers). Last year, the share of employees with higher education increased (in 2015, 75% of staff had higher education) and the average age of employees increased by a year. The gender-specific distribution of staff has not changed significantly over the last few years.

Statistics Estonia's staff by age and length of service, 2015, 2016

	2015		2016	
	Number	%	Number	%
Age				
24 or younger	6	1	5	1
25–34	85	21	77	20
35–44	76	19	73	19
45–54	83	21	78	20
55–64	111	28	109	28
65 or older	41	10	50	13
Total	402	100	392	100
Length of service in Statistics Estonia				
1 year or less	35	9	27	7
1–2 years	69	17	79	20
3–4 years	52	13	40	10
5–9 years	81	20	73	19
At least 10 years	165	41	173	44
Total	402	100	392	100

Labour turnover

In 2016, the voluntary turnover[a] of Statistics Estonia was 10%. Compared to the previous years, the turnover has not changed significantly but is still greater than the average turnover in state authorities, which, as of 2015 is 6.6%[b]. In order to maintain the organisation's institutional memory, knowledge and inter-institutional cooperation, it is important to keep the voluntary turnover rate below 10%.

Voluntary turnover, 2012–2016

	Turnover, %
2012	5.1
2013	10.4
2014	10.2
2015	9.8
2016	10.0

Remuneration

The average gross wages of Statistics Estonia's employees increased 2.4% over the past year. Compared to 2012, the average gross wages have increased 29%. The wage increase has been possible due to better management of resources of the organisation and the subsequent reduction in the number of employees.

In order to improve the competitiveness of wages and justice inside the house, the management has compiled a wages strategy for the upcoming years and an action plan for achieving the aims of the strategy.

Average gross wages, 2012–2016

	Wages, euros/month	Change compared to 2015, %
2012	957	
2013	1,035	8.2
2014	1,153	11.4
2015	1,202	4.2
2016	1,231	2.4

Employees' satisfaction and improvement activities

In 2016, Statistics Estonia carried out for the sixth time the employees' satisfaction survey in order to get an overview of the employees' expectations regarding the organisation, their level of satisfaction and work motivation, and changes in their views compared to the previous year. The survey measured employees' satisfaction with significant factors shaping work motivation, such as management, organisational culture and inner climate, development prospects, exchange of information, teamwork, organisation of work, content of work, work conditions, recognition and feedback and remuneration and benefits.

The response rate was 75%, i.e. the same as in 2015. Without interviewers and registrars, the response rate was again almost 90%, which can be considered a good result. The level of satisfaction of the employees of Statistics Estonia is still satisfactory, but is slowly improving. 68% of employees are satisfied – a percentage point more than a year ago. The level of satisfaction is highest among senior employees who have worked for Statistics Estonia for at least 16 years, but also new employees who have worked for the organisation for less than a year. Employees who are most critical have worked here for 1–5 years. By age, the level of satisfaction was highest among employees older than 51 years of age. In a year, the satisfaction had decreased the most among employees younger than 30 years of age.

As in the previous years, the highest score was given to immediate superiors and closest colleagues (department). Good evaluation was given to the management, work content and work environment. The employees consider the work and overall conditions to be good, although the evaluations have decreased compared to the time right after moving into the new building. Respondents were most critical about wage competitiveness and benefits, valuing employees and in-house development opportunities. The reputation of Statistics Estonia as an employer is still deemed a problem and the evaluation of the stability and security of the post has somewhat decreased.

Main areas of improvement in 2016 were remuneration and benefits, development opportunities, organisational culture and inner climate, evaluation and recognition, organisation of work and exchange of information.

Most significant improvements in 2016 were the following:

- training arrangements were renewed and the in-house training system was developed;
- recognition of the best employees was continued and extended, incl. recognising the best in-house training providers;

[a] Voluntary turnover reflects only those who left their post on their own free will.
[b] According to the 2015 civil service report. The data for 2016 are published in March 2017.

- information on training and business trips and the relevant material was made more easily available;
- regular briefings in departments were continued;
- a decision was made to participate in the family-friendly organisation programme;
- rooms for group and individual training were set up and group training was started;
- implementing the principles of the Lean methodology for more cost-effective process management and improved cross-organisational cooperation was continued; within the framework of the operative planning project OP 2.0, components were determined and teams were created around the components, theory meetings and workshops for teams took place and regular team meetings were scheduled;
- to increase the competitiveness of wages and improve justice inside the organisation, a wages strategy for the coming years was put together;
- the average gross wages increased 2.4%.

Development and training

In the renewed training arrangements, more attention is paid to the planning of training and connection with the strategy process. The in-house training system and in-house training provider's good practice have been described.

At the beginning of the year, Statistics Estonia started using the training module of the self-service portal for state public servants, which gives the employee an overview of all the suitable trainings, enables to submit training applications, register for training and provide feedback about training. Via the training module, the employee can access the materials of training sessions in which he/she or other Statistics Estonia's employees have participated. Gradually, also the training materials of the Ministry of Finance and the Government Office are made available.

In 2016, the volume of professional training for employees of Statistics Estonia increased 35% compared to the previous year, primarily due to the increased volume of in-house training (incl. department briefings, team training and workshops). In a year, the amount of in-house training increased 48% and accounted for 50% of the total training capacity. The share of in-house training in 2015 was 40%.

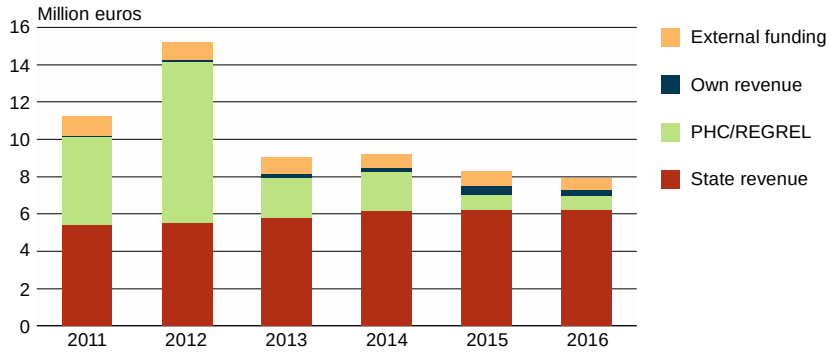
The average annual number of hours of training per employee in 2016 was 7.4 – 20% less than in 2015. The most voluminous areas of training, similarly to previous years, were related to the main activity of the organisation (49% of total training hours), management courses (23%), IT courses (15%) and EU training (7%). There were 27 briefings, 37 operative planning trainings and workshops and 3 information days for new employees during the year.

Despite the considerable increase in training capacity, training costs decreased by 6%. An increase in the training capacity without significant additional expenditure was possible thanks to the increased volume of in-house training, which is the cheapest training format.

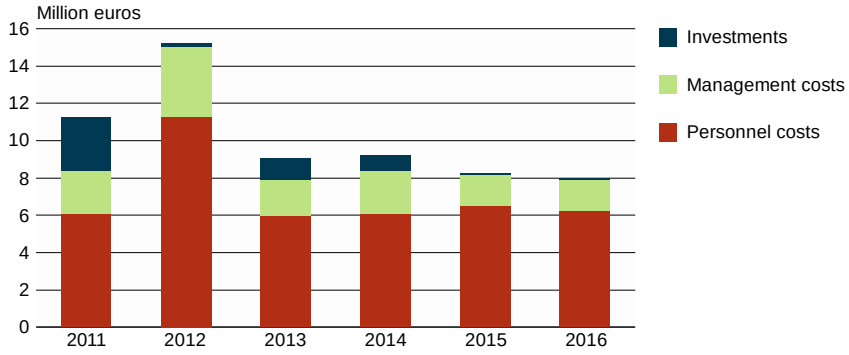
FINANCING

Statistics Estonia's operating expenses are covered with state revenue, own revenue (income from economic activities) and external funding. Population and housing censuses (PHC) and the Register-Based Population and Housing Census (REGREL) receive separate funding from the state revenue.

Financing of Statistics Estonia's expenses, 2011–2016

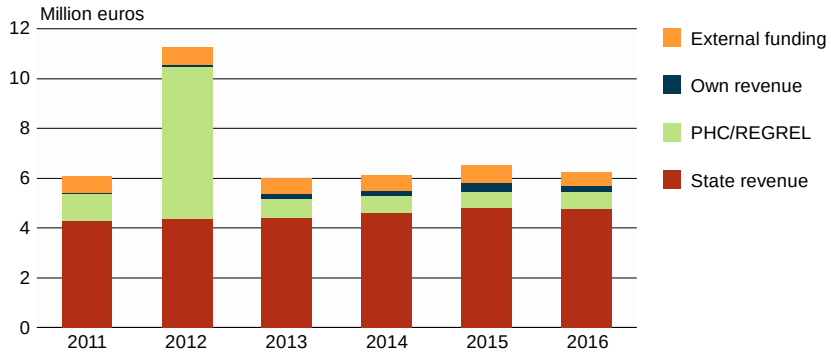


Statistics Estonia's operating expenses and investments, 2011–2016



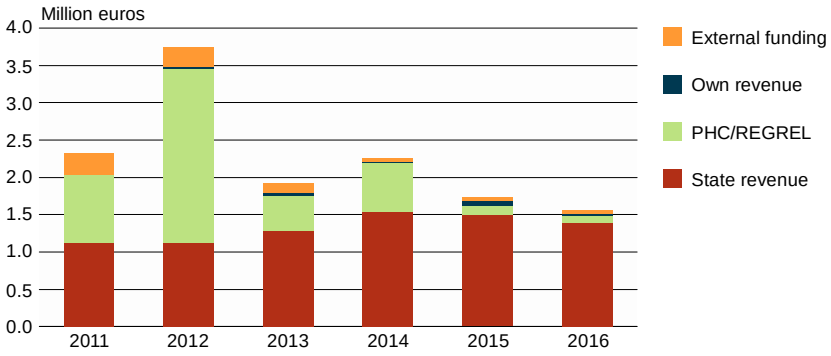
In 2016, operating expenses totalled 8 million euros – personnel costs 6.3 million, management costs 1.6 million and investments 0.1 million euros. Compared to 2015, the costs in 2016 decreased 4%, incl. a 3% decrease in personnel costs, 5% decrease in management costs and 30% increase in investments.

Personnel costs of Statistics Estonia, 2011–2016



76%, or 4.8 million euros of personnel costs in 2016 were financed from state revenue. Compared to 2015, personnel costs financed from state revenue remained the same. Due to a decrease in the amount of activities financed from external funding and own revenue, the personnel costs financed from external funding and own revenue decreased by 22% and 29%, respectively.

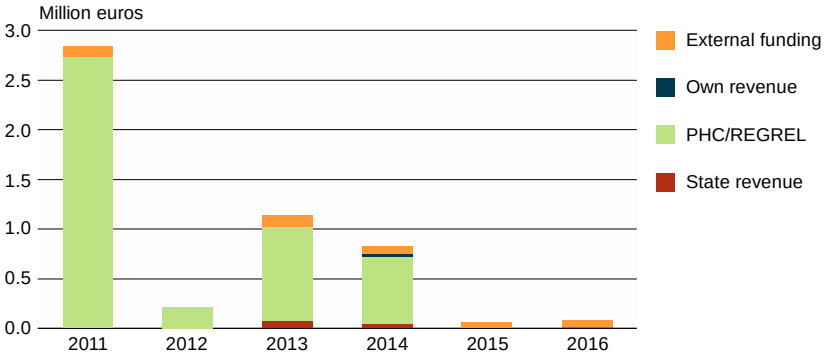
Management costs of Statistics Estonia, 2011–2016



1.4 million euros, or 89% of the 2016 management costs were financed from state revenue. The costs were mostly related to the lease and maintenance of the office building in Tallinn, business trips and trainings.

The 25% decrease in the costs of PHC and REGREL results from the fact that since 2015, the supply and maintenance of census hardware and software have been financed from the budget of the Information Technology Centre of the Ministry of Finance (RMIT). The decrease in expenditure covered from own revenue relates to a decreased number of orders.

Statistics Estonia's investments, 2011–2016



Since 2009, the only funds Statistics Estonia has had for investments are in the budget of and for PHC and REGREL. An exception was the state funding of acquisitions necessary for moving into the new office building in 2013. Statistics Estonia used 32,000 euros out of the unused balance of 44,400 euros for the acquisition of software licences in 2014.

In 2015, the financing of REGREL development activities from state revenue was stopped. Since 2016, the project has been financed from the funds of the current proposal round "Modernising of services necessary for the production of register-based statistics" of the measure of the European Regional Development Fund "Development of provision of public services". The volume of the proposal round in 2015–2017 is 2.8 million euros, of which Statistics Estonia used 0.1 million euros in 2016 for the development of production systems.

Statistics Estonia's operating costs and investments, 2011–2016
(thousand euros)

	2011	2012	2013	2014	2015	2016
Total expenditure	**11,235.4**	**15,212.3**	**9,053.1**	**9,208.9**	**8,279.1**	**7,985.5**
Operating expenses	8,395.2	14,999.4	7,920.5	8,377.4	8,210.4	7,896.2
personnel costs	6,083.6	11,259.2	5,990.9	6,121.2	6,498.2	6,265.2
management costs	2,311.6	3,740.2	1,929.6	2,256.2	1,712.2	1,631.0
IT-investments	2,840.2	212.9	1,100.7	819.1	68.7	89.3
Other investments	0.0	0.0	31.9	12.4	0.0	0.0
Expenditure from state revenue	5,414.7	5,515.3	5,788.7	6,189.2	6,242.6	6,237.5
operating expenses	5,414.7	5,515.3	5,705.1	6,144.8	6,242.6	6,237.5
personnel costs	4,279.3	4,393.2	4,420.0	4,606.5	4,775.4	4,784.0
management costs	1,135.4	1,122.1	1,285.1	1,538.3	1,467.2	1,453.5
IT-investments	0.0	0.0	51.7	32.0	0.0	0.0
other investments	0.0	0.0	31.9	12.4	0.0	0.0
Expenditure from own revenue	34.1	98.4	218.7	248.5	459.1	307.5
operating expenses	34.1	98.4	218.7	226.9	447.7	307.5
personnel costs	33.7	76.5	176.2	207.6	376.5	272.9
management costs	0.4	21.9	42.5	19.3	71.2	34.6
IT-investments	0.0	0.0	0.0	21.6	11.4	0.0
Expenditure from external funding	1,044.1	965.5	877.4	730.9	793.9	685.6
operating expenses	937.9	965.5	767.6	646.2	736.6	596.3
personnel costs	659.5	704.8	634.7	604.0	686.9	541.9
management costs	278.4	260.7	132.9	42.2	49.7	54.4
IT-investments	106.2	0.0	109.8	84.7	57.3	0.0
PHC 2011 expenditure	4,557.2	8,132.1	1,007.3	194.6	0.0	0.0
operating expenses	1,823.2	8,086.4	544.6	194.6	0.0	0.0
personnel costs	970.2	5,785.1	294.8	161.0	0.0	0.0
management costs	853.0	2,301.3	249.8	33.6	0.0	0.0
IT-investments	2,734,0	45,7	462,7	0,0	0,0	0,0
REGREL expenditure	185.3	501.0	1,161.0	1,845.7	783.5	754.9
operating expenses	185.3	333.8	684.5	1,164.9	783.5	754.9
personnel costs	140.9	299.6	465.2	542.1	659.4	666.4
management costs	44.4	34.2	219.3	622.8	124.1	88.5
IT-investments	0.0	167.2	476.5	680.8	0.0	0.0

PUBLICATIONS IN 2016

Eesti piirkondlik areng. 2016. Regional Development in Estonia

Eesti statistika aastaraamat. 2016. Statistical Yearbook of Estonia

Eesti Statistika Kvartalikiri. Quarterly Bulletin of Statistics Estonia

Eesti. Arve ja fakte 2016

Estonija. Faktõ i Tsifrõ 2016

Ida-Virumaa. Olukord ja strateegilised eesmärgid

Mini-faits sur l'Estonie 2016

Minifacts about Estonia 2016

Sotsiaaltrendid. 7. Social Trends

Viljandi vald – positiivne. Strateegia, ettevõtted, statistika

Translated by Pille Peensoo

Layout by Uku Nurges

Published by Statistics Estonia, Tatari 51, 10134 Tallinn

ISSN 2346-5948