

National Reform Programme “ESTONIA 2020”

(Approved by Government on 8th of May 2014)

INTRODUCTION; OVERVIEW OF THE ESTONIA 2020

The National Reform Programme ‘Estonia 2020’ was approved in 2011 and it describes the objectives for 2015 and 2020 established to improve competitiveness. In addition, the Programme also includes main activities required to improve competitiveness.

The two central objectives of the Programme are increasing the productivity and employment in Estonia. The main focus in the coming years is on education and employment, with an emphasis on integration of long-term and young unemployed people in the labour market and on the development of their skills.

‘Estonia 2020’ is updated by a Government decision annually at the end of April. The revisions made in the spring of 2014 take into account the statistics for the indicators related to the progress made in achieving the objectives, the country-specific recommendations made in the context of the European Semester, inter-ministerial discussions, the strategy papers concerning the use of aid/investments in the EU 2014–2020 budget period as well as the priorities of the Action Plan of the new coalition government and the challenges specified at meetings between the Prime Minister and ministers.

The action plan for the implementation of ‘Estonia 2020’ for 2011-2015 has also been supplemented with new measures. The updating takes place in accordance with the Government’s Action Plan, the state budget strategy and stability programme.

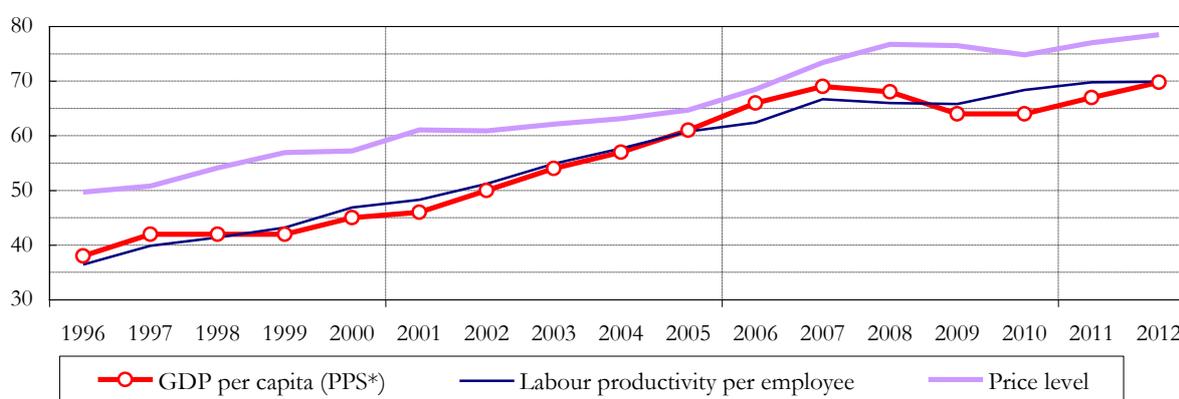
In the spring of 2015, halfway through the implementation of the programme, it is intended to prepare a more detailed interim analytical report on the progress made in achieving the objectives of ‘Estonia 2020’ and to make more substantial changes into both the objectives and action plans.

ANALYSIS OF PROSPECTS FOR ECONOMIC GROWTH

Since regaining of independence in 1992, the Estonian economy has grown nearly tenfold. Estonia saw extraordinary economic growth from 2001-2007. A correction began already in 2007, when the growth rate began gradually decreasing in connection with a shift in the economic cycle. Up to the middle of 2008, this adjustment could be considered an expected development and one that improved economic competitiveness.

In 2013, the real growth was below expectations – only 0.8%. However, the nominal GDP growth was 5.9% and the nominal income growth even reached 7.8%.

Figure 1. Real convergence between Estonia and the EU (% of the EU28)



Source: Eurostat

According to the Ministry of Finance's new spring forecast for 2014, economic growth will be smaller than previously expected – at around 3% – and thereafter speed up, supported by the recovery of external demand. Private spending continues to grow fast, while price increases were less than expected.

The high recovery speed of employment of previous years has been exhausted and is expected to stop this year or even decline. The growth in average salaries was faster than expected and should slow down slightly.

Table 1. Changes and forecasts in selected macroeconomic indicators (%)

	2013	2014*	2015*	2016*	2017*	2018*
Real GDP growth	0.8	2.0	3.5	3.6	3.4	3.2
Consumer price index	2.8	1.4	2.7	2.8	2.8	2.8
Growth in employment	1.0	0.2	0.3	0.1	0.3	0.5
Real salary growth	4.9	4.8	3.5	3.5	3.6	3.7

Source: Ministry of Finance spring 2014 economic forecast

Impact of measures

While compiling Estonia 2020, the target levels taken under the objectives of the Europe 2020 strategy were significantly more ambitious compared to the economic forecast of spring 2011. In setting the targets, it was presumed that it will be necessary to implement new measures and carry out reforms. The expected total impact of the measures and reforms on main economic indicators are summarized in the following table. The impact analysis has not been updated since 2011.

Table 2. Positive scenario of implementing Estonia 2020 compared to base levels of 2011

%	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Real GDP growth	4.0	4.0	3.7	3.7	3.6	3.5	3.5	3.6	3.7	3.8
Growth in labour productivity	1.8	2.1	2.5	2.7	2.7	3.4	3.6	3.6	3.5	3.5
Increase in number of employed	2.2	1.9	1.1	1.0	0.9	0.0	-0.2	0.0	0.2	0.3
Unemployment rate	13.5	11.4	9.9	8.6	7.7	7.5	7.4	7.2	7.0	6.9
Real growth of export	15.9	5.5	8.2	9.1	9.7	9.3	9.2	9.2	9.1	9.0
Productivity, % of level in EL27	69.6	70.1	70.7	71.6	72.4	73.8	75.4	76.9	78.4	80.0
Employment rate, 20-64 year-olds	67.8	69.1	70.1	71.2	72.5	73.0	73.5	74.3	75.1	76.0
Share of world trade	0.099	0.097	0.097	0.099	0.101	0.102	0.104	0.106	0.108	0.110

Source: Ministry of Finance and the Government Office (spring 2011)

LONG-TERM ECONOMIC POLICY OBJECTIVES

The three primary groups of factors that impact GDP growth are: 1) demographic factors, 2) extent to which the workforce is utilized in the economy (largely described by the employment rate and the number of hours worked by people) and 3) hourly productivity. Estonia's GDP growth up to 2007 was impacted above all by changes in the number of employed people and the productivity of the workforce. The greatest influence on the GDP growth that preceded the crisis came from the continuous rise in productivity.

Estonia's future demographic trends are similar to the general trends in Europe. The population decrease in the 1990s has not yet impacted the percentage of the working-age population but a noteworthy impact will become evident in the coming years. The decrease in population will take place primarily in the working-age population (15-64-year-olds); and in 20 years, according to Eurostat estimates, Estonia will have more than 100,000 fewer working-age people. At the same time, the relatively high share of non-citizens sets clear limits on Estonia's possibilities to import labour, this being the route utilized by several other European Union member states to increase the size of the workforce.

Table 2. Change in working-age population up to the year 2030

	Working-age population (15-64)	Decrease from 2010	Decrease in working-age population, %
2010	908 000		
2020	843 000	-65 000	-7 %
2030	801 000	-107 000	-12 %

Source: Eurostat, European Commission's Ageing Report

To maintain the economy at the current volume, there will be an increasing need for employees each year, as a result of which the **need for higher employment will grow in future**. This in turn will mean a need to increase the employment rate in all regions of Estonia.

The employment level dropped in the years of crisis after peaking in Estonia in the interim period, but it has restored fast and risen a bit higher than the European Union average. For this reason, in spite of the decreasing number of youth reaching working age, Estonia will find it possible to significantly restore the employment rate of the workforce. Current rising employment and, in the long term, the readiness of those 65 years of age and older to work should help soften the decrease in the working-age population.

The average real growth in productivity in Estonia over the past 10 years has been faster than the average for Europe (even when we include the downturn in 2009). **At the same time, GDP per capita in comparison with the EU continues to be low, and the primary reason is relatively low productivity.** The low level of productivity is related to both low total factor productivity¹ and capital intensity. In essence, this means that companies have invested little, that a great amount of human resources is expended, that they manufacture relatively inexpensive output and provide low value added services.

The rapid decrease of the working-age population and an analysis of Estonia's GDP components show that regardless of their region or gender, the working-age population must be engaged to the maximum extent possible in high value-added enterprise.

Thus there are **two primary and central challenges in the context of Estonia's prospects for continued growth:**

- **to achieve rapid growth in productivity** through products and services with greater capital intensity and higher value added;
- **to return to the high employment level of the pre-crisis period.**

¹ Total factor productivity is construed as all that takes place in internal processes of economic units (primarily companies). It is impacted to a great extent by the level of implementation of technology, economy of internal processes, effectiveness of everyday management etc.

The following objectives are set for 2020:

Increasing the employment rate in the 20-64 age group		
Initial level 2010	Estonia's target 2015	Estonia's target 2020
66,4%	72%	76%

Compared to the 2010 employment level and considering the declining population trend it will be necessary to bring **approximately 43,000 more people into the workforce** in order to attain the 76% objective². **The 2015 objective (73.3%) was already exceeded in 2013.**

Increasing productivity per employed person compared to the European Union average		
Initial level 2009	Estonia's target 2015	Estonia's target 2020
65%	73%	80%

The precondition here is that the EU's productivity will grow by an average of over 1% a year and that Estonia's productivity per employed person will grow approximately two percentage points faster than the average EU indicator. Achieving the 2015 level will require real GDP growth of an average of 4.4% per year in the period from 2011-2015. In the period 2003-2010 the average real GDP growth per year was 3.2% and in the period from 2004-2010 labour productivity grew an average of 3% per year. **The productivity of Estonian companies per employed person increased to 69.9% compared to the EU average.**

To achieve these goals, the current policy must be continued and developed further for the purposes of raising the skills of employees, increasing the workforce, increasing the volumes of research and development in the private sector, developing infrastructure that supports enterprise on the international level and promoting investment (especially in the fields with export potential and higher value added).

² It also takes into consideration the fact that the generations leaving the labour market for retirement in this period are larger than the cohorts of new people entering the labour market.

WELL EDUCATED PEOPLE AND INCLUSIVE SOCIETY

Under the education and integrated society field, the government policy focuses on the labour market, including actively involving all groups in society and offering qualified workforce and the quality and availability of education at all educational levels.

ESTONIA 2020 OBJECTIVES

The following primary objectives will be set for the year 2020 in the Estonia 2020 competitiveness strategy:

Reducing the share of early leavers from education, i.e. the percentage of young adults (18-24) with at most lower secondary education and not in further education or training		
Initial level 2010	Estonia's target 2015	Estonia's target 2020
11.7%	11.0%	9.5%

To achieve the goal, it will be necessary to completely implement ongoing policy changes that reduce the school dropout rate and to develop additional measures. Achieving this objective will reduce the number of people who discontinue their education by around 12,100 people compared to the 2009 level. Attaining the 2015 objective would mean that 8,500 fewer youths have discontinued their educational path compared to 2009. **The share of people aged between 18 and 24 who discontinued their education continued to decrease in 2013.**

Increasing the tertiary educational attainment, age group 30-34		
Initial level 2010	Estonia's target 2015	Estonia's target 2020
39.7%	40%	40%

The goal was set on the assumption that in the long term, the primary priority of educational policy is raising the quality and international competitiveness of higher education, as well as increasing the number of higher education student places financed by the state. The percentage of people with tertiary education in Estonia has increased significantly in the past 10 years as from 2000 the number of higher school graduates has grown tremendously (the so-called higher education boom). **In 2012, 43.2% of people aged between 30 and 34 had completed the tertiary level of education.**

Reducing the at-risk-of-poverty rate after social transfers		
Initial level 2010	Estonia's target 2015	Estonia's target 2020
17.5%	16.5%	15%

2009 was an exceptional year because the poverty threshold dropped due to the recession and the decrease in employment. Therefore, the data for 2010, according to which the at-risk-of-poverty rate after social transfer was 17.5%, were used as a basis for setting objectives. The increase in the at-risk-of-poverty rate was caused by an increase in the poverty level due to the increasing employment rate and incomes, which brought the **at-risk-of-poverty rate to 18.7% in 2012.**

In the Estonia 2020 strategy, Estonia has set to decrease the at-risk-of-poverty rate primarily through increasing employment and increasing the general educational level as its objective. For Estonia, it is important to reduce the at-risk-of-poverty rate after social transfers to 16.5%

by 2015 and to 15% by 2020. Special attention is being paid to children's poverty and improvement of subsistence for lower income families with children by targeted social policy measures – by increase of child allowance and needs based family allowance and giving more weight to children when granting subsistence benefits.

Increasing the participation rate in lifelong learning among adults (25-64).		
Initial level 2010	Estonia's target 2015	Estonia's target 2020
10.9%	15%	20%

In the years 2001-2006, the participation of Estonian adults in lifelong learning ranged between 4-7%. A breakthrough took place in 2008 and the Estonian indicator exceeded the EU average level. In 2009, the participation rate in lifelong learning rose to 10.6%. The government has set the goal of reaching the level of 15% of adult participation rate by 2015. By 2020, Estonia's objective is to increase the lifelong learning participation rate to 20%. **In 2013, the rate of participation in lifelong learning reached 12.5%.**

The prerequisite for achieving this objective is that additional substantive and financial measures in remarkably larger volume need to be implemented for increasing the adult participation rate in lifelong learning. These include particularly broadening the opportunities for adults to take part in the training and retraining measures, increasing the financing of adult training measures and offering vocational education to adults who lack professional education.

Reducing the share of adults (25-64) without any professional education or vocational training		
Initial level 2010	Estonia's target 2015	Estonia's target 2020
32%	32%	30%

A large percentage of Estonia's workforce (age group 25-64) only has a basic or general secondary education and does not hold a professional education (vocational or higher education). In 2009, the share of such people was 35%. The number of people who lack a professional education is highest in the youngest age group, among those who are 25-34 years old. **In 2012, the share of adults aged between 25 and 64 who did not have a professional education decreased to 30.3%.**

The goal was set taking into consideration ongoing measures for providing opportunities for acquiring a degree to those who discontinued their education. It was also planned to implement additional measures that must be implemented in the years ahead to increase the share of adults with professional education.

Reducing the long-term unemployment rate		
Initial level 2010	Estonia's target 2015	Estonia's target 2020
7.7%	4%	2.5%

Due to the decrease in the total number of jobs caused by the economic recession, the share of the long-term unemployed went through a major increase in 2010.

While in 2008 the share of the long-term unemployed in all the unemployed was 31%, in 2011 it was 57% and in 2012 54%. The long-term unemployment rate in the total workforce

indicates a downward trend. **The target of 2015 was achieved in 2013 – the long-term unemployment rate dropped to 3.8%.**

In the years ahead, it is expected that the overall employment growth will slow down. To fulfil the set objective, it will be necessary to take more effective the measures aimed at activating the unemployed and to increase the impact of active labour market policy.

Decreasing the youth unemployment rate (age group 15-24)		
Initial level 2010	Estonia's target 2015	Estonia's target 2020
32.9%	15%	10%

During the economic recession, the unemployment of young people increased more rapidly than average, reaching 32.9% in 2010. However, youth unemployment started to decrease in 2011, **dropping to 18.7% in 2013**. Despite that, youth unemployment is still two times higher than that of the rest of the working age population.

The goal is to bring the youth unemployment down to at least the pre-crisis level (12% in 2008). To do so, it is planned to implement additional measures specially aimed at the younger generation (for example, the “EU youth guarantee”). It is important to provide a high-quality education and implement measures designed to combat dropping-out from school, which will ensure all in all that youth are better prepared to enter the labour market.

Increasing the labour participation rate (age group 15-64)		
Initial level 2010	Estonia's target 2015	Estonia's target 2020
73.4%	74%	75%

In spite of unemployment, which increased during the economic crisis, people's economic activity and the workforce participation rate have remained relatively stable in recent years. A positive trend is that part of the increase in unemployment was caused by a drop in the non-active population and the fact that people who were previously away from the labour market have started looking for work. The goal was set considering the forecasted rate of recovery of the economy and the labour market as well as the decrease in the workforce due to demographic trends. **In 2013, the employment rate among the population aged 15-64 years was 75.1%.**

PRIORITIES OF GOVERNMENT POLICY

Quality, availability and effectiveness of education

1. Improving the quality of the educational system and adapting it to demographic changes.

The decrease in the number of students due to demographic changes has the greatest impact on the upper secondary school network followed by higher educational institutions. The number of basic schools and vocational educational institutions has decreased in recent years and thus adaptation to demographic developments has to a significant extent taken place. **To ensure balance between the quality and availability of general education**, basic education should be available as close to home as possible while upper secondary school level studies on the other hand should be available in larger county population centres.

The number of higher educational institutions has also decreased and due to the establishment of stricter quality requirements higher education has reached a situation where all the higher educational institutions in Estonia have the right to issue nationally recognized diplomas. **The division of labour and competences between higher educational institutions** is one of the most major higher educational system and reform objectives. In the long-term perspective, the new institutional accreditation procedures adopted in 2011 will contribute to a clearer differentiation between educational institutions and help to increase the amount of funding per student.

Transfer to the activity support system instead of the earlier admission system based on the state-commissioned education helps improve the effectiveness and efficiency of the higher education system. Increasing the scope of the needs-based education allowances and bursaries system improves access to higher education and motivates young people to choose professions in the growing sectors of the economy.

Compared to other EU countries, a relatively small percentage of basic school graduates in Estonia proceeds to study in vocational education. However, the need for a skilled workforce complying with the needs of the qualified labour market is great. It is important that **the vocational education system would ensure the preparation of a workforce of the required qualification in order to comply with the needs of companies and the society.** The activities as a result of which vocational education will become more attractive and will consider the needs of the society more than before are as follows: the development of vocational education curricula into output-based ones, shaping the qualification framework, changing vocational educational institutions into competence centres and engagement of entrepreneurs in making choices concerning vocational education. The education system of the state should be viewed as a whole according to the objectives of lifelong learning, which would, inter alia, also mean planning student places together with other study levels.

To direct the choices of the youth and to reduce the school dropout and unemployment, **support systems, incl. study counselling and career services** (career studies, career information and career counselling) **must be developed.** In addition, non-formal education and youth work also play an important role in supporting the readiness of the youth for coping with the challenges that they face. In order for the youth to adjust better to their later working life, in general education it is necessary, in addition to the factual knowledge, to **develop creativity, initiative and shape students' other social key competences.** It is important to make schools financial models more result oriented. The preparation of support specialists as well as the substantive quality and availability of support must also be improved.

A decrease in the number of upper secondary school graduates results in lower admissions figures in bachelor's and professional higher education, postsecondary vocational education, but also master's degree level studies. For higher educational institutions, this means that opportunities for lifelong learning become more important on the master's degree level as well as a decrease in the number of curricula.

Teacher training must ensure the ability to fulfil the general goals of the curriculum and to shape students' key competences. The qualitative level of teacher education and primary training must increase and later career should be supported by substantive in-service training corresponding to the development needs. The teachers' salary system must promote initiative, creativity and professional development of the teachers, incl. value the teacher's profession.

The level of financing general education has remained unchanged despite the fact that student numbers have been decreasing consistently. For this reason, the per-student financing of vocational education with respect to general education has decreased, and the expenses per student in general education are higher than they are in vocational education. Also, the share of financing tertiary education in Estonia is low among the OECD countries compared to general spending on education. With regard to financing education, the **proportions of financing different types of education should be reviewed and more emphasis must be placed on effectiveness.**

In planning structural funds for the subsequent periods, it should be borne in mind that infrastructure investments will decrease in some respects, because a large part of the infrastructure has already been created or renovated, while it is important to ensure IT-infrastructure developments of educational institutions. This allows more funding to be directed toward substantive developments in the educational system. It should also be borne in mind that the fixed costs of maintaining the new infrastructure will put added strain on the budget.

Due to internationalization, in coming years more emphasis will have to be placed on organizing education for children with an immigrant background, based on the objectives of integration. It will be important to take into consideration the ethnicity of the new immigrants and increase in the cultural diversity. **The availability of an international pre-school and general education is the prerequisite for highly qualified workers coming to Estonia to work.**

The most important reforms planned in this field are optimizing the network of general educational schools and more clearly separating basic schools and upper secondary schools, fully implementing the basic school and upper secondary school state curricula, increasing the quality of vocational education and its conformity to the labour market needs, and expanding the possibilities afforded by international general education (including implementation of IBO curricula) in Tallinn and Tartu and creating an European school.

2. Bringing labour qualification into conformity with the needs of the contemporary labour market (among other things, making better use of the opportunities of EU internal market policy and other policies) and increasing the share of people with professional education at the vocational or higher educational level.

A total of 30% of Estonia's workforce has a basic or general secondary education and does not hold a professional education (vocational and higher education). By age group, the problem is greatest in the youngest age group (25-34-year-olds), where the share of people who lack professional education is 29.9%, and in the oldest age group (55-64 years old – 30.9%); when we look at the long-term time series, we can see that a decrease has only taken place in the last couple of years.

At the same time, the new jobs that arise with changes in economic structure will require employees to have a higher educational level and up-to-date skills. To better integrate the needs of the labour market and people's skills, as well as to increase the productivity of the workforce, it will be necessary to ensure that there is an ample future supply of employees with up-to-date skills. For this purpose, it is above all necessary to **increase the share of the working-age population with professional education (i.e. vocational or higher education).**

To define the exact trend in the training need, a clear and operational labour market input is required. Monitoring of competence-profile-based changes in the labour market and linking it with the forecast of the quantitative workforce need is one of the possibilities for solving the problem. Analysis of the dynamics of qualitative changes in the labour market requires an input from various authorities and their close substantive cooperation.

A coordination system of monitoring labour needs and developing skills is established in order to improve the labour market relevance of people's skills. Individual components of "commissioned education and training" are combined into a well-functioning entirety and a cooperation platform is created to pool the systematic input from different parties to ensure that the knowledge and skills of the Estonian population meets the needs of employers and society as a whole.

The implementation of the coordination system of monitoring labour needs and developing skills will facilitate the planning of the structure, volume and content of formal education within the adult education system and in-service training, the development of curricula and career planning and will help employers in their efforts to develop the skills of their employees.

People with skills and an education that matches the labour market needs stand a better chance of finding a job, which in turn prevents high and long-term unemployment from developing. Thus, it is important that the structure of the educational system by various types of education conform to the needs of the labour market stemming from the economic structure.

A major reason for the large share of people without professional education in the case of younger people is the fact that they prefer general secondary education to vocational education and that many drop out of school.

The quality and competitiveness of human resources are impacted by students dropping out at all educational levels. The dropout phenomenon is the most noteworthy in the third stage of study of basic school and in the first year of upper secondary school and vocational studies, which is a sign that the academic process and environment do not support the development of every student in line with their abilities. Thus special attention and support must be devoted to **implementing the new state basic school and upper secondary school curricula and the new Basic Schools and Upper Secondary Schools Act.**

The higher dropout rate at vocational and higher educational institutions can be correlated with students' low level of knowledge about the working life and lack of learning skills, which often leads them to make the wrong professional choices, which in turn causes them later to discontinue studies. Therefore, it is important to increase the share of practical training, to implement problem-based training and **continue to develop career advisory, etc. services, and to increase the availability of such services** with the purpose of more effectively supporting students' educational and career choices.

More opportunities should be provided for cooperation between different sectors (the public and private sectors and universities) in order to provide high quality practical training during studies, including offering practical training for students from other countries to support the "talent policy" and motivate top specialists to stay in Estonia after the completion of their

studies. In order to facilitate the creation of additional student places in work-based learning, a coordination unit is established to provide counselling and advice to companies and schools.

High-quality pre-school education is important to ensure that all children are equally prepared for entering school. We need to devote more attention to early **discovery of children's talents and abilities, stimulating their minds and promoting their development**. This will help students create associations between different fields and the knowledge of subjects needed for working in such fields, which in turn will lead to greater motivation to learn.

The planned reforms focus on creating opportunities for young people with a basic education to acquire a professional education, significantly increasing the opportunities for adults in participating in training and re-training measures, and increasing the availability and quality of career services and career counselling.

3. Increasing the international competitiveness of higher education.

Estonian universities and higher educational institutions compete on the global higher education market, where there is stiff competition for talents. Along with the increase in economic well-being, more young Estonians are studying at universities abroad, and they primarily favour Finnish, German and British institutions of higher education. Promoting student mobility in the interests of obtaining a more diverse education is of key importance. The **supply of competitive higher education** must also be ensured, particularly in Estonia. A total of 3.6% of today's university students spend a portion of an academic year studying abroad, while 5,653 students are studying abroad full-time (OECD data of 2011). **The target set in the European Higher Education Area is for 20% of graduates to have mobility experience by 2020.**

According to projections, the number of students at the first stage of higher education will decrease by around 5% a year in the near future. In connection with changes in the demographic situation, it will be possible to increase admissions to master's and doctorate programmes, taking into consideration quality and the need to retain critical mass in higher education and in fields that are critical to Estonia, as well as maintaining a rational division of study areas between institutions of higher education.

Supporting internationalization of higher education serves three primary purposes. It creates an opportunity for Estonian students in higher education to widen their horizons, obtain experience studying and living in a different cultural environment and creating contacts, all of which are important components in later working life in an increasingly global world. Also important is "internationalising at home" – attracting **talents to areas that are important for the Estonian economy** or a coordinated talent policy, an inevitable part of which is cooperation between different sectors (the public and private sectors and universities), providing practical training opportunities for students from other countries and ensuring the existence of a relevant legal space that would facilitate the remaining of top specialists in Estonia after they have completed their studies. It is important to hire foreign faculty members to work at Estonian institutions of higher education to give Estonian students who are unable to study abroad an opportunity for contacts with an international environment. For the purpose of better integration of foreign faculty with the work and study environment, they must be provided with better opportunities for the participation in research. Foreign students, both those who leave the country after their studies and those who stay, are important for Estonia. Those who leave may become "ambassadors" for the Estonian state, culture and

economy in their own country, who can contribute to developments in Estonia through their contacts. Thirdly, we should take into consideration that competition and quality in higher education and the academic sphere in general are international. An international comparison is the basis for the quality standard and international mobility creates opportunities for recruiting better employees.

The internationalization of higher education encompasses both the mobility programmes aimed at Estonian students and faculty as well as measures for encouraging foreign students and faculty to come to Estonia. Thanks to the special measures implemented, admissions of foreign students to Estonian universities have increased in recent years. The goal for 2015 – to admit 2,000 foreign students – has been achieved. The actions that support internationalisation should be continued in order to increase the capacity of universities to internationalise and to attract more foreign students. To do so, it will be necessary to continue to further develop the existing measures and **to make Estonian higher education more attractive to foreign students**. Besides acquiring an education, it will be important to create more possibilities for foreign students **to stay in Estonia to work after graduating from university**.

The more active influx of foreign students and faculty has been hindered by the current procedures for obtaining visas and work permits and the limited opportunity for family members to accompany applicants of different immigration groups. Amendments to the Aliens Act, adopted in 2013, have improved the opportunities for students in entering the country and working in parallel with their studies; however, there are still obstacles that limit the opportunities for students in staying in Estonia after the completion of their studies. It is also important to provide more opportunities for foreign teaching staff and scientists to come to Estonia together with their families. Those processes are linked with the related services that help people adapt to life in Estonia, meet their expectations connected with the settlement of their family members here and contribute in any other manner to the possibilities of their self-realisation in Estonia.

In the field of higher education, the objective is to significantly increase the number of state-funded student places and to raise the quality of higher education through greater internationalization.

Labour supply

4. Increasing the impact of active labour market policy and sustainability of financing

To prevent and decrease the duration of unemployment it is important to continuously increase the **effectiveness of the provision of active labour market measures and enable the growth of their impact**. The low share of the unemployed participating in active labour market services due to the rapid growth of unemployment during the years of crisis has again started to increase.

In the coming years there is the risk that the high share of long-term unemployed and structural unemployment will persist for a longer period. Thus, in the coming years, more attention will have to be paid to **preventing and reducing long-term unemployment and unemployment among young people**. Better cooperation with local government institutions plays a significant role here (activation measures, resolution of social problems, etc.).

Support must also be provided for the transition of **the youth from education to labour market**. Measures must be applied for finding youth not in education, employment or training (the so-called NEET youth) and for bringing them back to vigorous activities.

It will be important to tighten the institutional cooperation and more clearly define the responsibilities of the Ministry of Education and Research, the Ministry of Social Affairs, the Unemployment Insurance Fund and local governments in reducing and preventing the unemployment. Opportunities must be created to allow unemployed who lack professional education to acquire qualifications in the degree level study. As to unemployed people who hold primary qualifications, they must be provided with additional opportunities to acquire higher or supplementary qualifications that would markedly increase their future competitiveness on the labour market. It is also important to deal more with unemployment prevention as it is significantly more costly and complicated to eliminate the consequences of unemployment.

It will be necessary to reinforce, in practice, the link between provision of active labour market measures and the benefits/allowances disbursed to people. The principle that receiving benefits entails obligations for the recipient to actively search for a job needs to be implemented into practice more clearly. To evaluate whether the active labour market policy is having the desired effect, it will be necessary to continue with a systematic monitoring and evaluation for assessing the impact of active labour market services.

In regard to the ageing workforce, in the future it will be important **to provide more measures for helping older people to return to the labour market** and to facilitate their working life.

One objective is the **reforming the system of capacity for work**, which would ensure the sustainability of the system, preserving and improving thereby the fitness for work among the working-age population, prevent unemployment and decline in working ability and support improvement of the working conditions, the returning and staying of people in the labour market. The reform brings into focus the best use of the working ability of working-age people who have decreased capacity to work; including the emphasis will be on **measures supporting access to employment and working aimed at people with reduced capacity for work and people with disabilities**.

A significant hindrance to the participation in employment is **the burden of care** that may be caused by taking care of children as well as of disabled and elderly family members. Therefore, special attention should be paid to reducing the withdrawal of the workforce from the labour market due to long-term illness, incapacity for work, disability or caring obligations and improving independent coping, incl. by providing special-purpose welfare and support services. Investments in **the living environment and support services of disabled and elderly people** allow improving the access of both their own as well that of their family members to labour market services and to the labour market itself.

For the purpose of (re)entry to the labour market after being at home with a baby and reconciliation of work and family life, **the availability of high-quality, affordable and flexible pre-school education and day care services must be improved**. It is also important to support the creation of childcare places according to regional needs. Additional support services (support person, personal assistant, transport, etc.) are required to enable the

participation of disabled children in day care and education and the participation of their parents in employment.

An amendment to legislation entered into force already at the beginning of 2011 that allows the unemployment insurance premiums to be used also to cover provision of active labour market measures. This ensures **the sustainability of financing for active labour market policy** after the ESF 2007-2013 funds have run out. In the following period it is possible to use the ESF funds to supplement labour market services and to develop and provide new services, where necessary.

5. Increasing healthy life expectancy by improving health-related behaviour and continuing to work toward reducing accidents and improving healthcare infrastructure.

Poor health-related behaviour, related illnesses and premature mortality among the working-age population leads to a significant loss of human resources. In the case of premature mortality, a major role is played by behaviour that jeopardizes the health (e.g. use of alcohol, disregard for hazards, low level of physical activity, smoking, eating an unbalanced diet) which is an important for continuing to extend life expectancy. The primary cause of death in Estonia over the years has been heart and circulatory diseases, neoplasms and injuries.

People's positive health behaviour is most impacted by the comprehensive provision of different measures, including increasing people's awareness, providing required services, establishing regulations that provide restrictions and incentives as well as an effective enforcement mechanism. This approach has been successful in recent years in such fields as fire and water safety, leading to a significant drop in the number of fire and drowning fatalities.

Another key reform was introducing health awareness, traffic safety and risk avoidance topics into basic school and upper secondary school curricula in early 2010. **The new human studies syllabus** became effective at the first stage of study in autumn 2011, in the second stage of study in 2012 and in the third stage of study in autumn 2013. Health and safety is an overarching topic in the upper secondary school curriculum as well. The programme of **compulsory beginner-level swimming lessons** for pupils of years 1 to 6 will be continued in order to improve children's swimming skills and reduce the number of deaths by drowning. In the future, we should consider developing and extending the programme in schools.

In the coming years, it will be important to direct resources at improving health-related behaviour among the working age population as well as prevention of injuries and fatal accidents due to injury. It is planned to implement an **inter-ministerial injury death prevention policy** and to continue the **development of light-vehicle roads** to ensure traffic safety. It is also planned to develop **recreational sites that support sports and an active lifestyle, improve awareness of fitness among the working-age population and develop measures to improve the eating habits of people**, in order to reduce health problems caused by nutrition.

Estonia is among the countries where the consumption of alcohol is increasing and the damage caused by alcohol is considerable. According to a report published by the World Health Organisation in 2012, alcohol is the main cause of death for 12% of Estonian women and 28% of Estonian men aged between 15 and 64. In order to prevent and reduce alcohol

consumption and the damage caused by alcohol, it is important to begin implementing the Government-approved **green paper on alcohol policy**, i.e. to enforce measures to control the availability and price of alcohol, prevent the distribution of “bootleg” alcohol, reduce the damage caused by alcohol consumption, prevent drunk driving, increase awareness and improve the availability of treatment and counselling services.

In order to increase the number of healthy life years, it is important to **reduce the damage caused by tobacco use**. At the beginning of 2014, the Government approved the green paper on tobacco policy that foresees measures to ensure a tobacco-free environment, reduce the attractiveness of tobacco products, regulate the marketing and distribution of alternative products, restrict youth access to tobacco products, prevent tobacco use, develop treatment and counselling services for those who wish to quit smoking as well as develop a tax policy that reduces tobacco use.

To reduce the number of on-the-job accidents and ensure a working environment that is supportive of good health, it is necessary to continue efforts to **establish an occupational accident and occupational disease insurance system**. Preparatory work in cooperation with organisations representing unions and employers has been done for many years, but the creation of a new type of insurance temporarily fell by the wayside due to the recession. Discussions concerning the occupational accident and occupational disease insurance system will resume soon.

It is also planned to increase the amount and scope (incl. the involvement of all important risk groups in the programmes) of evidence-based **health monitoring and screening programmes (such as for cancer)** to ensure that diseases and serious health problems are detected as early as possible and treatment can be started.

In the last ten years substantial investments to the quality of healthcare infrastructure and optimising the hospital network have been made. It is important to continue the **development of healthcare infrastructure** that takes into account the needs and possibilities of the aging and declining population. For the purpose, it is important to ensure strengthening of the basic medical care (family doctor system) and further optimum development of hospital network providing specialised medical care. Attention must also be paid to the development of health care **quality systems** and the relevant indicators that are monitored.

Various e-Health solutions play an important role in improving the quality, accessibility and effectiveness of health care services. To develop the e-Health solution and personal health care further and to **prepare a national e-Health strategy**, it is planned to establish an inter-ministerial task force.

COMPETITIVE BUSINESS ENVIRONMENT

The field encompasses a number of major subsectors such as research and development, innovation policy, enterprise and entrepreneurship and the development of a legal environment and public infrastructure (above all transport connections) that are favourable for enterprises.

ESTONIA 2020 OBJECTIVES

The following objectives have been set for 2020:

Raising the level of investments into research and development		
Initial level 2009	Estonia's target 2015	Estonia's target 2020
1.42%	2%	3%

Based on previous experience, the goals set and the latest economic forecasts, this would mean around 0.8 billion euros in R&D spending in 2020 – a quadrupling of R&D spending compared to 2009, assuming that the GDP in nominal value would be close to twice as large as before.

The average annual increase in investments into R&D activities from 2000-2009 was 10.1%, which was the highest figure in the European Union. Due to the initially low benchmark, growth was especially rapid in the private sector – an average of 18.4% per year. During the economic crisis, the government set a goal of increasing planned public sector investments in a greater than planned amount, to establish a good basis for private sector R&D investment growth, which would accelerate when economic recovery started. Consistent R&D policy was effective – the total spending on R&D decreased considerably less than GDP during the years of the economic crisis (2009). Private sector R&D spending remained practically the same and increased after 2010 by 33%. **In 2012, R&D spending reached 2.18% of GDP.**

Increasing the share of Estonian export in world trade		
Initial level 2009	Estonia's target 2015	Estonia's target 2020
0.085%	0.100%	0.110%

In past years, the growth of the market share of Estonian export as a percentage of total world export of goods and services took place at a time when world trade was growing rapidly. In light of the economic growth forecast, raising export volumes would mean a separate goal of increasing the share of export beyond 120% Estonian GDP, which would presume an export volume of over 30 million euros per year in 2020. The precondition for attaining the goals is that Estonia's export volumes must grow at a rate 2-3 percentage points more than the world average for economic growth. **According to the data from 2013, the market share of Estonian exports was 0.096%.**

Increase in labour costs ³ does not exceed the growth rate of productivity		
Initial level 2011	Estonia's target 2015	Estonia's target 2020
-2.8%	0%	0%

The growth rate of workforce expenses in the boom years of the previous economic cycle outstripped the growth of productivity. After the recession, the volumes of work increased

³ Real labour unit cost, change in ratio of labour costs to value added generated per employee

both in the industrial sector as well as in most service branches, due to which sales revenues grew and profitability recovered. There was a significant impact on companies' operating costs, above all on cuts in workforce expenses, accompanied by growth in effectiveness and an increase in competitiveness.

PRIORITIES OF GOVERNMENT POLICY

6. Shaping a policy that promotes long-term growth in the international competitiveness of companies.

The challenges with regard to the business environment in the medium-long range perspective will not change significantly. **Starting a business, developing and increasing the efficiency of companies, internationalization, innovation and cooperation continue to serve as the framework in which developments could take place.** As a general direction, the **support policies must move towards financial measures**, which enable more extensive use of public and private sector resources.

Still the **most important** for Estonia is **to ensure growth of productivity and improve access to capital for entrepreneurs.** Financing issue will become more urgent in connection with limited resources at the expansion and growth stages of companies. **Subsidization policy should support the implementation of companies' ambitions for growth as well as making the processes more effective.** Great emphasis must also be put on the development of complete measure packages supporting companies. A prerequisite is finding out the needs of companies in more detail, their more long-term planning focus and the integral management of resources and know-how aimed at support.

Issues related to availability of suitable workforce also remain central. These issues pose a challenge first and foremost to the adaptive ability of the education system. The growth of competitiveness of the business environment could be promoted mainly with **regulatory stability**, leaving room for changes that serve purposes of modernizing the environment (including expanding and deepening the European internal market). **Companies' export needs more lasting state support** in the broadest sense i.e. what is needed is counselling and training as well as for direct subsidy measures and security measures to continue.

The Estonian business environment is considered to be advantageous in comparison with other countries. Yet more specific challenges must still be addressed. With regard to the regulatory environment, we need **changes in legislation for stimulating the implementation of priority policies in the context of economic development.** There must also be efforts to perform **systematic assessment and decrease the administrative burden** must also continue to be dealt with. **Maintaining the stability of the taxation environment** encourage entrepreneurs to invest into developing their business.

As more important measures for responding to the challenges, **financial measures must be created to make company processes more effective and support their ambitions for growth**, more high-quality counselling service and training for setting the targets must be provided, **a system for assessing the impacts of entrepreneurial subsidies must be developed** and **entrepreneurial subsidies must be consolidated**, continuing measures aimed at **supporting export and developing cooperation**, offering state support for entrepreneurs heading to international markets through **more effective use of foreign representations.**

7. Creating an appropriate environment to attract more direct foreign investments into the sectors of greater export potential and added value.

Continuing to ensure the growth of the level of foreign investments into Estonia and developing Estonian export depends on ensuring the **availability of qualified workforce**. There is a lack of both skilled workers – needed by domestic and foreign-owned companies – and people who would be capable of ensuring that entrepreneurs are successful on export markets.

To draw investors, they must **be offered attractive benefits that would be competitive in international comparison**. It would also be necessary **to develop support measures aimed at serving foreign investors**. Estonia's general reputation and the social environment should also gradually become **success factors** in attracting new foreign investments. Foreign investments with a high added value take on key **impact on the shaping of supply chains** and thereby can open new **export opportunities for Estonian entrepreneurs**. Such foreign investments also promote the **transfer of knowledge and skills** and research and development intensive investments contribute to improving competences in the field in the broader sense.

There are definite arguments that are important for different investors in making an investment decision. Estonia is actively competing with other countries to attract foreign investments, tending to position itself as a destination country for **foreign investments that create higher value added and promote supply chains**. To retain and develop Estonia's competitiveness in attracting foreign investments, it will be important to implement a strategy for the development of a **comprehensive investment environment** that makes Estonia stand out in a positive sense. It is important to improve the export of **financial services and involved support services** to strengthen Estonian financial sector, which also adds to attractiveness of the investment environment.

The measure for **supporting major investors** that stimulate supply chains must be continued, the **capability of county development centres and local governments** to deal with regional investor service must be raised, **English-language information materials** must be created for promoting hiring of workforce and the **use of www.eesti.ee as a single contact must be simplified**. It is also important to develop a **comprehensive talent programme** and improve the **availability of foreign-language education** in Estonia.

8. Creating preconditions for increasing the volumes of research and development in the private sector and raising the number and quality of innovation outputs.

Although companies' research and development investments in Estonia are on the increase and the share of the R&D costs in the GDP has increased in the recent years, continuous efforts must be made to fulfil the objective set for 2020. The primary **challenge** that lies ahead is **to increase companies' innovation capability**. To do so, **research, development and innovation of companies operating in Estonia must be promoted**, but attention must also be devoted to bringing **knowledge- and development- intensive foreign investments** to Estonia. It will be important to **provide systematic support for young, innovative enterprises**.

We need a critical mass of vital development both in R&D and innovation “production” as well as for ensuring financial mechanisms to support young and innovative enterprises.

Increasing demand for R&D&I outputs has key importance, but this cannot take place solely by implementing one or two measures, it requires a full solution that would take into account the processes in the field from start to finish, in other words, from studies and experiments all the way up to the marketing of a finished solution. To create synergy, **mobility of knowledge and skills should be supported** and the **attractiveness of Estonia as a place to live should be improved**. It will be necessary to **support and ensure the access of Estonian companies to the global venture capital market**.

Public sector R&D capability, including the placement of our universities in international ranking lists as well as the efficiency and effectiveness of R&D, play a key role in companies' research and development capability and state or regional competitiveness indicators. Public sector R&D activity creates the necessary human resources for enterprise and provides access to modern infrastructure as well. The academic activity is a key connecting link between domestic and international networking of people and knowledge, which is one source for raising the innovation capacity of companies and attaining higher value added. In future, R&D&I will depend more on developments in the EU and on Estonia's **capacity to contribute to international cooperation, including the participation of EU initiatives and programmes within the framework of the European research area**.

Economic growth, employment and social well-being increasingly depend on the interaction and substantial cooperation between higher educational institutions, science communities and businesses. The innovation system must be treated as an entirety composed of various parts, which depend on the interaction of different components (*holistic model of innovation*). In the current financing period, greater focus was placed on the development of individual components of the innovation system (developing the physical infrastructure of R&D and higher education (buildings and equipment); developing the human resources and support structures of R&D and higher education; internationalisation, including connecting to international infrastructures); while these efforts were successful, the expected visibility and socioeconomic impact were not achieved. The objective of the next period is to use the created potential efficiently for the benefit of Estonia's development and economic growth; the main challenge is to ensure efficient implementation of a comprehensive innovation system.

The main objective of the third Estonian Research and Development and Innovation Strategy 2014-2020 "Knowledge-based Estonia", which has been approved by the Riigikogu, is to create favourable conditions for increasing productivity and improving living standards, for good education and culture and for ensuring the development and continuity of Estonia. The strategy is in line with the priorities of both the EU 2020 reform plan and the European Research Area.

In seeking to decrease the innovation gap between leading and developing economies, Estonia will take the necessary measures to become a part of the European Research Area – a research area open to the world, in which researchers, scientific knowledge and technology circulate freely and through which the Union and its Member States shall strengthen their scientific and technological bases as well as their competitiveness and their capacity to collectively address grand challenges.

In order for the position of Estonia not to fall in the international R&D (incl. the European research area), it is necessary to ensure balanced development of the R&D&I system. To increase the capacity of the R&D system, the research system reform must be completed. It

means a considered and effective use of structural funds and state-budget resources in financing R&D investments and the implementation of an effective strategy for continuing actions before the period for using the structural resources expires.

As necessary measures, those measures diagnosing the needs of companies must be implemented, which would find out the possibilities for improving the competitiveness of the companies in the best manner. **If necessary, public procurement regulations should be transformed** into an engine of development in fields important to the state (innovation, sustainability, design, creative industries and space technologies as well as the added value of local resources). The needs for financing the support structures and reasonable organisation of business must be analysed, **the R&D performance assessment methodology** must be developed and measures promoting **use of R&D infrastructure** aimed at entrepreneurs and **strengthening cooperation between research and companies** must be created. Companies with an ambition for growth must be provided with an integral counselling and financial supporting environment.

9. The broader use of the potential of the creative industries, ICT and other key technologies for raising the value added of other sectors.

For greater use of the potential of the creative industries, ICT and key technologies in future, it will be necessary to **promote activities that integrate the fields of training and internationalization as well as in financing**. To create additional value added from synergy between fields, attention should be devoted to **increasing the capability of human capital** in the broadest sense. Creating successful cooperation platforms requires the **existence of a favourable environment** and people that are able to take into consideration sectoral particularities. Use of ICT and other key technologies as **horizontal fields for improving processes in other fields** or for creating new initiatives will require cross-domain implementation support to advance to a new level.

As measures, the **development of the support structures** of creative industry must continue, as well as the **development of export ability** at creative industries entrepreneurs and **the cooperation** of creative industries entrepreneurs with other sectors must be promoted, measures for **promoting cooperation of entrepreneurs, creative personnel with people from ICT and other fields** and activities for providing content for the **creative industries entrepreneurs development programme** must be developed. **ICT substrategies** for greater integration of focus fields and a **measure for developing service sector's enterprises**, including developing the export potential of health services, must be created.

10. Developing human resources engaged in research and ensuring a future supply of engineers and top-level specialists.

The new generation of researchers and top-level specialists depends largely on the quality of PhD studies and the number of those who have entered and successfully completed PhD studies. While the organisation of PhD studies has been changed almost annually, the low efficiency and low number of people who complete the studies (compared with the target numbers agreed with the universities) continues to be a problem. The main reasons are the insufficient income of doctoral students, lack of social guarantees and the issue of the quality and relevance of doctoral studies. The Research and Development Organisation Act makes it

possible from 2012 to sign PhD students to an employment contract that is accompanied by the same social guarantees as in the case of any other contractual employment relationship.

The legislative amendment is an important step towards creating a young researcher's career system. The aim is to make doctoral studies more attractive and to create opportunities for recognising doctoral students as young researchers and not only as students as well as to make it easier for them to dedicate fully to research activities. In addition, **additional measures should be implemented to improve the quality of PhD studies (including through internationalisation), to make the selection of Ph.D. students and supervisors more efficient and to ensure the successful completion of studies.** To facilitate the faster graduation of Ph.D. students, it will be necessary to continue to support the activities of doctoral schools and centres of excellence in research.

The system for supervision of research papers in universities must be developed and the number of capable supervisors must be increased. One potential seedbed for supervisors could be study groups created in Estonia in which international faculty members and researchers participate. For highly qualified foreign faculty members and researchers to settle in Estonia, the hindrances have often included the salary, which is not internationally competitive, as well as other rules restricting the circle of applicants. The establishment of unjustified language requirements and other restrictions upon carrying out internationally open competitions for filling the posts of research staff must be avoided.

It is important **to promote the mobility of teachers in its various forms.** More value should be placed on effective supervision, where the supervisor would support graduation of PhD students and be motivated for performing high-quality supervision work through recognition and career. The business sector should contribute more to PhD studies, including supervisions and the development of business studies. Cooperation between the academic and business sectors should be promoted in order to improve the doctoral students' skills of combining research and economic activities, thereby improving the competitiveness of the business sector and promoting innovation.

11. Bringing transportation, ICT and other public infrastructure and institutions that support business to an international level.

Due to Estonia's location and settlement patterns, it is very important for the living and business environment that there are **connection possibilities, both cross-border and domestically, on a competitive level.** In developing local industry and services, the availability of public services in the case of well-functioning transport and information exchange infrastructure should not depend on the particularities of the location. It is important for sectors exporting large-scale goods to ensure effective and competitive domestic carriage of goods by road following the example of the Nordic countries. Based on the movement patterns of the workforce, the **better interoperability of transport and connection points** requires special attention. It will be necessary to harmonize travel schedules in order to ensure the ease of use of public transport, and to create the corresponding infrastructure that will allow passengers and goods to move from one type of transport to another and in the long term, use **integrated planning to enable selection from among various transport type alternatives.**

In international comparison, the level of transport infrastructure has been relatively weak for Estonia, especially as regards the level of cross-border connecting routes, above all due to the

cost of the investments and economic unprofitability, stemming from low population density and low number of potential users. For the same reason, the development of ICT infrastructure at a contemporary level to cover the entire country will not be possible without state support. However, for Estonia, in terms of development as business, scientific, cultural or educational environment and internationalization, these are key preconditions – and currently, limitations. Thus it will be important **to devote more attention to international connections, especially direct flights and cross-border railways and roads.** In the interests of balanced regional development, it will be necessary to continue developing not only international highways but dust-free surfaces for state secondary roads, to lay preparations for **linking public transport systems** and to continue establishing **quality high-speed Internet** infrastructure.

To do so, investments will continue into extending airport runways, into expanding terminals and improving the quality of equipment. Road construction requirements will be brought up to date and the safety and convenience of connection points between different types of transport will be increased. The large-scale project to cover all of Estonia with broadband Internet access will also continue in cooperation with telecommunications operators.

ENVIRONMENTALLY SUSTAINABLE ECONOMY AND ENERGY SECTOR

The field of environmentally sustainable economy encompasses development of the Estonian energy sector, energy efficiency in various sectors and general resource efficiency objectives.

ESTONIA 2020 OBJECTIVES

The following objectives have been set for 2020:

Level of greenhouse gas emissions compared to the 2005 level ⁴		
2005 level	Estonia's target 2015	Estonia's target 2020
5647 thousand tons	6156 thousand tons	6269 thousand tons (+11% compared to 2005)

* The estimated actual level of emissions – the actual point of departure for attaining the target – is 5,644 thousand tons.

The EU has set the goal of reducing emissions by 20% compared to the 1990 emissions level by the year 2020. The emissions reduction will be achieved by combining two mechanisms – the EU's emissions trading system and national targets for sectors outside the trading system. In 2013, the EU emissions trading system was launched on a new and uniform basis and auctions are the main means for emission allowance trading; only under certain conditions will units be distributed for free. The EU has set the goal of reducing greenhouse gas emissions through the trading system by 21% compared to the 2005 level of emissions.

National commitments have been set for sectors that are not part of the trading system (buildings, transport, agriculture, waste, etc.) where Estonia's emissions should not increase more than 11% by 2020 compared to the level of 2005. To date, that limit has not been exceeded. According to the initial forecast, the emissions of greenhouse gases in the sectors not belonging to the allowance trading system were 5644 thousand tons CDE. A framework for trading emissions from sectors outside of the allowance trading system will be adopted and will come in force no later than 2015.

The national targets and the EU trading system combined should result in a 20% reduction in the EU's emissions compared to the 1990 level.

GHG emissions have decreased significantly in Estonia in recent years. While the estimated GHG emissions were approximately 41 million tonnes CDE (carbon dioxide equivalent) in 1990, the estimated GHG emissions in 2012 were 19.2 million tons (excluding the *LULUCF*⁵ sector), which means a decrease of about 53%.

Increasing the share of renewable energy to 25% of final consumption of energy		
Initial level 2009	Estonia's target 2015	Estonia's target 2020
19,5%	23,6%	25%

Estonia's goal is to increase renewable energy to 25% of final consumption of energy by 2020, which will require changes in all sectors. Today, the Estonian energy sector is largely

⁴ The objective will come into effect for sectors outside the EU emissions trading system.

⁵ Land use, change in land use and forestry.

based on fossil fuels but the share of renewable energy sources has steadily increased in recent years. **In 2012, the share of renewable energy in final consumption was 25.8%.** A long-term target is 25% of renewable energy by 2020, which means that the level achieved in 2012 must be maintained.

Support mechanisms for cogeneration plants that generate energy from renewable sources have significantly contributed to increasing the share of renewable energy in final consumption. However, many boiler houses still use natural gas or heavy fuel oil. Cogeneration based on biofuels and wind energy have significant potential in the production of renewable energy. In the future, greater focus must be placed on increasing the use of renewable energy sources in the transport sector.

Preserving the level of final energy consumption at the 2010 level		
2010 level	Estonia's target 2015	Estonia's target 2020
2818 ktoe	2986 ktoe	2818 ktoe

In compiling the long-term forecast for energy use, Estonia proceeds from change in the GDP and sector-based developments, as a result of which it is presumed that final consumption in 2020 will be approximately 3248 ktoe. Considering this, Estonia has set the goal of maintaining the final consumption of energy at the same level as 2010 (approx. 2866 ktoe) i.e. reducing final consumption of energy by approx. 11% compared to the level forecast for 2020. Accordingly, final consumption of energy in 2015 should not significantly exceed the current consumption and it should remain between 2938-2986 ktoe (approx. 4% lower than the projected level for 2015).

Maintaining the level of final consumption at the level of 2010 means that energy saving must be increased in nearly all sectors, in particular in the household, industrial, transport and public sectors. Investments into making buildings more energy efficient must continue, while the public sector must lead the way in maintaining and constructing buildings. The industrial sector can save energy by introducing new technologies. The consumption of energy by the transport sector can be reduced by decreasing the need for transport, increasing the use of public transport and making vehicles more economical. It is also important to increase general awareness and thereby change the behaviour of consumers.

PRIORITIES OF GOVERNMENT POLICY

12. Implementing long-term structural changes in the energy sector in harmony with Estonia's energy security and energy efficiency objectives.

A factor that is increasingly starting to impact the state's competitiveness is the existence of an environmentally sustainable and efficient energy sector. To keep in step with the international climate policy and reduce the energy intensity of the economy it is important to ensure the functioning of the EU internal energy market and **adapt the national development plan for the energy sector to the changes in energy market.** The greatest challenges lie in the electricity sector, where about 80% of electrical energy is generated from oil shale. A major keyword in the decade ahead is diversification of energy sources. This covers both **expansion of co-generation of electricity and heat, reconstruction of oil shale fired plants and increasing the share of wind energy and biomass energy.**

From the standpoint of diversifying energy sources and energy security, it will be important to **establish sufficient energy connections** in the region. The Estonia-Latvia energy link, BalticConnector and LNG Terminal – all these projects are listed among the projects of European common interest that have been approved by the Commission. In order to implement these projects, it is important to continue cooperation in applying for EU funds. The electricity producers in Estonia and other EU member states must be provided with equal competition conditions in relation to producers in non-EEA countries.

As of 1 January 2013, Estonia's electricity market was opened in full for all electricity consumers. In order to open the gas market, the gas distribution network must be separated in terms of ownership. On the one hand, competition will increase with the market opening up, which should ensure better service for end consumers. At the same time, the state should ensure that the procedural side operates as impeccably as possible and that the **market functions successfully**.

13. Reducing the general resource and energy intensity of the economy.

ENERGY CONSERVATION

A factor that is impacting the state's competitiveness to an increasing extent is the energy intensity of the economy and the ability of various sectors to achieve energy savings through the adoption of new technologies and solutions.

Energy efficiency is being promoted in Estonia in nearly every field, but the emphasis and nature of the measures have been very different. The energy efficiency policy has been very strongly aimed at households through various **measures that increase energy efficiency of buildings**. Investments have been made into energy efficiency in public buildings of state and local government. The primary instrument for influencing energy use in the transport sector has been excise duties, and the fuel excise has been raised on ten occasions in the last 15 years. In the transport sector, projects aimed at improving energy efficiency have been implemented under the green investment scheme.

Today's level of final consumption of energy in the sectors and the forecast for the next ten years shows that the greatest growth as well as **need for sectoral measures for saving electricity, motor fuels and other fuels will be in the households', industrial and transport sectors**. Investments into energy efficiency of **apartment buildings** must be continued and state measures for promoting energy efficiency of **private houses** must be expanded. In industry there is currently potential for an estimated 30% heat and 10% electricity conservation, and attaining this will require adoption of new technology and an increase in awareness. Energy use in transport must be controlled through three activity directions – **reducing the need for transport**, including making freight more efficient and sustainable, **increasing use of public transport and increasing the economy of vehicles**. **Public sector energy use** must be treated separately insofar as the behaviour of the public sector must serve as a role model for other sectors. Increasing capability for managing electricity consumption through development of an intelligent power grid in Estonia will also contribute horizontally to energy conservation in all sectors.

Energy efficiency can be increased by establishing **energy co-operatives**; Estonia needs to develop the relevant legislation and legal conditions. **The development of a smart grid** will

help to reduce energy losses on transfer, optimise energy production, develop diffuse energy production and connect more sources of renewable energy to the grid.

RESOURCE EFFICIENCY

Achieving sustainable economic growth means continuous development of more resource efficient, nature conserving and thereby more competitive economy.

In recent years, the Estonian government has carried out a so-called ecological tax reform, the goal of which is to **increase environmental taxes and reduce labour taxes**. The same direction must be continued in future, by taking into account the opportunities of different sectors to adapt to an environmentally sustainable economy. While Estonia has a functioning environmental tax system, a detailed analysis of the behaviour of companies and the changes in the economic environment is needed in order to establish new long-term types and rates of taxes. Attention must be paid to supervision of environmental charges and to the **efficiency of tax revenue use**. These issues should be taken into account in preparing a new **framework for establishing environmental charges for 2016–2020**. In order to maintain the competitiveness of the business environment, it must be ensured that companies have information about resource and environmental charges sufficiently in advance; therefore, the new environmental charges framework should be agreed on sufficiently in advance of the enforcement of the framework.

In the next period for European Emissions Trading System (EU ETS), focus must be placed on the development of the **energy and resource efficiency of companies outside ETS**. There is need to develop measures to improve the energy and resource efficiency of companies, including preparing waste for reuse and the recycling of waste. Promoting R&D and introducing new solutions that are aimed at increasing resource efficiency will help to increase the international competitiveness of the economy.

Estonia has established infrastructure for collecting waste and the reuse of waste is increasing. Preventing waste generation and promoting the reuse and recycling of waste continue to be the priorities of the new National Waste Management Plan 2014-2020⁶. Besides the disposal and recycling of waste, more attention should be paid to **preventing and reducing waste generation**. Because of the high proportion of oil shale waste, it is important to find **recycling possibilities** by removing existing bottlenecks that prevent greater use of oil shale waste for different products (such as grit stone).

Estonian natural conditions favour an efficient use of agricultural and forestry land that creates preconditions for using renewable resources for energy production as well as the food and wood industries. The growth potential of forests must be sustained and the use of wood as a renewable resource within the limits of sustainable volumes must be simplified – to promote the regeneration cutting of mature forests and the subsequent regeneration and growing of forests. The natural values of forests are protected; the volume and protection measures are updated continuously according to their condition.

⁶ Before approving the Waste management Plan, the Government of the Republic forwarded it to the Riigikogu for discussion on 17 April 2014; the discussion is expected to take place on 20 April 2014 at the plenary assembly of the Riigikogu.

R&D in the field should look for solutions for effective use of renewable resources and **enhancing the value of biomass** in Estonia – i.e. to use it to produce products with as high a value as possible. One of the outputs of bio-economy is **reduced environmental impact of transport sector** for example through **more extensive use of biogas** instead of fossil fuels. For optimal resource use and decreased environmental impact it is important to create and implement measures for developing **more environmentally friendly public transport, carriage of goods, traffic flows** and green corridors in cities.

A life cycle based approach should be promoted in the building sector. This means the energy efficient construction and renovation of buildings, the use of renewable and energy saving materials and promoting the recycling of demolition waste. The demolition of buildings that are no longer used and spoil the landscape (agricultural, industrial and military structures) and the management of demolition waste, including promoting recycling and reuse and regeneration of the land, must be continued.

The competitiveness of industry requires efficient and secure access to raw materials and their safety of supply⁷. In terms of the effective and efficient use of natural resources, there is a need to **update relevant legislation** and review the restrictions that prevent the use of local materials. Correct economical values must be placed on **ecosystem services**. Therefore, it is important to develop a **methodology for mapping and evaluating ecosystem services** in order to create the long term secure supply of ecosystem services and new business opportunities.

⁷ COM(2011) 25

SUSTAINABLE AND ADAPTIVE PUBLIC SECTOR

This field – a sustainable and adaptive public sector – encompasses government activities aimed at increasing macroeconomic stability and creating a general favourable economic environment; this means primarily tax and budgetary policy as well as activities related to developing the government sector itself.

ESTONIA 2020 OBJECTIVES

Structural surplus of the government budget		
Initial level 2010	Estonia's target 2015	Estonia's target 2020
0.1%	0.2%	-

Sustainable fiscal policy is the goal of the Government. The volume of the state budget has been quite stable in the recent years. The surplus that was in place since 2002 (1.5–2.5% of GDP) was replaced by couple of pre cents of deficit during the economic crisis in 2008 and 2009. The Estonian government sector budget was with a nominal surplus in 2010 and 2011; in 2012 and 2013, there was a small deficit; the budgetary position has incorporated a structural surplus since 2009. The nominal deficit is mainly caused by investments related to the revenues from allowance trading and by additional contributions to the second pension pillar, which in 2014 amounts to 0.5% of GDP. The achievement of a structural budget surplus shows that there are no structural sustainability problems in the budget and after the disappearance of the temporary effects the nominal position will also improve.

PRIORITIES OF GOVERNMENT POLICY

14. Reaching a government sector budget surplus by 2014 and maintaining this position in the long term

The medium-term objective of the Government is the **structural surplus** of the government budget. Surplus is the primary means for the government to prepare for the **negative pressure that demographic development will bring to bear on the budget** over the long term. The surplus will allow the state's already liquid funds it drew on during the economic crisis to be replenished in the medium-long term and creates a buffer against possible economic setbacks in future. It also safeguards the reputation of strong monetary policy of the Estonian state, and reliability in the eyes of foreign investors will increase. One component of a business environment that stimulates growth is a moderate tax burden, which will have the effect of leaving enough funds at the disposal of private investors. A moderate **tax burden requires the government sector's revenue and expenses to be kept in balance** in the medium-long and long term.

Just like other EU member states, Estonia must take into account in carrying out its budgetary policy the fact that it is part of a common economic and monetary union and must fulfil its obligations (those stemming from the treaty establishing the European Union and the Stability and Growth Pact, processes stemming from the European Semester). For Estonia, it is important that measures be followed which help member states decisively put in order their budgets along with establishing a new and more stringent regime, reducing public sector debt and thereby raising the reliability of the entire euro zone in the aftermath of the crisis. The crisis showed that the euro area must have a safety net for supporting countries in difficulty,

and thus Estonia must make its contribution in solidarity with other euro area members both into the current European Financial Stability Facility and the European Stability Mechanism.

Estonian government sector budget has had a structural surplus after the crisis since 2009, which is in compliance with the set target. In 2013, there was a small budget deficit (-0.2%), particularly due to one-time factors, but the structural position was, as before, with a surplus of 0.4%. The aim of the government is the government sector's budgetary position with a surplus structurally in 2013 and thereafter, considering the cycles of the economy, the preparation of the government sector's budgets with a nominal surplus in the medium and longer term perspectives.

15. Improving the sustainability of social expenditure in the public sector in the face of decreasing working-age population and ageing population, ensuring effective health care and well-oriented and effective social policy (including the necessary support services).

In Estonia as in other developed countries, one challenge is **ensuring long-term financial capability for public social spending**. This is complicated by demographic changes, i.e. the decrease in the working-age population and the increase in the number of pension-age people.

In order to develop continuous financing of the social insurance system, it will be analysed further how to develop possible changes in health insurance, pension insurance and unemployment insurance, including in the context of developing a new scheme for capacity for work. Healthy life expectancy and longer participation in the labour market (and healthy lifestyle) have a positive impact on the social insurance system. Therefore, continuous financing must also be ensured in the future by **strengthening the principles of the functioning health insurance system**.

To keep otherwise capable and well-trained people active on the labour market and aim resources at providing other social services, it would be expedient to review the **special pensions system and to reduce or abolish the old-age pensions under favourable conditions**. Likewise, the general pension age reform decided in late 2009 is being implemented.

Shifting towards a targeted approach means that the amounts of needs-based family allowances must also be increased, i.e. needs-based family allowances for low-income families will be doubled and the weight of the existence of children in granting subsistence benefits will be increased from 0.8 to 1.0.

16. Continuing a budgetary policy that supports competitiveness (high level of productive expenses, increased flexibility, controlling public sector wage costs, planning the local government revenue base in state budget strategy).

Compared to other European Union countries, Estonia has a **high level of productive expenditures (investments, education costs, R&D costs, etc.)**. This should be maintained and if necessary increased in government sector budgets as these expenditures create a new foundation for economic growth and greater tax revenue. In compiling the budget, the ratios of productive expenses are monitored, such as the percentage of investments or education expenditures, and the establishing of ceilings on operating expenses will be considered. These objectives were considered in the negotiations for the next EU financial framework (2014-

2020), taking thereby into account a more flexible mutual connection between measures, **the impact of EU co-financing on fixed costs**, and in preparation for exiting the support system.

A lower percentage of fixed expenses and revenue-dependent expenses in the government sector budget allows for a more flexible response to changes in the economy and society and also makes it possible to ensure the needs-based financing of sectoral policies. For example, fuel excise tax will be untied from road maintenance costs in order to increase the flexibility of the budget. A new concept is being developed to determine the performance levels of the tasks of local authorities and the funding of the performance of these tasks. This includes an analysis of the actual level and the average cost of the performance of the tasks of local authorities together with the development of a methodology for assessing the budgetary impact of new tasks.

In the medium-long term, Estonia's competitiveness will benefit if **the growth of the public sector's expenses on wages and salaries is in proportion to the growth in productivity**. If salaries grow faster than productivity, the competitiveness of enterprises will be weakened in the longer term, and domestic inflation pressures will be increased, and this will in turn mean greater pressure on government sector expenditures through transfers related to wages and salaries.

17. Continuing the gradual reduction of taxes on labour and profits and to increase taxes on consumption and use of natural resources.

Greater taxation of wages and profit will limit economic growth more than the equivalent amount of taxation on consumption and use of the environment. For this reason, we must continue at every level **a shift in taxation from workforce (direct taxes) to taxation of consumption and resource use (indirect taxes)**. Besides geographic location and reputation of the state, taxation is one of the most important factors that helps draw foreign direct investment to the country. Favourable taxes are the linchpin for positive investment decisions in cases where other prerequisites (basic infrastructure, education, security) are ensured to a degree comparable with other countries.

Efforts must be continued to harmonize indirect **taxes that have a significant impact on the functioning of the EU internal market and to abolish exceptions in the EU**. Direct taxes and tax systems (rates) reflect every country's specific and unique social and political choices, and thus the principle of freedom of choice of member states must remain in place in this regard.

Estonia must become the 28th tax system to support the uniform consolidated income tax base on condition that it will simplify the functioning of the entrepreneurial environment and that it is possible to maintain the current Estonian corporate income tax principles. Simplicity, transparency, low administrative costs are of key importance for Estonia in maintaining and increasing the competitiveness of the entrepreneurial environment.

18. Avoiding macroeconomic imbalances

The challenges that lie ahead for economic policy in coming years are related to reinforcing the institutional framework to allow **imbalances to be better controlled and to avoid the potential for recurrence of imbalances**. It will also be important to ensure the better

functioning of the business environment and the labour market, so as to increase long-term economic growth prospects.

The impact of the factors that caused overheating of the economy in 2005-2007 has now abated and economic growth is influenced by other factors (foreign demand and increase in competitiveness), therefore the occurrence of a similar boom in internal demand is unlikely in the near future. Yet we must still be ready to mitigate such economic imbalances should they arise.

In this connection many reforms have been initiated and directions have been taken that this strategy has also documented, such as **public service reform** and **centralization of support services of the state** for making the public sector more efficient and keeping labour costs comparable with the overall salary and productivity growth.