



# PILLARS – Pathways to Inclusive Labour Markets: The case study of Estonia

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# 1 Introduction

Estonia is a country in north-eastern Europe, one of the three Baltic states. The country borders Russia, Latvia and shares maritime borders with Finland and Sweden. Estonia has a small population (1 330 068) and the population density is significantly below the EU average (30.5, compare to 109 in the EU). Around a third of the population resides in the capital – Tallinn, making the centre of business, innovation, and education. Since 2015, Estonia has experienced positive net migration, due to return migration of Estonians and the immigration of third-country nationals.<sup>1</sup> The immigration is typically associated with labour shortages and increasing job opportunities, linked to Estonia’s GDP growth.

The Estonian GDP per inhabitant in PPS has been growing in the last 20 years, however, it still accounts for 86% of the EU-27 average. Given the small size of the economy, it is highly dependent on trade and external shocks. Due to cultural ties and geographic location, Estonia has developed strong business relations with Finland, Sweden, Germany, and Russia.

In recent years, Estonia has been trying to improve the quality of education by applying innovative, child-centred learning methods that involve new technologies across all levels, including VET. The level of tertiary education attainment in Estonia is higher than in the EU, on average. This is related to two key factors - promotion of higher education and low tuition fees in public institutions. International student mobility at the tertiary level has risen steadily in Estonia, representing 11% of tertiary students in 2019. The largest share of international students comes from Finland.<sup>2</sup>

Total population in 2021	Population density (persons per square km) <sup>3</sup> , 2021	Average crude rate of net migration plus statistical adjustment (2013-2020)	GDP per inhabitant in PPS (% of EU-27 avg. from 2020 average) in 2021	Tertiary education attainment (ages of 30-34), 2021 <sup>4</sup>
1 330 068	30.5	2.0	86%	43.1%

<sup>1</sup> <https://phavi.umcs.pl/at/attachments/2022/0119/140607-barmig-estonia-national-report-31122021.pdf>

<sup>2</sup> <https://www.oecd-ilibrary.org/sites/68949f98-en/index.html?itemId=/content/component/68949f98-en>

<sup>3</sup> The EU average population density in 2021 was 109

<sup>4</sup> The EU average of tertiary education attainment in 2021 was 41.5%

## 2 Overview of the labour market in Estonia

### **Labour market trends and key skills in demand**

Due to small, aging population and economic development, the country is challenged by a shortage of labour. Thus, employment indicators have been improving in the last 10 years, especially the long-term unemployment, female unemployment, and NEET. The demand is higher for senior and mid-level specialists, such as ICT specialists, technicians and mechatronics specialists, engineers in different technical fields, forestry machine operators, nurses, care providers, physiotherapists, psychologists, business and data analysts, and industrial and service designers.<sup>1</sup>

In the last 20 years, Estonia has been making efforts to position itself as the most digitised country in the world with a large ICT sector. Since 2010, the number of enterprises active in the ICT sector in Estonia has increased 2.6 times, therefore the ICT contribution to the national GDP is one of the highest (5.98%) among the EU Member States. The development of the ICT sector in the country has led to continuous increase in the number of employees in this sector since 2010. This is likewise confirmed by the EXCITE study which shows that the average number of persons employed in the ICT sector has doubled over the decade – going from an average of 15,585 persons employed in 2010 to 31,561 persons employed in 2020. Thus, the percentage of ICT personnel in total employment has risen from 3.09% in 2010 to 4.75% in 2019. According to the EXCITE study, if the trends continue along similar trajectory, by 2030 the Estonian ICT sector will employ 50,000 people (accounting for 10% of the total persons employed in 2030) and account for an estimated 30% of the Estonian GDP.<sup>2</sup>

To decrease labour shortages and mismatches, the Estonian government has amended its immigration law to allow easier hiring of highly qualified foreign workers, stimulated wage growth that, at present, outpaces productivity gains.

### **Major job sectors/industries**

The economy of Estonia is service based, as 67.7% of the population are occupied in this sector. In contrast, industry accounts for 28.4% and the agricultural sector for only 3.9%. The major industries in Estonia are food, engineering, electronics, wood and wood products, textiles; information technology, telecommunications.<sup>3</sup>

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<sup>1</sup> [https://eures.ec.europa.eu/living-and-working/labour-market-information/labour-market-information-estonia\\_en](https://eures.ec.europa.eu/living-and-working/labour-market-information/labour-market-information-estonia_en)

<sup>2</sup> <https://taltech.ee/en/news/small-nations-ict-sector-intends-grow-tenfold-next-ten-years>

<sup>3</sup> <https://www.countryreports.org/country/Estonia/economy.htm>

## Key challenges on the labour market and vulnerable groups

The educational and regional divide in Estonia's labour market is strong. As a result, low-skilled/low-education population, especially from rural areas, are at risk of long-term unemployment. Historically, the unemployment rate was particularly high in north-eastern Estonia. Given a lack of extensive social protection for the unemployed, the poverty risks are also high among them.

In addition, young people without previous work experience and people with health problems also face bigger difficulties finding employment than other population groups. More than one out of five inactive people aged 15-74 was inactive due to illness or disability in 2019, placing health problems as the most widespread reason for inactivity in Estonia, apart from retirement and studying.<sup>1</sup>

Indicator	Data
Employment rate, 2021 <sup>2</sup>	79.3%
Employment in high-tech sectors, 2021 <sup>3</sup>	6.5%
Unemployment rate, 2021 <sup>4</sup>	6.2%
Youth unemployment rate, 2021 <sup>5</sup>	10.9%
Unemployment rate of males (15 years or over), 2021 <sup>6</sup>	6.8%
Unemployment rate of females (15 years or over), 2021 <sup>7</sup>	5.5%
Unemployment rate among individuals with less than primary, primary and lower secondary education (levels 0-2), 15 years or over, 2021 <sup>8</sup>	14.4%
Unemployment rate among individuals with upper secondary and post-secondary non-tertiary education (levels 3-4), 15 years or over, 2021 <sup>9</sup>	6.9%

<sup>1</sup> <https://www.oecd-ilibrary.org/sites/bf4a7892-en/index.html?itemId=/content/component/bf4a7892-en#section-d1e1871>

<sup>2</sup> The EU average rate of employment in 2021 is 73.2%

<sup>3</sup> The EU average of employment in high-tech sectors in 2021 was 4%

<sup>4</sup> The EU average unemployment rate in 2021 was 7.2%

<sup>5</sup> The EU average youth unemployment rate in 2021 is 14.5%

<sup>6</sup> The EU average unemployment rate among males (15 years or over) in 2021 was 7%

<sup>7</sup> The EU average unemployment rate among females (15 years or over) in 2021 was 8.1%

<sup>8</sup> The EU average unemployment rate among individuals with less than primary, primary and lower secondary education (levels 0-2), 15 years or over, in 2021 was 13.9%

<sup>9</sup> The EU average unemployment rate among individuals with less than primary, primary and lower secondary education (levels 3-4), 15 years or over, in 2021 was 7.6%

Unemployment rate among individuals with tertiary education (levels 5-8), 15 years or over, 2021 <sup>1</sup>	3.4%
Labour market slack, 2021 <sup>2</sup>	11.2%

### 3 Technological transformation and policies/instruments to stimulate innovative and inclusive job creation

According to Estonia's performance on RIS, since 2013 the country has significantly improved its innovation performance, particularly the number of product process innovators, business process innovators, innovative SMEs collaborating with others, and public-private co-publications. Currently, it is the most innovative among the three Baltic States. The progress in innovation has been attributed to several factors, namely digitization, favourable business environment, FDI and successful promotion of business and education opportunities in Estonia.

Since early 2000s, the Estonian government has been strongly and successfully promoting digitisation in the public sector. This has been conducted through two main instruments: the data infrastructure X-Road and the compulsory national digital ID.<sup>3</sup> X-Road is a platform for decentralized databases that drive digital service delivery for public and private sector use. The digital ID has been introduced to facilitate digital identification of citizens/residents for the use of public services. Both instruments, in combination, have laid the ground for the development of the e-government infrastructure across sectors (i.e., healthcare, education, taxation). In view of experts, the approach has been successful due to commitment of highly motivated civil servants and private sector actors to build an efficient system that will reduce corruption, improve governance in the public sector and facilitate bureaucratic procedures for business.<sup>4</sup>

The digitisation of the public sector has given rise to the development of the ICT industry within Estonia, as the government has been stimulating e-commerce and supporting technology-oriented start-ups. Until recently, the ICT sector development in the country has been oriented towards larger foreign markets, particularly in the Scandinavian countries.

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<sup>1</sup> The EU average unemployment rate among individuals with tertiary education (levels 5-8), 15 years or over, in 2021 was 5.4%

<sup>2</sup> The EU average labour market slack in 2021 was 14%

<sup>3</sup> <https://d-nb.info/120400515X/34>

<sup>4</sup> <https://e-estonia.com/whats-behind-estonias-digital-success/>

However, in the last few years, the ICT sector has reached a level of maturity and the local demand for the ICT goods and services has been growing. As a result, the ICT manufacturers and developers have started to look towards the local market as well. The local businesses have been increasingly forming partnerships to ensure that Estonian ICT companies supply other sectors with the technologies to stimulate digitisation and automation processes. Another notable recent development in the Estonian innovation ecosystem are spin-offs from ICT companies. The ICT companies support the development of spin-offs to stimulate more risky innovation across different industries.

Despite increasing digitisation, 81% of enterprises in Estonia are still characterised by either low or very low digital intensity. According to the studies, the adoption of automation technologies has been highest in the manufacturing sector (6.9% companies in the sector imported automation related goods/services), with the highest automation imports registered in high-tech and medium-to-high-tech manufacturing.<sup>1</sup> Based on the 2019 European Company Survey by Eurofound, Estonian enterprises are more likely to use high-speed computers, rather adopt advanced technologies such as robots.

The R&I ecosystem in Estonia is not very developed yet. Despite that in 2011 the Estonian government has committed to increase its spending on R&D to 1% of GDP over time, this has been hard to achieve for budgetary and political reasons. Most public investment in R&I is driven by the EU Structural Funds, while R&D investment across industries is low. Available funding is directed towards stimulating FDI and start-ups. The FDI in Estonia has proved to be an important source of knowledge/training for local companies and workers, thereby supporting the development of local R&I system.<sup>2</sup> To attract FDI, Estonia offers favourable macroeconomic conditions for business, business-friendly regulations, excellent broadband capacity and other infrastructure. Such conditions for doing business have contributed to the development of the start-up ecosystem.

The Estonian Business and Innovation Agency, SmartCap and Start-up Estonia are the principal organizations that aim to increase Estonia's international competitiveness and to develop entrepreneurship through grants, loans, venture capital, credit insurance and guarantees.<sup>3</sup> The approach of the organizations is focused on increasing Estonia's visibility to attractiveness business, foreign investment, and skilled international workers. Based on views of experts, such approach has been effective, in particular due to pro-active and collaborative

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<sup>1</sup>[https://www.researchgate.net/publication/353211812\\_Effects\\_of\\_Automation\\_on\\_the\\_Gender\\_Pay\\_Gap\\_the\\_case\\_of\\_Estonia\\_Effects\\_of\\_Automation\\_on\\_the\\_Gender\\_Pay\\_Gap\\_the\\_case\\_of\\_Estonia](https://www.researchgate.net/publication/353211812_Effects_of_Automation_on_the_Gender_Pay_Gap_the_case_of_Estonia_Effects_of_Automation_on_the_Gender_Pay_Gap_the_case_of_Estonia)

<sup>2</sup> [https://www.hm.ee/sites/default/files/documents/2022-10/pr\\_estonia\\_-\\_final\\_report\\_.pdf](https://www.hm.ee/sites/default/files/documents/2022-10/pr_estonia_-_final_report_.pdf)

<sup>3</sup> <https://eas.ee/en/about-the-organisation/>

attitude of the Agency's employees. The Estonian policymakers and public authorities have realised the importance of promotion/marketing activities for FDI and international collaboration, therefore, continuous efforts are made to highlight Estonia's achievements and its potential.

Among the key barriers that prevent innovation and technological development in the country are a shortage of skilled labour and universities/research institutions that are detached from industries. The latter compromises the quality of education and limits the potential for effective collaboration, technology transfer. Nevertheless, as mentioned earlier, in recent years the Estonian government has been reviewing its education and migration policies to address these challenges.

In 2014, the Estonian government has pioneered an e-residency programme that has been considered a good practice for stimulating entrepreneurship and migration.

E-Residency of Estonia is a government-issued digital identity that allows residents and third-country nationals to start a company 100% online from anywhere. Users can authenticate themselves online and sign documents using secure and efficient electronic signatures. Although that card does not grant physical residence or citizenship rights, it provides the following opportunities:

- Setting up and managing a location-independent company online from anywhere in the world,
- Establishing a trusted EU company online in one day,
- Managing the resulting company fully online,
- Applying for a business bank account and conduct secure e-banking,
- Accessing international payment service providers (Paypal, Braintree, etc.),
- Digitally signing and transmitting documents,
- Declaring Estonian taxes online.

The programme facilitates the process of starting a company within and outside Estonia, lowers business operating costs, provides access to Estonian administrative system, makes transactions transparent and allows users to trade in euros. Despite that some entrepreneurs indicated that they faced tax conflicts and regulatory complications, for Estonia the programme has increased the country's visibility, presenting it as a champion

in digitisation, and stimulated entrepreneurs from around the world to set up a company in Estonia.<sup>1</sup>

The success of the initiative is associated with the novelty of the programme, promotion activities that made it well-known among entrepreneurs, and a user-friendly application process.

## 4 Policies/instruments to prevent and mitigate job displacement

Companies importing automation related goods account for a significant level of employment in Estonia, while the national employment data shows that innovative companies have maintained a stable share of total employment in Estonia (roughly around 25%).<sup>2</sup> As a result, most experts suggest that the job loss resulting from technological transformation can be matched (at least partially) by the demand for labour, generated by new industries and companies.

Nevertheless, it is widely recognized that outdated knowledge and skills or a lack of them will put individuals at risk of unemployment. In view of the stakeholders, outdated knowledge and skills are common even among young people in Estonia, who have recently graduated. The issue lies in the quality of education, particularly the quality of teaching as most teachers do not undergo continuous training. In recent years, Estonia has increased investment in its education system, launching various innovative education programmes, promoted STEM, and obliged teachers to integrate technologies across all education levels. In addition, many schools in Estonia started to offer elective courses in the field of technology education, such as programming, robotics, 3D graphics, computer science, informatics.

In 2012, Estonia launched the ProgeTiger programme to create interest in technology and improve technological literacy and digital competence of teachers and students. The programme targets all young children, from kindergarteners to high school and vocational school students. Participants receive training in three major areas: engineering sciences,

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<sup>1</sup> [https://link.springer.com/chapter/10.1007/978-3-031-04238-6\\_22](https://link.springer.com/chapter/10.1007/978-3-031-04238-6_22)

<sup>2</sup> [https://www.researchgate.net/publication/353211812\\_Effects\\_of\\_Automation\\_on\\_the\\_Gender\\_Pay\\_Gap\\_the\\_case\\_of\\_Estonia\\_Effects\\_of\\_Automation\\_on\\_the\\_Gender\\_Pay\\_Gap\\_the\\_case\\_of\\_Estonia](https://www.researchgate.net/publication/353211812_Effects_of_Automation_on_the_Gender_Pay_Gap_the_case_of_Estonia_Effects_of_Automation_on_the_Gender_Pay_Gap_the_case_of_Estonia)



information technology, and design & technology, learning about programming, robotics and 3D technology.<sup>1</sup>

In parallel, Estonia started to train teachers, develop learning materials, and translate Codecademy.com programming courses. Some teachers have joined the network of ProTigers that offers exciting opportunities for children and inspires new colleagues to get involved.

The success factors of the programme are the following:

- Integration of technology in the education process from childhood, especially if it is done in a game-setting, raises interest in technology and is more likely to encourage children to pursue career in technology-related fields;
- The programme targets students of all ages, thereby improving digital skills of the entire generation;
- The programme is placed in a wider framework of educational reforms in the country, therefore it is supported by the stakeholders and can be scaled up;
- Training of teachers is essential for ensuing quality education and to promote technology-enabled education within the country;
- The network of ProTigers represents ambassadors of the initiative that will ensure its sustainability and support, allowing it to scale up.

Until 2017, Estonian ALMP approach has been primarily reactive, meaning that it focused on providing support to the unemployed people seeking to re-enter the labour market. However, since 2017 the government in Estonia has focused on developing the ALMP measures that will prevent unemployment, especially among individuals at risk of unemployment. The central role in the new approach was taken by OSKA.

OSKA is the publicly funded agency of Estonia, established in 2015, that forecasts the needs for Estonian labour force and skills. The annual studies of OSKA analyse current labour and skills demand and forecast what skills/qualifications will be essential for the economy in the next 10 years.<sup>2</sup> OSKA reports to the Employment Department of the Ministry of Social Affairs of Estonia to inform the development of employment, education, economic and social policies. The development of the ALMP measures is also strongly influenced by the

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<sup>1</sup> <https://www.educationestonia.org/progetiger/>

<sup>2</sup> <https://oska.kutsekoda.ee/en/contact/>

findings of OSKA.<sup>1</sup> In addition, the studies of OSKA help people to make informed career choices, as data on labour market developments is publicly available and is utilized by the PES during consultations with employed and unemployed people.

The data is collected using applied research surveys on sectoral needs for labour and skills, combining both qualitative and quantitative research methods and analysing professional qualifications across all levels of education. Under the Development Strategy 2035, continued efforts and funding will be directed towards the development of OSKA's labour demand forecasts.

The effectiveness of OSKA has been dependent on several factors:

- Willingness of the policymakers to collaborate with the agency and to adjust policies, based on OSKA recommendations. Although the agency admits that such collaboration is still problematic, as policymakers did not use to design policies in multi-stakeholder consultations, a significant progress has been made;
- OSKA collects both qualitative and quantitative data. This represents a unique approach, as typically only quantitative data is collected. Due to interviews, OSKA gains deeper insights into needs, challenges, plans and ambitions of companies and workers. This improves the quality of advice that OSKA provides;
- The data produced by OSKA is publicly available and presented in a user-friendly format, increasing its utilization by PES, companies/organisations and labour force in Estonia.

The ALMP in Estonia includes traditional measures, such as job search assistance, career counselling and training, entrepreneurship/self-employment support, sheltered employment and work schemes for people with decreased work capabilities. However, the novelty of the Estonian ALMP is its focus on (partially or fully-funded) training programmes that are suggested to both the unemployed individuals and employed but at risk of unemployment. In addition, only training that, based on data from OSKA, is likely to provide relevant skills and increase employability of individuals will be subsidized.

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<sup>1</sup> <https://valitsus.ee/viime-inimeste-teadmised-oskused-ja-hoiakud-kooskolla-tooturu-vajadustening-majanduse#kirde-ja-kagu-estoni>

Specifically, the new training services include:

- a degree study allowance for an employed person or a person registered as unemployed for obtaining vocational, professional higher education or Bachelor's studies;
- labour market training with a training card for employed persons at risk of unemployment;
- support for obtaining qualifications for employed persons who have undergone labour market or other training with the support of the training benefit;
- a training grant for employers for improving the skills and knowledge of their employees upon their recruitment and helping them to adapt to changes in the employer's economic activities.

In view of the interviewees, all four training types have been effectively preventing unemployment, thereby supporting both employers and employees. The first two instruments are presented below.

The degree study allowance is available in Estonia to fund vocational, professional higher education or bachelor's degree courses. The allowance is aimed at both employed and unemployed persons who face challenges finding employment or are at risk of losing their job due to outdated skills. Generally, the requirements for applicants consider the level of education attainment and/or the time since they graduated. Applicants must meet one of these conditions:<sup>1</sup>

- The applicant does not have a degree from professional or vocational education and it has been at least 5 years since they obtained education or dropped out of education;
- The applicant has gained their profession or higher education degree more than 15 years ago;
- The applicant cannot continue working in their current position, due to their health.

The degree study allowance has been considered an effective instrument to prevent or mitigate unemployment, due to the following reasons:

- The instrument supports adult learning among population groups that have poor employment prospects;
- The instrument proves long-term, comprehensive training that enables significant upskilling/reskilling;

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<sup>1</sup> <https://www.tootukassa.ee/en/services/career-and-training/degree-study-allowance>

- The measure supports specific study programmes that are selected based on forecasted skill demand by OSKA<sup>1</sup> (with the exception to people facing work challenges due to their health – they are allowed to choose programmes that allows them to remain employed);
- As of 2022, beneficiaries receive a monthly allowance of EUR 292 for their studies to partially cover living/training expenses and ensure commitment to training.

The Estonian government offers short-term (up to a year) training options to enable unemployed and employed to gain skills required for the labour market. A key element is the use of the training card. The card is an online tool that offers training options to an individual, based on career counselling from the PES (Estonian Unemployment Insurance Fund).<sup>2</sup> While additional training options can be provided (specific courses can be ordered), the supply of training options is grounded in the forecasted skill demand by OSKA.

The training is available for employed persons if they provide evidence that they are at risk of unemployment.<sup>3</sup> Specifically, the requirements for employed persons are:

- The employee cannot continue in their current employment position, due to health problems. This is the only criteria that bypasses the low annual income requirement;
- The employee has an annual income of less than EUR 18.636 and is over the age of 50. The criteria is meant to address the risk of unemployment, due to ageing;
- The employee has an annual income of less than EUR 18.636 and has not attained vocational or higher education. The criteria are meant to address the risk of unemployment due to dropping out of education;
- The employee has an annual income of less than EUR 18.636 and their Estonian language skills are insufficient to continue in their current employment. This criteria targets minority groups and migrants.

The success of this instruments has been related to the following factors:

- The list of offered trainings is tailored for each individual, following career counselling and the forecasted skills demand, projected by OSKA. All services are offered using digital identification methods, thereby increasing efficiency of processes;

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<sup>1</sup> <https://oska.kutsekoda.ee/en/>

<sup>2</sup> <https://www.tootukassa.ee/en/services/career-and-training/training-card>

<sup>3</sup> <https://www.tootukassa.ee/en/services/career-and-training/training-employees-work-and-study>

- Employed persons get access to subsidized training if they indicate at least one factor of vulnerability - income, age, skills/education level, language skills. A variety of considered factors allows to support different population groups.

Besides the creation of OSKA, in recent years the policymakers in Estonia have been introducing other tools and mechanisms that support better labour market analysis and training activities. In 2018, the policymakers, together with the stakeholders, developed the vision of the labour market, presented in the report “Labour Market 2035”. The consultation also involved the Foresight Centre at the Estonian parliament. The Centre has created four scenarios for the development of labour market pathways at least up 2030.<sup>1</sup> Based on these scenarios, training activities have been designed.

**Figure 1 Labour Market 2035 framework scenarios**



Source: Vallistu J. (2018). Labour Market 2035. Future Perspectives and Scenarios

An evidence and consultation-based approach of the policymakers in Estonia has proved effective in driving leadership, co-creation, and co-management of the entire labour market system. In view of policymakers and experts, such consultations allowed to reveal most relevant stakeholders, to identify differences in views/perspectives and co-create solutions that later would be implemented from different directions with the support of stakeholders. As an example, the interviewees noted that business organisations and environmental organisations have a different understanding of issues and tackle the same problem

<sup>1</sup> <https://arenguseire.ee/meist/>

differently. The participating stakeholders remarked on the usefulness of the exercise for allowing them to both voice their opinion in policy development, as well as interact with representatives of different sectors.

## 5 Policies/instruments to support employers and employees during job transformation

Based on the 2019 European Company Survey of Eurofound, most Estonian enterprises provide training to their employees to ensure that they can perform their current jobs rather than to develop skills for a different job or for personal development. This is not surprising, given limited financial resources and pragmatic approach of enterprises. In general, lifelong learning and adult education are not common in Estonia, therefore upskilling and reskilling in view of technologies transformation is challenging. A continuation of the Estonian Lifelong Learning Strategy, the Estonian Education Strategy 2021-2035 (also aligned with the Estonia 2035 strategy) identifies three strategic goals. One of the goals, namely the third goal, focuses on ensuring that education addresses the needs of the labour market.<sup>1</sup> Overall, the strategy notes the necessity to increase flexibility of the education system to meet the challenges and demands for new skills in the workplace. Thus, the government and universities are encouraged to work closely with employers to adapt education to the needs of the labour market and to ensure that students have the technological skills they need for the future.<sup>2</sup> Skill development is understood as a comprehensive process, which ensures the availability of skill development opportunities across all age groups and different learning needs.

The use of digital solutions (as well as a certain emphasis on digital skill development itself) is notable in the objectives raised for the achievement of the third goal.<sup>3</sup> These objectives are:

- The development of digital education history. This tool will allow individuals to manage education and career pathways and provide the tools to assess their skills.
- Awareness raising actions to inform population about opportunities to develop digital skills.

One of the ALMP instruments, namely the training grant, has been effectively supporting employers, especially those that undergo technological transformation and lack skilled workers.

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<sup>1</sup>[https://www.hm.ee/sites/default/files/haridusvaldkonna\\_arengukava\\_2035\\_kinnittaud\\_vv\\_eng.pdf](https://www.hm.ee/sites/default/files/haridusvaldkonna_arengukava_2035_kinnittaud_vv_eng.pdf)

<sup>2</sup> <https://www.educationestonia.org/preparation-for-future-work/>

<sup>3</sup> <https://digital-skills-jobs.europa.eu/en/actions/national-initiatives/national-strategies/estonia-education-strategy-2021-2035>

Estonia offers the training grant for employers to improve skills and knowledge of their employees. Through the grant, training support is available across four different categories, each reflecting changing demand for skills:

- Recruitment training grant for employers. It is available to support emerging skills demands if a specific skill is considered critical, according to OSKA forecasts. First, employers are obliged to seek new employees matching skill requirement from those registered in the PES (Unemployment Insurance Fund). If no suitable candidates are found, employers receive a grant to train their current employees.<sup>1</sup>
- Training grant for employers upon changing circumstances. The grant is supporting employee training due to internal restructuring at the company, the introduction of new technologies or changes to qualification requirements. The measure is meant to help employers and employees through disruptive periods, and to stimulate retention and upskilling of workers. The training funded through the grant must last at least 50 academic hours, indicating the need for significant learning to account for the changing working environment and conditions.<sup>2</sup>
- Training grant for employers for the development of employees' Estonian language skills. The grant is aimed at supporting businesses employing foreign talent. The training funded through the grant must be at least 50 academic hours.<sup>3</sup>
- Training grant for employers for developing employees' proficiency in ICT. The measure is supporting digitisation and other types of technological transformation. Employers are encouraged to consult the OSKA study 'OSKA ülevaade valdkonnaspetsiifiliste IKT-oskuste vajadusest' (OSKA overview of the need for field-specific ICT skills) to select most relevant ICT training. The training funded through the grant must be at least 50 academic hours and can last up to one year.<sup>4</sup>

The support of employers and, consequently, of vulnerable employees is regarded essential for increasing the labour market resilience and for supporting technological transformation in organisations. The use of OSKA forecasts to guide employers' decisions has been described as a particular strength of the Estonian AMLPs. The grant offers at least 50 academic hours of training, which suggests short-term, yet comprehensive training. Lastly, the grant stimulates the development of ICT-related competences and supports better integration of migrant workers in Estonia.

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<sup>1</sup> <https://www.tootukassa.ee/en/services/employers/recruitment-training-grant-employers>

<sup>2</sup> <https://www.tootukassa.ee/en/services/employers/training-grant-employers-upon-changing-circumstances>

<sup>3</sup> <https://www.tootukassa.ee/en/services/employers/training-grant-employers-development-employees-estonian-language-proficiency>

<sup>4</sup> <https://www.tootukassa.ee/en/services/employers/training-grant-employers-developing-employees-proficiency-information-and>

Automation technologies have stimulated the development of platform economy in Estonia. At the moment, migrant workers significantly contribute to it, due to limited language skills and administrative barriers that prevent them from working in other industries. However, platform companies do not pay enough attention to working/employment conditions of platform workers, while trade unions do not cater for migrant workers either.<sup>1</sup> Current legislation in Estonia does not support the possibility for self-employed persons, or other non-employed workers to enter into collective agreements in order to determine the prices and conditions for the provision of the service.<sup>2</sup> The weak development of trade unions and other social partnerships in Estonia, and in the Baltic states generally, is the result of poorly developed social partner organisations, evident in their low level of representation and institutional and financial shortcomings.<sup>3</sup>

## 6 Lessons learned

**Stimulation of innovative and inclusive job creation**, powered by automation technologies:

- As a small country with limited resources and a small market, the strategy of the Estonian government has been focused outward. The government focused on branding the country as a hub for digitisation and ICT in the EU. This has been done through the development of a common vision in the government across all levels, consistent communication and investments that target the ICT sector development.
- The leadership, management skills of the public sector authorities are essential for developing and implementing a long-term vision of the country's development. In view of limited resources, there is a need to consolidate efforts across the public sector organisations to ensure coherence and efficiency.
- The integration of the stakeholder consultation into the policymaking is essential to develop evidence-based policies and to ensure successful policy implementation.
- The public sector has been driving digitisation in Estonia through digital infrastructure initiatives, which, besides stimulating the ICT sector, have been improving conditions for doing business in Estonia, thereby attracting FDI.
- FDI can be an effective mechanism for learning/training of local companies and workers, thereby supporting the development of local R&I system.
- Investments in the ICT sector are instrumental to drive technological transformation across other industries. However, to capitalise on the ICT sector development it is

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<sup>1</sup> <https://phavi.umcs.pl/at/attachments/2022/0119/140607-barmig-estonia-national-report-31122021.pdf>

<sup>2</sup> [https://www.apgads.lu.lv/fileadmin/user\\_upload/lu\\_portal/apgads/PDF/Juridiskas-konferences/ISCFLUL-7-2019/iscflul.7.2-33\\_Tavits.pdf](https://www.apgads.lu.lv/fileadmin/user_upload/lu_portal/apgads/PDF/Juridiskas-konferences/ISCFLUL-7-2019/iscflul.7.2-33_Tavits.pdf)

<sup>3</sup> <https://www.eurofound.europa.eu/publications/article/2003/the-developments-and-current-situation-of-trade-unions>



essential to have mature domestic industries or high demand for ICT services/products abroad. In case of the latter, the policymakers should encourage and facilitate export, develop business relations and partnerships.

- The cultural ties and geographic proximity to the Scandinavian countries have expanded business opportunities and, as a result, to economic development.
- The shortages of skilled labour and weak university-industry linkages may significantly hamper the development of R&I and business ecosystems, holding back the economic potential of a country.

**Prevention and mitigation of job displacement**, following adoption of automation technologies:

- The approach to reduce job displacement of the Estonian government focuses on medium/long-term results, as the policymakers made an explicit focus on transformation of the education sector and on pro-active ALMP. To apply such approach, a strong political commitment to the long-term vision is needed across public organizations.
- The policymakers in Estonia have made an emphasis on labour market analysis and forecasting to design measures that will respond to the needs of the market now and in the future. Thus, the labour market research agency OSKA plays a key role in policymaking in Estonia.
- The effectiveness of OSKA is attributed to its data collection methodology that includes both qualitative and quantitative data. Hence, the policymakers can learn about needs, challenges, plans and ambitions of employers and employees, while analysing the data and formulating policies.
- To stimulate the development of the ICT sector and to decrease labour shortages, the education system should integrate digital technologies across all education levels, including from kindergartens.
- The ALMP in Estonia targets both employed and unemployed individuals who are at risk of unemployment. The focus of the ALMP is on subsidized trainings – short, medium, and long-term, that are provided following career counselling and are considered relevant for the labour market, based on OSKA's data. In addition, ALMP instruments also account for different factors, such as income, age, skills/education level, language skills, thereby stimulating inclusion.

**Supporting employers and employees during job transformation**, following adoption of automation technologies:

- Employers typically provide skills only for a specific job. Thus, the public sector should ensure that lifelong learning systems are in place to provide a more comprehensive upskilling/reskilling.

- The training offers should be diverse in terms of format, duration to accommodate to individuals' needs.
- Estonia is working on the development of the tools that will allow individuals to record, track and manage their own individual learning pathways, as well as, to assess their skills.
- Raising awareness about the existing training opportunities is crucial to ensure participation in lifelong learning.
- To support technological transformation in companies, it is essential to offer training grants for employers. In case of Estonia, the grant is conditional on acquisition of essential of skills critical for the labour market, based on OSKA data, and supports integration of migrants through Estonian language skills programmes.
- The comprehensive analyses on the impact of technological transformation on working/employment conditions in Estonia are not conducted. In addition, trade unions are under-developed in Estonia. As a result, it is difficult to determine what policies, regulations should be in place to ensure decent working/employment conditions of workers.
- The platform workers are not sufficiently protected by the national legislation and prohibits formulation of collective agreements; therefore, the EU regulations are urgently needed.