

# INTEGRATED SKILLS STRATEGY 2030

(GENERAL PART)

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# GLOSSARY OF TERMS

**Cognitive skills** – include sensory processes, attention, memory, reasoning; it is gathering knowledge, focusing attention, remembering (as well as performing work), finding solutions (including problem solving), evaluating solutions, reasoning, estimating, making decisions, understanding, speaking and abilities relating to understanding speech.

**Competence** – the broadly understood ability to take specific actions and perform tasks using one's learning outcomes (knowledge, skills and social competences) and experiences. For this reason, competence cannot be equated with learning outcomes.

**Credit transfer** – the process by which an awarding body recognises the learning outcomes validated by another entity that are part of the requirements of a given qualification.

**European Qualifications Framework** – a structure of qualifications levels serving as a reference for national qualifications frameworks and helping to compare the qualifications attained in various countries.

**Formal education** – education provided by public and non-public schools and other education system entities, higher education institutions and other higher education system entities through programmes leading to the attainment of full qualifications and qualifications awarded after having completed post-graduate study programmes referred to in Art. 160, paragraph 1 of the Act of 20 July 2018 on the Higher education and science law (Journal of Laws, item 1668, as amended), or qualifications in a profession referred to in Art. 10 paragraph 3, point 1 of the Act of 7 September 1991 on the school education system (Journal of Laws of 2018, items 1457, 1560 and 1669)

**Human capital** – the potential of a given society, expressed by its members' educational level, life experience, attitudes and skills that can serve to improve the actual and future welfare of that society.

**Informal learning** – acquiring learning outcomes by undertaking various activities outside of formal and non-formal education.

**Innovativeness** – a set of skills enabling persons to organise, synthesise and express knowledge, view the world and develop new ideas, perspectives, reactions and products in diverse ways.

**Integrated Qualifications Register** – a public register as understood in Art. 3, point 5 of the Act of 17 February 2005 on the computerisation of activities of entities performing public tasks (Journal of Laws of 2017 item 570, as amended), functioning in an information technology system, recording the qualifications entered in the Integrated Qualifications System (Art. 2, point 24 of the Act of 22 December 2015 on the Integrated Qualifications System).

**Integrated Qualifications System** – a separate part of the National Qualifications System, which requires the use of standards specified in the Act for describing qualifications and assigning Polish Qualifications Framework levels to qualifications, principles for including qualifications in the Integrated Qualifications System and entering them in the Integrated Qualifications Register, as well as the principles and standards for awarding qualifications and ensuring the quality of awarded qualifications (Art. 2 point 25 of the Act of 22 December 2015 on the Integrated Qualifications System).

**Key competences** – the combination of knowledge, skills and attitudes that can be used in many different contexts and in various sets needed for each individual to achieve personal fulfilment and development, gain employment opportunities, social inclusion and active citizenship (Council of the European Union, 2018).

**Learning (education) outcomes** – knowledge, skills and social competences acquired in the process of learning (Art. 2, point 4 of the Act of 22 December 2015 on the Integrated Qualifications System).

**Lifelong learning** – learning in various forms and places (in formal, non-formal and informal contexts) at all stages of life.

**Non-formal education** – education and training provided through programmes that do not lead to the attainment of a full qualification or a qualification awarded after having completed post-graduate studies programmes or a qualification in a profession (Art. 2, point 3 of the Act of 22 December 2015 on the Integrated Qualifications System – Journal of Laws 2018, item 2153).

**Non-governmental organisations** – organisations that are not public finance sector entities as defined in the Public Finances Act, and legal persons not acting for profit, or organisational units without legal personality governed by a separate legal act granting legal capacity, including foundations and associations.

**Polish Qualifications Framework (PQF)** – the description of the eight distinguished levels of qualifications in Poland corresponding to the appropriate levels of the European Qualifications Framework as referred to in Annex II of the Recommendation of the European Parliament and of the Council of 23 April 2008 on the establishment of a European Qualifications Framework for lifelong learning (OJ C 111, 06.05.2008, p. 1), formulated with the use of general descriptors of the learning outcomes for qualifications at specific levels, expressed in the categories of knowledge, skills and social competences (Art. 2, point 8 of the Act of 22 December 2015 on the Integrated Qualifications System).

**Professional activity** – involvement in the production process of society, undertaking work for pay.

**Professional skills** – abilities of using the knowledge of a particular sector/field and acquired skills to perform defined and specific activities in a given profession.

**Qualification** – a set of learning outcomes in the categories of knowledge, skills and social competence, attained through formal education, non-formal education or informal learning, in accordance with a given qualification's requirements, whose attainment was assessed through validation and formally confirmed by an authorised awarding body (Art. 2, point 8 of the Act of 22 December 2015 on the Integrated Qualifications System).

**Skills** – ability to appropriately and effectively perform a specific type of activity, task or function. To “appropriately perform” means to use the relevant theoretical and practical knowledge in action and adhere to social norms, in particular those relating to the given type of activity.

**Skills Strategy** – includes policies promoting skills development in different skills-building contexts and long-term plans that aim to achieve socio-economic growth through the effective use of a skills system.

**Social and emotional competences** – an area of behaviour requiring the coexistence of social and emotional competences that include self-awareness, social awareness, responsible decision-making, managing one's behaviour, managing relationships with others.

**Social capital** – the trust and the standards and patterns of behaviour in force, the ability of citizens to mobilise and pool the resources to foster creativity and strengthen the will to cooperate and agree to achieve common goals.

**Social cohesion** – the ability of society to provide a relatively high quality of life to its members and to reduce differences in living standards and avoid social inequalities.

**Social competences** – the ability developed during the learning process to shape one’s own development, as well as the autonomous and responsible participation in professional life and society, taking into account the ethical context of one’s own behaviour (Art. 2, point 7 of the Act of 22 December 2015 on the Integrated Qualifications System).

**Social exclusion** – the situation in which an individual member of society cannot normally participate in the activities of its citizens, not because of any personal beliefs, but rather due to circumstances beyond his/her control. Social exclusion is a multidimensional phenomenon and in practice means the inability to participate in economic, political and cultural life, resulting from the lack of access to resources, goods and institutions, as well as limited access to social rights and unmet needs.

**Social involvement** – all the observable actions of a person directed towards others or relating to their activities.

**Sustainable development** – the type of development ensuring that the needs of the present generation are being met without undermining the prospects of future generations to meet their own needs.

**Transversal skills (transferable)** – the abilities used in various areas of human activity, which include such skills as: critical thinking, creativity, taking initiative, problem solving, risk assessment, decision making and the constructive “management” of emotions as additional.

# ABBREVIATIONS

<b>BAEL</b>	Badanie Aktywności Ekonomicznej Ludności [Labour Force Survey]
<b>BKL</b>	Bilans Kapitału Ludzkiego [The Study of Human Capital]
<b>CBOS</b>	Fundacja Centrum Badania Opinii Społecznej [Centre for Public Opinion Research]
<b>CKE</b>	Centralna Komisja Egzaminacyjna [Central Examination Board]
<b>Council</b>	Council of the European Union
<b>ECTS</b>	European Credit Transfer System
<b>EEA</b>	European Economic Area
<b>ELA</b>	Ogólnopolski system monitorowania Ekonomicznych Losów Absolwentów szkół wyższych [Polish Graduate Tracking System]
<b>EQF</b>	European Qualifications Framework
<b>ESLC</b>	European Survey on Language Competences
<b>EU</b>	European Union
<b>FRSE</b>	Fundacja Rozwoju Systemu Edukacji [Foundation for the Development of the Education System]
<b>GDP</b>	gross domestic product
<b>GUS</b>	Główny Urząd Statystyczny [GUS]
<b>ICF</b>	International Classification of Functioning, Disability and Health
<b>ICT</b>	information-communications technologies
<b>IEA</b>	International Association for the Evaluation of Educational Achievement
<b>IPET</b>	indywidualny program edukacyjno-terapeutyczny [individual educational-therapeutic programme]
<b>IQR</b>	Integrated Qualifications Register
<b>IQS</b>	Integrated Qualifications System
<b>KFS</b>	Krajowy Fundusz Szkoleniowy [National Training Fund]
<b>LOWE</b>	Lokalne Ośrodki Wiedzy i Edukacji [Local Knowledge and Education Centres]
<b>MAPZ</b>	Model Analizy Popytu na Zawody [Model analysing the demand for professions]
<b>NBP</b>	Narodowy Bank Polski [National Bank of Poland]
<b>NEET</b>	not in employment, education and training
<b>NQF</b>	National Qualifications Framework



<b>OECD</b>	Organisation for Economic Co-operation and Development
<b>ORE</b>	Ośrodek Rozwoju Edukacji [Centre for Education Development]
<b>PARP</b>	Polska Agencja Rozwoju Przedsiębiorczości [Polish Agency for Enterprise Development]
<b>PIAAC</b>	Programme for the International Assessment of Adult Competencies
<b>PIRLS</b>	Progress in International Reading Literacy Study
<b>PISA</b>	Programme for International Student Assessment
<b>PPKZ</b>	podstawy programowe kształcenia w zawodach [curricula for education in the professions]
<b>PQF</b>	Polish Qualifications Framework
<b>PUP</b>	powiatowe urzędy pracy [County Labour Office]
<b>SIO</b>	System Informacji Oświatowej [School Information System]
<b>SME</b>	small and medium-sized enterprise sector
<b>SSR</b>	student-staff ratio – the number of students per one teaching staff
<b>TALIS</b>	The Teaching and Learning International Survey
<b>TIMSS</b>	Trends in International Mathematics and Science Study
<b>U3A</b>	university of the third age
<b>UN</b>	United Nations
<b>WSDZ</b>	wewnątrzszkolny system doradztwa zawodowego [in-school vocational counselling]
<b>WUP</b>	wojewódzkie urzędy pracy [Regional Labour Office]



## SUMMARY

The supply of relevant skills plays a special role in social and economic development today. **Contemporary changes resulting from globalisation, technological development, an aging society, the growth of migration, urbanisation or the green economy determine the set of skills conditioning success in the social sphere and the labour market.** Above all, these include transversal skills: digital skills, a readiness for learning, critical thinking, problem solving, teamwork and the ability to adapt to new conditions. The growing importance of these competences is due, among others, to global trends that are changing the organisation of work and the role of employees, generating the rapid obsolescence of skills and growth in the demand for new ones, as well as increasingly accentuating those skills that are more difficult to automate.

In the context of these challenges, investing in the ability to match skills with anticipated and current social and market needs requires a systematic and comprehensive approach to skills policies.

The Integrated Skills Strategy sets the framework for:

- designing and implementing a coherent policy for developing skills in line with the concept of lifelong learning;
- ensuring equal access to information on the supply of skills and demand for them, educational and vocational counselling as well as education and training offers in the area of skills development;
- strengthening awareness about the importance of developing skills throughout life to achieve individual, economic and social benefits;
- increasing educational, professional and social activities in all social groups, especially among people with low-level skills or those threatened with social exclusion.

**The overall aim of the Integrated Skills Strategy is to create opportunities and the conditions for the development of skills required to strengthen social capital, social inclusion, economic growth, and to achieve a high quality of life. The implementation of this aim is based on six priority areas:**

- **raising the level of key skills in children, youth and adults;**
- **developing and disseminating a learning culture focused on the active and continuous development of skills;**
- **increasing the participation of employers in the development and better use of skills;**
- **building an effective system of diagnosing and informing about the current state and demand for skills;**
- **developing effective and long-lasting mechanisms for inter-ministerial and intersectoral cooperation and coordination in the area of skills development;**
- **equalising opportunities of access to development and to the utilisation of skills.**

The implementation of activities in these priority areas will contribute to the development of skills relevant to the needs of learners, society and the economy, and better coordinate the activities of the parties involved in these efforts. Having the right skills will help those living in Poland to secure jobs that bring satisfaction and make the most of their potential. This then contributes to ensuring well-being, a dignified life and cohesive, sustainable and inclusive development in line with the Strategy for Responsible Development and other government policies and agreements of the European Union.

The structure and scope of this document results from the interdependence of policy areas relating to skills and the diverse forms and contexts in which they are acquired. It covers the elements indicated in the Partnership Agreement and refers to the framework set by the Organisation for Economic Co-operation and Development (OECD) to develop effective skills policies.

A key element of the Integrated Skills Strategy is the diagnosis of progress, and above all, the challenges and priorities relating to the development of relevant skills in Poland, the activation of the skills supply in the labour market, the effective use of skills in economic and social life, as well as strengthening the system for the formation and development of skills. This document specifies the actions to be taken to achieve the set goals, and also presents the model of implementing and monitoring the Integrated Skills Strategy together with the institutions participating in these processes.

# 1. THE ECONOMIC AND SOCIAL CONTEXT OF SKILLS

The end of the twentieth century brought a definitive transition to the economy, primarily characterised by: the central importance of knowledge as a source of innovation, a focus on controlled development of techniques, the development of information technologies as the basis for political and social decision making, the growing importance of specialists and scientists in the structure of professions, the dominance of the services sector in the economy, as well as the development of the financial, health and education sectors.

The new economy is based on new skills. In view of the declining number of jobs consisting of simple activities, employers are increasingly paying attention to the entire spectrum of their employees' skills. Above all, they expect complex skills, especially those relating to: communication, problem solving, team work and emotional intelligence. The quality of human capital is increasingly the basis for intelligent and sustainable development, based on social cohesion.

The vast majority of jobs also require a certain level of digital skills, the development of which is particularly emphasised by the creators of the European Digital Agenda, which is one of the pillars of the Europe 2020 strategy and the Operational Programme Digital Poland for 2014–2020. The priority of these programmes is to: strengthen the digital market for intelligent and sustainable development, and – to benefit social inclusion – make better use of the potential of information and communication technologies (ICT) to support innovation, economic growth and progress. The promotion of universal access to the Internet and the constant improvement of society's digital competences are to help in this respect.

The increasing amount of available data, as well as the widening spectrum of computing capabilities make it possible today to better manage company resources, plan production and manage the entire product life cycle, which is leading to the transformation of industry to the 4.0 model. Technological progress relating to universal digitisation, automation and robotics affects the reduction of the demand for employees on the one hand, while on the other, it increases the demand for new skills and new types of jobs. The organisation of work and the role of the employee are changing. A system based on changing job positions is being replaced by a model requiring employees to constantly develop, acquire new skills and look for new roles for themselves. Apart from making key decisions or coordinating the production process, the tasks of employees are more frequently being found in the areas of its programming, defining procedures and handing production over to machines.

Currently, assessing enterprises is based not only on financial criteria, but rather on their relationship with the surrounding community, customers and employees, as well as the company's impact on the environment and society. In a responsible company, apart from striving to maximise profits, key roles are played by good civic practices, a company mission contributing to positive social change, and a culture based on cooperation. Connected to this are three key challenges facing organisations: collaborative leadership, greater flexibility in designing the career paths of employees, and technological changes and their impact on how work is performed.

The increasingly fast-paced dynamics of changes in the labour market means that existing skills are quickly becoming obsolescent and aging, and the demand for new ones is growing. The shrinking labour supply caused by demographic

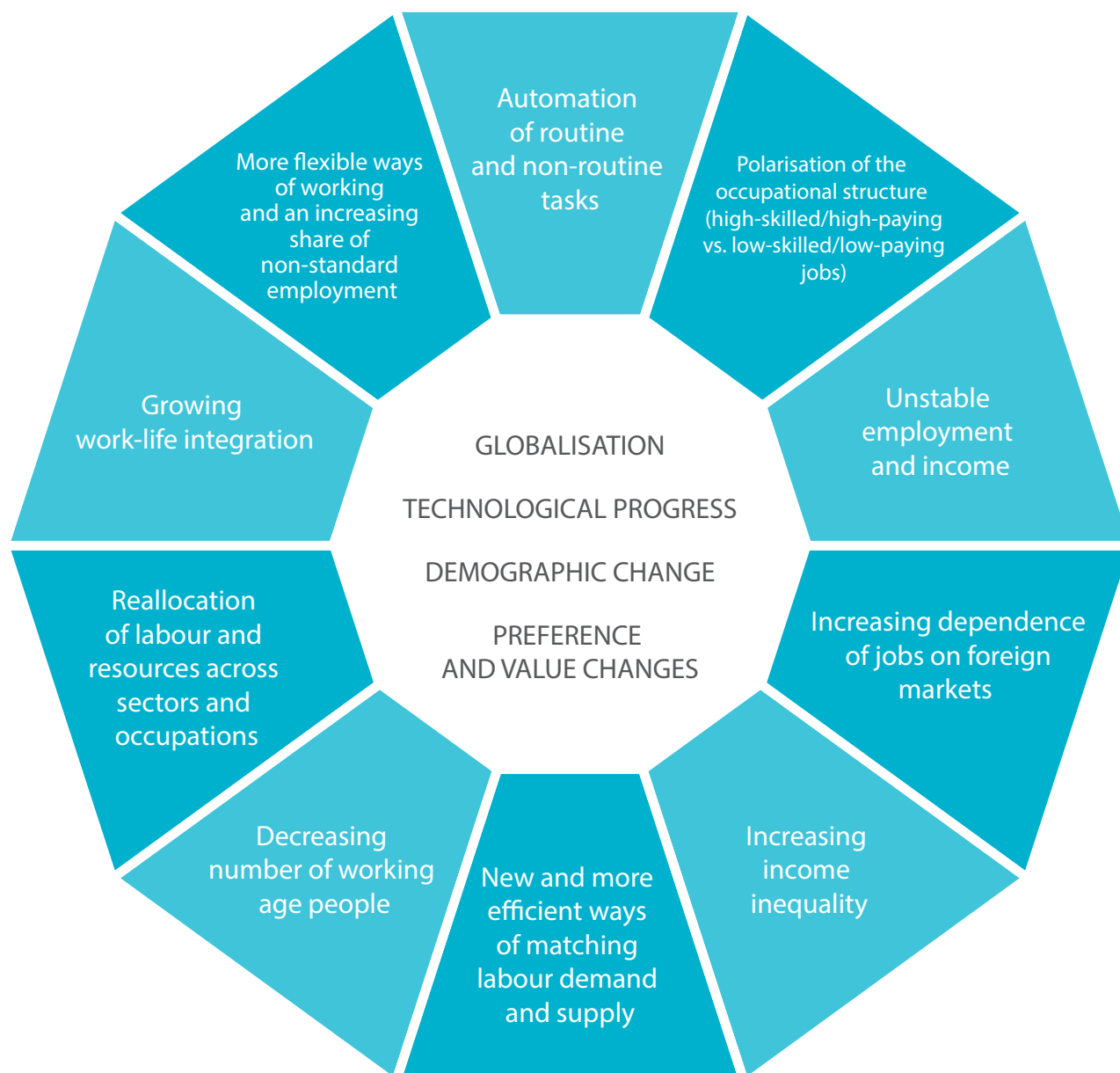
changes means that investments will be required to develop people's skills throughout their professional lives. The skills acquired in school during youth quickly age. Shortages and gaps in the demand for skills emerge, which in turn affects the operations of enterprises. In this context, the need for lifelong learning is becoming an important element in the perspective of social and economic development. Therefore, lifelong learning becomes key, placing the learner at the centre of attention – his/her individual development, predispositions and expectations. No less important in this context is the new role of the people involved in teaching – as those supporting learners in their development.

In addition to high-quality human capital, social capital also has key significance, that is, the trust that facilitates interpersonal cooperation and supports the coordination of activities, norms of reciprocity, as well as networks of civic engagement. It serves, among others, social integration and solidarity, complements and supports state institutions, as well as controls the government and commercial sectors. One of the effects of social capital or one of its functions is also to increase the level of economic development. As is evident from the experience of other countries, after exceeding a certain threshold of wealth, which Poland is approaching, social capital gains enormous significance. This is related, among others, to the growing importance of teamwork, which is becoming a decisive factor in attaining a competitive advantage. Restrictions in the development of social capital may thus become a barrier to further economic growth and result in a deterioration of the quality of life of the inhabitants of the country.

## 2. SKILLS OF THE FUTURE

Contemporary social changes, among them globalisation, technological developments, an aging society, increased migration, urbanisation or a green economy, not only shape the socio-economic landscape of the modern world, but also indicate the skills conditioning success in society and the labour market.

Figure 1. Megatrends influencing the need for skills, jobs and the way work is performed.



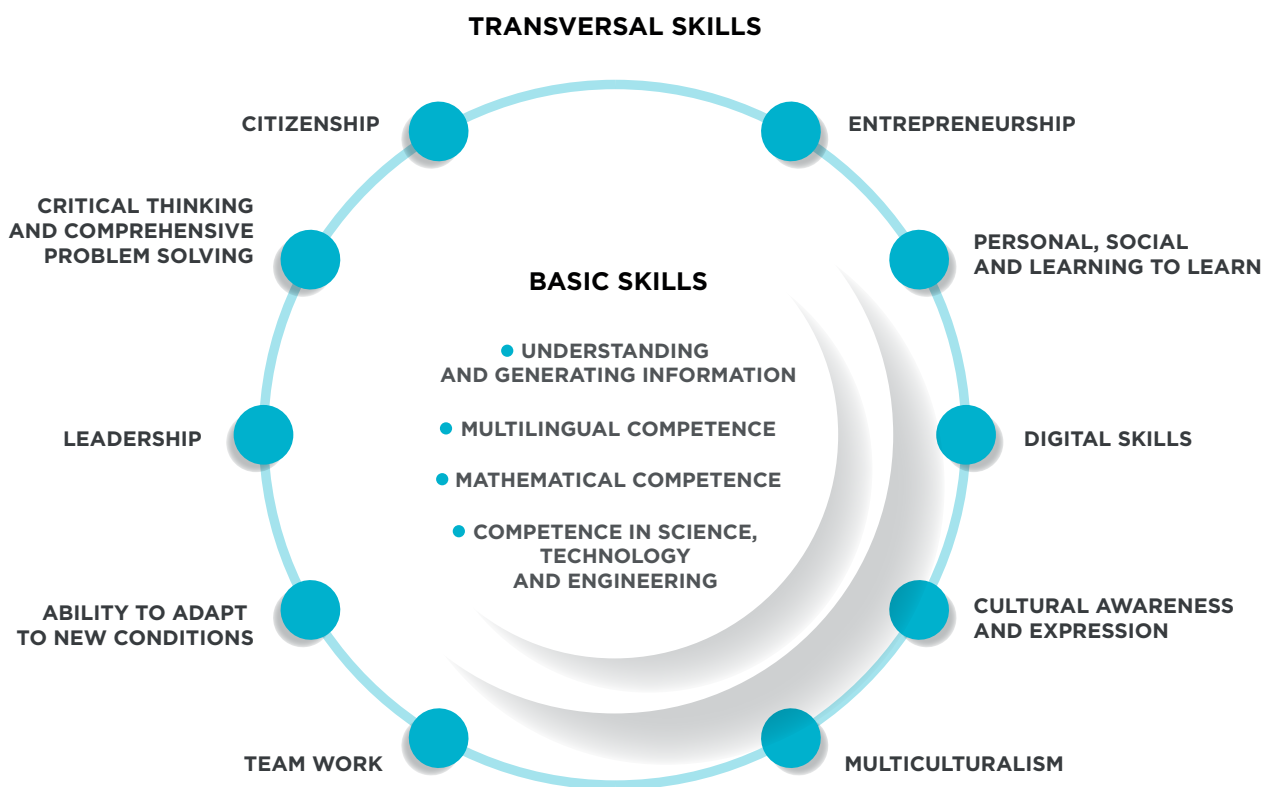
Source: Own work based on OECD (2017). *Future of work and skills*.

Everyone needs key competences developed in the perspective of lifelong learning, which constitute a dynamic combination of knowledge, skills and attitudes that a learner must develop throughout life, starting from an early age. Key competences are needed for personal fulfilment and development, employability, social inclusion

or a satisfying life. They include such competences as selecting and generating information in one’s native language and foreign languages, numeracy, skills relating to the natural sciences, digital skills, as well as personal, social and civic competences, and finally entrepreneurial skills, cultural awareness and expression (European Commission, 2018b).

As part of the Council recommendation on key competences updated on 22 May 2018, we can distinguish both basic and transversal skills (European Commission, 2018b). Basic skills include: generating and correctly understanding written information, developing and using mathematics skills, using a foreign language, and competences in science, technology and engineering. On the other hand, general, transversal skills include IT, citizenship and entrepreneurial skills. Transversal skills are applicable in many professions. They increase employee productivity, allow job seekers to apply for positions with more employers, thus improving their chances of becoming employed. They also form the basis for developing other skills. Thanks to their universality, they facilitate the ability of persons to function under uncertain conditions, in times when dynamic technological advances are resulting in rapid changes to qualifications’ standards and professional competences.

Figure 2. Basic and transversal skills.



In the context of future skills, it is important to pay special attention to those included in the key transversal competences, including critical thinking and comprehensive problem-solving skills, team work, the ability to adapt to new conditions, leadership skills and those relating to attitudes of openness and tolerance in an age of multiculturalism.



Table 1. Description of basic and transversal skills

Basic skills	
<b>understanding and generating information</b>	the ability to identify, understand, express, create, and interpret concepts, feelings, facts and opinions in both oral and written form using visual, sound/audio and digital materials in all fields and contexts; the ability to communicate and connect effectively with others in an appropriate and creative way
<b>multilingual competence</b>	the ability to use different languages appropriately and effectively for communication; the abilities to understand, express and interpret concepts, thoughts, feelings, facts and opinions in both oral and written form in an appropriate range of societal and cultural contexts according to one's wants and needs
<b>mathematical competence</b>	the ability to develop and apply mathematical thinking in order to solve a range of problems in everyday situations; the ability and willingness to use mathematical modes of thought, [logical and spatial thinking] and presentation (formulas, models, constructs, graphs, charts)
<b>competence in science, technology and engineering</b>	the ability and willingness to explain the natural world by making use of the body of knowledge and methodology employed; to identify questions and to draw evidence-based conclusions; [make use of] that knowledge and methodology in response to perceived human wants or needs; [understand] the changes caused by human activity and responsibility [for them]

Transversal skills	
<b>digital skills</b>	the confident, critical and responsible use of digital technologies and engagement with [them] for learning, at work, and for participation in society; the skills of information and data literacy, communication and collaboration, media literacy, digital content creation (including programming), safety (including digital well-being and competences related to cybersecurity), intellectual property [rights], problem solving and critical thinking
<b>personal, social and learning to learn</b>	the ability to reflect upon oneself, effectively manage time and information, work with others in a constructive way, remain resilient and manage one's own learning and career; the ability to cope with uncertainty and complexity; to maintain physical and mental health, and to be able to lead a health-conscious, future-oriented life, empathize and manage conflict in an inclusive and supportive context
<b>citizenship</b>	the ability to act as responsible citizens and to fully participate in civic and social life, based on [an] understanding of social, economic, legal and political concepts and structures, as well as global developments and sustainability
<b>entrepreneurship</b>	the capacity to act upon opportunities and ideas, and to transform them into value for others, [...based on] creativity, critical thinking and problem solving, taking initiative and perseverance and the ability to work collaboratively in order to plan and manage projects that are of cultural, social or financial value

<b>cultural awareness and expression</b>	knowledge of local, regional, national, European and global cultures and expressions, and an understanding of how these expressions can influence each other as well as the ideas of the individual; understanding the different ways of communicating ideas between creator, participant and audience within written, printed and digital texts, theatre, film, dance, games, art and design, music, rituals, and architecture, as well as hybrid forms; understanding of one's own [creative] identity and cultural heritage within a world of cultural diversity and how arts and other cultural forms can be a way to both view and shape the world; the ability to express and interpret figurative and abstract ideas, experiences and emotions with empathy, and the ability to do so in a range of arts and other cultural forms; the ability to identify and realise opportunities for personal, social or commercial value through the arts and other cultural forms and the ability to engage in creative processes, both as an individual and collectively
<b>critical thinking and comprehensive problem solving</b>	readiness to consider in a thoughtful way the problems and objects that fall within the scope of experience; knowledge of and the ability to apply logical methods of reasoning and inquiry
<b>team work</b>	the skills of effective work in groups; working to achieve a common goal; the ability to reach a compromise by being flexible and open to helping other team members and assuming part of the responsibility for the results of the team's work and learning process
<b>ability to adapt to new conditions</b>	the ability to quickly adapt to new roles and responsibilities; the ability to adapt to a new team; the ability to work effectively under changing conditions and priorities
<b>leadership</b>	planning activities leading to the implementation of set goals; making use of interpersonal skills to solve problems; the effective implementation of activities to reach a goal; making use of the skills of others to achieve a common goal; acting responsibly in the interest of the group in which one is a member; organising and leading the work of a team
<b>multiculturalism</b>	an open attitude, productive and authentic cooperation with others; appealing to the group's collective wisdom; overcoming cultural differences and looking at problems from different perspectives in order to increase innovation and the quality of work
<b>creativity and innovation</b>	the ability to generate, express or apply new and valuable ideas, techniques and perspectives, also in the form of cooperation; proficiency in coming up with non-routine solutions and answers, as well as exploring and experimenting with innovative and unconventional approaches to achieve valuable results.

[Translator's note: Descriptions from *understanding and generating information* to *cultural awareness and expression* are quoted from the Council Recommendation of 22 May 2018 on key competences for lifelong learning, pp. 8-11.]

### 3. SKILLS AS LEARNING OUTCOMES

The Integrated Skills Strategy uses the word “skill” in a manner consistent with its widely accepted meaning in Polish, as an innate or acquired ability to effectively handle something. The Integrated Skills Strategy defines the aims and tasks of the national policy for skills development, thus it refers to a wide range of issues relating to having people of all ages acquire new “abilities to effectively handle something”. “Handling something” in the context of the Strategy will always involve taking such actions that are a response to one’s own needs or those of other people. The ability to undertake effective activities in the labour market and in social life are of particular importance from the point of view of development policies.

**In the Integrated Skills Strategy, the word “skill” means the ability to perform a certain type of activity, task or function appropriately and effectively. “Appropriate performance” is understood as the use of relevant theoretical and practical knowledge in action and adherence to social norms, in particular those relating to the given type of activity.**

The expression “acquired ability” used in the glossary definition of skills cited above is equivalent in meaning to the term “learning”. Any skill developed as an “acquired ability” through organised learning, performing a job or other type of activity is always the result of some type of learning process.

In accordance with the Act on the Integrated Qualifications System (IQS), the learning outcomes required for qualifications are categorised in three distinct groups in the Polish Qualifications Framework (PQF): knowledge, skills and social competences. However, the learning outcomes acquired in the learning process – new knowledge, skills and social competences – cannot be treated separately. In fact, the learning outcomes for knowledge always involve a certain component of skills. Skills always contain certain elements of knowledge, and social competences always include some skills and certain knowledge. For this reason, an essential foundation for the skills referred to in this document are elements of knowledge and an awareness of the obligations and responsibilities associated with them.

The understanding of the term “skill” in the Integrated Skills Strategy fully complies with the definition provided in the Act on the Integrated Qualifications System, in which it means “the ability to perform tasks and solve problems specific to a field of learning or professional activity acquired in a learning process”. The adopted definition of skills also coincides with the Recommendation of the European Parliament and of the Council on the European Qualifications Framework (EQF), wherein skills mean **the ability to apply knowledge and use know-how to perform tasks and solve problems**. In the context of the European Qualifications Framework, skills are defined as cognitive (including logic, intuition and creative thinking) or practical (including manual efficiency and the use of methods, materials, tools and instruments). This approach to skills is consistent with the definition adopted by OECD, where skills are understood as a **package of knowledge, attributes and abilities that can be learned and that enable individuals to be effective and consistent in performing actions or tasks, and can be built and expanded through learning**.

## 4. AIMS OF THE INTEGRATED SKILLS STRATEGY

Poland has committed to developing a skills strategy in accordance with the provisions of a chapter of the Partnership Agreement – “Thematic objective 10: Investing in education, training and vocational training for skills and lifelong learning”. The Integrated Skills Strategy sets the framework for supporting the complementarity of policy and the integration of activities in the area of broadly understood skills. It covers the development of skills in the sphere of education and training, including formal education (general and vocational, higher education), non-formal education and informal learning. It takes into account the need for specific skills, their availability, adaptation to the needs of the labour market and economy, as well as the management and coordination system in these areas.

Figure 3. The places and ways skills can be developed.



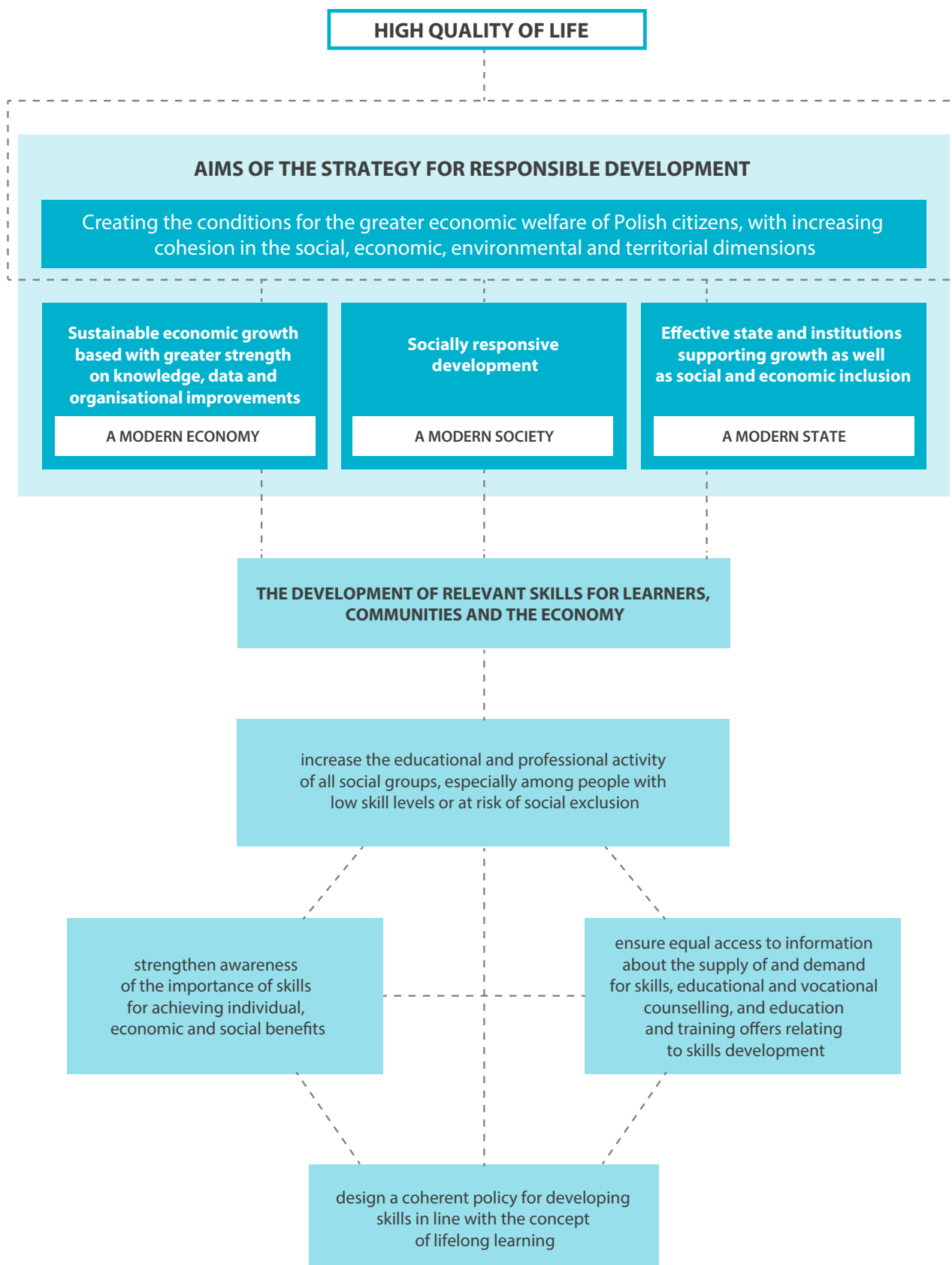
### **The Integrated Skills Strategy will serve to:**

- **design and implement a coherent policy for developing skills in line with the concept of lifelong learning;**
- **ensure equal access to information about skills resources and the demand for them, educational and vocational counselling, as well as education and training offers relating to skills development;**
- **strengthen awareness of the importance of developing skills throughout life to achieve individual, economic and social benefits;**
- **increase educational, professional and social activity in all social groups, especially among people with low skill levels or those at risk of social exclusion.**

The implementation of the above objectives is to contribute to the development of skills relevant to the needs of learners, society and the economy, and to a better coordination of activities of the involved actors on behalf of skills, and consequently, to achieve the main objective of the Strategy for Responsible Development – creating the conditions for the greater economic welfare of Polish citizens together with an increase in cohesion in the social, economic, environmental and territorial dimensions.

The Integrated Skills Strategy takes into account the requirements relating to the socio-economic model of the country's development presented in the Strategy for Responsible Development and the model of the country's development management system adopted in the System for the Management of Poland's Development. As understood by the Organisation for Economic Co-operation and Development (OECD), such a strategy is to provide countries and economies with a strategic approach to building, maintaining and using their human capital to increase employment and economic growth and to promote social inclusion and participation.

Figure 4. Aims of the Integrated Skills Strategy and the Strategy for Responsible Development.



## 4.1. THE RELATION OF THE INTEGRATED SKILLS STRATEGY TO NATIONAL AND INTERNATIONAL POLICIES

The Integrated Skills Strategy is consistent with the Strategy for Responsible Development; it complements and further develops the aims and objectives of the Human Capital Development Strategy 2020 (with a perspective to 2030), and also refers to the remaining eight horizontal integrated development strategies:

- Innovative and Effective Economy “Dynamic Poland 2020”;
- Transport Development Strategy to 2020 (with a perspective to 2030);
- Energy Security and Environment Strategy perspective to 2020;
- Efficient State Strategy 2020;
- Social Capital Development Strategy 2020;
- National Regional Development Strategy 2010–2020: Regions, cities, rural areas;
- Strategy for the Sustainable Development of Rural Areas, Agriculture and Fisheries for 2012–2020;
- The Development Strategy of the National Security System of the Republic of Poland 2022.

The Integrated Skills Strategy also refers to government programmes supporting the development of civil society, such as:

- Civil Society Organisations Development Programme for 2018–2030 (PROO);
- Solidarity Corps – The Programme for the Support and Development of Long-term Volunteerism for 2018–2030;
- Government programme of Support for the Development of Polish Scout and Scouting Organisations for 2018–2030.

At the regional level, the Integrated Skills Strategy is a reference point for updating voivodship development strategies, Regional Territorial Observatory work and Regional Territorial Forums. Like national development policy, international strategies and recommendations also take into account the need to adapt the demand for skills and their supply so as to avoid emerging discrepancies and to support economic and social growth.

The Integrated Skills Strategy, benefitting from the achievements of the work of international organisations, takes into account:

- the New Skills Agenda for Europe. Joint actions to strengthen human capital, increase employment opportunities and competitiveness proposed by the European Commission on 13 June 2016;
- EU recommendations, in particular the Council Recommendation of 22 May 2017 on the European Qualifications Framework for lifelong learning repealing the Recommendation of the European Parliament and of the Council of 23 April 2008 on the establishment of a European Qualifications Framework for learning lifelong and the Council Recommendation of 20 December 2012 on the validation of non-formal and informal learning;

- EU documents setting directions for work on establishing a European Education Area by 2025, including the Conclusions adopted by the European Council on 14 December 2017 regarding the European Commission communication on “Strengthening European Identity through Education and Culture” published 14 November 2017 and the “Council conclusions on moving towards a vision of a European Education Area” of 22 May 2018.
- the Council Recommendation of 22 May 2018 on key competences for lifelong learning;
- the Council Conclusions of 14 December 2017 on a renewed EU agenda for higher education;
- the European Union’s actions for social inclusion, and thus constitutes the implementation of the right to inclusive education characterised by good quality, training and lifelong learning in order to maintain and acquire skills enabling full participation in society and the ability to effectively cope with changes in the labour market (the first of the 20 key principles in the Pillar of Social Rights);
- the results of the work of the Organisation for Economic Co-operation and Development, in particular the OECD Future of Education and Skills 2030 project, as well as diagnoses and analyses of the skills strategies of other countries.

Fulfilling the objectives of the Integrated Skills Strategy should contribute to Poland’s achievement of goal 4.4 of the “2030 Agenda for Sustainable Development” of the United Nations (UN), which concerns increasing the number of young people and adults with appropriate skills, including technical and vocational skills, essential for the development of employment, jobs and entrepreneurship by 2030.

The Integrated Skills Strategy takes into account the objectives of the Integrated Qualifications System, i.e. ensuring: the quality of awarded qualifications, the recognition of learning outcomes obtained in non-formal education and informal learning, the accumulation and transfer of credits, access to information on qualifications available in the Republic of Poland, the ability to compare qualifications attained in Poland with those awarded in other EU Member States.

The Integrated Qualifications System is one of the tools for state policies on skills development. The ministers responsible for the administration of government departments, supported by expertise from the relevant industry or sector, are authorised by the Act on the Integrated Qualifications System to decide on including market and regulated qualifications in the national qualifications system, creating sectoral policies in terms of skills and qualifications. Sectoral regulations should be consistent with the objectives and assumptions of the Integrated Skills Strategy.



## 4.2. METHODOLOGICAL APPROACH

The commitment to develop a skills strategy is included in the Partnership Agreement approved by the European Commission on 23 October 2017 based on Commission Implementing Decision C(2017) 6994 (notification on 24 October 2017). The provisions of the Agreement set the scope of this document, which covers the areas of general education, vocational education, lifelong learning, and higher education. The Integrated Skills Strategy takes into account both the demand (demand for specific skills) and supply (availability or skills supply in society), as well as the methods of forecasting the demand for skills.

The key element in developing the Integrated Skills Strategy was to diagnose the current situation, and above all the challenges and priorities for the development of relevant skills in Poland, the activation of the skills supply in the labour market, the effective use of skills in social and economic life, as well as strengthening skills development systems. As part of work on the Integrated Skills Strategy, existing data was analysed.

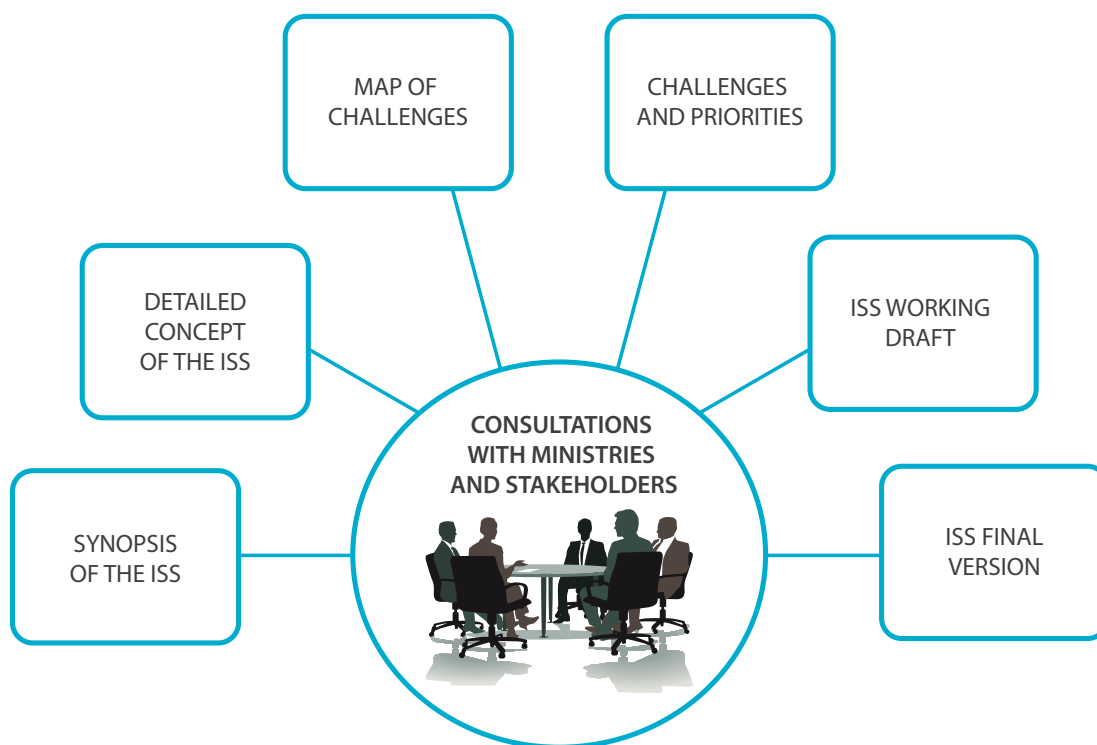
**As a result of analysing the existing data, including the results of national and international surveys, seven thematic reports were created:**

- Diagnosis of shaping the skills of children, youth and adults in the general education system;
- Diagnosis of shaping skills in the vocational education and training system;
- Diagnosis of shaping skills within non-formal education and informal learning;
- Diagnosis of the current state of skills of children, youth and adults in Poland;
- Diagnosis of the demand for skills in the labour market and society;
- Analysis of national and foreign strategies for shaping and developing skills, including models for shaping and developing skills and lifelong learning in connection with various spheres of social and economic life;
- Analysis of the methods, tools and procedures used to diagnose the demand for skills from the point of view of the labour market, used in Poland and selected OECD countries.

These diagnoses were used to prepare the text of this document, defining the main action areas to 2030.

**The planned method of working on the Integrated Skills Strategy was premised from the beginning on dialogue and close cooperation between all relevant government bodies and stakeholders, which resulted from the assumption that the usefulness of the Strategy will depend to a large extent on the involvement of a wide range of interested parties.** Therefore, consultations on the results of the work on the Integrated Skills Strategy took place at all stages of the process of its development and included representatives of several dozen different institutions.

Figure 5. The elements of the Integrated Skills Strategy that were consulted.



In addition to three workshop seminars, observations and comments on the results of the work on the Integrated Skills Strategy were provided at: meetings with the Board of Directors of Vocational Schools, an internal seminar for Educational Research Institute staff, meetings of the Stakeholders Council of the Integrated Qualifications System, a meeting of the Competence Programme Council, and also at a seminar in Toruń on the Integrated Skills Strategy organised by the Lifelong Learning Consortium, the Department of School Pedagogy of the Faculty of Education at Nicolaus Copernicus University and the Educational Research Institute. The second draft of the Integrated Skills Strategy was also sent to two external reviewers.

After its adoption by the Council of Ministers, the Strategy will be further developed in cooperation with the Organisation for Economic Co-operation and Development, in accordance with the OECD Skills Strategy project methodology. This means that the experience and knowledge of OECD, the ministries and stakeholders will be incorporated at the stage of formulating specific actions aimed at implementing the priorities presented in the general part of the Strategy.

## 5. DEMOGRAPHIC, ECONOMIC AND SOCIAL FACTORS AND THE SKILLS SUPPLY

The supply of skills and demand for them are closely related not only to formal and non-formal education and informal learning, but also to social and economic conditions and the consequences of demographic, economic and social processes. In the context of demography, the extension of life and the aging of societies, the increase in the number of retirement age people and the decline in the fertility rate, as well as the increase in professional migration and social mobility decisively impact the economy and society.

### Demography

In a demographic context, the key factors include a longer life span and the aging of societies, increased numbers of people of retirement age and a declining fertility rate, as well as increased professional migration and social mobility.

After five years of decline, the Polish population increased in 2017 to reach 38 434 000 residents. This increase was mainly due to changes in registered migrations abroad (GUS, 2018a).

In 2017, 402 000 children were born in Poland – about 21 000 more births than in 2016. It seems, however, that this is only a temporary trend, resulting from the improved financial situation of families and the labour market (GUS, 2018a).

The population forecast indicates that the number of women at the age of highest fertility will be systematically dropping. The number of women aged 25–29 and 30–34, will decrease by 33.9% and 38.0% respectively in 2030, compared to 2017 (GUS, 2014).

The slight increase reported in the population only applies to rural areas. Since the end of the 1990s, the population in Polish cities has been decreasing, but increasing in rural areas, especially in the suburban municipalities concentrated around large cities.

Women invariably constitute almost 52% of the total population of Poland. However, the female-male ratio is differentiated by age – men have the numerical advantage among persons up to 48 years of age. In turn, the femininity ratio among persons 48 years of age and older is almost 125, in the oldest years – 70 years and more – there is an average of 174 women for every 100 men (GUS, 2018a).

Since the beginning of the 1990s, the average life expectancy of Polish residents has increased by about 7 years, for women it amounts to 81.9, for men – 73.9 (GUS, 2018a). The aging process of the Polish population is accelerating. The group of persons aged 65 years and older is still growing – it constituted 17% of the general population in 2017. The number of persons aged 80 and older is increasing – in 2017 it accounted for 4.3% of the total population of Poland (GUS, 2018a). For



several years, the so-called dependency ratio has been increasing (the number of persons not of working age per 100 persons of working age) – for every 100 people of working age in 2017, there were 29 people below working age and 34 persons over working age (GUS, 2018a)

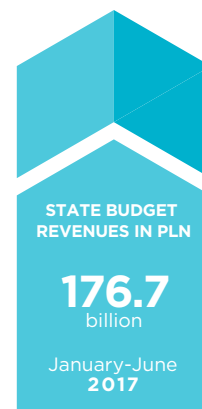
The observed demographic changes indicate that the population situation in Poland is still difficult. According to forecasts, every third inhabitant of Poland will be 65 years old or older by 2050. While the population of the entire European Union will increase by 2.5% by this time, the Polish population could fall by almost 11% (GUS, 2014).

## Economy

The Polish economy is in an upward phase of the business cycle – in 2017 as a whole, the Gross Domestic Product (GDP) rose by 4.8%. Consumption remains the main engine driving the Polish economy (Macroeconomic Data Bank).

International innovation rankings indicate that the Polish economy is still not very innovative compared to other OECD countries. Only a small percentage of companies in Poland conduct research and development or implement innovations. These companies are concentrated in a relatively small number of industries, most often in industrial processing (National Bank of Poland, 2016).

After 2007, the Polish economy significantly increased its share in the world trade of high-tech products, however, this share is still lower than the European Union average. According to Eurostat data (2016), the share of high technology products in Polish exports increased from 5.1% (24th among EU countries) to 8.5% (19th place) between 2011–2015.



## Labour force participation

The economic activity rate in the 4th quarter of 2017 was 56.2% (GUS, 2018f). Meanwhile, the level of the economic activity rate among persons with the lowest level of education (lower secondary school or less) in 2017 was 16.9%, while in the group of persons with higher education, it was 80.1% (GUS, 2018f).

The number of employees over 50 years of age is systematically growing – in 2007–2017, the employment rate for both women and men increased in this age group, with the highest increase in the number of women aged 55–59. In the 4th quarter of 2017, every third person over age 50 in Poland was professionally active. In 2017, the employment rate for persons over 50 was 33.2% – 41.8% for men and 26.4% for women (GUS, 2018e).

Data from the last ten years show a positive trend in the economic activity of people with disabilities, especially those of working age. Between 2008 and 2017, the economic activity rate of working age people with disabilities increased by 4.7 percentage points, their employment rate by 5.2 percentage points, and their unemployment rate dropped by 3.7 percentage points.



In 2017, the economic activity rate of disabled people aged 16 and over was 17.6%, the employment rate – 16.1%, and the unemployment rate – 8.4% (GUS, 2018f).

The professional activity of people with a low level of education, especially among women, is still very weak. According to Eurostat and OECD data, the employment rate of people with low-level skills in Poland, defined by the level of education, is significantly lower than the EU average (41.8% compared to 55.6% in 2017). Over half of working age people with a low educational level are not working and are not looking for a job – among women, the percentage reaches almost 68.1%. Over 2/3 of women with a low level of education are not in the labour market.

## Unemployment

There were 1 092 200 unemployed persons registered in labour offices at the end of March 2018, which was lower compared to the number recorded in February 2018 (by 3.1%), as well as in March 2017 (by 17.5%) (GUS, 2018d).

Foreigners constitute a small number among the registered unemployed (less than 0.3%) and only very few of them (around 6.5%) are entitled to unemployment benefits.

In terms of the structure of registered unemployed, at the end of March 2018, the share of women was higher than men and amounted to 54.1% (1.4 percentage points more compared to the previous year) (GUS, 2018a).

A two-times lower number of unemployed, shorter periods of unemployment, lower unemployment among graduates, and a lower unemployment rate by almost half – these are the changes that have taken place in the Polish labour market over the last 26 years. While at the end of 1991, the number of unemployed reached 2.156 million people, at the end of 2017, no more than 1.082 million people were unemployed. The unemployment rate at the end of June 2018 amounted to 5.8% of the active civilian population and was 0.8 percentage points lower than in the 1st quarter of 2018; compared to June 2017, it was lower by 1.2 percentage points. It is important that the female unemployment rate is higher than the male rate. Also, the employment rate is clearly higher in the male population than in the female population. It is more difficult for women to return to work, especially after a longer break for maternity or parental leave. Women seeking employment for the first time are also in a more difficult situation (GUS, 2018e).

Almost half of the unemployed are persons with no professional experience or lacking adequate qualifications. The unemployed are mostly persons who have been unemployed for a long time, are under 30, and have a low educational level (GUS, 2017a).

The lowest unemployment rate is found for persons who have completed higher education – this population had an unemployment rate of 2.3% in the 4th quarter of 2017. The highest unemployment rate (11.1%) was recorded among persons with the lowest level of education (at most, completion of lower secondary school) (GUS, 2018f).



Despite the improving situation in the labour market and growing staff shortages, over 5 million Poles of working age were economically inactive in the 2nd quarter of 2018. The number of economically inactive persons in the 2nd quarter of 2018 was estimated at 13 246 000. So it fell by 159 000 (1.2%) in relation to the 1st quarter of 2018 and by 8 000 (0.1%) in relation to the 2nd quarter of 2017. Recently, we have seen the growth of economically inactive numbers come to a halt. Among the economically inactive, the majority were women – this population amounted to 61.54% of the total, of which 38.2% were of working age (18–59 years). The main cause of professional inactivity among both women and men was retirement, followed by learning and supplementing qualifications, as well as family and home-related responsibilities. Another cause was illness or disability and discouragement due to the lack of success in finding a job (GUS, 2017a).

## Jobs

The past few years can be described as “the year of the employee” in many industries. There has been record low unemployment, a very large number of job offers, and growing competition among employers for the best specialists.

At the end of the 2nd quarter of 2018, the number of vacancies in organisations employing at least 1 person was 164 700 and was higher than at the end of the 1st quarter by 8% (GUS, 2018j).

Job vacancies were mainly concentrated in the private sector (87.2%) and in organisations in which more than 49 people were employed (46.3%) (GUS, 2018g).

Starting from the 1st quarter of 2016, the number of newly created jobs is significantly higher than the number of job vacancies. During 2017, 694 100 new jobs were created, mainly in the private sector (89.5%) (GUS, 2018g). Compared with the end of the 2nd quarter of 2017, the number of vacancies was higher by 35%. At the end of the discussed period, 42 500 newly created jobs were still vacant. In the 2nd quarter of 2018, 35% fewer new jobs were created compared to the preceding quarter, but 1.7% more than in the previous year. In the 2nd quarter of 2018, 33% fewer jobs were eliminated than in the preceding quarter and 3.5% less than in the 2nd quarter of 2017 (GUS, 2018j).



## Wages

In the first three quarters of 2018, the average monthly gross remuneration totalled PLN 4 573.03. Meanwhile, the average monthly gross retirement and disability pension from the non-agricultural social security system in the same period amounted to PLN 2 214.95 (GUS, 2018).

In 2017, the earnings of 25% of the lowest paid employees did not exceed PLN 3 000. 25% of the highest earners received remuneration in the amount of PLN 6 060 or more (Sedlak & Sedlak, 2018).

A gender pay gap still remains – the wage gap in women’s and men’s earnings reaches 19% in Poland. In 2017, women earned an average of PLN 846 less than men. The disproportion in wages



is visible at all career levels and independent of the size of the company. The greatest difference in average salaries between women and men occurred among the 25% of highest wage earners. In the case of non-managerial employees, men earned an average of PLN 300 more than women performing the same work (Sedlak & Sedlak, 2018).

## Household income

The financial situation of all households in Poland clearly improved in 2016. Households achieved higher incomes and incurred higher expenses. The surplus of income over expenditures increased, which provided households with greater opportunities to save (GUS, 2017c).

The level of the average monthly disposable income per person in 2016 was PLN 1 475 and was 7% higher in real terms than the income in 2015 (GUS, 2017c).

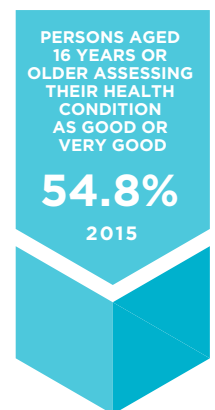
Average household monthly expenditures per person in 2016 reached PLN 1 132 and in real terms, was higher by 4.3% than expenditures in 2015, accounting for 76.7% of income (in 2015 – 78.7%). Spending on consumer goods and services amounted to an average of PLN 1 083 and was higher by 4.5% compared to 2015 (GUS, 2017c).

In 2015, 57.9% of Polish residents aged 16 and over rated their health as good or very good. This result was 0.3 of a percentage point worse than in 2014. Although a slight deterioration in the assessment of health condition affected men and women equally, men more often assessed their health very well (18.6% men versus 14.4% women). With age, the number of negative health assessments increased. Long-term health problems were reported more frequently by urban residents (37.8%) than those living in rural areas (32.6%). The phenomenon of the high mortality of men in relation to women and, consequently, a significantly shorter life span is very clearly visible in Poland (GUS, 2017b).

## Social involvement

In recent years, the involvement of Poles in community work within the framework of civic organisations has clearly increased. In 2016, there were 91 800 active associations and similar social organisations, foundations, social religious groups, as well as economic and professional self-governed organisations. The number of such organisations has increased by 5% since 2014 and by 15% since 2010. In 2016, they had a total of 9.1 million members (GUS, 2016b).

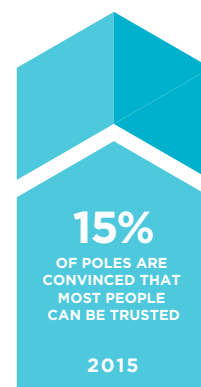
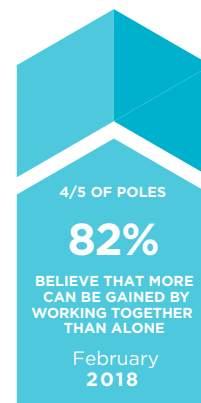
A belief in the effectiveness of working together has successively strengthened, and most Poles have a pro-social attitude and advocate solidarity among people rather than fighting for their own interests, believing that joint action on behalf of their own local community can be effective and bring tangible benefits. Four-fifths of Poles (82%) believe that by working together with others, more can be achieved than by working alone. The actual level of readiness to work together, however, is slightly lower – not everyone who is willing to cooperate sees an opportunity to work



with others within their community. Slightly more than one-quarter of Poles (28%) do not know anyone with whom they would like to cooperate (CBOS, 2018).

However, the overall level of involvement in volunteering has remained at a relatively low level for many years. In the 1st quarter of 2016, 8.5% of persons aged 15 and older were involved in volunteering in various types of organisations and institutions. After recalculating the total amount of work of these people per year, it can be compared to the work time of 152 600 full-time employees. The activities of volunteers were mostly concentrated in associations and foundations, and next in churches, religious communities and organisations (GUS, 2016a).

Small signals are evident of building a civil society. The percentage of people trusting others has increased – from 12% in 2013 to 15% in 2015. Furthermore, Poland’s residents are characterised by a fairly high level of trust in people from their own community and with whom they maintain daily relationships, but at the same time, they lack such trust in others. Poles are also much less likely than representatives of other societies to believe in the good intentions of others. Public trust in various types of institutions and organisations is also quite low in Poland. If a Pole is socially active, he/she does so individually, rather than in a group. Almost half of the citizens are still indifferent to acts in violation of the public good. The indicators of social capital: tolerance and a tendency to associate, have dropped slightly, remaining unchangeably low since the beginning of transformation, being one of the lowest in Europe (Czapiński, Panek, 2015).





## 6. SKILLS IN POLAND. THE DEVELOPMENT OF SKILLS AMONG CHILDREN, YOUTH AND ADULTS

The Strategy for Responsible Development adopted by the Council of Ministers on February 14, 2017 is the key national document of the Polish state on medium and long-term economic policies. The main objective of the Strategy is to create the optimal conditions enabling the income growth of Polish citizens, while increasing social, economic, environmental and territorial cohesion. An important condition for achieving this goal is to improve the quality of human and social capital, and acquiring skills is a key element of development in this area, determining the emergence of a strong national economy. Skills development is linked to changing the education system, especially in vocational and higher education, as well as teaching tailored to the needs of the labour market, responding to the changing economic conditions of the country.

### 6.1. EARLY CHILDCARE AND PRE-SCHOOL EDUCATION

**In an era of dynamic social and economic changes and their associated challenges, ensuring all children a good start in life by providing high quality early education and care is the basis for their development and learning.**

Participation in early childhood education and care improves the mastery of basic skills, reduces the risk of early school leaving and, consequently, contributes to reducing inequality and social exclusion. Scientific research indicates that the level of children's skills at the beginning of their school education depends, among other things, on whether and how long they attended pre-school education. Participation in high quality education and care in early childhood has a positive impact on being prepared to start school and achieving better results at later stages of education (Vandenbroeck, Lenaerts and Beblavý, 2018; PISA 2012; PIRLS 2011; Heckman and Masterov, 2004; Heckman, 2006). It is also significant in the context of social integration and equal educational opportunities for children brought up in families of different socio-economic backgrounds. This means that guaranteeing placement in nurseries and pre-schools for all interested families is not only aimed at providing children with care and making it easier for parents to return to work, but is also intended to offer high quality services leading to comprehensive child development, to be followed by their educational success and greater opportunities in the labour market (Górowska-Fells, 2013).

Table 2. Summary of the main benefits of high quality early childhood education and care

Impacted area	Children	Parents	Government administration and society
<b>Education, cognitive and non-cognitive skills</b>	<ul style="list-style-type: none"> <li>• higher achievement and better development</li> <li>• lower incidence of repeating a grade</li> <li>• less time spent on tutoring or remedial classes</li> <li>• higher share of completing education</li> <li>• better quality of life</li> </ul>	<ul style="list-style-type: none"> <li>• opportunity to continue their own education, participate in lifelong learning</li> </ul>	<ul style="list-style-type: none"> <li>• better educated society</li> <li>• lower expenditures on certain educational activities</li> </ul>

Impacted area	Children	Parents	Government administration and society
<b>Labour market</b>	<ul style="list-style-type: none"> <li>greater chance of securing employment</li> <li>higher salaries</li> </ul>	<ul style="list-style-type: none"> <li>higher participation in the labour market (especially mothers, single parents)</li> <li>higher salaries</li> </ul>	<ul style="list-style-type: none"> <li>lower unemployment</li> <li>higher tax revenues</li> <li>lower expenditures for social welfare and other types of assistance</li> </ul>
<b>Poverty, social inclusion</b>	<ul style="list-style-type: none"> <li>decreased risk of poverty and inequality</li> <li>better integration</li> </ul>	<ul style="list-style-type: none"> <li>decreased risk of poverty</li> </ul>	<ul style="list-style-type: none"> <li>decreased level of poverty</li> <li>decreased inequality</li> <li>higher social cohesion</li> </ul>
<b>Health</b>	<ul style="list-style-type: none"> <li>better health results</li> </ul>	<ul style="list-style-type: none"> <li>better health results</li> </ul>	<ul style="list-style-type: none"> <li>lower health care-related expenditures</li> </ul>
<b>Justice system</b>	<ul style="list-style-type: none"> <li>lower incidence of crimes and misdemeanours</li> <li>lowered risk of involvement with the penitentiary system</li> </ul>	<ul style="list-style-type: none"> <li>lower incidence of criminal behaviours</li> </ul>	<ul style="list-style-type: none"> <li>lower justice system expenditures</li> </ul>

Source: Developed on the basis of the results presented in the report of the European Expert Network on Economics of Education “Benefits of early childhood education and care and the conditions for obtaining them” from 2018.

**The reforms of the last decade, focused on improving the support system for the youngest beneficiaries of early education and care, are aimed at increasing the participation of children in day care.** After the adoption of the Act on the care of children up to 3 years of age of 4 February 2011 (Journal of Laws of 2011, items 603 and 650), the pace of creating day care facilities for children under the age of 3 has increased. On December 31, 2017, there were 3 120 nurseries, nursery units and childcare clubs operating in Poland, which provided care to 99 409 children – twice the number of these institutions in 2013 – 1 526 facilities for 87 600 children (GUS, 2018i). Further development in this area is the objective of the departmental development programme for day care facilities for children under the age of 3 “MALUCH+”, which is a continuation of the previous “MALUCH” programme, implemented since 2012.

**As the number of available slots in nurseries grew, the age group of children eligible for pre-school education gradually increased, and as of September 1, 2017, covered all 3, 4 and 5 year-old children.** 6-year-old children are required to attend a one-year pre-school preparatory programme in a pre-school, kindergarten located in a primary school or in another form of pre-school education, and this programme, like school education, is included in the educational subsidy from the state budget. The municipality is responsible for ensuring the optimal conditions enabling children to meet the requirement of attending a one-year pre-school preparation programme and the right to pre-school education. For this purpose, additional funds were allocated in 2013 to support pre-school education for the youngest children, which significantly reduced the relatively high fees borne by parents in previous years.

The share of children from 4 years of age to the age of compulsory education in pre-school education in 2013–2015 increased by 5.3 percentage points to 90.1%, to reach 93.1% in the 2015/2016 school year. This ratio approached the EU average of 94.8% in the 2014/2015 school year (GUS, 2017d).

**Creating and implementing activity programmes aimed at developing a broad set of skills and competences, both basic and socio-emotional, to help children learn and take advantage of diverse educational opportunities in later stages of their education, is one of the most important tasks and challenges facing pre-school education.** Reforms introduced for this purpose in pre-schools emphasise preparing children to learn a modern foreign language, develop literacy skills and support the overall development of the child. The core curriculum has been extended to include

activities for six-year-olds to develop literacy skills and prepare them for writing in the final year of pre-school education. In addition, all children attending kindergarten must be taught a foreign language. Activities in this area affect the children's development of linguistic awareness and cultural sensitivity, and stimulate the motivation to learn foreign languages in later stages of education. In kindergartens for children from national and ethnic minorities, and those speaking regional languages, the maintenance and development of a sense of national, ethnic and linguistic identity is emphasised.

**Among the issues requiring further action are increasing the number of children under the age of 3 participating in early childhood education and care and placing greater emphasis on developing exploratory skills and a creative approach to learning about the world from the first years of a child's life.** In Poland, the model of caring for young children in the home prevails, thus the percentage of children under 3 in some form of care – despite a gradual increase (14.5% in 2017 compared to 2.6% in 2010) – remains low (the EU average is 33.9% according to the 2017 Eurydice survey). This particularly applies to rural areas in eastern and northeastern Poland. Among the main reasons for this phenomenon are:

- low demand for out-of-home care for children of this age, resulting, among others, from limited trust in this form of care and the high value attributed to the family's role in raising children;
- low level of employment of women caring for younger children;
- too high costs (76% of all facilities are private sector institutions);
- lack of an appropriate offer and limited supply of facilities for the youngest children (there is strong local and regional diversity).

**Considering that an early start to pre-school education significantly impacts the achievement of better results in later stages of education, this disproportion may contribute to the differences in educational opportunities for children at an early stage of development.** In the conditions of a market economy, this previews the strong reflection of such differences in the later life course of these children (Szymański, 2004). The group particularly exposed to the consequences of this situation are children who are disadvantaged mainly due to socio-economic, cultural or linguistic reasons. However, it should be noted that in order to counteract these negative phenomena and achieve the above-mentioned benefits of participation in out-of-home childcare, investments in early childhood education and care must be based on high-quality, accessible, affordable and socially inclusive services. Research shows that low quality day care results in the lack of benefits or negative effects both among children and in society as a whole (Melhuish et al., 2015).

## 6.2. FORMAL GENERAL AND VOCATIONAL EDUCATION

**The intense programme of reforms in the education sector initiated in recent years aims to adapt the structure of education and curricula to the demand for skills in the modern labour market and to the requirements of social life.** The reformed system is intended to offer children and youth the general education necessary for continuous personal development, the ability to respond to the needs of modern society, as well as vocational education that involves their future employers in its development.

**Changes in Polish education in the last three decades are gradually aiming towards strengthening skills development.** Thanks to the effective implementation of compulsory education, the requirement to continue learning

until the age of 18 and a well-organised programme to reintegrate young people who have left school, the rate of early school leaving in Poland is very low – in 2016, the percentage of persons aged 18–24 who left education and training early was 5.2%. The percentage of students participating in vocational education and training programmes allowing them to continue on to higher education, as well as the percentage of persons aged 25–34 in at least secondary education, is above average.

The percentage of people aged 18–24 with at most a lower secondary school education who prematurely left education or training was 5% in 2017, which is less than half of the EU average of 10.6% (Eurostat, 2018). The percentage of secondary school students in Poland attending initial vocational education slightly increased to 50.5% in 2015, exceeding the EU average of 47.3%.

**Significant programme changes have also occurred in school education. New core curricula for pre-school education, general and vocational education have been adopted to provide students with high quality education.** In order to adapt educational outcomes to current social expectations and labour market requirements, the emphasis is on instilling values (cooperation, solidarity, building social relations), developing competences such as: creativity, innovation and entrepreneurship, developing critical and logical thinking skills, arousing students' curiosity and the motivation to learn, supporting the student in recognising their own predispositions and determining the path of further education, the comprehensive personal development of the student through deepening knowledge, being active in social life, encouraging organised and conscious self-education based on the ability to prepare their own place to work. The most important skills to be developed as part of general education in primary school are considered to be: effective communication in Polish and modern foreign languages, mathematical thinking, searching, ordering, critical analysis of information from various sources, creative problem solving, programming, team work and social participation. The new core curricula introduce compulsory educational activities for students relating to vocational counselling, aimed at supporting students in the process of making educational and career decisions. This will enable school graduates to acquire a level of key competences appropriate to the challenges of the modern world and to develop a system of values and attitudes necessary to contribute to the development of society and the economy. The results of the obligatory 8th grade examination introduced as of the 2018/2019 school year will allow the level of competences to be determined of students finishing primary school in key areas of knowledge, which are the basis for undertaking education in its next stage.

**The directions of recent changes also emphasise the social activity of students, and thus on shaping the skills and attitudes useful in social life and future professional work.** This relates to the obligation of schools to include the organisation and implementation of volunteering activities in their statutes. The student government can act in this area in consultation with the director of the school or facility. A number of activities are planned to promote the idea of volunteering as part of the programme "Solidarity Corps – Programme Supporting and Developing Long-term Volunteering for 2018–2030".

Acquiring such social competences as communication and cooperation in a group is also intended to facilitate participation in team or individual projects as well as the organisation and management of projects. Introducing the project method as one of the activating methods during school lessons also promotes the development of entrepreneurship and the creativity of students, and enables the use of innovative programmes, organisational or methodological solutions in the education process (ORE, 2017). An example of such a solution is the pedagogical experiment, whose principles are described in the School Education Act.

**Supporting especially gifted students is particularly important for economic, social, scientific and cultural development.** The support system currently operating in Poland is not comprehensive. Many solutions and initiatives are not interconnected. Therefore, it seems justified to establish a uniform strategy for the development of talents, within the required legislative framework. This will allow their shortage to be reduced in the Polish economy, especially in the research and development sector. A good support system for gifted pupils (and students) can also limit the negative phenomenon for the Polish economy of highly qualified people leaving the country (the “brain drain”).

**Of increasing importance in governmental activities is also the integration of children who have experienced migration.** Towards this end, funds are foreseen to help integrate newly arrived migrant children and to reduce the number of such persons who drop out of education. These measures include enabling the development of preparatory classes for pupils coming from abroad (both Polish citizens and foreigners), providing them with individual support and employing additional teachers. These activities should be implemented, among others, by strengthening the involvement of local authorities in developing educational opportunities for children who have experienced migration and increasing the support offered by schools. The difficulty in undertaking activities in this area is the lack of data on the number of migrant children who have successfully completed subsequent stages of education, as well as monitoring data on the outcomes of teaching children from this group. This prevents a reliable diagnosis to be made on the development of skills by migrant children in Polish schools.

**Changes in the reform of vocational education are aimed at enabling more flexible cooperation between schools and employers, as well as introducing mechanisms for the professional development of teachers directly with the future employers of students.** One of the factors underlying the introduced reform was the disturbing number of unemployed vocational school graduates. In the first quarter of 2018, the highest percentage of unemployed persons seeking their first job were graduates of vocational upper secondary schools (28%) and basic vocational schools (20%) (GUS, 2018k).

The introduction of a two-stage sectoral vocational school in place of basic vocational schools, i.e. a 3-year first stage sectoral vocational school and a 2-year second stage sectoral vocational school, is intended to ensure the permeability of vocational education in the school system, as well as the opportunity to acquire, in various forms, additional skills useful in the labour market. Reformed vocational education will also create new opportunities for graduates to plan and build their careers and contribute to an increase in the number of students enrolling in vocational education and training schools. Other action plans in this sector relate to increasing the involvement of employers in the training and examination process, promoting apprenticeships in actual working conditions and improving the accessibility and effectiveness of vocational education, also among adults.

**A way of developing the potential of students is learning through practice. In this respect, the impact of employers on the model of the vocational education system is particularly important.** New sectoral education (first stage sectoral vocational schools, second stage sectoral vocational schools, technical schools and post-secondary schools) is to be based primarily on cooperation with employers, particularly in establishing sponsored classes, preparing curriculum proposals for the profession, implementing vocational education, equipping workshops or providing school shop equipment, organising professional examinations, as well as implementing vocational counselling and promoting vocational education. As a result, the integration of education is also likely to increase, as so far general, vocational and practical education and internships with an employer were distinct, separately functioning segments, poorly integrated with each other. What is more, employers are to play an important role in providing teachers and

trainers with the possibility of completing internships in enterprises, and thus contribute to increasing the professional competences of teaching staff.

**At present, vocational training does not optimally prepare young people to enter the labour market.** The challenge, and at the same time the goal, of vocational education reform is to create a modern and attractive education system for students and their parents. The key is to gain widespread trust in the quality of the teaching and learning resulting from the educational offer. On the one hand, vocational training is to be based on the acquisition of skills that can be immediately used by graduates in the labour market and, on the other hand, for the development of key competences. This requires vocational school teachers to be constantly following civilizational, economic and digital changes.

**Despite the increased interest in vocational secondary education, the proportion between students of general and vocational schools is not changing.** The ongoing demographic changes, especially the decline in the population aged 16–21, have had a huge impact on the number of students at this level of education over the past two decades. In the last few years, the share of students in basic vocational schools decreased, with a noticeable increase in the number of students in general and vocational upper secondary schools. Therefore, young people are primarily choosing those schools that will prepare them for the *matura*, which allows them to continue their learning in higher education institutions. Meanwhile, the share of students in basic vocational schools aged 16–18 in relation to the total number of persons in that age group was 12.6%. In the 2016/2017 school year, compared to the previous year, the number of students in basic vocational schools for youth dropped by 7% (GUS, 2017d). This may be the result, among others, of the high level of unemployment of vocational school graduates, especially those from the basic vocational schools, and the lower effectiveness of vocational education, factors discouraging students from applying to this type of school. A small percentage of vocational school students begin working in the profession in which they trained. Another challenge is the poor preparation of graduates, especially from basic vocational education, for lifelong learning.

**The limited availability of reliable labour market analyses taking into account the local context, as well as the insufficient use of existing analyses, affect the mismatch between the educational offer of schools and the needs of the labour market.** It is not uncommon that the vocational education offer is not the result of an analysis of labour market needs, but rather of the availability of teaching staff and a view towards keeping education costs low. In addition, the potential of drawing on the practical knowledge resources of employers is not sufficiently used. To meet these challenges, an analytical tool was developed by the Educational Research Institute, which comprehensively considers all the factors affecting the shape of the supply and demand of labour in the long-term perspective. The concept of the tool is a direct response to the changes taking place in the vocational education system in terms of achieving the best adjustment to the requirements of a changing labour market. The basis of the tool is the Model Analysing the Demand for Occupations (Model Analizy Popytu na Zawody – MAPZ), which uses various sources of information, including data from the GUS survey on the labour market demand for graduates educated in the occupations taught in sectoral vocational schools, data from the Social Insurance Institution on social security, and data from the Educational Information System. The tool also takes into account the results of the Study of Human Capital, as well as the opinions of the Sector Skills Councils and the Competence Programme Council, as well as the opinions of the relevant ministers for sectoral vocational school occupations.

**Due to its open structure, the Educational Information System (SIO) can be modified and expanded.** SIO includes a list of schools and other educational institutions (including the costs of operating them), a list of teachers (including: salaries, qualifications, classes taught) and data on students and graduates, among others, by professions/qualifications



taught in the education system. This means that SIO data can be included in the proposed system of diagnosing skills needs. These data may be of particular importance for forecasting, because they show not only the number of graduates in individual professions, but also the number of students in individual classes according to occupation/qualification, which allows very precise estimates to be made of the inflow to the labour market of graduates with specific skills in the perspective of up to five years (in the case of vocational upper secondary schools). SIO also allows the potential to be determined of education system institutions to teach specific occupations/qualifications as a result of the information on teachers' qualifications and the didactic resources of the schools. These data do not yet include information about the results of journeyman examinations.

**The task of the school is to prepare students for choosing their educational path and profession.** Effective career counselling and vocational education provided in school play an important role in the process of making educational and professional decisions. They stimulate students to ask themselves a number of questions in the areas of self-understanding, understanding the world, managing their own lives, building relationships and entrepreneurship. Career counselling is a process that begins in the pre-school period and is continued at subsequent stages of education. It consists of undertaking activities to support children, pupils and students in the process of identifying professional interests and predispositions, preparing them to choose the next stage of education and profession. Career counselling is systematically strengthened through legal, organisational and methodological solutions.

**The noticeable trend of the aging of the teaching staff (the average age is 43) requires the recruitment of young staff and developing an attractive offer of professional development.** The need to raise the attractiveness of the teaching profession drew the attention of the European Commission and the Council of the European Union, which stressed that making teaching a high status profession in society should be a strategic direction of actions to be undertaken by individual European Union countries (European Commission, 2010). A serious challenge facing today's European countries, including Poland, is attracting the best candidates to the teaching profession and the professional development of older teachers.

**The level of teacher education, the requirements of universities in educating teachers are being significantly increased.** Out of concern for the quality of the preparedness of pedagogical staff, only those universities that conduct research and use the latest scientific achievements in the field of teacher education and student education will be authorised to educate teachers. Educating educators and teachers is to be closer to practice, and individual time devoted to educating future teacher is to be greater than before.

**As it follows from the Act of January 26, 1982 – the Teachers' Charter (Journal of Laws of 2018, item 967, as amended), a teacher is obliged to improve professionally, in accordance with the school's needs.** Financing for teachers' professional development is used for the organisation and provision of: methods consultations for teachers; support to schools and facilities; cooperation and self-education networks for teachers; training courses, methods and subject area workshops, seminars, training conferences and other forms of professional development for teachers, as well as the preparation of training and information materials. Out of concern for the quality of teachers' improvement, continuing education institutions are required to be accredited by the school superintendent, confirming that the given institution ensures a high quality of teacher training programmes. An important role in improving teachers' development is played by activities implemented under the Erasmus+ Programme, i.e. the programme of the European Union envisaged for 2014–2020 in the fields of education, training, youth and sport, based on the achievements of European educational programmes that have been operating for 25 years. In order to attract and retain the best

prepared teachers in the profession, it is worth placing more emphasis on strengthening the incentive system. Activating motivation is one of the tasks required to improve the quality of work.

**The suitability of the forms and content of the improvements used to meet the needs of schools, teachers and, above all, students is still unsatisfactory.** Thus far, research shows that teachers assess the impact of training on their work in school as moderate, especially in the area of child development and psychological skills, which include issues pertaining to relationships with students and parents, coping with their problems (Hernik et al., 2015). There is also a lack of good continuing education offers (internships/apprenticeships) for teachers taking place in enterprises, and teachers' salaries compared to earnings in business do not attract specialists (non-teachers) from the labour market despite the abolition of limits on the wages of practice teachers. The professional responsibility of teachers for child/student development and their effective preparation for didactic-educational-care work are the key premises (apart from the formal requirements resulting from pedagogical supervision) for the ongoing monitoring of the core curriculum.

**Teachers still use the enormous potential offered by information and communication technologies (ICT) in the education of skills – both subject-related and key – to a limited extent.** Teachers do not question the attractiveness of digital technologies, but many of them approach ICT with reserve in using it in their daily work. Although 90% of teachers declare that they use digital technologies in teaching, the so-called passive learning methods dominate. A typical lesson using digital educational technologies is generally a frontal, collective method, where the teacher uses the equipment and the students are the passive recipients of transmitted information (Plebańska, 2017). For many teachers, information and communication technologies consume valuable teaching time, including teaching the material and preparing for the examinations. Teachers still use ICT to a limited extent to communicate with pupils' parents, as well as with other teachers or schools. The National Education Network project, i.e. high-speed Internet for schools, supports changes in the way pupils are taught by including and using the educational resources available on the internet, and contributes to the development of new forms of education and the acquisition of digital skills by students. Changes in this direction are also supported by training projects for teachers launched under the Operational Programme Digital Poland.

**The continued dominating practice in school of educating by transferring and remembering knowledge generates relatively passive students, and thus does not promote cognitive independence and hinders the development of independent thinking and more complex skills among students.** The new core curriculum strongly emphasises the use of the project method. However, there is still a lack of adequate teacher preparation for student-oriented learning based on learning outcomes and understanding the differences between this approach and the traditional programme-based system. Ineffective teaching methods prevail among teachers of all subjects in various types of schools, they avoid working in groups and in pairs, and do not promote the independence and creativity of students. The need to transfer a massive amount of information to all students in a fixed time period means that in the didactic practice of formal education, activation methods requiring the flexible use of time and work in small groups of students are relatively rarely used. This disadvantage in teaching may become exacerbated by the reception of the previously obligatory core curriculum – with its insufficient attention to elements emphasising the key significance of skills (Federowicz, Choińska-Mika, Walczak, 2014).

**The main deficit of education, especially formal education, is manifested in the dominance of detailed content and requiring students to execute relatively simple and routinised skills.** With such an approach in educational practice, the development of complex skills, and above all, the skills of reasoning and independent thinking is placed on a back burner. It also seems to be dangerous to assume that complex skills should not be developed in the initial



stage of education. The challenge is to strengthen what the child comes to school with, as well as to incorporate pupils' experiences outside of school. As studies at the Educational Research Institute have shown, formal education still does not place enough emphasis on reaching the incremental teaching aims and accumulating learning outcomes – complex skills are acquired in varying degrees of advancement, which means that they should be gradually deepened at each stage of education. Little emphasis is also placed on shaping the skills of learning and a positive approach to lifelong learning, which would facilitate improving the level of competences throughout life, and, as a result, lead to educational and professional success in the future.

**Until now, the examination system was too focused on confirming knowledge and simple skills, it also contained rather poor sets of types of test items.** For the most part, they test and reward convergent thinking. The skills of divergent thinking, that is, providing different, alternative and correct solutions to the same problem, which is the basis of creativity, are not adequately rewarded. An additional stimulus for creating solutions that reward creativity may be the appearance of a module for creative thinking for the PISA 2021 study. Exercises solving tasks of a specific type cause a student's thinking to become stiffened, and his/her actions may become routinised, which can result in the gradual avoidance of creative thinking. The changes introduced in vocational examinations are aimed, among others, at confirming practical knowledge. From September 1, 2019, students attending basic vocational schools, sectoral vocational schools and vocational upper secondary schools will be required to take a vocational examination for each qualification. As of 2020, the written part of the vocational examination will be conducted on-line, and the test items of the practical part of the examination for selected qualifications will be made public.

**Children and youth have varied access to the educational offer.** In relation to primary schools (and also to lower secondary schools before), there are clear differences by community in the number of interest groups organised by schools – more of them, and as a consequence, a more diversified offer, are available to students in city schools. Despite these differences, the proportion of students taking advantage of extracurricular activities is basically the same in both compared communities. This means that the interest of school children and youth is the same regardless of the school's surrounding community, although the offer available to students of rural schools is poorer compared to their peers. Research indicates that the most common reason for not participating in extracurricular activities is the lack of felt need, lack of interest in the available offer and lack of access to activities in the declared area of interest. This most likely relates to the low cultural capital of pupils, failure of parents to see the benefits of having their children participate in additional activities, as well as the varied availability of extracurricular activities in the specific community where they live, resulting, among others, from the limited financial capabilities of parents (in the case of attractive classes that have a fee) and the organisers of such activities.

**According to data collected from Polish schools in the Educational Information System, with each year, increasingly greater numbers of children certified as needing special education are attending school.** The education of disabled students certified as needing special education is organised on the basis of an individual educational and therapeutic programme (IPET). The teacher is obliged to work closely with the parents of special education needs children, and the parents of such pupils must have direct access to their child's teacher and information about their child's educational progress and school performance. In addition, legal solutions relating to the individualisation of the learning process and the flexibility of this process are implemented. With a view towards social inclusion and the active participation of students with a low level of intellectual disabilities in the labour market, five auxiliary professions were established as of September 1, 2017 in the classification of vocational education occupations: locksmith assistant, carpenter's assistant, mechanic's assistant, tailor's assistant, and hairdresser's assistant. Textbook publishers are

required to prepare versions of their publications adapted to the needs of students with disabilities. In addition, a team was established to develop a model for educating students with special educational needs. Work is also underway on a new model of diagnosing students based on the use of the International Classification of Functioning, Disability and Health (ICF). Its aim is to quickly identify a child's needs and determine the type of required support.

## 6.3. HIGHER EDUCATION AND SCIENCE

**In the last two decades, there has been unprecedented development in higher education in Poland.** The share of the population aged 30–34 that has successfully completed higher education is regularly increasing, and over 3/4 of persons with higher education have a master's degree. In comparison, the vast majority of adults in EU countries with similar or higher achievements in access to higher education have at most a licentiate degree.

The percentage of university graduates increased from 25.2% in 2000 to 46.4% in 2017 (in comparison with the same change in the EU of 22.4% to 39.7%). The share of the population aged 30–34 that successfully completed higher education in 2016 was 44.6%, and thus the national target for the successful completion of higher education by 45% of the population aged 30–34 has already been achieved in 2017 (GUS, 2018).

**The number of persons in postgraduate studies is constantly growing.** Compared to the previous year, the number of these persons increased by 6 400 in the 2016/2017 academic year, amounting to 158 000 (of which 84 000 persons were studying at public universities and 73 900 at non-public universities). Women accounted for 72.8% of all students who completed postgraduate studies. Pedagogy, business and administration, and medical studies (GUS, 2017f) were the most popular fields among postgraduate students. The inconsistent quality of postgraduate study programmes remains a challenge, including their limited focus on the individual needs of students in the study programme, as well as the time, manner, and location of the education (Poteralski, 2013).

**The government has begun a reform of higher education in order to improve the quality of higher education and research in Poland and to better adapt the sector to the realities of the labour market.** The Minister of Science and Higher Education announced a new strategy for scientific excellence, modern higher education, partnership with business and the social responsibility of science, which includes the following three elements:

- Constitution for Science (systemic changes in higher education, including distinguishing research universities and establishing a National Academic Exchange Agency);
- Innovations for the economy (commercialisation of science and partnership with business);
- Science for You (a social responsibility programme for universities and research institutions including initiatives such as: the University of the Young Explorer, Naukobus [Science Bus], and support for universities of the third age).

These initiatives are to contribute in particular to overcoming the fragmentation of higher education, broadening the teaching offer, greater mobility of researchers, growing social involvement of universities, and strengthening the management and autonomy of these institutions. The reform also foresees simplifying the university funding system and reporting, as well as reorienting universities' evaluation processes into a system promoting teaching quality and

developing research. Until recently, the funding formula for higher education and research institutes encouraged the admission of a large number of students and doctoral students – the more students enrolled, the greater the amount of subsidies received by the units. In 2017, a new algorithm for the distribution of the (basic) education subsidy for public higher education institutions was introduced, together with a quality indicator promoting teaching accessibility, which establishes the optimal proportion of students to the teaching staff (11–13 to 1).

**The need for the greater internationalisation of Polish higher education institutions is now a permanent element of the debate relating to the demographic changes of Polish society and competition for the foreign pool of talents.** The proposals for changes are aimed at increasing the internationalisation of higher education institutions in the country. The establishment of the National Academic Exchange Agency is to support the internationalisation process by developing a scholarship offer, encouraging foreign students to study in Poland, and informing them about the opportunities available, as well as by promoting the mobility of teaching and research staffs. The Agency's task is also to undertake activities aimed at preventing the emigration of well-educated people as well as facilitating the return of outstanding Polish scientists from abroad.

In the 2017/2018 academic year, over 72 000 foreign students studied in Poland, over 6 900 more than a year earlier (an increase of over 10%). Since 2005, the number of foreign students has consistently increased in Polish higher education institutions, currently constituting 5.6% of all students in Poland (GUS, 2017g).

**The quality of the education offered by Polish higher education institutions is reflected in its attractiveness to foreigners.** The low position of universities in international rankings, average international mobility of scientists, small number of prominent foreign scientists lecturing at Polish universities, and the small number of study programmes at the highest world level and conducted in English do not encourage foreign students and researchers to take advantage of the offer of our universities. Poland has one of the lowest percentages of foreign students from EU countries among all foreign students. This is due, among others, to the unsatisfactory coordination of activities to internationalise education and research included in universities' development strategies, low awareness of the need for international exchanges among academic and administrative staff, and hence, poor quality services for both international research programmes and students. Currently, the majority of institutions operating in the higher education system have sections in their development strategies devoted to the internationalisation of studies, promotion and the recruitment of foreign students.

**The new directions of actions emphasise strengthening the links between the world of science and business and focusing on the commercialisation of research.** Higher education institutions are obliged by law to cooperate with representatives of their social and economic communities when designing and operating education/study programmes – and they use these regulations extensively and rationally. From the point of view of the economy and the labour market, in the case of studies with a practical profile, the change eliminating the previous system of determining the staffing minimum will significantly increase the link between the university and business and the economy. Due to the abolition of the minimum staffing level and the introduction of the provision that at least 50% of class hours must be provided by academic teachers employed at the given university as their main place of employment, universities offering studies with a practical profile will have much greater opportunities to recruit specialists and practitioners. As a result, these universities will be in constant and direct contact with business, which will contribute to the practical achievement of learning outcomes by students. Linking practice with science will be the element integrating the learning process and will enable graduates to be prepared to work in the professions of the future. The

Constitution for Science clearly defines the possibility for universities to conduct dual education, where a portion of the ECTS points (European Credit Transfer System) can be attained with an employer, based on a contract with that employer. This type of education combined with a change in the scope of required practice – an increase in its number of hours to 6 months – will increase the practicality of studies and result in an even broader link between science and business and the economy.

**The “Implementation Doctorate” Programme of the Minister of Science and Higher Education introduced in 2017 is to contribute to a stronger connection between the scientific community and the socio-economic environment.**

This initiative assumes that the doctorate will be undertaken in the dual education system: the doctoral student will work on a dissertation in an academic unit (university, research institute) and in an enterprise under the double supervision of a promoter at the academic unit and an employee experienced in conducting research and development in the enterprise.

Activities are also being undertaken to encourage universities and research institutes to obtain external sources of financing and to commercialise research. This is intended to increase the number of research projects commissioned by the industrial sector. Pursuant to the Act of 25 September 2015 amending certain acts in connection with supporting innovation (the so-called first Act on Innovation), 2% of institutional funds for research and development must be allocated for this purpose. The first and second acts on innovation also significantly increased tax deductions for R&D expenditures – as of January 1, 2018, 100% of eligible costs can be deducted (and companies with the status of a research and development centre, even up to 150%). In addition, the government plans to increase its commitment to effective commercialisation in the institutional and individual assessments that determine the funding of research. Currently, weak links between business and research institutions limit the long-term involvement of the private sector in research and development. In 2015, only 10% of innovative companies in Poland cooperated with universities, and financing by enterprises of research conducted by the academic community is one of the lowest in the European Union (European Commission, 2017). Many academic technology transfer centres are struggling with problems of underfunding and having difficulties in attracting and retaining qualified staff. In turn, numerous innovation support programmes implemented by local and national government agencies remain scattered and lack strategic direction.

**In order to strengthen practical education to enable the effective development of students’ competences, the Act of 20 July 2018 – Law on Higher Education and Science introduces two paths of education in studies with a practical profile – the obligatory 6-month practical training or dual education studies.** The Ministry of Science and Higher Education in cooperation with representatives of academia and employers has developed a framework for conducting dual education studies, aimed at popularising alternative education in universities and companies. In order to prepare the university for implementing the above-mentioned regulations, projects were launched under Operational Programme Knowledge Education Development aimed at popularising dual education in universities and companies and enabling the provision of comprehensive support, among others, in the field of professional skills and soft skills development of students, as well as high quality internship programs.

**The development of skills important from the point of view of the labour market is also a main objective of the Competence Development Program addressed to students of all disciplines who want to develop skills important in the labour market (e.g. vocational, communication, interpersonal, linguistic, IT and analytical skills).** The activities under this programme, implemented since 2014, include certified classes and workshops, additional practical activities implemented in the form of projects and study visits in enterprises, also organised in cooperation with foreign

institutions. To help keep pace with technological progress and ensure relevant practical experience for students, innovative teaching methods, digital technologies, modular training and interdisciplinary education are also promoted along with competence development.

Other activities aimed at better adapting higher education to social and economic needs include competitions for new study programmes and increasing the competences of university teaching staff, supporting academic career offices, and launching a nationwide tracking system of the professional careers of higher education graduates (ELA) in 2016.

**An important change introduced as of October 1, 2014 in an amendment to the Act – Law on Higher Education and Science is also the reform relating to the confirmation of learning outcomes at universities.** Higher education institutions are authorised to recognise knowledge and skills acquired outside the higher education system, for example, during courses, professional activities or volunteering, and to validate them for a study programme. This opens the higher education system to practitioners who want to change their profession or continue their education. However, the scale of using this option remains limited.

**Introducing the national qualifications framework (NQF) in the higher education system was also important for shaping skills.** The amendment to the Act on Higher Education adopted by Parliament on 18 March 2011 meant that as of the academic year beginning October 1, 2012, the national qualifications framework became the mandatory basis for developing study programmes at higher education institutions. The NQF for higher education is a specific method of describing the education offered to students by Polish higher education institutions. The descriptions are formulated in the language of learning outcomes, that is, they present the requirements that a student should meet after completing his/her studies within a given learning cycle. Even more, the common European system allows the diplomas awarded at various universities throughout Europe to be compared.

**As in the case of education at lower levels, persons with a lower socio-economic status have limited access to high quality education.** Parents' education still has a major impact on participation in higher education: over 80% of persons aged 25–34 whose parents had completed higher education also obtained a university degree (OECD, 2016). In addition, persons with a lower socio-economic status are at a disadvantage when it comes to accessing high quality primary and secondary schools, and it is more difficult for them to be accepted at a highly reputable public higher education institution (Arnhold and Kwiek, 2011).

**The limited number of sources of information on the state of skills in the case of students and graduates of higher education institutions means that knowledge in this area is incomplete.** There is no database gathering information on the skills acquired by students of particular majors at all higher education institutions available in a form allowing analyses and comparisons to be made.

## 6.4. THE NON-FORMAL EDUCATION AND INFORMAL LEARNING OF ADULTS

**For several years, the idea of lifelong learning has become one of the main priorities of public action, and Poland's education is gradually opening up to non-formal education and informal learning.** Since September 2012, the

system of external vocational examinations allows people to attain qualifications based on their knowledge and professional skills acquired outside vocational schools. In 2016, Poland implemented the Integrated Qualifications System, which includes the Polish Qualifications Framework and the Integrated Qualifications Register (IQR), finalising the approach based on learning outcomes in general, vocational and higher education systems developed in recent years. An important element of this system is the ability to validate learning outcomes obtained outside school and higher education systems, including through non-formal education and informal learning. It is assumed that this will be accompanied by the implementation of generally binding validation principles and standards, which will also apply outside the formal education system. By expanding the ability to accumulate and transfer learning outcomes obtained in different contexts, these changes will allow greater flexibility in attaining further qualifications and adapting learning paths to different conditions and circumstances in life.

The changes noted above, as well as other directions of reforms referred to in this document, are part of the lifelong learning policy set forth in a document entitled “Lifelong Learning Perspective”, adopted by the government in September 2013. The strategic policy objective in this area is to prepare children and youth for lifelong learning, and adults – to develop skills and improve competences to meet professional, social and personal challenges. The “Lifelong Learning Perspective” emphasises the need for the greater openness of formal education to other forms of learning at different stages of life, the integration of the national qualifications system, and a new approach to adult education.

**Poland’s experience in using models of support for adult learning based on an analysis of participants’ educational and training needs is still quite modest.** In Poland, the tradition of applying individual assessments of basic skills and other key competences (outside the education system) is still relatively short. There are still too few commonly known and generally available places where one can obtain the advice of an experienced specialist and determine, after one’s skills have been identified, what needs improvement, which skills are lacking and how to address this. Free services of this type are offered to adults, both unemployed and job seekers, by County Labour Offices (PUP) and Regional Labour Offices (WUP).

Despite the dynamic development of the non-formal education sector in recent years, the offer of adult education that takes into account the specificity of how this age group learns remains limited. The target groups of the actions taken most often lack the large number of economically inactive people and employees – especially of small and micro-enterprises – with low qualifications.

**Improvement of the basic and general skills of adult Poles and the professional and social activation of people aged 50+ are among the strategic directions taken to improve the quality of human capital designated in the Strategy for Responsible Development.** An example of this are the currently implemented projects in Poland known as “Local Knowledge and Education Centres” (LOWE), addressed to adults with low skills living in disadvantaged areas. As part of “A Chance – New Opportunities for Adults” project implemented since October 2018 by the Foundation for the Development of the Education System, various models of support for adults with low basic skills will be tested and developed. As part of the dissemination of the concept of lifelong learning, two programmes were also implemented, one for persons aged 50+ (also 45+), with particular emphasis on their professional activation, and the other for the 60+ age group – a program focused mainly on the social activation of participants. The implementation of both initiatives included supporting the development of educational offers for people of this age. An important issue from the point of view of adult education is also the support offered under the European Social Fund (ESF) at the regional level.

**The participation of adults over the age of 25 in education after completion of formal education remains low, contrasting with the high level of the education indicator of at least the secondary or basic level (currently sectoral)**



**among adults aged 25–64 years in developed countries.** Research indicates that among the main reasons for this phenomenon are a negative school experience as well as a low awareness of the benefits of lifelong learning and the possibilities of using various proposals to develop skills.

**Understanding – and frequently offering it mainly to adults – non-formal education as a learning experience similar to school education reduces the motivation of people to undertake learning and their readiness to participate in this form of education.** The passive form of transferring knowledge with a clearly defined division of roles into “lecturer” and “listeners” discourages adults who have been “freed” from school desks and do not want to return to them anymore. It also contradicts the idea of non-formal education, which due to the active methods of teaching and work, is called learning through practice. A demotivating factor for learning at later stages of life is also the use of assessment methods that rank learners, typical of formal education. As a result, according to data from the OECD study on adult skills, over 60% of Polish adults have no intention of participating in adult education.

**The development of non-formal education depends to a large extent on popularising organised forms of learning in the workplace or in close connection with work – employers play an important role here.** The current, relatively low level of investment in employee development especially concerns unskilled and low-skilled people employed in simple jobs in the sector of small and medium-sized enterprises (SME). This is connected to a still low awareness among employers of the long-term benefits of raising employee competences in the longer perspective. Most small and medium-sized enterprises do not see training as an important factor that directly translates into the functioning of enterprises and market position, and they also are unable to assess the training needs of their employees. This situation may change, because due to the increasingly frequent lack of employees, some employers have strongly reconsidered the belief that the benefits of investing in employee development are insufficient. As part of the reform of labour market institutions being implemented since 2014, the National Training Fund (KFF) was established, constituting 2% of the Labour Fund, intended to co-finance the continuing education of employees, including low-skilled persons and employers.

**Employees, especially those with low qualifications, are not convinced that learning will increase their chances of changing and improving their life situation.** Due to the barriers to both horizontal and vertical promotion, which this group often encounters, they do not see measurable benefits from raising their competences and remain educationally passive. Such an attitude about education may also diminish the need to acquire general skills.

**The main activities aimed at supporting the lifelong learning of employees and employers include financing their continuing education as well as providing access to a database of development service offers.** Three-party training contracts can also be developed at the request of an employer between the county official, the employer and a training institution. The employer agrees to hire an unemployed person after he/she completes training. Persons sent for training should be trained in accordance with the specific needs of the employer concerned, who in turn is obliged to employ them.

The Development Services Database was launched to support the demand mechanism for the selection and financing of development services for enterprise employees. This is an open website containing development services offers, including: training, vocational courses, counselling, postgraduate studies, mentoring or coaching. The database makes it possible to find and select development services corresponding to the needs of learners, and in the absence of a suitable offer, it provides the possibility of ordering a “tailor-made” service. It also includes a mechanism enabling participants to evaluate the services.

**Despite the growing importance of issues relating to the development of adult skills, the scale of existing activities and their results remain limited.** Policy in the field of adult education requires greater coherence, setting clear goals at the national level, and moving beyond a departmental, narrow approach to organising activities that activate adults. An important step in this direction was the creation of the Inter-ministerial Task Force for Lifelong Learning and the Integrated Qualifications System.

A barrier to the development of adult learning after formal education is also the lack of coherence between the qualifications attained in schools and the higher education system and the qualifications awarded outside these systems. This has an adverse effect on the possibility of offering more flexible forms of adult education. In addition, due to the relatively early stage of IQS implementation, the promotion of procedures to validate skills acquired outside the formal education system remains limited, and the coordination of methods to assess and recognise competences outside the education system is still a challenge.

**The relatively low number of studies on non-formal education and informal learning in Poland is connected with the issue of the insufficient identification of the needs of adults as learners.** An awareness of the specificity of adulthood is also relatively low. Considering the huge diversity of this social group due to the developmental stages in life (from early adulthood to old age), the limitations mentioned above mean that non-formal education and informal learning are perceived as inadequate and ineffective.



## 7. THE SUPPLY AND DEMAND FOR SKILLS IN SOCIETY AND THE ECONOMY

### 7.1. SKILLS DEMAND

**The shortage of suitably qualified employees, resulting from a high demand for labour and a limited number of professionally active people, is becoming one of the most important barriers to economic growth in Poland.**

Personnel shortages are currently indicated by entrepreneurs as one of the main challenges of operating their businesses. According to data from the Labour Market Barometer for the first quarter of 2018, more than half of employers (50.5%) declared having difficulties in recruiting employees (Work Service S.A., 2018). Together with changing skills needs, the shortage of qualified employees in Poland has reached its highest level in 12 years, and the scale of this phenomenon has reached a level exceeding the global rate (ManpowerGroup, 2018). According to domestic and foreign studies, the shortage of professionals in the country and the world is deepening and transforming into a long-term crisis, which will increasingly limit economic growth. Supplementing the shortage of professionals is therefore crucial for the future situation of employers and the condition of their enterprises (Deloitte, 2018).

**The demand for employees in the labour market particularly concerns skilled workers.** Employers looking for qualified engineers, specialists, manual workers, drivers, salespersons and service employees report an ongoing problem in recruiting candidates for these types of positions. The largest staffing needs are in the following sectors: production, construction and logistics, where at the end of the third quarter of 2017, almost half of all unfilled jobs in the economy were recorded. Even more, the vacancy rate grew by 53% over a year in these industries (Barometr zawodów, 2017). Staffing problems also occurred in the trade and service industries. There is also a shortage of professionals in accessing information and digital services.

**A reduced risk of unemployment is still one of the significant benefits resulting from participation in higher education.** Graduates of higher education institutions also have higher salaries. In the case of the group aged 25–64, the unemployment rate in 2017 of persons with higher education was 2.2%, compared to 4.7% among persons with secondary and post-secondary education, and 11% in the group with an education below the level of secondary school (according to Eurostat data).

**Research shows that as the duties performed in a job become more complex, candidates applying for such a job are expected to have higher education levels.** Employers expect primarily a Master's degree from candidates for managerial and specialist positions. In turn, mid-level employees, office workers, sales staff and service employees are expected to have a secondary education, and skilled workers as well as machinery and equipment operators – a basic vocational education. In the case of unskilled workers, employers usually expect them to have completed basic vocational education.

**At the same time, global trends indicate a decreasing demand for all work performed manually, in particular for routine operations.** Due to increasing automation resulting from technological progress, employees will increasingly be working with computerised systems that require more advanced skills. This means that people with low-level skills who previously performed these types of routine tasks manually will be at risk of exclusion from professional and social life. This problem may affect a significant number of adults, many of whom have a low actual level of basic skills.

**The Polish enterprise sector is dominated by microenterprises, which employ a large share of the labour force and seldom invest in developing employees' skills.** The share of the smallest companies in the structure of all enterprises is 96%. Most of these companies do not have departments responsible for human resource development and training and it is difficult for them to devote time during working hours for training outside the company. Among other reasons, this is why few enterprises are willing to invest in training their employees, despite the reported difficulties in finding workers with appropriate skills (PARP, 2015). This may be related to the lack of a long-term personnel policy that includes attending to employee development and a low awareness and lack of conviction about the need for this. The highest engagement in the field of staff investment is characteristic of large companies.

**The weak links still present between enterprises and vocational and higher education and research institutions make it difficult to increase the productivity of micro-enterprises operating in mature sectors.** Companies of this size employ a large part of the labour force and need support to modernise and improve efficiency. This is also a significant problem for small and medium-sized enterprises (SMEs) from the more innovative and faster growing sectors of the economy, for which skill shortages are one of their main challenges (OECD, 2018). The reform of vocational education assumes the implementation of education based on cooperation with employers. The law guarantees that the vocational education system is supported by employers, employers' organisations, business chambers or other economic organisations, associations or self-governed occupational groups, as well as Sector Skills Councils. The changes introduced in higher education and science also emphasise strengthening cooperation between the world of science and business.

**The progressive aging of professionally active persons is causing an increasing demand for working 50- and 60-year-olds, however, compared to other OECD countries, the potential of 55+ people in Poland is still not fully utilised (OECD, 2018).** Although the SME sector employs the majority of employees in Poland over the age of 50, few companies undertake activities allowing for a more rational and effective use of human resources, by taking into account the needs and capabilities of employees at this age. According to data from the survey "Attitudes of employers towards seniors in the labour market" conducted by Work Service in 2015, 76% of employers do not have development programmes adapted to people aged 50+. This is despite the anticipated significant increase in the share of this age group in the workforce, as well as lower labour costs and the possibility of benefitting from special allowances offered by the state to employers hiring seniors. This is mainly due to the deeply rooted and culturally embedded stereotypes about older adults and the lack of awareness and knowledge among entrepreneurs regarding the use of innovative practices and principles conducive to the longer economic activity of individuals. Cooperation between business leaders and employees to solve the problems relating to the lack of an appropriate approach to human resources management in companies is also a difficulty. According to business and HR leaders, Polish companies are prepared to a small extent for the trend in human capital management relating to age management (Deloitte, 2018).

**According to forecasts, most jobs in Poland will require high qualifications by 2025.** In the coming years, a slight increase in employment is expected, mainly in the logistics and transport, construction and services sectors, mostly business services (Cedefop, 2015). About 34% of jobs will be for professionals (high-level professions in the fields of exact sciences, health engineering, business and teaching), and about 15% for service and sales employees. It is expected that by 2025, the share of the high skilled workforce will increase to around 56%, compared to 21% in 2005. At that time, persons with an average level of qualifications will comprise about 36% of the workforce, compared to 53% in 2013. On the other hand, the share of persons with low or no qualifications will probably drop to below 8%.

**Having digital skills is a required condition to fully participate in society of the 21st century and provides the opportunity to benefit in different areas of life.** As a compilation of knowledge, skills and attitudes allowing for the implementation of various activities through digital technologies, digital skills are important in professional, family and civic life, both in an individual and social perspective. Their importance to every citizen, now and in the future, is irrefutable. At the same time, the level of digital skills in Poland is unsatisfactory, especially among people over 45 years of age. According to the results of The Digital Economy and Society Index (2018), Poland is in 25th place in this respect among European Union Member States (European Commission, 2018c). In turn, Eurostat data shows that as many as 54% of adults in Poland do not have basic digital skills. In the face of emerging new professions and the need to constantly update the digital competences of employees in various institutions, these indicators are not only worrisome, but also compel us to take specific actions.

## 7.2. SKILLS SUPPLY

### The skills of children and youth

**International comparative studies, such as PIRLS, TIMSS, PISA, ESLC, indicate that the level of skills (both in science and the humanities) of Polish students should be assessed positively.** Polish respondents are located in the upper rather than the lower sectors of results. The knowledge of foreign languages – mainly English – is somewhat worse in this respect.

**The results of national surveys and the analysis of exam results show that students perform relatively well with simple skills, but – despite progress – have difficulties with complex skills.** It can therefore be concluded that a basic limitation of the effectiveness of the modern Polish school is due to an unwritten premise that more complex skills are accessible to the beginning pupil to a very small extent. They are acquired at a later stage, after intensively exercising elementary skills. The challenge in this area for the education system is to produce ways to develop students' reasoning from an early age together with the gradual development of the conceptual and formal apparatus. This is crucial, among others, due to the growing demand for skills to perform non-routine tasks, increasingly important in relation to future market needs.

**The relatively low results of youth in problem solving indicates the need to focus more on this area.** This is critical from the point of view of supporting the development of skills required to perform non-routine tasks, increasingly more important in the future. Young residents of Poland also poorly fare in using ICT and in knowing a foreign language. The least satisfactory are the education outcomes in secondary schools, where significant differences persist in the achievements among students of various types of schools at this level. Moreover, the impact of social background on educational attainment has not changed significantly over the last decades. Both in primary and post-elementary schools, particularly poor results are observed among students from rural schools and families with a low socio-economic status (differences corresponding to three years of education).

**Too little attention is paid in formal education to shaping social competences as well as their related attitudes.** Rewarding individual progress, widespread in the Polish education system, discourages cooperation, while research indicates that participants performing a task in a group achieve better results than persons performing the task individually. The development of social competences is also not served by the still dominant teaching style in Polish schools, which does not sufficiently take advantage of the potential of group work. The dominance of control, assessment and requirements over support, cooperation and trust is evident in the relations between teachers and students, between

management and teachers, as well as between supervising institutions and the school itself. An attitude of competition dominates in many schools, hindering the acquisition of important social skills, including the development of students' readiness for dialogue and establishing good relations within and outside of the school. Such an environment for the teaching and learning process strengthens the external and usually negative motivation of students to learn and makes it impossible to create a climate based on openness and trust, conducive to both the effectiveness of student learning and the comfort and professional satisfaction of teachers and directors.

**The results of the Study of Human Capital (PARP, 2015) indicate that today's youth is significantly lacking in social competences and the characteristics guaranteeing an appropriate quality of performed work.** The Study of Human Capital reports repeatedly emphasise that young people entering the labour market lack specific soft skills, such as: maintaining contact with clients, communicativeness, personal culture, and self-presentation skills. Employers also note significant deficiencies in the sense of responsibility, discipline, honesty, credibility, industriousness, diligence and precision among future staff. They also point to gaps in the professional preparation of many job candidates, including a low level of basic skills, often identified in the PISA and PIAAC surveys. Interestingly, the graduates themselves highly assess the usefulness in their jobs of the knowledge and skills acquired at schools and universities (PARP, 2017).

**An accurate and reliable diagnosis of the skills of children and youth is hampered by the lack of adequate research data.** The most useful sources of information on possessed skills relate to primary school pupils. Somewhat worse – as far as data sources are concerned – is the situation of the skills of general and vocational upper secondary school students in the general subjects. There is a lack of knowledge about the level of mastery of specific skills in individual subjects at particular levels of education. On the basis of available data sources, relatively little can be said about the professional skills of students and graduates of vocational schools. There are no ready-to-use – for planning and evaluating public policies – data describing the type and level of skills acquired by children and youth in the course of non-formal education. The Educational Information System only has data in several general categories on the number of participants of extracurricular activities offered in schools, which makes it impossible to draw conclusions about the skills acquired in them.

The least amount of information sources exist for higher education students and graduates – employers do not have a reliable and standardised source of information on the skills acquired by this group of learners. A database is lacking that would gather information in a comparable form on the skills acquired by students of particular study programmes at all universities.

## The skills of adults

**One of the biggest challenges for the Polish economy in the coming decade will be the provision of relevant skills required in the labour market, especially in the long-term perspective.** According to the demographic forecast of Eurostat (2014), by 2040, the number of people of working age in Poland will fall by 4.62 million (17%) compared to 2013. Labour market specialists indicate that in 2030, employers will have problems in filling one out of five jobs of a total of 20 million. Not only will highly qualified employees be missing, but also those with basic qualifications (Zespół Analiz i Opracowań Tematycznych, 2016).

**The steady increase in the number of people working or actively seeking employment contrasts with the low level of activity of specific groups in the labour market.** Important features that differentiate passive and professionally active people are sex, level of education and – above all – age. An especially worrying phenomenon is the long-term, low

economic activity of women (in 2017, it was 48.4%, while among men – 65.2%) (GUS, 2018f). Poor access to childcare for very young children, especially in rural areas, the low popularity of part-time employment, low availability of institutional support for the care of elderly family members, are challenges, especially for women, in reconciling the responsibilities of care and professional work.

Also, older people, those with lower qualifications and disabled persons are less economically active in Poland than representatives of these groups in most other EU Member States. Poland is also characterised by a high percentage of people with post-secondary, basic vocational and general education who are not working and not seeking a paid job (27.9%, or about 4 million people compared to 6% among men and 15% among women with a higher education). The proportion of economically inactive persons belonging to the relatively small group with only a lower secondary or less education also remains high (34.9% compared to 53.7% of the EU average). The economic activity rate of people in the 25–49 age group is close to the EU average (European Commission, 2018a). **However, research indicates that the greatest potential skills resources in Poland are among the relatively unproductive employees in micro- and small enterprises (about 1/3 of employees in Poland), in particular, people with lower qualifications (OECD, 2018). The potential of persons aged 55+ is also not taken advantage of to eliminate skills deficits in the labour market.** Considering that the share of people aged 50–74 in the 15–74 age group will amount to 43% in 2030 and will continue to grow, the activation and increase of employment of this age group is becoming increasingly important. The progressive aging of the professionally active part of the population is already today causing an increased demand for working 50- and 60-year-olds. However, the employment rate in the 55–64 age group is still relatively low (46.1% in 2018). Poland ranks 30th among 35 OECD countries taking part in the “Golden Age Index” ranking, which assesses the level of using the potential of people over age 55 in the labour market (PwC, 2018). In turn, 9.9% of people in the 65–69 age group were working in 2016 (with the world average at 20%), while according to GUS, Poles of this age will become the dominant group in society in 2050 (in comparison, this share was 14.7% in 2013). Among the many reasons for this phenomenon, the following can be mentioned:

- low-level qualifications;
- lack of an adult learning culture;
- difficult access to care services for children, dependents or the elderly;
- health related problems;
- low popularity of part-time employment.

**The results of the Programme for the International Assessment of Adult Competencies (PIAAC) and information society research in Europe show that middle aged adults in Poland have a level of skills often lower than their educational level may indicate.** While youth and the youngest adults obtain results above the OECD average, middle aged adults, those over 40 years of age, and especially those over 50 years of age, attain results below this average. This particularly applies to the skills of comprehending texts (1/3 of people aged 55–65), mathematical reasoning (over 1/3 of people aged 55–65), as well as the use of information and communication technologies (almost 80% of those aged 55–65 years) – adult Poles reach a lower level than the average level of skills of OECD-country citizens in these areas. Employed residents of Poland use a computer at work less frequently and less intensively than in other countries (46% never use a computer, whereas in OECD countries, this figure is 30%). As research shows (GUS, 2014), this is due more often to the lack of a sense of needing to use a computer than from technical barriers. Such a low level of basic adult skills threatens to exclude them from the labour market and an active social life.

Research shows that about 20% of adults in Poland have difficulty understanding texts and thinking mathematically in everyday life, and the share of the adult population (16–74) with at least basic digital skills is relatively low in Poland (46% in 2017 and 40% in 2015) compared to the EU average (57% in 2017).

**People with a low level of education, who are economically and socially inactive, unemployed for a long-term and certain categories of people living alone are those who primarily have a lower level of basic skills.** These are also the people who do not have the opportunity to learn in a practical way at work or through social contacts. Low professional and social activity intensifies with age and this is an additional, strong factor in the low skill levels of older adults. This problem is aggravated by the lowest level of participation in education and training among adults who most need support in improving skills, i.e. among the less educated, inactive, older, or from small localities.

**Due to high activity rates among highly qualified employees and the gaps caused by the outflow of Poles to foreign countries, migrants are becoming an increasingly important source of new employees for companies.** According to the data of the Ministry of Family, Labour and Social Policy (2017), in 2016 and 2017, the employment of foreigners in Poland continued to increase. The number of work permits issued by the end of 2016 increased by about 94% compared to 2015, and registered declarations of intention to entrust work to a foreigner – by approximately 68%. According to GUS, the highest share in the total number of issued permits are work permits granted to Ukrainian citizens (in 2017, 81.7% of issued permits went to citizens of Ukraine). The NBP estimates that in 2015, there were approximately 1 million people legally employed (Chmielewska et al., 2016). Currently, Poland occupies a leading position among European Union countries in terms of the number of issued visas and residence permits for foreigners from third countries. However, it should be emphasised that despite the growing popularity of more permanent forms of employment among foreigners, most permits are issued for a period of 3 months to 1 year. On the basis of these data, it is difficult to estimate whether the migration of foreigners will be a long-term phenomenon, or whether the currently popular model of cyclical migration among Ukrainian citizens will strengthen. This form of labour migration from Ukraine to Poland may hinder the full use of migrants' skills and may be easily affected by changes in the relative attractiveness of employment in their countries of origin, Poland and other EU Member States (National Bank of Poland, 2017).

**Among the Ukrainians coming to Poland, well-educated people decidedly predominate: 37.7% have completed higher education and 53% have completed secondary education.** Also among all immigrants, the majority have completed higher education (40%) or secondary education (37.5%). 23.5% of working immigrants declared having higher qualifications than those required by the work they are currently performing (GUS, 2015). This means that immigrants often do work in which they are not fully utilising their skills.

**In recognition of the chance to acquire competence resources from abroad (especially from Ukraine), a number of amenities were introduced for foreigners undertaking work or study in Poland.** In May 2014, the Act of December 12, 2013 on foreigners entered into force; in 2016, changes were introduced to facilitate the employment of foreigners; in 2017, the intention to entrust work to foreigners was replaced by seasonal and short-term work permits, and from January 2018, the Act on the promotion of employment and labour market institutions was amended and a new type of permit was introduced – seasonal work. These will be available to foreigners employed in work that depends on the change of the seasons, mainly in agriculture, gardening or tourism. As a result of these activities, new immigration trends have appeared, among others, an increase in the number of young people and students coming to Poland, as well as young specialists, entrepreneurs and their family members. The observed increase in interest in studies in Poland may, in the case of an unchanged or worsening situation in the Ukrainian labour market, lead to an increase in the number of young Ukrainians permanently remaining in Poland.



**In 2017, an amendment to the Repatriation Act was adopted, aimed at facilitating the return and settlement in Poland of people of Polish descent and their descendants whom the authorities of the USSR exiled or deported.** It is expected that the introduction of the act will result in the arrival to the country of over 10,000 Poles living in the Asian part of the former USSR within the next nine years. The Act provides them with the opportunity to participate in Polish language courses and vocational courses, as well as in adaptive and integration classes covering issues relating to the education system, family support policies, social assistance, the labour market and worker rights.

**Limited knowledge about the current state of adult skills makes it difficult to plan policies in the area of developing, activating and using the skills of this age group, as well as preventing their shortages.** Information on the acquisition and level of skills certified by sectoral organisations is not available in a uniform, structured database. Also, no data collection systems exist on the qualifications attained by adults (except for Central Examination Board data on learners who passed school qualifications after attending vocational training in post-secondary schools or took the exams extramurally). There is no systematic monitoring of qualifications nor, more broadly, of the situation of immigrants in the labour market in the whole country.

### **7.3. MISMATCH BETWEEN AVAILABLE SKILLS AND THOSE SOUGHT IN THE LABOUR MARKET**

**The lack of transversal skills sought from the labour market among employees and the young people entering the labour market indicates a mismatch between education and the changing requirements of employers.** Despite many years of effort and the numerous successes of formal education in meeting the requirements of business, employers state that employees in Poland lack social-emotional, cognitive and digital skills, that is, those considered crucial in the coming decade. This shows, among others, insufficient education in the field of social competences (e.g. the ability to cooperate), digital skills and the skills required to perform non-routine tasks.

Among people between the ages of 18 and 35 who are employed on the basis of a work contract, only half declare that their job responsibilities concur with their education, while 40% of respondents aged 18–70 would like to be in a different profession than the one they are currently performing. This mainly applies to persons working in trade/services and manual labour, and to a much lesser extent – white collar work (PARP, 2017).

**Such shortages are and will be a special problem in the context of increasing the innovation of companies, primarily in faster growing sectors of the economy. Innovation mainly depends on creativity and problem-solving skills.** In contrast to the significant changes in the scope of the professional competences that are needed, the structure of the demand for transversal skills does not change rapidly with technological development. What is more, research indicates that in the context of growing uncertainty relating to the preparation of young people to work in yet unknown positions and professions, acquiring these competences during education is becoming increasingly important.

**Developing social skills, including the ability to cooperate, curtails, among other things, the persistent, relatively low level of involvement in voluntary and unpaid work for the common good.** Only 13% of Poles were members of organisations, associations, parties, committees, councils, religious groups, unions and circles in 2015 according to Diagnoza Społeczna [Social Diagnosis]. From the national and international surveys conducted thus far, it appears that – despite the general conviction about the effectiveness and the need for joint activities for the local community –

Poles, if they are already socially active, are involved individually rather than in a group and, despite the positive changes, still relatively rarely engage in volunteering or organise themselves in assistance organisations.

**Developing the skills of cooperation, and related to this, flexibility, as well as abandoning the silo mentality of an organisation, are a challenge for job positions at each level.** Research also points to the growing demand from employers for other general skills, such as verbal communication, engagement, decision making, time management, taking initiative and ICT skills. Increasingly higher requirements beyond technical and practical knowledge are being required from specialists in the exact sciences, from whom advanced soft skills are being expected with greater frequency.

**Effective planning, recruitment and the use of human resources are hindered by the lack of integration between elements of the system of diagnosing skills needs from the perspective of the labour market.** The insufficient complementarity of information in existing data sets prevents access to sufficiently precise and complete data on the current demand for skills. This is related, among others, to the lack of effective coordination of activities undertaken by educational institutions overseen by various ministries. The involvement of certain participants of the system (e.g. employers' organisations and professional organisations) is also insufficient. There is no uniform solution for the formulation of an educational offer based on reliable forecasting data, which exposes vocational education and training system actors (ministries, local governments, educational institutions) to the risk of making misguided assumptions.

**Presently, available tools for monitoring the levels of current resources and the need for professions refer to the current state of deficit and surplus professions; they do not consider social and economic trends, and especially not long-term strategies and investment plans to develop the country's economy.** These issues are to be included in the aforementioned forecast of the demand for employees in the occupations being taught in sectoral vocational schools in the national and regional labour markets, determined by the minister responsible for education and child care, and based on data from the Educational Research Institute. The concept of this tool is based, among other things, on the use of economic and educational data, including the results of existing tools monitoring the demand for professions that take into account social trends, economic needs and their supply (i.e. "Barometer of professions" study [Barometr zawodów] and employment forecasting) as well as tracking higher education graduates (the nationwide Polish Graduate Tracking System monitoring the careers of higher education graduates – ELA, launched in 2016).

**The amount of information provided directly by employers on the demand for skills is small, as is their involvement in the process of obtaining data.** In addition, existing solutions for diagnosing skills needs in Poland are based on occupations and not skills, the demand perspective, a quantitative and rather national/regional approach, rather than a sectoral approach. Basing the financing of some of the activities of a skills needs forecasting system on project solutions increases the risk that these activities will be discontinued once the funding ends. The Sector Skills Councils being established, whose task is to enable entrepreneurs from a given sector to impact educational services, are to help in defining skills needs and developing appropriate strategies.



## 8. STRATEGIC PROBLEMS RELATING TO SKILLS IN POLAND: A SUMMARY

### The challenges relating to developing skills:

- long-term domination of the learning paradigm (based on competition, control, assessment and the relatively passive role of the learner);
- still too little emphasis on developing the skills of independent, creative and critical thinking and learning at all levels of the education system;
- mismatch of the skills of people supporting others in learning (teachers, educators, etc.) to the needs of learners and the requirements of a modern society and economy;
- the low potential of the majority of Polish higher education institutions to attract and retain particularly talented students;
- unequal access to opportunities for the development of relevant skills at all stages of life;
- low participation of adults in learning, especially among older workers and people with low-level qualifications;
- little Polish experience in demand models of supporting adult learning that includes an analysis of participants' educational needs;
- limited possibilities of developing forms of learning at work in relation to broad target groups of adults: employees of inefficient companies (usually micro- and small enterprises) and professionally inactive people;
- poor promotion of the validation procedures for skills acquired outside the education system;
- still low attractiveness of vocational education for learners and teaching staff;
- limited involvement of employers in the development and implementation of vocational education and training;
- untapped potential of non-formal education, including activities conducted by civic organisations.

### The challenges relating to the skills supply:

- insufficient number of qualified employees;
- low economic activity of selected social groups (i.e. older people, less qualified people and women);
- a significant percentage of adults with low levels of professional, key, basic and digital skills, especially among older people;
- high share of higher education graduates in relation to the OECD average with confirmed deficits in mathematical reasoning and comprehending texts;

- low level of graduates' skills needed to work in today's work environment (self-organisation, professional and interpersonal skills);
- relatively low results of youth in problem-solving skills;
- outflow of people with higher qualifications to western European countries;
- dispersed and limited knowledge about the current state of the skills of children, youth and adults, as well as about skills gaps.

## **The challenges relating to the need for skills and their utilisation:**

- mismatch of skills resources to labour market requirements;
- difficulty in filling job positions designated for specialists and technicians with a high level of skills;
- unutilised potential of skills among professionally inactive people and employees, especially in unproductive micro- and small enterprises, as well as among migrants;
- low interest of a wide group of employers in employee training (micro-firms);
- weak links between business and science in order to stimulate innovation.

## **Systemic challenges:**

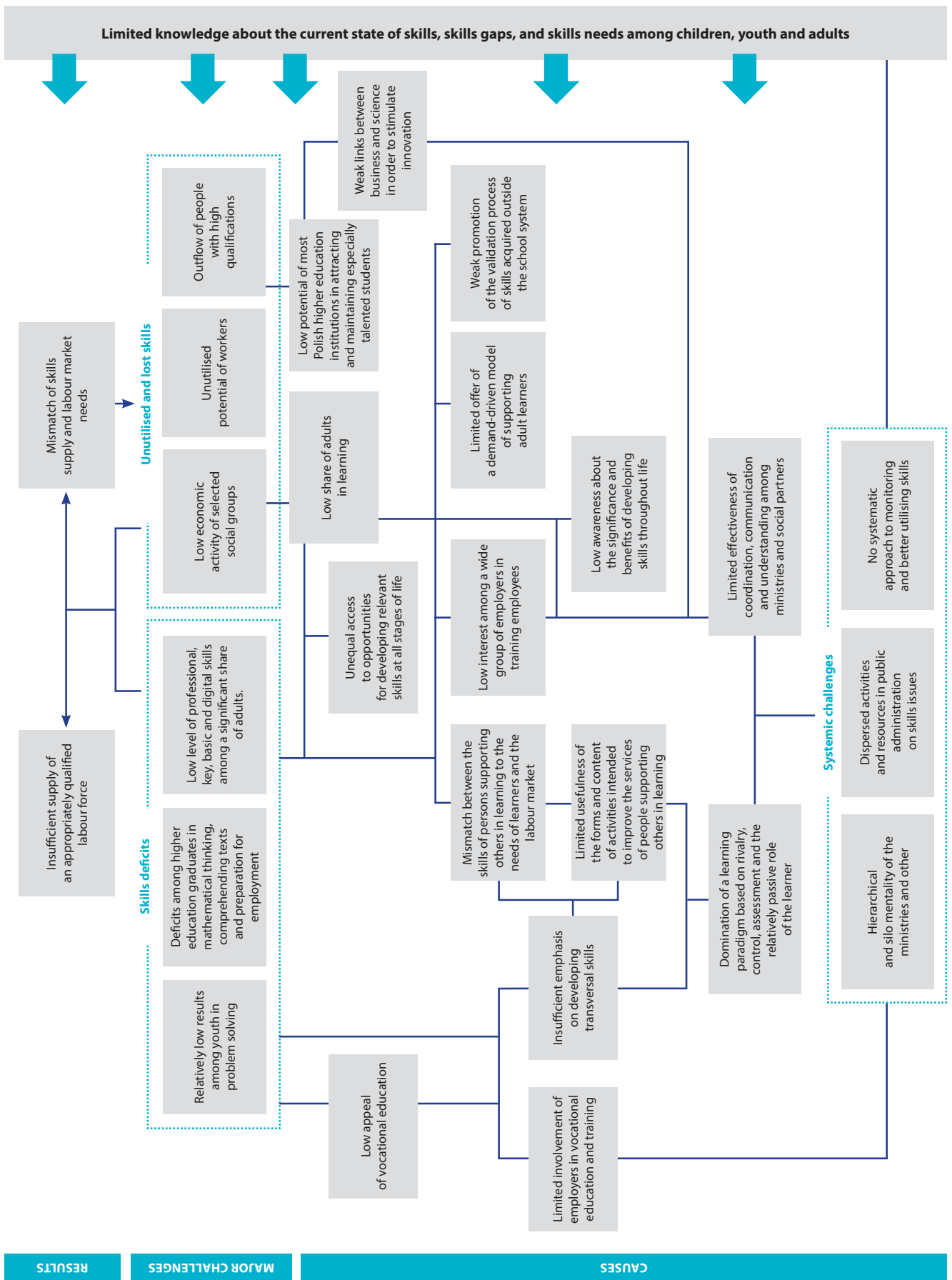
- limited effectiveness of coordination, communication and understanding among ministries and social partners in the area of skills policies;
- dispersed activities and resources in public administration on skills issues;
- hierarchical and silo mentality of the skills development system and institutions involved in its functioning;
- lack of a systematic approach to monitoring and better utilising skills.

## **The challenges relating to social capital:**

- low level of mutual trust and cooperation in education, professional and social life;
- difficulties in ensuring the material functioning of civil society organisations, including those involved in improving the skills of their members, employees and volunteers.

In addition to the challenges indicated in the figure below, the demographic, economic and social determinants indicated in Chapter 5 impact the skills deficits, underutilisation and mismatches to labour market and social needs.

Figure 6. Summary and interconnections of the skills challenges in Poland



## 9. PRIORITIES AND ACTION AREAS TO SHAPE AND DEVELOP SKILLS

**STRATEGIC OBJECTIVE:** Create opportunities and conditions for developing and improving the skills needed to strengthen social capital, social inclusion, economic growth, and to achieve a high quality of life.

### Priority 1: Raise the key skills levels of children, youth and adults

#### JUSTIFICATION

The key to the future is not just knowledge and information itself, but how one thinks and learns, as well as having the skills that allow adaptation to rapid changes and increase the chances of a successful life in a knowledge society. These include, among others, transversal skills, such as critical and comprehensive problem-solving, teamwork, the ability to adapt to new conditions, and leadership skills. Transversal skills are becoming increasingly important in the context of obtaining and maintaining satisfactory employment, professional mobility, lifelong learning and greater flexibility and competitiveness in the labour market. There is also a growing demand for developing the skills needed to perform non-routine tasks, which requires creative thinking as well as higher-level social competences and cognitive skills.

Because skills needs are not constant – they change throughout life – knowledge, skills and social competences must be constantly developed through formal, non-formal and informal learning, including through social activities within civic organisations (e.g. non-governmental and scouting organisations).

Technological changes constitute a significant challenge for Poland due to low social capital and the large group of adults with low actual levels of basic skills, particularly in the effective use of computers and the Internet. There is a clear need to undertake systematic, coordinated actions for the development of digital skills at every stage of citizens' lives. This means not only the need to conduct digital education in formal education, from the pre-school stage, but also to support non-formal initiatives and a mindset conducive to informal learning in this area. The result of these activities should be the earliest possible preparation of children for the conscious and creative use of digital technologies. Digital technologies should be used by children and youth not only for passive entertainment. They should additionally facilitate the comprehensive development of knowledge, interests and creative activities in a digital environment, also through programming.

Actions should also be taken to strengthen the skills of people using digital technologies. Such actions would allow for the simultaneous updating of existing skills and acquiring new ones, enabling the use of heretofore non-existent tools. This approach is aimed at more deeply embedding digital technologies in the lives of citizens by pointing out their diverse applications.

The last area of intervention should be conducting activities aimed at the digital inclusion of all people who for various reasons are not able to use digital technologies. It should be remembered that these activities should not be limited only to older adults, among whom this problem is most visible, but also include other social groups, especially those

less privileged. Digital skills as an issue penetrating all spheres and areas of life are of interest to various sectors (administration, business, non-governmental sector) and ministries. Even though this interest is good and desirable, it unfortunately results in the significant fragmentation of activities and the lack of coordination of initiatives.

Each student is gifted in some way, and the task of the system being created is to identify and develop those talents. School should be a place enabling the development of all students' abilities and talents. Each student is characterised by an essential profile of abilities. From the perspective of society as a whole, not identifying or developing certain types of talents leads to personnel shortages in specific areas.

## MAIN AREAS OF ACTION

1. Develop the key competences for the active participation of citizens in social and economic life – within formal and non-formal education and informal learning – in various places and forms.
2. Adapt the education and training offer to the needs of people of different ages, with different levels of knowledge, skills and social competences, based on a diagnosis.
3. Further develop people's skills in using digital technologies. Expand education and training offers in digital technologies to build awareness of their current and future practical applications.
4. Support initiatives for the dissemination of knowledge and skills in the field of economics and participation in economic life.
5. Prepare children as early as possible for the conscious and creative use of digital technologies.
6. Strengthen the system of developing the abilities of all students, taking into account their various strengths and needs, including a support system for particularly gifted pupils and students.
7. Develop effective and diversified mechanisms of financing and quality assurance in the area of skills development.

## Priority 2: Develop and promote a culture of learning directed towards the active and continuous development of skills

### JUSTIFICATION

The essence of the difficulties in implementing the idea of lifelong learning in Poland is due to the insufficient conscious creation of active attitudes and learning skills and the relatively limited opportunities for adult education, especially for people with low-level skills. This leads, among others, to unequal access to opportunities for building appropriate skills, which could deepen with the aging of the population and technological advances.

Taking into account the changing demand for skills, demographic changes and the high ratio of older employees performing routine work, increasing lifelong learning, especially among adults, is an important element of the future development of skills in Poland. Productivity and innovation at the company and national levels, and thus overall prosperity, will depend, among others, on the availability and adequacy of forms of lifelong learning targeted to the skills needs of different clients and the private sector.

An increased effort to ensure high-quality education and training throughout life is therefore indispensable to respond to these challenges. Changing the paradigm and methodology of learning, building an environment conducive to developing skills, and raising public awareness about the importance of learning play a key role in shaping attitudes about continuous development and, in turn, in acquiring key competences needed to function in the work environment and social life.

The promotion of a learning culture begins at the earliest stages of education and requires a redefinition of the role of the teacher and pupil. The learner becomes a “guide”, a “companion of cognitive, emotional and social experiences”, the pupil is thus defined as the subject of the learning process. In such roles, responsibility for educational outcomes rests equally on both the teacher and the pupil, who becomes an active participant in the learning and teaching process, and not only the passive recipient of a given content. By strengthening the active role of the learner, educators should consider activation methods and techniques to a greater extent, motivating students to undertake self-education activities. The key is to put into practice the strong conviction that learning does not consist of simply registering information, but is a creative process based on building structures of new knowledge by learners that takes into account already possessed knowledge and one’s own experience.

The promotion of active learning attitudes also requires changing the organisational culture in the places where skills are acquired. To create environments and experiences allowing learners to discover and construct knowledge, student-centred education is needed that is based on collaboration and support.

## MAIN AREAS OF ACTION

1. Promote the paradigm of supporting learning in place of the teaching paradigm in the core curricula as well as in school didactics and lifelong education.
2. Change the education, professional improvement, assessment and employment of teaching staff to optimally prepare them to support lifelong learning.
3. Build an organisational culture of institutions based on cooperation and trust.
4. Promote a lifestyle based on lifelong learning.
5. Popularise learning through active participation in social life and public affairs, including involvement in civic organisations.

## Priority 3: Increase the involvement of employers in developing and better utilising skills

### JUSTIFICATION

The involvement of the private sector is needed to ensure the development of skills that respond to the needs of employers. This requires employers’ participation in the design and implementation of training programmes, active cooperation with the providers of education and training services, increased efforts to create forms of practical learning in the work environment, as well as ensuring the availability and adequacy of training in the workplace. The inclusion of employers in these activities is also important because the main factors motivating adults to undertake educational activities are

the requirements and expectations relating to the nature of the work and professional role. Therefore, employers play an important role in the activation of adults, including those underrepresented in training after completing school education.

Building a work environment in which learning is understood as a permanent and continuous process, not an episodic action, is also needed. Fostering the individual and team development of employees, investing in high-quality targeted training, and particularly enabling the practice of learning in the course of performing normal work and internships, creates better learning opportunities that match the needs of the labour market. The strengthening of links between enterprises and vocational education, higher education and research institutions can help in this. This is important primarily for the relatively unproductive micro-enterprises operating in mature sectors and for small and medium-sized enterprises (SMEs) from more innovative and faster growing sectors of the economy, for which skills shortages are a particular problem.

## MAIN AREAS OF ACTION

1. Develop mechanisms to strengthen the cooperation of educational and research institutions with employers and organisations affiliating employers.
2. Promote, develop and recognise forms of learning through practice, especially those organised in the workplace.
3. Design and implement a system of incentives for employers to cooperate in the area of skills development.

## Priority 4: Build an effective system of diagnosing and informing about the current state and demand for skills

### JUSTIFICATION

The mismatch and skills shortage in the labour market often result from the lack of a proper diagnosis of the demand for skills sought by employers. This can lead to an inadequate educational offer in a broad sense, which results in investing in the development of skills not needed by the labour market. This adversely affects the situation of employees, employers and job seekers and generates high and unnecessary costs for the whole of society and the economy.

The aim of the diagnosis and information system should be to provide the knowledge needed for the rational pursuit of educational, labour market or migration policies.

In order to ensure corrective actions, it is important to reveal skills gaps, not only at the level of professions, but above all at the level of specific skills, which can also be understood as the ability to perform professional tasks in specific job positions or groups of precisely selected learning outcomes required for given occupations.

Diagnosing the skills demand is now becoming an inherent element of the system coordinating education and the labour market. The “spontaneous” adjustment of the labour market is limited by a number of barriers, primarily the information barrier (information asymmetry), resulting in a mutual lack of knowledge about the expectations of labour market participants.

The existing elements of the system diagnosing skills needs in Poland are not integrated from the point of view of the labour market. A systemic solution is missing, which would ensure the efficient and effective integration of individual elements. In

addition, no forecast analyses are available on the preferred directions of skills development that take into account the desired future state of the socio-economic system (based on the directions set forth in strategic documents). Developing such a system will allow information to be obtained on the skills that are needed and those which should be developed in the future.

Gaps in ensuring access to reliable information on skills needs negatively impact educational and professional choices. Better access to such information supports the decision-making process in these areas and is a key requirement for a quicker and better response to economic demand. Educational and career counselling play a key role in this process.

The skills development system is to provide access to relevant information supporting the decision-making processes of education and labour market participants, as well as to facilitate educational and professional mobility. This will enable end users to know what they should learn and which skills to develop. Institutions, on the other hand, will learn which skills should be promoted, stimulated and shaped.

## MAIN AREAS OF ACTION

1. Integrate and expand existing elements of diagnosing the current state and demand for skills, also in a narrower framework than the profession, in the short, medium and long term perspectives, based on a unified classification (conceptual) system.
2. Develop a generally available, useful and understandable catalogue of skills.
3. Develop the requirements and standards of processing information from current diagnoses and analyses of civilizational trends and development modelling.
4. Develop a communicative way of presenting information about the current state and demand for skills in the short, medium and long term.
5. Develop a system of effective educational and vocational counselling for children, youth and adults in the development and use of skills throughout life.

## Priority 5: Develop effective and permanent mechanisms of inter-ministerial and intersectoral cooperation for skills development

### JUSTIFICATION

The accumulation of more and better quality data does not automatically mean better policies for matching skills to the needs of the labour market. The challenge is often to correctly interpret the data and translate them into premises and actions in policy areas.

The ability to disseminate results and incorporate them into mainstream policies is conditioned by the ability to coordinate activities, as well as to include in this process the assumptions and diagnoses developed by the system's final users (e.g. social partners, representatives of the education sector, public employment services, civic organisations with an analytical-research profile).



For this purpose, mechanisms need to be developed for strong cooperation between the various parties involved in the process of shaping skills, as well as tools to change education on a regular basis, in a way – as it is being conducted (while operating) without requiring deep structural or functional reforms to shape the desired skills.

## MAIN AREAS OF ACTION

1. Develop an integrated system of educational and LLL policy institutions based on an analysis of the current skills supply and demand.
2. Develop the conditions for lifelong learning as the basis for shaping skills – implementing solutions in the areas of formal, non-formal and informal learning.
3. Build a system of effective data processing on formal education, non-formal education and informal learning.
4. Improve communication between ministries and various levels of public administration on the educational and training needs of children, youth and adults.
5. Develop the possibilities, mechanisms and tools for validating skills acquired outside the formal education system.

## Priority 6: Ensure equal opportunities in access to the development and utilisation of skills

### JUSTIFICATION

As the socio-economic changes of recent years show, people with low-level qualifications are less likely to be employed and are threatened by unemployment to the greatest extent. Their situation, in comparison with mid-level and highly qualified employees, is systematically worsening. Low-level skills occur together with low levels of completed education and low cultural and social capital. There is a clear relationship between the identified attributes and various aspects of exclusion. Therefore, both for people with low-level skills and low levels of completed education, the proposed activities must be comprehensive, taking into account all aspects of exclusion.

Importantly, the level of acquired qualifications is linked to social characteristics. This means that people with a high level of social and cultural resources have a better chance of acquiring attractive skills and qualifications. The challenge is to reduce the phenomenon of socially reproduced access to skills and qualifications.

Although the vast majority of low-qualified employees perceive a higher education as a factor increasing the chances of gaining better employment, they do not express a need to improve their qualifications. Among the most common reasons for the lack of such a need is the belief that career opportunities in their current workplace have already been exhausted. An additional barrier to improving skills is the kind of work they do – performing simple tasks does not require skills that can only be acquired in the education and training system. Some, especially older adults, openly talk about their reluctance to learn or doubt its outcomes. Respondents perceived the importance of training only when it translates into specific benefits – most often in finding a better job, but also for promotion or a raise. Employees with low-level qualifications on the one hand are not actively seeking to improve their skills, on the other hand, they lack the ability to diagnose their own competences and plan their own professional development (Kania et al., 2009).

The increase in the absolute number of migrants and the growing number of sources of migration flows constitute both opportunities and challenges for Poland. The greatest difficulties that must be faced in the context of educational work with migrant children (refugees, immigrants and repatriates) are: pupils' language problems – ignorance or poor command of the host country language, associated poor academic performance and limitations in the ability to communicate with peers and teachers, ignorance of the regulations on compulsory education, educational deficiencies resulting from another educational system in the countries of origin, as well as cultural barriers – mutual fear of cultural diversity (Todorovska-Sokolovska, 2010). With regard to adult foreigners, the challenge is to accelerate the integration process, make better use of the potential of migrants by providing them with the necessary knowledge and skills required to function in Poland and the Polish labour market and to better use the skills acquired in the country of origin. The Strategy for Responsible Development provides for the adoption of a new approach to migration policy. It should be subordinated to the primacy of the labour market and its needs, at least in the short term, especially in light of the forecasts predicting large shortages in the labour market. It must be much more proactive than ever, seeking optimal solutions from the point of view of the country's economic development.

The challenge is to maximise inclusive education for students with special educational needs and to strengthen the links between areas of activities for disabled persons in such a way as to enable them to acquire and use skills for their fullest possible participation in society.

In the context of teachers using ICT in their daily work, it would be important to place greater emphasis – at the stages of initial teacher education and continuing education – on the ability to implement accessibility standards, understood, among others, as the equal access of excluded people, including those with disabilities, to ICT technologies and systems.

## MAIN AREAS OF ACTION

1. Diagnose and eliminate barriers, including environmental, economic, geographical and health barriers, in access to the full range of high quality education and training services within formal and non-formal education and informal learning.
2. Provide people with low-level skills with education and training tailored to their professional needs and specific competence deficits, in line with the demand-based model of individual skills improvement paths promoted in the EU Council Recommendation on Upskilling Pathways: New Opportunities for Adults.
3. Combat digital exclusion among particularly affected groups.
4. Increase the quality and promotion of inclusive education, with particular emphasis on preparing children, youth and adults with disabilities to enter the labour market.
5. Ensure the implementation of education based on the principles of solidarity, democracy, tolerance, justice and freedom, and respect for other cultures, including through didactic materials on issues such as: mutual respect, resolving conflicts in interpersonal relations in non-violent ways.
6. Improve the initial and continuing education of teaching staff in the area of intercultural education and the educational needs of migrants.
7. Develop mechanisms enabling the remote acquisition of competences (including using MOOC-type standards – Mass Open Online Courses).

## 10. IMPLEMENTING AND MONITORING THE INTEGRATED SKILLS STRATEGY

The Integrated Skills Strategy is a cross-cutting strategy that requires the cooperation and involvement of many different stakeholders. It outlines the priorities and directions of high-level actions that form the basis for detailed work. Their implementation will take place at the operational level, and detailed activities and deadlines will be developed by ministries and consulted with relevant stakeholders. Making specific recommendations regarding skills actions and policies and defining issues relating to the implementation of these policies will be conducted in cooperation with OECD during the second phase of work on the strategy based on the agreement already signed.

The adopted mode of work on the Integrated Skills Strategy assumes:

- the development of the general part of the Integrated Skills Strategy, ending with the definition of strategic goals and an indication of the main areas of action contained in this document;
- developing – in the next stage of work – strategic programmes, which will be implemented on the basis of the “Integrated Skills Strategy 2030 (General Part)” together with an indication of the responsible entities and sources of financing;
- conducting consultations and dialogue with key stakeholders at all stages of developing the detailed version of the Integrated Skills Strategy;
- the preparation of a detailed version of the Integrated Skills Strategy.

In connection with the above, this document does not contain a final proposal of strategic programmes nor a model for strategy implementation. The final shape of these decisions will be developed in cooperation with ministries, the OECD and key national stakeholders. Instead, it proposes a format of institutional back-up for the effective implementation of the activities that will ultimately be developed.

**Effective implementation of the Integrated Skills Strategy requires the cooperation of all the ministries responsible for development and the effective use of skills in Poland, which are:**

- Ministry of National Education,
- Ministry of the Family, Labour and Social Policy,
- Ministry of Science and Higher Education,
- Ministry of Digital Affairs,
- Ministry of Finance,
- Ministry of Maritime Economy and Inland Navigation,
- Ministry of Infrastructure,
- Ministry of Investment and Economic Development,

- Ministry of Culture and National Heritage,
- Ministry of National Defence,
- Ministry of Entrepreneurship and Technology,
- Ministry of Agriculture and Rural Development,
- Ministry of Sport and Tourism,
- Ministry of Internal Affairs and Administration
- Ministry of Foreign Affairs,
- Ministry of Justice,
- Ministry of the Environment,
- Ministry of Health,
- Chancellery of the Prime Minister.

The Ministry of National Education as the coordinator of lifelong learning policy, on behalf of the chairperson of the Inter-ministerial Task Force for Lifelong Learning and the Integrated Qualifications System, and the minister coordinator indicated by the provisions of the Act on the Integrated Qualifications System, conducts activities to prepare the Integrated Skills Strategy – the general and detailed parts.

At the operational level, implementing and monitoring the Integrated Skills Strategy will be supported by institutions from the organisational environment of the ministries or their affiliated expert units, as well as representatives of employers and employees. The institutions constituting the expert base of individual ministries, operating as external entities to public administration institutions, have the human resources required to prepare implementational solutions and analyses to assess the accuracy and effectiveness of the adopted solutions. The cooperation of these entities in implementing and monitoring the strategy will take place in the form of an implementation consortium based on a mutual formal agreement.

**The model to implement and monitor the Integrated Skills Strategy assumes a two-tiered management system.**

I. The first tier concerns the cooperation of ministries, with the key role assumed by the Inter-ministerial Task Force for Lifelong Learning and the Integrated Qualifications System.

The Task Force’s tasks include:

- determining the key directions of activities in the areas of implementing and monitoring the Integrated Skills Strategy in the assumed time horizon;
- accepting the monitoring reports on the results of implementing the Integrated Skills Strategy, prepared by institutions at the second tier of management;
- providing opinions on initiatives to implement and monitor strategic programmes prepared by institutions at the second management tier.

II. The second tier of management includes the implementation of the guidelines prepared by the Inter-ministerial Task Force for Lifelong Learning and the Integrated Qualifications System. A key role will be played by the Implementation Consortium, which includes the institutions or affiliated expert units from the organisational environment of the ministries and other government administration bodies, as well as representatives of employers, employees and local governments.

The Consortium's tasks include:

- maintaining permanent dialogue with the entities of the social and economic communities;
- performing the implementation tasks presented in the guidelines of the Inter-ministerial Task Force for Lifelong Learning and the Integrated Qualifications System;
- monitoring the effects of activities (strategic programmes and specific projects) conducted to implement the Integrated Skills Strategy;
- initiating new strategic programmes based on dialogue with stakeholders from the broad social community – ensuring the flow of information on the needs of stakeholders through communication tools with representatives of various sectors of the economy and public life.

The adoption of a two-tiered management system ensures:

- continuous cooperation among the ministries and eliminating the silo mentality of state management;
- expert support in the field of implementation and socio-economic analysis through the use of institutions that are affiliated with the ministries;
- integration of the activities of institutions constituting the expert base of individual ministries;
- channels of communication with the social and economic communities using the tools of the Integrated Qualifications System and Integrated Qualifications Register as well as Sector Skills Councils.

The legal form of the functioning of the above-mentioned institutions and the financing of interventions undertaken within the priorities and directions of activities will be determined in the next stage of building the strategy.

Figure 7. Diagram of managing the implementation and monitoring of the Strategy



### Indicators used to monitor achievement of the aims of the Integrated Skills Strategy

The indicators to monitor the implementation of the aims of the Integrated Skills Strategy are a continuation of the indicators of achieving the objectives of the “Lifelong Learning Perspective”.

No.	Skills level indicators
1	The level of children’s basic skills at the end of early school education – reading proficiency according to IEA/PIRLS studies
2	Level of youth achievement in reading, mathematics and natural sciences (according to OECD/PISA studies)
3	Level of key competences of adults (according to OECD/PIAAC studies implemented since 2011)

No.	Early childhood care and education indicators
1	Percentage of children under 3 years of age enrolled in forms of day care
2	Percentage of 2-year-olds: <ul style="list-style-type: none"> <li>● in forms of day care for children up to 3 years of age</li> <li>● in forms of pre-school education</li> </ul>
3	Percentage of children in pre-school education: <ul style="list-style-type: none"> <li>● 3-year-olds</li> <li>● 4-year-olds</li> <li>● 5-year-olds</li> <li>● 6-year-olds</li> </ul>
4	Employment rate of women aged 26–45 years raising at least one child under the age of 6

No.	School education development indicators
1	Effects of demographic changes – number of students: <ul style="list-style-type: none"> <li>● primary schools</li> <li>● secondary schools: <ul style="list-style-type: none"> <li>– general secondary schools</li> <li>– vocational education and training schools: <ul style="list-style-type: none"> <li>• first stage sectoral vocational schools</li> <li>• second stage sectoral vocational schools</li> <li>• vocational secondary schools</li> <li>• post-secondary schools</li> </ul> </li> </ul> </li> </ul>
2	Number of pupils per school, class groups per grade and teachers in: <ul style="list-style-type: none"> <li>● primary schools</li> <li>● general secondary schools</li> <li>● vocational education and training schools: <ul style="list-style-type: none"> <li>– first stage sectoral vocational schools</li> <li>– second stage sectoral vocational schools</li> <li>– vocational secondary schools</li> <li>– post-secondary schools</li> </ul> </li> </ul>
3	Selection preferences for types of post-primary schools <ul style="list-style-type: none"> <li>● percentage of first year students in: <ul style="list-style-type: none"> <li>– general secondary schools</li> <li>– vocational secondary schools</li> <li>– first stage sectoral vocational schools</li> </ul> </li> </ul>
4	Young people aged 15–19, not in employment, education or training

No.	Vocational education development indicators
1	Number of vocational education students repeating a year in: <ul style="list-style-type: none"> <li>● vocational secondary schools</li> <li>● first stage sectoral vocational schools</li> <li>● second stage sectoral vocational schools</li> <li>● post-secondary schools</li> </ul>
2	Successful completion of vocational education – comparison of the number of first year students with the number of graduates taking and passing vocational examinations
3	Unemployment rate of vocational school graduates in comparison with graduates of other types of schools and higher education institutions

No.	Higher education development indicators
1	Percentage of people aged 30–34 years with higher education in Poland and the EU
2	Percentage of graduates in mathematics, exact and technical sciences (% of graduates of all faculties)
3	Employment rate of people with higher education in Poland and the EU
4	Unemployment rate of higher education graduates
5	Student mobility: <ol style="list-style-type: none"> <li>(1) Polish students studying in EU, EEA or EU candidate countries</li> <li>(2) students from EU, EEA or EU candidate countries in Poland</li> <li>(3) Polish students starting their first year of study in a different city than their place of residence</li> </ol>

No.	Adult learning development indicators
1	Percentage of people in Poland and the EU aged 16–74 without basic digital skills
2	Percentage of adults aged 25–64 participating in education or training
3	Percentage of adults aged 25–64 participating in education or training by education level
4	Percentage of adults aged 55–74 participating in education or training



No.	Skills needs indicators
1	Young people aged 20–24 and 25–29, not in employment, education or training
2	The economic activity rate of persons: (1) under the age of 25 (2) between the ages of 50–64
3	Number of qualifications included in the National Qualifications Framework (Integrated Qualifications System)
4	Employment level in the sectors relating to technology and the intensive application of knowledge (Eurostat)

No.	Level of social capital indicators
1	The level of generalised trust among Poles
2	Percentage of Poles feeling that they have influence on the affairs of their city/municipality
3	The percentage of taxpayers donating 1% of their income tax to public benefit organisations (OPP)
4	The percentage of Poles involved in volunteering
5	Percentage of citizens who are members of non-governmental organisations
6	Number of active non-governmental organisations, associations, foundations, other social organisations per 10 000 inhabitants
7	The percentage of associations, foundations, other social organisations cooperating financially and non-financially with public administration
8	The percentage of public administration offices cooperating financially and non-financially with non-governmental organisations
9	Electoral turnout in the first round of local government elections
10	Percentage of Poles using the Internet as a tool for social communication
11	The percentage of households equipped with satellite or cable TV
12	Percentage of Poles participating in selected areas of culture (literature, cinema, theatre, concert, exhibition)
13	Readership of newspapers and magazines per capita
14	Percentage of local government budget expenditures on culture and the protection of national heritage



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