



# Foresight of future competencies

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# Key numbers

**4**

scenarios for the labour market in 2035

**4**

profiles of employees with the desired competencies of the future

**41**

factors influencing the development of the labour market

## Key to the development of the labour market and employee competencies in the run-up to 2035:

**5.78**

average assessment of the importance of the level of the virtualisation of the labour market

**6.23**

average assessment of the importance of the level of digitisation at companies

**5.49**

average assessment of the importance of the ability to work in dispersed teams

**5.91**

average assessment of the importance of the level of work automation

## Most difficult to predict for the development of the labour market and employee competencies in the run-up to 2035:

**5.03**

average assessment of the uncertainty of the level of labour market virtualisation

**4.58**

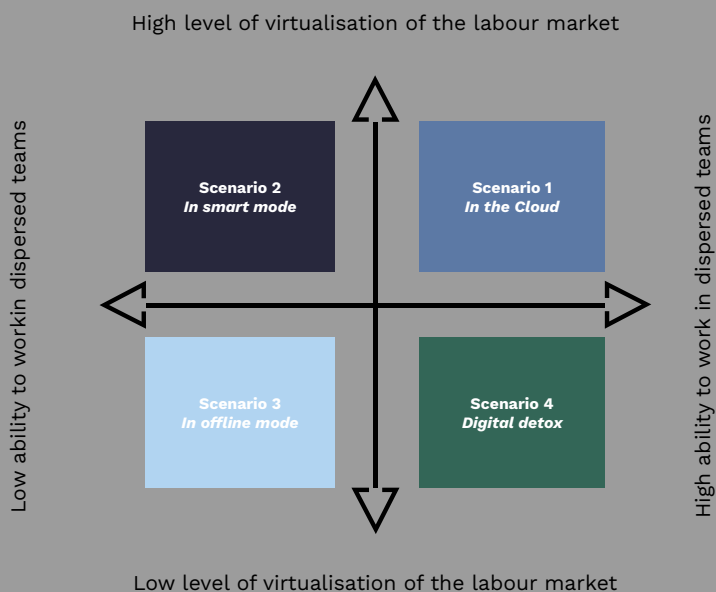
average assessment of the uncertainty of the country's political stability

**4.75**

average assessment of the uncertainty of the ability to work in dispersed teams

# Key findings

- **The level of virtualisation of the labour market and the ability to work in dispersed teams will be the driving forces of the labour market in the run-up to 2035, according to experts.** They are the basis for the four scenarios of the development of the labour market and the profiles of employees with the desired competencies presented in this report.



- **The *In the Cloud* scenario assumes a high level of virtualisation of the labour market and a high ability to work in dispersed teams.** This is a vision of a world in which virtual technologies can have both a positive (e.g. increased professional mobility, unlimited access to data in time and space) and a negative impact (e.g. technology addiction, risk of virtual harassment, loneliness on social networks). In this vision of the future of the labour market, **advanced digital competencies, transformative competencies, the ability to act in situations of uncertainty, and social competencies (the ability to work in a group, creativity) are crucial.**

- **The *In smart mode* scenario assumes a high level of virtualisation of the labour market and a low ability to work in dispersed teams.** Actions are largely of a hybrid nature, combining the competencies of people and machines. Cooperation with machines and algorithmic systems will require employees with **technical and digital competencies**. Competencies such as the ability to think systemically, **the ability to find and interpret signals of change in the organisational environment, creativity, and the ability to cooperate with others** will also become more important.
- **The *In offline mode* scenario assumes a low level of virtualisation of the labour market and a low ability to work in dispersed teams.** Analogue isolation is a vision of the future that has negative consequences for the labour market. There is a visible decline in professional mobility, innovation and cooperation with foreign organisations. Analogue isolation encourages entrepreneurs to return to traditional forms of work. The following are highly important: **industry-specific specialist competencies, taking responsibility for one's own activities, the skilful use of environmental and social solutions, social competencies related to the ability to work in teams onsite, and operating in uncertain situations.**
- **The *Digital detox* scenario assumes a low level of virtualisation of the labour market and a high level of skills in working in dispersed teams.** This is a vision of the future with negative consequences for the labour market. The sudden return of most employers to the analog world creates a number of challenges for the organisation of work and the management of companies' resources. Skill gaps, resulting from the need for employees with advanced digital skills to adapt to working in analog conditions, appear. Employees' specialist competencies become more important and traditional professions become popular again. The importance of **social competencies related to the ability to work in both onsite and dispersed teams, as well as the importance of maintaining work-life balance**, grow.

# Introduction

Most analysis on the future of the labour market focuses on the development of technology and new professions that require new competencies resulting from this development. Demographic trends, such as increasing life expectancy and aging societies, are also taken into account. The future of the labour market is affected by numerous factors that foresight research seeks to identify and assess the impact of.

The 21<sup>st</sup> century is characterised by sudden and unexpected events, known as "wild cards" in foresight research. Just when it seemed that the COVID-19 pandemic was the biggest possible shock to the labour market, Russia invaded Ukraine. However, this report was written before the war in Ukraine began. While we were carrying out this research and developing the scenarios for the labour market for the run-up to 2035, nobody imagined that the threat of war was so real. It cannot be ruled out that the factors expected to have the greatest impact on the labour market's development would have been slightly different. Similarly, the scores for the factors with the greatest degree of uncertainty could have been different. When the report was being prepared for publication, Poland had taken in over two million refugees from Ukraine, mostly women and children. A large share of the Ukrainian refugees are already interested in looking for a job. This is currently one of the key challenges for the Polish labour market. However, experience shows that, **regardless of the nature of the risks and crises that become our everyday reality, a universal challenge for the market is employers' ability to adapt to changes, and employees' ability to adapt in conditions of uncertainty, which require new skills.**

The report consists of two main parts, preceded by an outline of the foresight research methodology. In the first part, we present seven groups of factors that will influence the future labour market, with an assessment of their importance and the ability to predict them in the run-up to 2035. The second part contains scenarios for the development of the labour market and

**The aim of this report is to identify the social, economic, ecological, political, value-related, and legal factors that will influence the development of the labour market and employee competencies in the future and to present four scenarios for the development of the labour market in the run-up to 2035, along with profiles of the employees of the future, which take into account the desired competencies.**

profiles of future employees, along with their desired competencies. For each scenario, we provide recommendations for entities that influence the labour market.

It should be emphasised that the **scenarios are not forecasts**, because — with such a long time horizon and a rapidly-changing environment — the future is characterised by high uncertainty. The methodology of the school of intuitive logic adopted for constructing the scenarios does not make it more probable that a specific scenario will occur, nor does it judge whether the scenarios developed are favourable or unfavourable. The authors' intention was to show that the arrangement of events in the developed scenarios may vary, although some common threads can also be identified, regardless of the arrangement of the axes of the scenarios' driving forces. Analysis of the future scenarios prompts us to take action today, allowing us to strengthen the desired development paths or prevent those that might seem unfavourable.

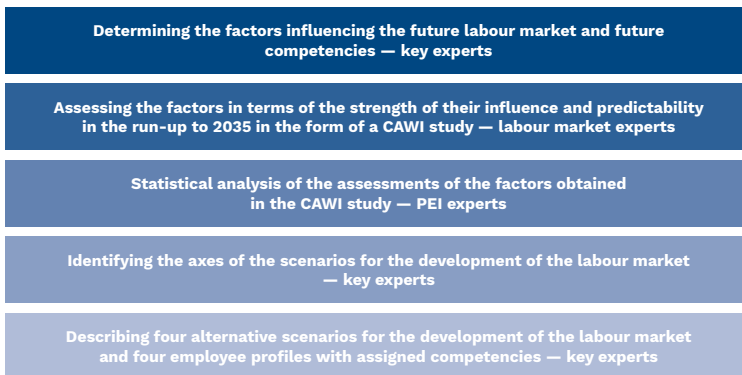


# Research methodology

We were able to achieve the study's aims by using quite a comprehensive methodology. We conducted research based on experts' knowledge using foresight research methodology. As a result, we developed scenarios for the development of the labour market, created profiles of the employees of the future, and assigned them competencies that will make it easier for them to function in the future labour market.

## Infographic 1. The research process

### Foresight expert research



Source: prepared by PEI.

Foresight research allows us to make future projections based on experts' knowledge and appropriate processing techniques. **The study adopted a time horizon of 2035, and the research methodology, consisting of five main stages (Infographic 1), was based on the logic school of intuitive scenario construction.**

The first stage involved STEEPVL analysis, a checklist of the social (S), technological (T), economic (E), environmental (EN), political (P), value-related (V) and legal (L) factors that influence the development of the labour market. The factors were identified by a team of key experts. The second stage involved assessing the factors (on a seven-point Likert scale) in terms of their significance for the future labour market and future competencies and the uncertainty of predicting them with a time horizon of 2035. We obtained

the assessment of the factors through a CAWI survey conducted among 65 experts. These included representatives of academia, business and the administration who deal with labour market issues and employee competencies in their professional work. During the third stage, we conducted statistical analysis of the results obtained from the survey, which enabled us to select key factors at the next, fourth stage of the study: the axes of the scenarios for the development of the labour market in the run-up to 2035. The key factors were selected using the technique proposed by Klooster and Asselt,<sup>1</sup> according to which the factors that are the most uncertain and most important for the projected phenomenon should constitute the scenarios' axes. As a result, in stage five, by identifying the key factors' extreme values, we constructed four qualitatively different scenarios for the development of the labour market. Then, based on the realities of a given labour market scenario, we outlined the employee profiles and indicated which competencies they should have.

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<sup>1</sup> S.A. Klooster, M.B.A. Asselt (2006), *Practising the scenario-axes technique*, "Futures", No. 38, p. 18.

# Factors influencing the labour market and the competencies of the future








**What factors influence the development of the labour market and competencies of the future?** Key experts asked themselves this question and, in accordance with the specificity of the STEEPVL analysis, named factors in seven groups: **social (S), technological (T), economic (E), environmental (EN), political (P), value-related (V) and legal (L).**

The factors were specified by experts during a brainstorming session and then subjected to verification. The research team took all the factors identified and then eliminated repetitions, aggregated them, and verified them. As a result, a list of 41 factors was obtained (Infographic 2).

In the next stage of the study, a survey questionnaire was prepared based on the list of factors obtained. It took the form of an electronic survey (CAWI) addressed to a wider group of experts. On a seven-point Likert scale, the respondents assessed the impact and predictability of the factors identified in relation to the development of the labour market and future competencies in the run-up to 2035. Answers were provided by 65 respondents with the characteristics presented in Infographic 3.

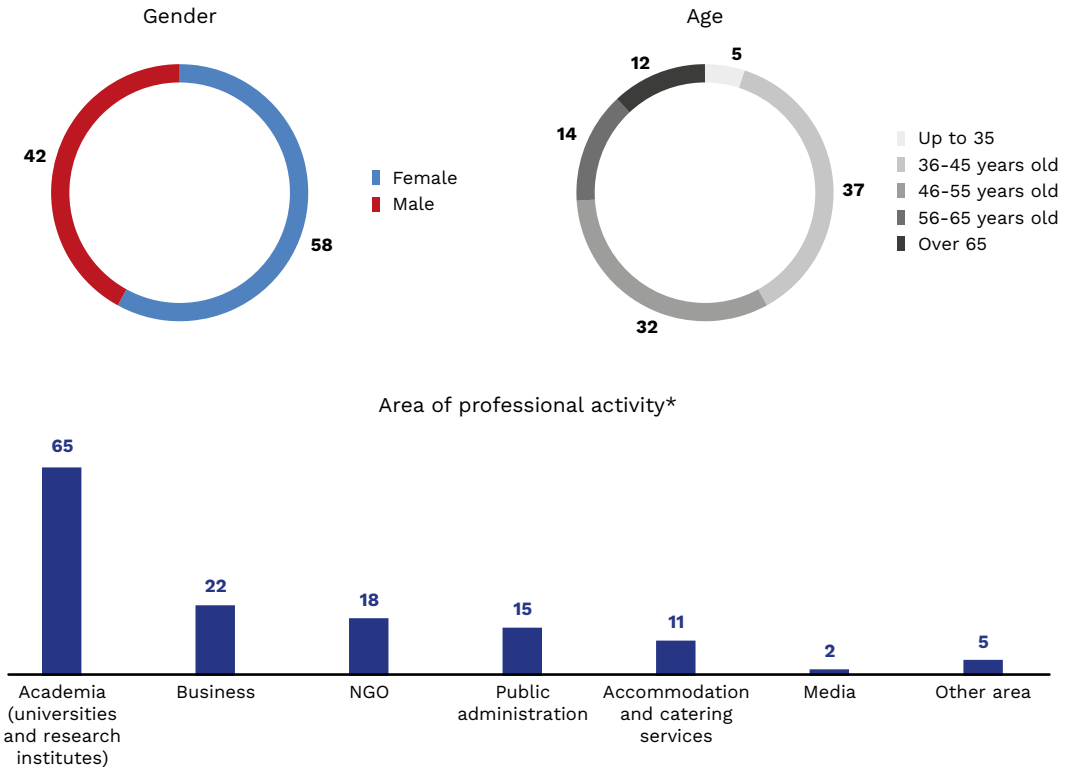


## Infographic 2. STEEPVL analysis factors influencing the labour market and the competencies of the future

|   |  |
|---|--|
| <p><b>Social</b></p>           | <ul style="list-style-type: none"> <li>• Percentage of people continuing their education,</li> <li>• percentage of older people (65+) among professionally active people,</li> <li>• the degree of virtualisation of social life,</li> <li>• level of cultural diversity in the labour market,</li> <li>• ability to work in distributed teams,</li> <li>• level of business representatives' engagement in the dual education process.</li> </ul> |
| <p><b>Technological</b></p>    | <ul style="list-style-type: none"> <li>• Level of virtualisation of the labour market,</li> <li>• level of digitisation at enterprises,</li> <li>• level of cybersecurity at enterprises,</li> <li>• level of automation of work,</li> <li>• level of robotisation in services,</li> <li>• level of employees' digital maturity.</li> </ul>  |
| <p><b>Economic</b></p>         | <ul style="list-style-type: none"> <li>• Level of purchasing power of money,</li> <li>• level of labour costs,</li> <li>• level of innovation at enterprises,</li> <li>• rate of economic growth (GDP),</li> <li>• level of popularisation of flexible forms of work,</li> <li>• level of implementation of the concept of corporate social responsibility by enterprises.</li> </ul>  |
| <p><b>Environmental</b></p>    | <ul style="list-style-type: none"> <li>• Level of development of the circular economy,</li> <li>• level of environmental awareness in society,</li> <li>• level of development of sustainable transport,</li> <li>• degree of use of renewable energy sources,</li> <li>• efforts to achieve climate neutrality.</li> </ul>  |
| <p><b>Political</b></p>      | <ul style="list-style-type: none"> <li>• Stability of relations between Poland and the EU,</li> <li>• quality of higher education,</li> <li>• restrictiveness of the EU's climate and energy policy,</li> <li>• political stability of the country,</li> <li>• level of support for the development of vocational education,</li> <li>• level of support for the development of talent (by the state).</li> </ul>                                  |
| <p><b>Value-related</b></p>  | <ul style="list-style-type: none"> <li>• Level of intergenerational cooperation,</li> <li>• level of care for physical and mental health,</li> <li>• level of balance between private and professional life,</li> <li>• level of trust in technology,</li> <li>• perception of vocational school graduates in society.</li> </ul>  |
| <p><b>Legal</b></p>          | <ul style="list-style-type: none"> <li>• Legal regulations on flexible forms of work,</li> <li>• legal regulations on the work of robots/AI (e.g. taxation),</li> <li>• legal regulations on data ownership,</li> <li>• legal regulations on vocational education,</li> <li>• legal regulations on higher education,</li> <li>• legal regulations on environmental protection,</li> <li>• transparency of the tax system.</li> </ul>               |

Source: prepared by PEI.

**Infographic 3. Structure of the sample by gender, age and area of professional activity (%)**



\* respondents could choose several answers; other area: think tank.

Source: prepared by PEI based on the results of the survey.

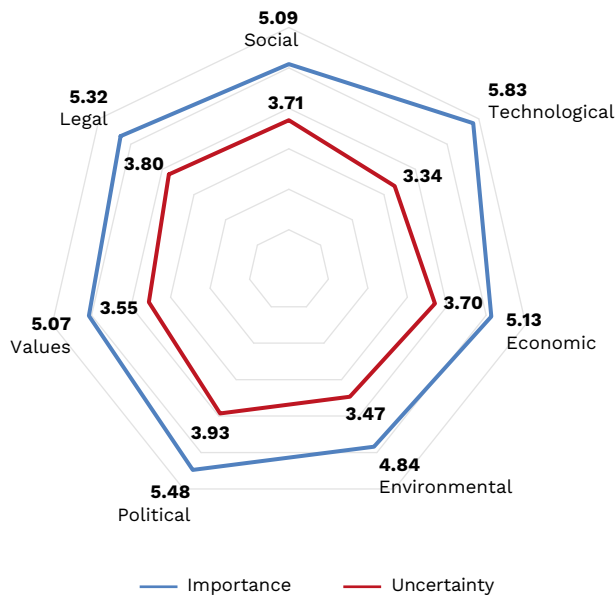
Based on the 65 respondents' assessment of the factors' impact on the **labour market and employee competencies in the run-up to 2035**, basic statistical measures were calculated.

Analysing the arithmetic means of the assessments in individual groups of factors (Chart 1), it can be seen that **technological (arithmetic mean 5.83) and political (5.48)** factors have the greatest impact on the development of the labour market. Legal factors and economic factors (5.13) received a slightly lower rating (5.32). Environmental factors (4.84), values (5.07) and social factors (5.09) received the lowest average rating.

Technological factors' large impact on the labour market probably results from growing automation and digitisation. Thanks to the development of Big Data, the automation of processes and computing power is resulting in the emergence of new business models and transforming relationships within organisations and with their environment. In addition, remote work is becoming more popular thanks to the virtualisation of jobs. Technical competencies in the use and management of knowledge and information will

therefore be desirable in the future. Specialised industry competencies will still be important, but the methods of internal and external communication will change due to advancing digitisation. The ability to cooperate between man and machine at the workplace also be important.

**Chart 1. Average assessment of the importance and uncertainty of individual categories of STEEPVL factors on the labour market and future competencies in the run-up to 2035**



Source: prepared by PEI based on the results of the survey.

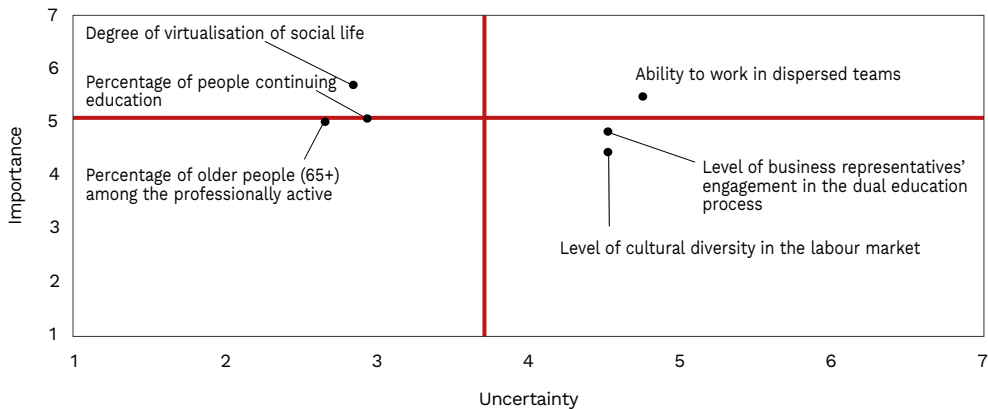
Analysing the arithmetic means of the uncertainty of individual groups of factors obtained in individual groups, it can be seen that **political (3.93) and legal (3.80) factors are the most difficult to predict**. Social (3.71) and economic (3.70) factors were considered slightly less difficult to predict. In context, the value-related (3.55), ecological (3.47) and technological (3.34) factors were deemed the easiest to predict and the most reliable.

The high uncertainty of political and legal factors, in the experts' opinion, results from their unpredictability and variability over time. Tax policy, labour law regulations and assumptions regarding state budget revenues and expenditures influence the perception of uncertainty by entrepreneurs. When assessing the level of political and legal uncertainty, consumers take into account aspects that affect their disposable income. Meanwhile, social, economic, value, ecological and technological factors — which are characterised by a lower degree of uncertainty — are more predictable because they are often subject to trends and tendencies that shape the world around us.

## Social factors

In the group of **social factors**, the degree of virtualisation of social life was deemed to have the **strongest impact on the development of the labour market and future competencies**, followed by the factor of the ability to work in dispersed teams (Chart 2). Both factors are linked to technological progress and the virtualisation of professional relationships, which supports virtual communication not only in professional life, but also in social life. The virtualisation of social life was accelerated and consolidated during the pandemic. At the same time, the virtualisation of professional relationships and the growing number of remote workers is resulting in the increasing dispersion of work teams, including their internationalisation. Their proficient use of new media and the ability to work effectively in virtual teams are becoming particularly important.

**Chart 2. Average assessment of the importance and uncertainty of social factors on the labour market and future competencies in the run-up to 2035**



Source: prepared by PEI based on the results of the survey.

Among the social factors, the level of cultural diversity in the labour market has a **slightly smaller impact on the future of the labour market**. This factor is important from the perspective of the shrinking workforce due to demographic processes and the growing need to attract human capital from abroad. In this context, the ability to work in a multicultural team becomes important.

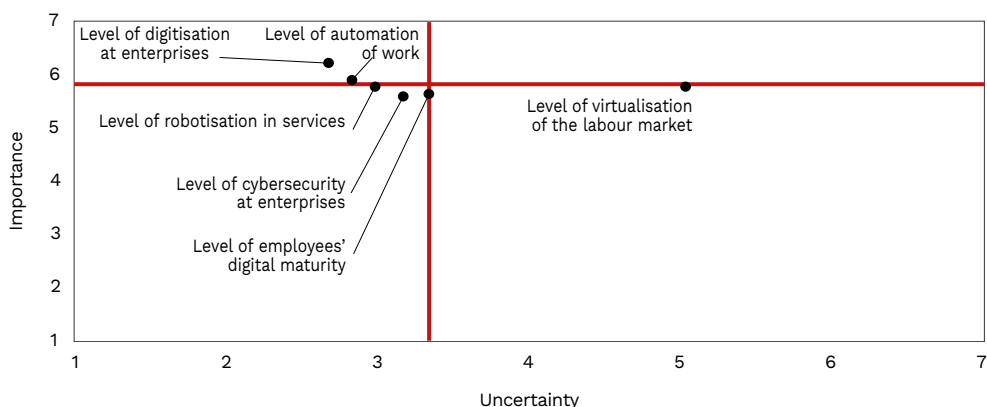
Of all the **social factors**, it was **most difficult to predict** the future development of the factor level of the ability to work in dispersed teams and the level of cultural diversity on the labour market, as well as the level of involvement of business representatives in the dual education process.

## Technological factors

Among the **technological factors, the level of digitisation at enterprises has the strongest impact on the future labour market** (Chart 3). However, other technological factors were also highly rated by respondents, in terms of their significance for the development of the future labour market and future competencies.

Respondents' assessments of the predictability of technological factors in the future were slightly more diverse. Here, **the level of virtualisation of the labour market turned out to be the most unpredictable**. On the one hand, this uncertainty may result from barriers on the labour demand side (smaller companies rarely use workplace virtualisation, mainly due to the necessary outlays on building the necessary technical infrastructure, data centre, virtualisation system, etc.). On the other hand, it may result from barriers labour supply side (limited trust in new solutions for organising work among certain groups of employees, such as older people).

**Chart 3. Average assessment of the importance and uncertainty of technological factors on the labour market and future competencies in the run-up to 2035**



Source: prepared by PEI based on the results of the survey.

The importance of the level of digitisation of enterprises, combined with the virtualisation of social life and the demand for the ability to work in dispersed teams, creates new challenges for employees and their communication skills. Future communication with both social and professional contacts will be based on the use of instant messengers and virtual platforms. At least basic digital competencies — using computer programmes, searching for information online, using social media, using online banking and posting one's own content online — will be required. In times of growing uncertainty and

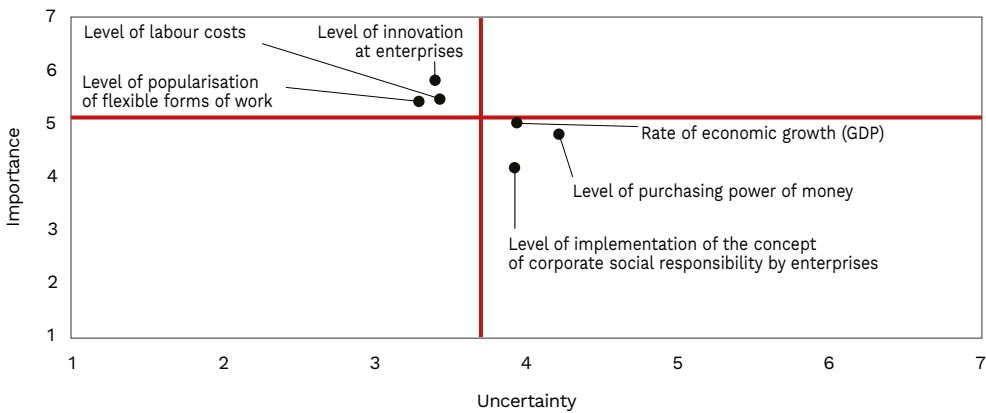


too much information from a variety of sources, the ability to manage information overload will also be important, including the ability to filter important information and work amid all the noise.

## Economic factors

Analysing the average assessment of the influence of economic factors, the level of innovation at enterprises was deemed to have the strongest impact on the labour market and future competencies (Chart 4). This factor directly affects enterprises' competitiveness and the potential for job creation. Labour costs and the extent to which flexible forms of work become widespread are also very important for the development of the future labour market. These factors are linked to state policy on the taxation of labour, the minimum wage and the legal provisions regulating flexible forms of employment. Respondents deemed the purchasing power of money the most uncertain in the future. The unpredictability of future prices levels and wages may be linked to the ongoing inflation, which largely results from external factors beyond the control of the National Bank of Poland's monetary policy. Inflation has a strong impact on the labour market through wage pressure.

**Chart 4. Average assessment of the importance and uncertainty of economic factors on the labour market and future competencies in the run-up to 2035**



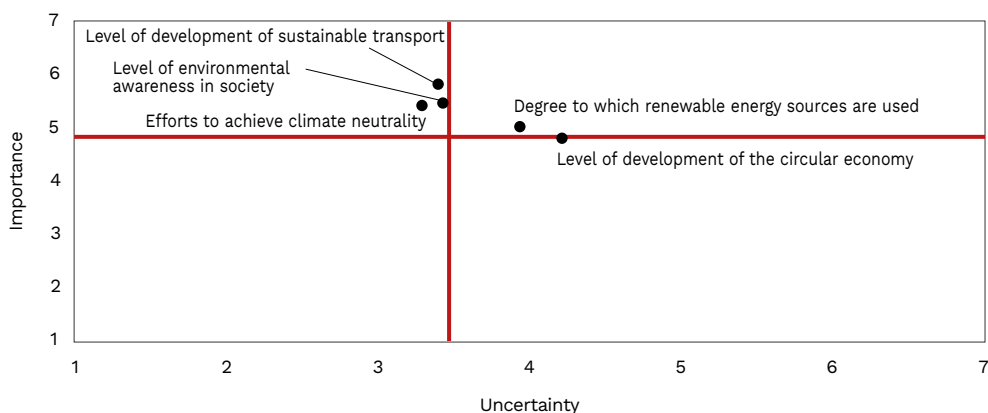
Source: prepared by PEI based on the results of the survey.

## Environmental factors

The **primary environmental factors that have a strong impact on the labour market and future competencies** include the extent to which **renewable energy sources are used** and **efforts to achieve climate neutrality** (Chart 5). These factors determine changes in the employment structure and the creation of green jobs (for example, by reducing the demand for labour in the mining industry, with an increase the demand for labour in the renewable energy sector). Moreover, efforts to achieve climate neutrality determine companies' decisions in the context of energy consumption and environmental protection solutions. Preferences in society when it comes to consumption are changing, too.

The average uncertainty assessments in the group of **environmental factors** were similar; the level of environmental awareness in society and efforts to achieve climate neutrality are slightly more uncertain. Fostering environmental awareness in society or the social pursuit of climate neutrality are long-term processes influenced by various aspects of social life, including the education system, society's wealth, and socialisation in the family. It is therefore difficult to predict how these factors will develop in the future.

**Chart 5. Average assessment of the importance and uncertainty of environmental factors on the labour market and future competencies in the run-up to 2035**



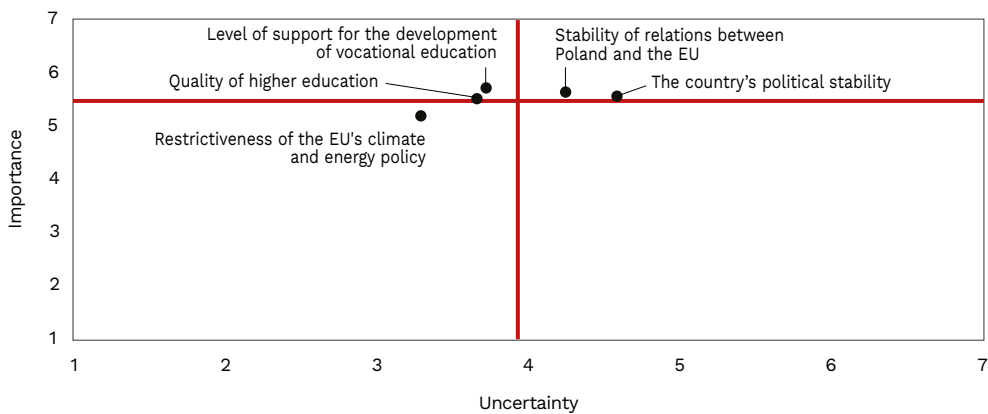
Source: prepared by PEI based on the results of the survey.

## Political factors

**Political factors are a highly rated group in terms of their significance for the future labour market and future competencies.** The factors with the highest average rating in terms of their impact were the **level of support for the development of vocational education** and the **stability of relations between Poland and the EU** (Chart 6). Structural unemployment and the mismatch

between the structure of labour demand and labour supply have been a long-standing problem in the Polish labour market. Industry-specific specialist competencies are important and employers are experiencing a shortage of employees with these competencies. The level of support for the development of vocational education and increasing the number of people graduating from vocational schools would largely solve this problem. The stability of Poland's relations with the EU affects access to EU funds, which support the development of enterprises and infrastructure, and therefore translate into employment stability.

**Chart 6. Average assessment of the importance and uncertainty of political factors on the labour market and future competencies in the run-up to 2035**



Source: prepared by PEI based on the results of the survey.

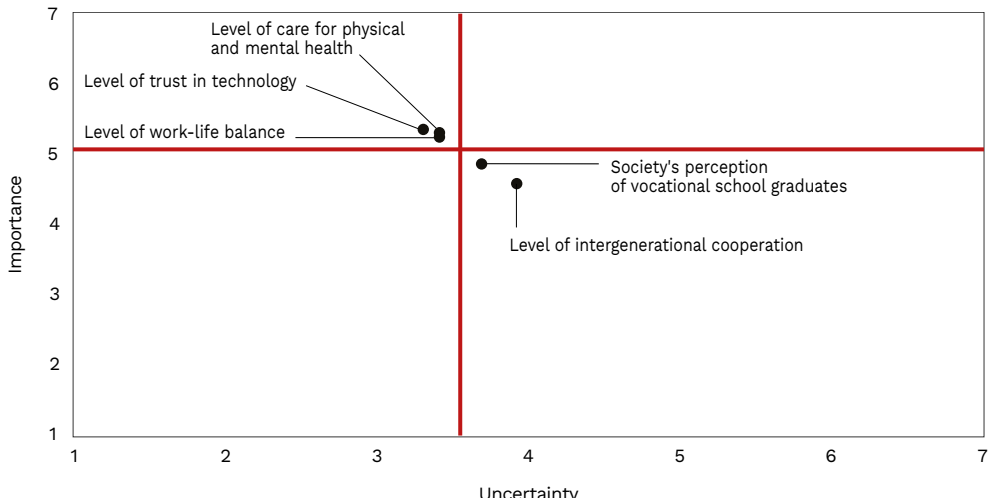
Among the **political factors**, the following are the most difficult to predict: the **country's political stability** and the **stability of relations between Poland and the EU**. The experts' opinion was probably influenced by Poland's tense relations with the EU in connection with the process of approving the National Recovery Plan, which affects the business and investment climate.

## Value-related factors

The **value-related factors that have the greatest impact on the labour market and future competencies** include: the **level of trust in technology** and the **level of care for mental and physical health** (Chart 7). The level of trust in technology among all groups of employees, as well as the management, is one of the aspects that ensures the absorption of technology at companies, including the rise of the virtualisation of work. However, the factor relating to health, broadly understood, which was already important before

the pandemic, has now become even more important. Wellbeing, including mental and physical health, is particularly important in the context of the challenges currently faced by dispersed teams working remotely (including overwork and a sense of isolation).

**Chart 7. Average assessment of the importance and uncertainty of value-related factors on the labour market and future competencies in the run-up to 2035**



Source: prepared by PEI based on the results of the survey.

**Value-related factors** were not very difficult to predict, but the ones characterised by the **greatest uncertainty** were the **level of intergenerational cooperation** and **how society views graduates of vocational schools**. This may result from the multiplicity and variability of the factors that shape their development. The level of intergenerational cooperation depends on the corporate culture and companies' commitment to implementing tools that integrate representatives of individual generations in the workplace. Meanwhile, how society views graduates of vocational schools is determined, on the one hand, by the quality of vocational education and, on the other hand, by the demand for employees with vocational education.

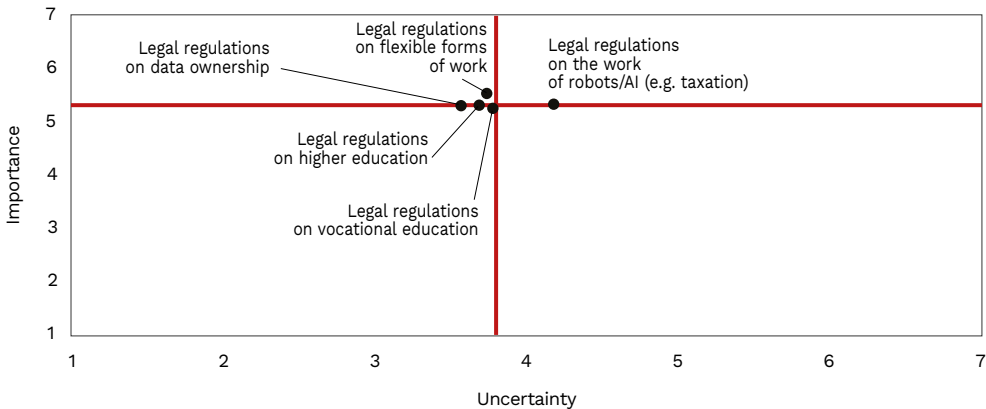
### Legal factors

Among the **legal factors**, **legal regulations regarding flexible forms of work** received a high average rating, in terms of their impact on the development of the labour market and future competencies (Chart 8). They are particularly important in an era of rapidly-changing conditions on the labour market, the

emergence of new technological solutions, and the need to make remote work more widespread. However, according to the respondents, other legal factors have a strong impact on the development of the labour market, too.

The following **legal factors** received **the highest rating in terms of their uncertainty**: the **transparency of the tax system** and the **legal regulation of the work of robots/AI (for example, taxation)**. The tax system in Poland changes frequently, which is why it is difficult to predict in the long term. However, regulations on the work of robots are a niche in Polish law that will only be filled with growing demand for artificial intelligence, as a way to supplement work by humans.

**Chart 8. Average assessment of the importance and uncertainty of legal factors on the labour market and future competencies in the run-up to 2035**



Source: prepared by PEI based on the results of the survey.

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Summing up our analysis of the factors' significance for the future labour market and future competencies, it should be noted that, according to the respondents, **technological factors** — such as the level of digitisation at companies, the extent to which work is automated, the degree of virtualisation in the labour market and the level of robotisation in services — are the most significant. Another significant factor is the degree of innovation at enterprises, which is largely dependent on the technological factors above. However, the **level of virtualisation of the labour market and the ability to work in dispersed teams are characterised by the greatest uncertainty**. On the one hand, this may result from the hope that widespread virtualisation will not be necessary after the pandemic. On the other hand, the

uncertainty concerning the virtualisation of labour market may result from fears that not all enterprises will be able to provide the necessary technical support. **Working in dispersed teams is strongly determined by the level of virtualisation of the labour market.** Uncertainty in the labour market is therefore influenced by factors from a variety of groups — mainly technological, social, political and legal factors. **The ability to act in a situation of uncertainty therefore becomes important, which affects the need for a variety of cognitive competencies, including the ability to make sense of phenomena and find their deeper meaning, think creatively, response rapidly to changes, and analyse and assess risk.**

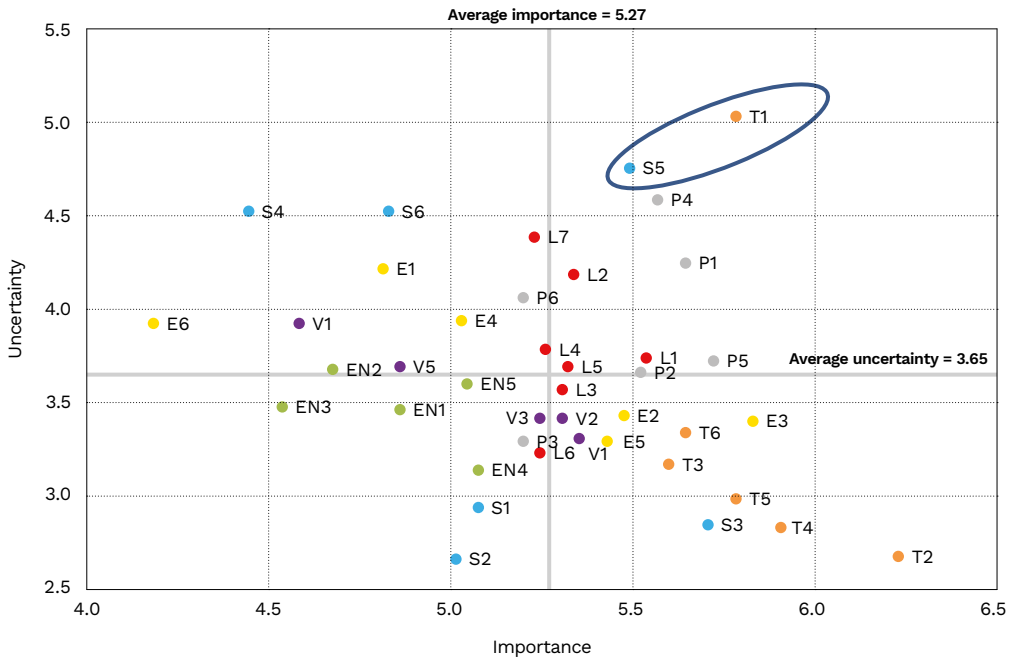


# Scenarios for the development of the labour market and competencies of the future

To carry out the study, we used a research methodology based on the school of intuitive logic. This allowed us to construct four qualitatively different visions of the future. In key experts' opinion, this choice of methodology seemed optimal because it allowed us to avoid presenting extreme visions of the future — both positive and negative — that might turn out to be unlikely and controversial. The scenarios' axes were defined in accordance with the technique proposed by Klooster and Asselt, which states that the most uncertain and most important factors should be used as the scenarios' axes (Klooster, Asselt, 2006).

As Chart 9 shows, factors **T1 (the level of labour market virtualisation)** and **S5 (the ability to work in dispersed teams)** received the highest ratings in terms of uncertainty. At the same time, these factors received higher-than-average importance ratings. The team of key experts therefore recommended that these factors be seen as the driving forces of the labour market in the run-up to 2035 (Chart 10).

**Chart 9. Classification of the STEEPVL factors: uncertainty and importance for the development of the labour market and future competencies**



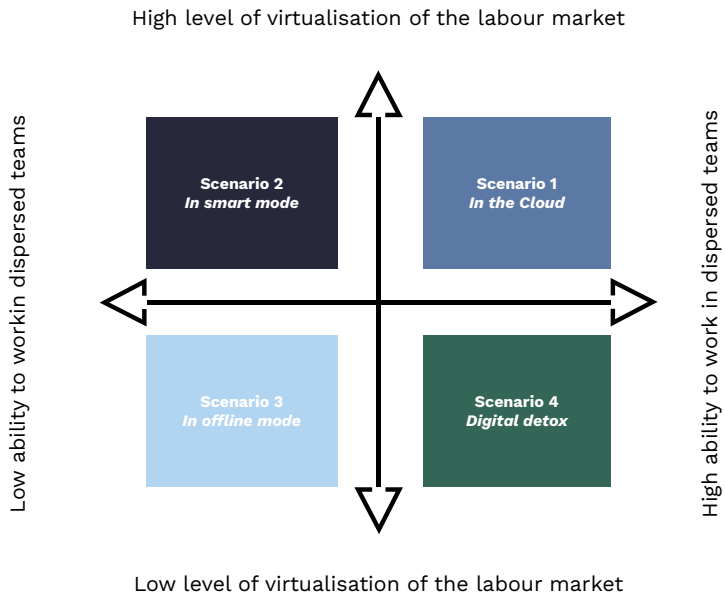
Legend:

S1-Percentage of people continuing their education; S2-Percentage of older people (65+) among professionally active people; S3-Degree of virtualisation of social life; S4-Level of cultural diversity in the labour market; S5-Ability to work in distributed teams; S6-Level of involvement of business representatives in the dual education process; T1-Level of labour market virtualisation; T2-Level of digitisation of enterprises; T3-Level of cybersecurity in enterprises; T4-Level of work automation; T5-Level of development of robotisation in services; T6-Level of digital maturity of employees; E1-Level of purchasing power of money; E2-Level of labour costs; E3-Level of innovation of enterprises; E4-Economic growth dynamics (GDP); E5-Popularisation of flexible forms of work; E6-Level of implementation of the concept of corporate social responsibility by enterprises; EN1-Level of development of the circular economy; EN2-Level of ecological awareness of society; EN3-Level of development of sustainable transport; EN4-Degree of use of renewable energy sources; EN5-Striving for climate neutrality; P1-Stability of relations between Poland and the EU; P2-Level of quality of higher education; P3-Restrictiveness of the EU's climate and energy policy; P4-Political stability of the country; P5-Level of support for the development of vocational (vocational) education; P6-Level of support for talent development by the state; V1-Level of intergenerational cooperation; V2-Level of care for physical and mental health; V3-Level of work-life balance; V4-Level of trust in technology; V5-Society's perception of vocational school graduates; L1-Legal regulations regarding flexible forms of work; L2-Legal regulations on the work of robots/AI (e.g. taxation); L3-Legal regulations on data ownership; L4-Legal regulations on vocational education; L5-Legal regulations on higher education; L6-Legal regulations on environmental protection; L7-Transparency of the tax system.

Source: prepared by PEI based on the results of the survey.



**Chart 10. Scenario axes and names of the scenarios for the development of the labour market**



Source: prepared by PEI based on the results of the survey.



## Scenario 1. *In the cloud*

### Assumptions for the scenario:

high level of virtualisation  
of the labour market

high ability to work  
in dispersed teams

### The labour market

A feature of the labour market in 2035 is widespread virtualisation. Organisational structures become flat and non-hierarchical. Recruitment processes at companies, communication between employees, work-related tasks, building relationships with customers and suppliers, and searching for new sales markets take place online. The work is carried out by efficient, interdisciplinary and multicultural dispersed teams.

In this scenario, the natural ageing of the population is accompanied by the development of medicine, healthcare services and a declining population. Senior citizens receive systemic and institutional support to help them remain on the labour market. As a result, in 2035, older people (over 65 years old) will do well on the labour market. They account for a high percentage of professionally-active people — and there is a clear trend in the economy of increased action in the silver economy. Meanwhile, **young people and people of working age eagerly use new technological solutions in the professional and personal sphere.**

The **virtualisation of the labour market has a significant impact on the virtualisation of social life and the higher percentage of people continuing their education.** This has a positive impact on professional and personal development, but also has negative consequences in the form of the risk of social alienation. **Employees' ability to work in dispersed teams promotes cultural diversity in the labour market,** which constitutes a significant challenge when managing staff. At the same time, modern solutions in the field of integrated communication removed geographical barriers that previously limited the ability of large, culturally-diverse teams located in different parts of the country, region or world to cooperate. Working in dispersed teams promotes the internationalisation of Polish companies, regardless of sector, and contributes to their development. Although working in dispersed teams has many advantages (it enables external professionals to be hired, allows the company to draw on a much wider range of experiences and creative resources, facilitates the flexible expansion of the team as tasks appear, and allows staff to work from home), it also presents a number of new challenges that entrepreneurs did not have to deal with when communication was based on in-person meetings and telephone calls.

Direct contact with one's supervisor, co-workers and clients will be limited to the necessary minimum. **Remote work based on the cloud computing model dominates. Virtual desktops and networking become widespread.**

**Organisational structures are flat and non-hierarchical.** The virtualisation of the labour market is accompanied by ubiquitous automation and digitisation, not only in production, but also in services. Polish enterprises' and employees' digital maturity increases noticeably. Poland, as one of the economies in Europe digitising the most rapidly, no longer comes last in rankings of innovation enterprises.

At the same time, the **virtualisation of the labour market results in lower labour costs in the economy.** Flexible forms of work become more common. Weekly working hours are reduced. Falling labour costs also favour faster economic growth, which increases the purchasing power of money. At the same time, limited natural resources make enterprises more and more conscious, not only in terms of corporate social responsibility, but also in terms of concern for the environment. Similar attitudes can also be seen in society. The pursuit of climate neutrality and the restrictiveness of the EU's climate and energy policy force sustainable transport to be increasingly widely used. The circular economy is gaining significance, which has implications for the recycling and reuse of products.

**Higher education is focused on promoting education in new technologies.** Fields relating to computer science, robotics, and the processing of huge datasets are becoming very common. **Many government programmes are being created to support the development of talent, especially in ICT.**

The *In the cloud scenario* is a vision of a world in which virtual technologies may have two consequences for the labour market, both positive (e.g. increased professional mobility, unlimited access to data in time and space) and negative (e.g. addiction to technology, the risk of virtual harassment, loneliness on the Internet).

Awareness of the negative consequences of virtualisation of the labour market results in clear efforts when it comes to universal care for people's physical and mental health. New generations entering the labour market care about work-life balance and expect this attitude from their employers.

The new reality of the labour market and the deteriorating state of the natural environment force legal regulations on flexible forms of work, environmental protection and the promotion of vocational education to be introduced. **Favourable legal regulations allow robots and avatars to be hired.** This scenario also assumes that working in dispersed teams will lead to the introduction of new forms of work organisation that will regulate employees' availability at particular times of the day, allow "work in silence" to be introduced, standardise the approach to multitasking and determine ways of moderating work, especially in intercultural teams and ones based on intergenerational cooperation.

**Key characteristics of the labour market in the scenario *In the cloud*:**

- modern integrated communication solutions remove geographical barriers that limited the ability of large, culturally diverse teams located in different parts of the country, region or world to cooperate,
- remote work based on the cloud computing model dominates,
- virtual desktops and networking become widespread,
- organisational structures are flat and non-hierarchical,
- higher education is focused on promoting education in the field of new technologies,
- Favourable legal regulations allow robots and avatars to be hired.

## Employee profile

The ongoing virtualisation and digital transformation of the labour market have led to a radical change in the type of tasks performed in 2035 — and how they are performed. Advanced digital competencies are become necessary for employees to function in the labour market. The discourse on the labour market no longer uses categories such as "occupation" or "profession", but rather refers to bundles of competencies and various tasks performed within dispersed project teams. On the one hand, this prospect of flexible employment is an opportunity for employees to take on more satisfying tasks (including financially), providing greater opportunities for development and promotion. On the other hand, it primarily supports **self-directed and well-organised employees who are able to seek new forms of employment independently (and actively) and mediate between various projects and teams efficiently.**

In this vision of the future of the labour market, **transformative competencies** turn out to be **key**, including the ability to **adapt to new conditions, including extremely unstable and uncertain ones, taking responsibility for one's tasks** (and position on the labour market), and **reconciling tensions and solving dilemmas linked to the complex form of employment** (potentially at several entities at the same time), among other things – Infographic 4.

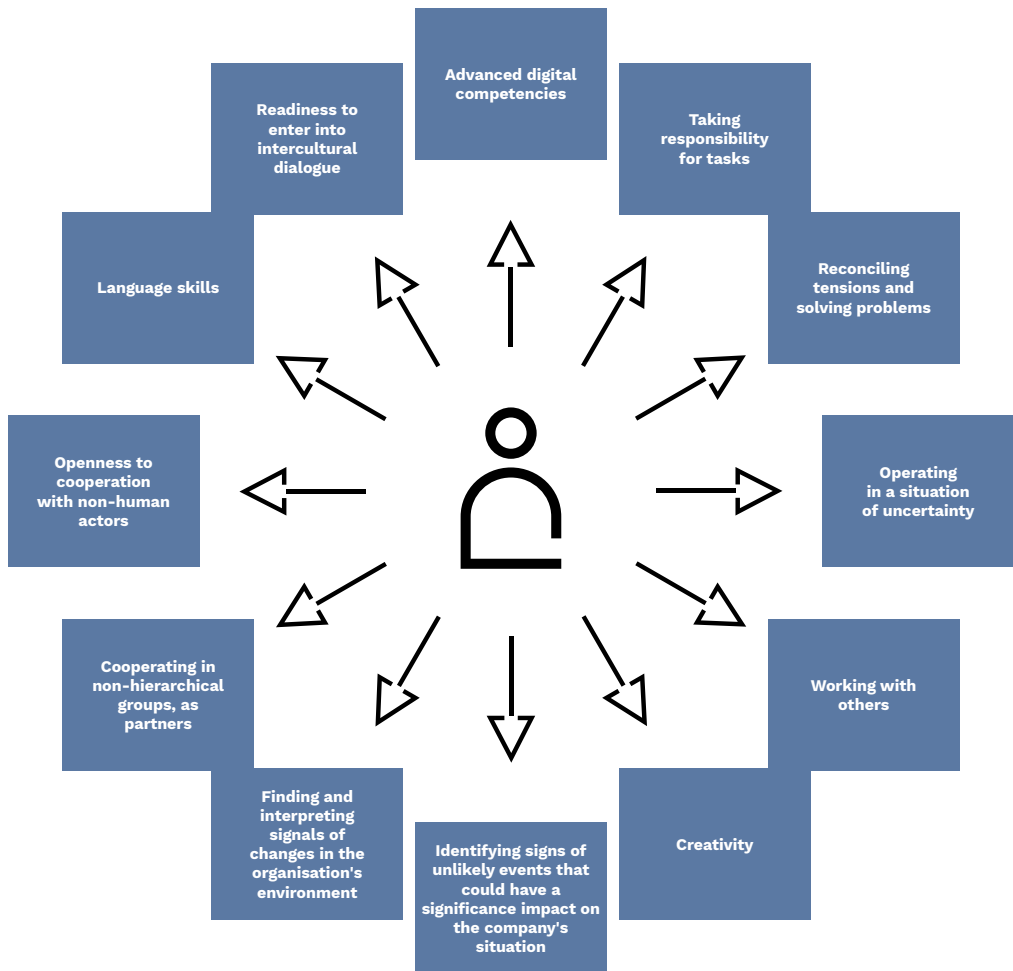
Moreover, the labour market in 2035 is based on enterprises with a flat, project-based organisational structure (AGIL) and interdisciplinary teams established to carry out a specific task. **Employees must have the ability to cooperate in non-hierarchical groups as partners**, which may be particularly difficult for people who gained their professional experience during the initial phase of the technological revolution, when organisations with a transparent structure and a simple promotion path dominated. **Social competencies** also play an important role here, including the **ability to work in a group**, as does **creativity**, which can be equated with the ability to adapt to unexpected conditions by modifying the goal or specificity of the company.

The rapid and ubiquitous development of technology means that the **ability to identify signs of unlikely events that could have a significant impact**

on the company's situation (wild cards) and to find and interpret signals of change in the organisation's surroundings are also important.

Another specificity of the labour market in 2035 is humans' close cooperation with machines and artificial intelligence solutions. Technosceptical attitudes, which have hampered the widespread implementation of machine learning algorithms in recent years, have been marginalised, and the increasingly improved technologies in many areas are not only displacing, but also replacing, people in their routine work.

**Infographic 4. Employee profile in the *In the cloud* scenario**



Source: prepared by PEI based on the results of the survey.

This means that employees **must be open to cooperation with non-human actors**, who now actively co-create the work environment as partners that staff interact with, rather than objects subject to human control. The machines' far-reaching autonomy and empowerment in their relations with humans require special cognitive maturity on the part of employees who interact regularly with AI solutions.

Finally, due to globalization, which is resulting in the lifting of geographical and spatial barriers, the need (or perhaps opportunity?) to work in culturally and linguistically diverse teams is a major challenge in 2035. **Language skills** and **readiness to enter into intercultural dialogue** are therefore needed to find one's place in a heterogeneous work environment, and get to know and better understand the context that partners and co-workers are operating in.

### Recommended actions to make the *In the cloud* scenario likely to occur

**Education:**

- making education promoting entrepreneurial attitudes from an early stage widespread,
- making forms of education similar to an entrepreneurial university from an early stage widespread,
- promoting mentoring and reverse e-mentoring,
- promoting techno-centric attitudes,
- promoting an attitude of openness and intercultural sensitivity,
- preparation for work in an intercultural environment,
- promoting ethical attitudes in the use of digital technologies,
- focusing continuing education on methods for analysing, processing and evaluating information, analysing network structures, systems thinking, design, managing information, communication systems and security in digital communications.

**Business:**

- promoting coaching attitudes and empowerment at companies,
- increasing spending on R&D relating to the automation and robotisation of production and services at companies,
- increasing spending on R&D when it comes to the security of data and digital communications.

**Decision-makers:**

- developing legal solutions relating to the promotion of flexible forms of work,
- developing legal regulations concerning cooperation between humans and robots,
- introducing regulations to increase digital security,
- developing a system of incentives for entrepreneurs when it comes to robotisation and automation in production and services,
- eliminating the effects of technology addiction, enabling free, quick and universal access to psychological consultations.

## Scenario 2. *In smart mode*

### Assumptions for the scenario:

high level of virtualisation of the labour market

low ability to work in dispersed teams

### The labour market

The labour market in 2035 is based on virtual organisations operating as temporary networks of independent entities, focused on meeting customer needs or taking advantage of market opportunities to create needs. The work is predominantly carried out by employees in onsite teams located in organisations with physical headquarters.

Much of human activity takes place online. Work, education, shopping, medical services, entertainment and culture are widely available via the Internet. **A common form of operation is temporary virtual organisations**, established to meet emerging customer needs or to create new needs on the market that customers had not been aware of.

The virtual organisations **being created are based on enterprises operating in specific locations**, with specific material and intangible resources, such as knowledge, staff, technology, infrastructure, and well-developed ICT systems that contribute value added to the processes being carried out by virtual organisations. Many organisations are intelligent. **Employees operating within the framework of virtual organisations prefer to work in onsite teams at companies with physical headquarters, rather than in dispersed teams**. This primarily stems from an awareness of the negative effects of remote work, which became very common, and somewhat forced, during the previous decade due to the ongoing pandemic, as well as the feeling among employees that they are spending too much time in a virtual environment. Employees prefer to work in a single location and appreciate the opportunity to work in onsite teams due to the importance of in-person contact with colleagues, the opportunity to establish lasting personal relationships in the workplace, and to increase the sense of belonging to the company and co-creating it. Direct contact with colleagues reduces the number of errors when interpreting information in emails and accelerates the learning process. **People over the age of 65+ account for a large group of employees** (the development of the silver economy). For this group of employees, working at different hours (because colleagues are based in different time zones) and the need to take into account differences between cultures or nationalities is somewhat of a burden, which may limit work efficiency. Remote work — the disadvantages of which they had experienced in the past — was associated with disruption of the boundaries between professional and personal life, and this balance is now particularly valued. Employees in other age groups, including young

people who are very socially active in the virtual world, feel that much of life already takes place virtually and see the advantages of working in onsite teams. Employees prefer to work in onsite teams; they notice and appreciate the advantages of **working directly with clients**, among other things. One of the forms of cooperation is joint research projects, which help companies meet customers' needs and identify future ones. The recognition of weak market signals, which is crucial at an intelligent organisation, is facilitated by the open exchange of information using modern ICT systems. The use of rapidly-developing online communities also plays an important role in detecting weak signals, including by analysing the content of statements and visual materials created by Internet users, enabling the company to use of the results of consumers' creative activity.

Manufacturing and service companies are characterised by the **key importance of learning processes**. The **process of acquiring and creating knowledge** involves constantly improving the qualifications of employees, consolidating and using the knowledge that has been acquired for the development of the individual and the entire organisation. A significant percentage of employees are involved in continuing education. Organisations think ahead by engaging in the dual education process. When it comes to higher education, special emphasis is placed on education in the area of developing and using new technologies.

The labour market is characterised by **automation and a high level of digitisation**. Digital technologies are used to automatically obtain information from processes carried out inside and outside the company. The use of self-healing networks is widespread, providing self-diagnostics (including problem detection), the automation of management and repairs, resistance to attacks and the ability to remove their effects, increasing the organisation's efficiency. Predictable, routine and repetitive actions, both mental and physical, are carried out by automated systems using artificial intelligence. New-generation learning robots are increasingly flexible and better adapted to working with humans within organisations. Fully autonomous vehicles and robots are used, resulting in changes in transport and logistics, among other areas. Employees have the skills to use the latest innovative technologies, including well-developed ICT, providing unlimited access to data in time and space. Employees cooperate with machines and systems because they have the skills to work in an environment of fully automated systems. **The actions carried out are largely of a hybrid nature, combining the competencies of people and machines**. Cooperation with machines and algorithmic systems requires employees with technical and digital competencies. Simple programming skills are as fundamental as the ability to use office programmes. **Key competencies** also include those that algorithms and robots do not have; namely, those relating to **creativity, social and emotional intelligence**.

The economy operates in a situation of **limited natural resources**. Multifaceted actions are taken to ensure that they are used efficiently. **Intelligent transport systems** that use innovative technologies are being introduced; they are both better for the environment and improve travel conditions, including for commuters. Enterprises operate in accordance with the concept of corporate social responsibility, including implementing **innovative**



**technologies that reduce the consumption of raw materials** (including ecodesign, moving away from single-use plastic products, and 50% of the materials and resources used returned to the economy). The level of environmental awareness in society keeps rising.

**Key characteristics of the labour market in the *In smart mode* scenario:**

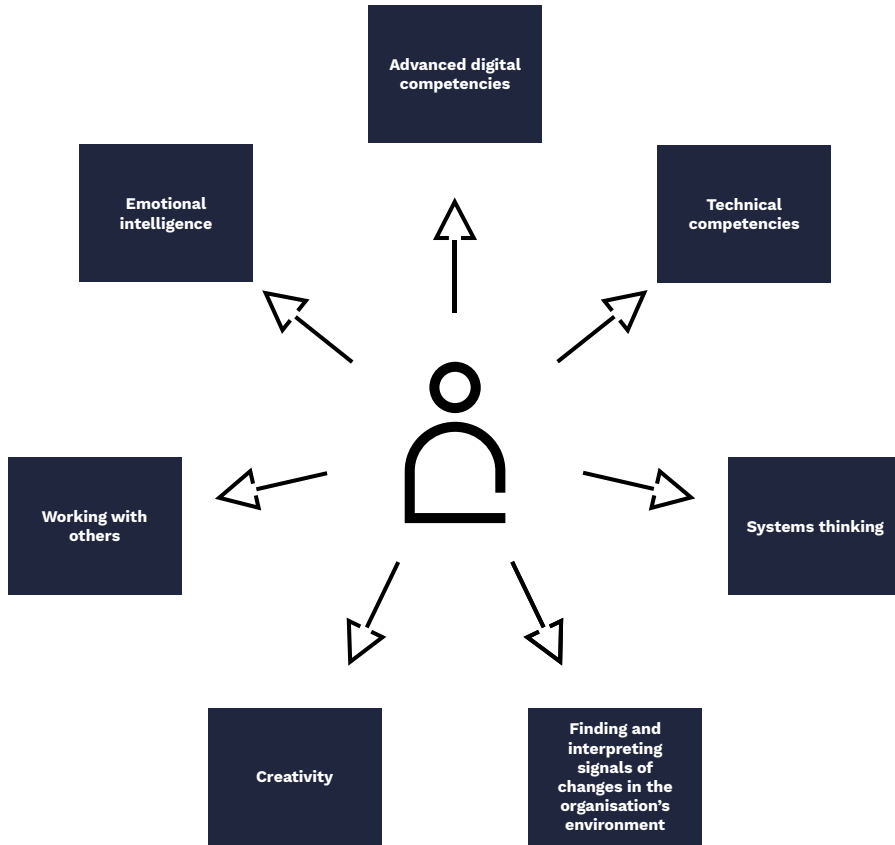
- the prevalence of temporary virtual organisations,
- the creation of virtual organisations based on companies with physical headquarters,
- the automation and high level of digitisation at companies,
- employees prefer to work in onsite teams,
- the widespread combination of the competencies of people and machines.

## Employee profile

In this vision of reality in 2035, the profound virtualisation of the labour market goes hand in hand with a tendency to move away from the model of dispersed work performed remotely by individuals who do not have physical contact with each other in the company's space. The experience of the coronavirus pandemic (2020-2022) exposed the weaknesses of working in virtual teams, especially those established ad hoc, without prior institutional preparation and without equipping employees with the skills to manage their work and time, which led to a mass return to offices and the revival of direct face-to-face cooperation. **Social skills** are therefore necessary, including the **ability to work in a team, manage people** and **resolve the conflicts** that arise in onsite teams (Infographic 5). It is clearly visible that the **ability to cooperate — including directly — using the benefits of new technological solutions** will be the key to success on the labour market in 2035.

Working in direct, non-dispersed teams, which will require employees to be physically present at the office, will not only increase companies' energy efficiency (research shows that the fixed costs of maintaining shared office space are much lower than those of individual home offices at employees' apartments), but also reduce the carbon footprint and have a positive impact on the natural environment, which is in inevitable crisis (the organisation of common spaces is also less of an environmental burden).

Infographic 5. Employee profile in the *In smart mode* scenario



Source: prepared by PEI.

At the same time, the requirement that staff be present at the company's headquarters requires **increased employee mobility** and daily commuting to work, which undoubtedly reduces their efficiency at work (due to time spent in traffic jams and commuting to the company, at the very least). With advanced smart city solutions, transport challenges are largely eliminated, but they still play a significant role in employees' everyday lives.

The high level of digitisation at companies also requires **advanced digital competencies** that enable employees to incorporate intelligent technologies (including cloud computing and virtual desktops) into their daily work at the office. **Flexibility and cognitive openness to new solutions** will therefore be important; they will not only improve people's work, but also reduce it and remodel the tasks performed. The advancing automation and robotisation of work, associated with a high degree of virtualisation of tasks, will also require

**readiness to work with intelligent solutions** and self-learning algorithms, which will already be natural partners in professional interactions in 2035.

In this scenario, the labour market is characterised by a visible **tension** between **the virtual** and **the real**, “analog” world, in which employees’ health and wellbeing (experienced by immersion in virtual reality in the 2020s) comes to the fore. Employees must be able **to efficiently switch between worlds** and manage their presence in both realities at the same time. The **ability to think systemically and manage processes comprehensively**, taking into account both virtual and fully analog areas, will also be important.

Recommended actions to make the *In smart mode* scenario likely to occur:

**Education:**

- strengthening education in the area of developing and using new technologies, including learning programming,
- the development of technical and digital competencies to cooperate with machines and algorithmic systems,
- training in effective group work skills,
- interpersonal communication training,
- making coaching and tutoring widespread from an early age.

**Business:**

- care for employees’ mental wellbeing and health as they function simultaneously in the virtual and real, “analogue” world,
- efforts to increase digital security,
- supporting a culture of learning and using the knowledge acquired for the development of the individual and the entire organisation.

**Decision-makers:**

- developing legal regulations concerning cooperation between humans and machines,
- introducing regulations to increase digital security,
- introducing a talent management policy,
- creating a system of incentives promoting employee mobility.

### Scenario 3. *In offline mode*

#### Assumptions for the scenario:

low level of virtualisation of the labour market

low ability to work in dispersed teams

#### The labour market

The labour market is based on small local enterprises with staff working onsite. The work environment becomes homogeneous. Onsite work gets in the way of the internationalisation of Polish enterprises, regardless of industry, which hampers their development. However, industry-specific competencies are gaining in importance. The balance between employees' private and professional lives is also important.

**In 2035, a significant proportion of older people (aged 65+) will be active on the labour market. Unfortunately, not all of them can cope with technological innovations.** They account for a high percentage of professionally active people, but age-related limitations mean that they cannot keep up with technological development. They are much better suited to onsite work than remote work.

**People with extensive professional experience (in the 40-65 age group) feel lost, having spent too long operating in a virtual environment.** Remote work, which became widespread during the pandemic (2020-2022), influenced the rapid development of ICT technology and contributed to the virtualisation of the labour market. However, the misuse of the benefits of technology has reduced professional effectiveness (for example, due to the use of social networks for private purposes during working hours) and the emergence of new illnesses related to it. To recover, these people were advised to withdraw from the virtual world.

**Young people are eager to return to nature and consciously refrain from using electronic devices.** They had noticed that the excessive use of modern technologies had a negative impact on their parents' and older siblings' physical and mental health. They consciously avoid remote work. They do not want to suffer negative consequences, in the form of the risk of social alienation. Their trust in technology becomes limited. Young people also push back against work in dispersed teams. They believe that it disrupts the rhythm of the day. Different time zones force employees to reorganise their working hours, which makes it much more difficult to maintain work-life balance. For their own convenience, they prefer to work in monocultural teams; communication is easy and cultural differences do not need to be taken into account. Their knowledge of other cultures is decreasing. They begin to push back against cultural diversity.

This generates a number of problems. The economy is slowing down and companies are becoming less competitive. **Geographical barriers** reappear, **limiting employees' ability to work together in large, culturally diverse teams located in different parts of the country, region or world. The work environment becomes homogeneous.**

Analogue isolation encourages entrepreneurs to return to traditional forms of work. **Onsite work gets in the way of the internationalisation of Polish enterprises, regardless of industry, which hampers their development.**

Other countries opt for remote work based on the cloud computing model. Virtual desktops and networking are becoming common. The virtualisation of the labour market is accompanied by the spread of automation and robotisation, not only in production, but also in services. However, Polish enterprises' and employees' digital maturity is declining noticeably. Poland comes last in enterprise innovation rankings.

**Despite growing environmental awareness in society, the low level of virtualisation has a negative impact on the environment — to some extent.**

Limited natural resources mean that companies are becoming increasingly conscious, not only in terms of corporate social responsibility, but also in terms of concern for the environment. Similar attitudes can also be observed in society. Young people are highly environmentally aware. The circular economy is becoming increasingly important, which also has implications for the recycling and reuse of products. However, implementing this type of solutions becomes complicated due to reluctance and inability to implement environmentally-friendly technological solutions.

**In education, there is a strong trend towards vocational education.** Professions using manual skills are becoming increasingly common and appreciated. However, talented people, especially in those in ICT, go abroad and pursue their careers there.

**The outlined scenario is a vision of the future that has negative consequences for the labour market.** There is a visible decline in professional mobility, innovation, and cooperation with foreign organisations. However, the problem of addiction to technology is absent. The development of vocational education is becoming increasingly important. Manual labour is better paid than work requiring advanced qualifications in the field of modern technologies. Graduates of vocational schools are sought after on the labour market and viewed positively by society.

**Awareness of the negative consequences of the virtualisation of the labour market results in clear efforts to universally care for physical and mental health.** New generations entering the labour market care about work-life balance and expect such attitudes from their employers.

In this scenario, **industry-specific specialist competencies** become more important. There is also a growing awareness of the need to take care of psychophysical health, which may be disturbed by the misuse of modern technologies. However, the poor condition of the economy leads to a number of economic problems in the country.

**Key characteristics of the *In offline mode scenario*:**

- the common form of operation among small local organisations with staff working onsite,
- individual work is very important,
- traditional professions of “the past” are appreciated,
- graduates of vocational schools are sought after on the labour market and viewed positively by society,
- organisations are characterised by cultural homogeneity,
- decline in professional mobility, innovation, and cooperation with foreign organisations,
- care for employees' physical and mental wellbeing,
- work-life balance is important.

## Employee profile

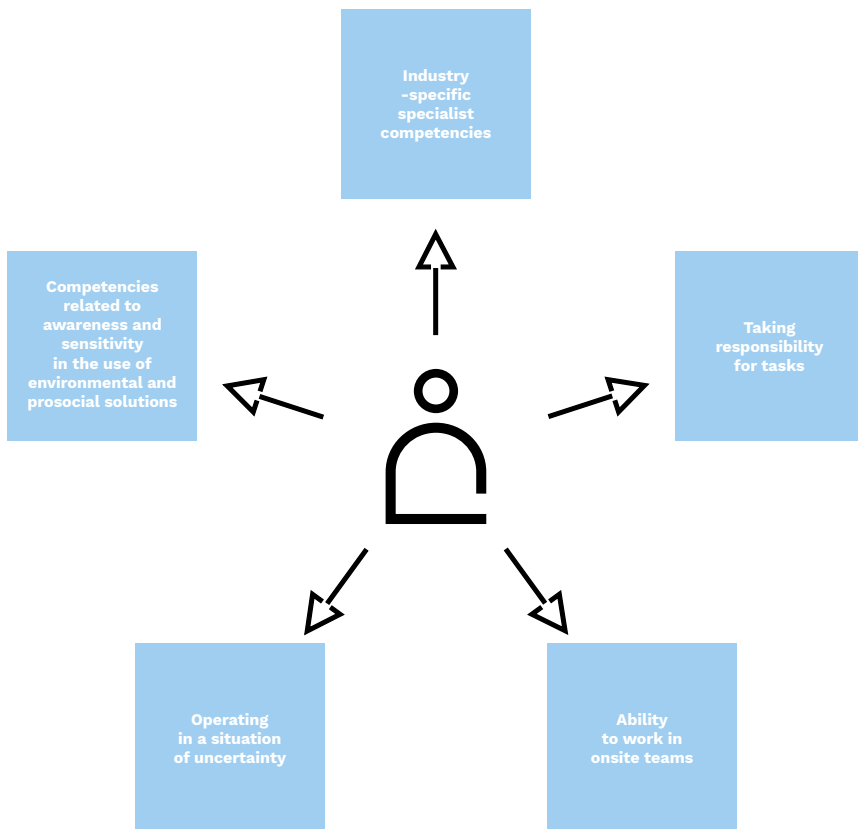
According to this vision of the reality of the labour market in 2035, the digitisation and automation of the economy, which has been advancing for years, have clearly slowed down. Technological saturation and the dissemination of new artificial intelligence solutions have created a situation in which the efficiency of a company (and its employees) is dependent on the skilful use of technology and its effective control (Infographic 6). Over time, however, it turned out that uncritical reliance on the technological reliability of the ICT solutions applied may lead to the unforeseen disruption of the company's operations (for example, if the system is hacked or there are server power problems) and, in extreme cases, in the event of prolonged technical problems, even to the company's collapse. In the face of the huge (and still growing) scale of digitised processes, digital security has turned out to be a major challenge, and mass borderline situations related to violations of security and network users' privacy **have eroded trust in technology and led to a shift towards the analog “here and now”**.

2035 has brought about **technological sobering, with people logging out of digital reality wherever possible**. This has its macro-systemic consequences: in the face of the declining competitiveness of the Polish economy in the international arena, there is a clear increase in unemployment (which had remained at a constant, low level of approximately 5% for years) resulting from the mismatch of competencies among Polish employees and candidates. People who entered the labour market a few or a dozen years ago are primarily equipped with the so-called **competencies of the future**, which, in the form that they were transmitted years earlier, **turn out to be unnecessary** in 2035.

The sense of being ill-fitted to the requirements of the modern labour market is most difficult for people with extensive professional experience (in the 45-65 age group), for whom **the need to retrain and change their business profile** involves the greatest effort. In the face of the change in the nature of the work performed and the reversal of transition trends, such as digitisation of the workplace, **continuous training** and expanding the scope of the necessary professional skills is a constant part of employees' everyday lives — although we would call the package of knowledge and skills being transmitted **competencies “of the past”**, anachronistic in view of the changes taking place in the world. The return to direct relationships in an analog work environment is somehow a return to how things were before three decades of digitisation.

From a macroeconomic perspective, abandoning digital solutions leads to clear losses for the economy. Yet for the individual, the return to a reality not mediated by digital technologies turns out to be a remedy for drowning in virtual reality, restoring the balance between the online and offline world. The **ability to act in situations of uncertainty** seems extremely helpful here.

**Infographic 6. Employee profile in the *In offline* mode scenario**



Source: prepared by PEI.

## Recommended actions to make the *In offline mode* scenario likely to occur:

### **Education:**

- the spread of education promoting entrepreneurial attitudes,
- the promotion of vocational education,
- training fostering craftsmanship,
- the spread and promotion of green education.

### **Business:**

- promoting and supporting micro-entrepreneurship,
- promoting local resources,
- promoting and supporting organic production.

### **Decision-makers:**

- developing legal solutions on working hours that allow work-life balance,
- supporting local family businesses,
- changing the image of vocational education.





## Scenario 4. *Digital detox*

### Assumptions for the scenario:

low level of virtualisation  
of the labour market

high ability to work  
in dispersed teams

### The labour market

The labour market in 2035 will be much more analog, largely due to the emergence of many negative social phenomena linked to work in the virtual space. There will be a return to onsite professional activity. At the same time, employees will still have the skills to work in dispersed teams, which will largely go unused. There will be a need to adapt to work involving direct cooperation. Employees will place considerable emphasis on maintaining work-life balance.

The intensive development of information and communication technologies, and the extremely rapid virtualisation of the labour market in 2022-2032, **will result in many negative social phenomena** in 2035. They include **an increase in the number of people addicted to the Internet, the widespread inability to cope with real life problems, and the breakdown of social and family ties**, which will contribute to the slow withdrawal of many professionally active people from work that requires that all tasks be performed in the virtual space. The situation is compounded by the **bankruptcy of many global corporations, which — operating almost exclusively as virtual organisations — have become the target of attacks by cybercriminals on an unprecedented scale.**

**These unfavourable socio-economic trends force employers to take action to overcome this impasse.** Flexible forms of employment are becoming less important, and the trend of offering employees standard jobs — with onsite work during specific hours, allowing them to separate their work life from their private life — is returning. In the slightly longer term, **the level of digitisation at enterprises, and therefore their efficiency, is decreasing, as automation and robotisation that improve production and services slow down** due to the fact that they were, to a large extent, strongly related to a given organisation's digitisation. **The level of innovation — and internationalisation — at labour market entities is declining because,** to a large extent, it was closely related to the level of virtualisation at them.

There is a growing **trend of returning to work onsite, which provides opportunities for personal and direct contact with other people. The level of trust in technology in society is clearly decreasing, while care for physical and mental health is increasing,** which requires work-life balance. **A society** tired of the high degree of virtualisation — not only in the labour market, but also in other areas of life, such as leisure, entertainment, shopping and services — **starts gearing up for a “digital detox”,** seeking ways to live in harmony

with the natural environment. **The level of environmental awareness is increasing**, reflected in **the choice of sustainable forms of transport**, as well as **greater interest in using renewable energy sources**, among other things.

The vast majority of professionally active people **are skilled at working in dispersed teams**. For many years, this was how they performed their professional duties, so they **are used to the management style and division of responsibilities typical of dispersed teams**, as well as **to a culturally-diverse work environment**.

Widespread remote work in the decade prior to 2035 means that people on the labour market struggle to adapt to working onsite and in monocultural teams. There is **an increase in interest in a large group of adults in training in the field of direct customer service, personal communication, and so on**. This also applies to older people, who account for quite a significant share of professionally-active people.

Even though the virtualisation of the labour market is very low, **some employees with the most advanced skills when it comes to working in dispersed teams are becoming an important way for companies operating in analog mode to acquire a competitive advantage**. When seeking ideas for new products or phenomena that require consultation with faraway experts and specialists, a “temporary” team can be established quickly that to tackle a specific problem at the company. The occasional use of a select group of employees’ ability to work in dispersed teams allows the company to draw on a spatially unlimited sets of experiences and creative resources, even though it operates in an almost exclusively analog reality.

**The Digital detox scenario is a vision of the future with negative consequences for the labour market**. The sudden return of most employers to the analog world undoubtedly creates a number of challenges when it comes to organising work and managing other company resources. The digital skills developed by employees over the years, as well as their ability to work in dispersed teams, are largely unused. At the same time, skills gaps appear, as employees with digital skills must adapt to work in analog conditions. Vocational education is becoming increasingly important because, in a non-virtual reality, blue-collar workers are much more sought after and better paid.

#### **Key characteristics of the labour market in the *Digital detox* scenario:**

- employers are returning to traditional solutions that reward analog ways of performing tasks at companies,
- the role of flexible forms of employment is decreasing, while full-time posts and work with specific hours become increasingly common,
- work in dispersed teams is only meant to complement traditional forms of operation at companies,
- increase in the role of specialist competencies, including ones linked to traditional professions,
- employees emphasise work-life balance.

## Employee profile

This scenario for the development of the labour market is linked to the spread of technosceptical attitudes, which are increasingly manifested by people who use new technological solutions in their everyday lives. The progressive virtualisation of the labour market reached a "critical mass" in 2020s, a result of the marked acceleration of the digital transition processes during the COVID-19 pandemic, among other things. The shift to remote work *en masse* and the wider use of solutions mediating face-to-face contacts brought about by the pandemic-related restrictions continued for several years after the start of the epidemic, but began to weaken significantly over time, giving way to sentimental trends opposing the excessive virtualisation of the professional and private sphere.

Innovative technological solutions in the field of artificial intelligence, originally designed to support employees and dispersed teams, became the basis for organising work at companies in a relatively short period of time, gradually replacing the structures of "human" actors. In 2035, a sharp slowdown in the implementation of digital innovations on a large scale can be observed, with a **return to traditional solutions in many areas**, emphasising analog ways of performing tasks at companies, **while maintaining the trend of working in dispersed teams**, which are physically and structurally distant from each other (Infographic 7).

In such a contrasting work environment, **specialised competencies** that enable employees to perform the tasks assigned to them effectively, regardless of the technological and organisational solutions adopted, are the most valuable. **A real profession**, supported by **experience in the industry** and many years of work, are what counts on the labour market.

**Traditional professions** focused on the **production of material goods** are back in favour in Poland — in contrast to the direction of economic development in other European countries, which are largely focused on developing the consumption and production of intangible goods. Polish employees are losing their value and competitiveness on the global market more and more every year, and their skill profile differs from the standards accepted around the world. While globalization processes have not slowed down and readiness to work in dispersed teams has not decreased, Poles, who are unable to constitute a real force on the European market, are primarily seeking employment within Poland.

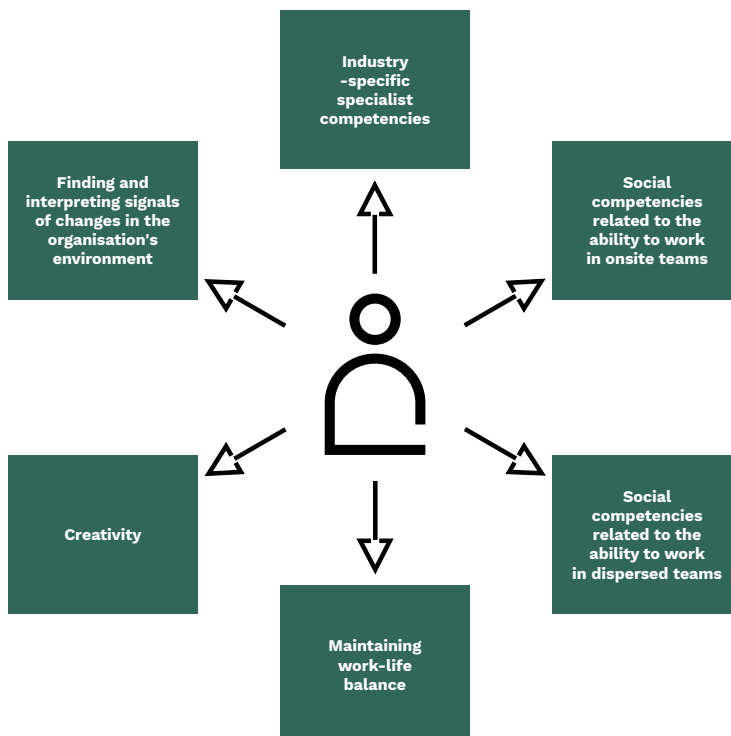
The labour market in 2035 is a market **of conscious employees "who take care of their own interests", communicate their needs and expectations clearly, but also work efficiently in a variety of groups.**

Another characteristic feature of employees in this vision of the world is their **attention to work-life balance**. And while, over the course of the ongoing changes, employees have developed the ability to work in dispersed teams, which has become widespread, it is now difficult to use it to do real work, which is oriented towards face-to-face contacts in an analog professional reality.

At the same time, **concern for the health and wellbeing of loved ones** has come to the force. This means that people active on the labour market today value stable forms of employment and good medical care. Of the benefits that employers can offer their staff, health protection and employee rights are the most popular.

Observing the progressive destruction of the environment and of natural resources, employees are also more **involved in environmental activities and support for fair trade, showing their sensitive, human side**. In this scenario, 2035 is an opportunity to revise the adopted paradigms of technological progress and redefine the basic values that the labour market is oriented around.

**Infographic 7. Employee profile for the *Digital detox* scenario**



Source: prepared by PEI.

Recommended actions to make the *Digital detox* scenario likely to occur:

**Education:**

- promoting vocational education,
- striving to make education more practical at every level,
- strengthening cooperation between educational institutions and business (the development of dual education).

**Business:**

- organising training and workshops on working in face-to-face teams,
- offering psychological consultations and group therapy, which constitute a "*digital detox*" for employees,
- changing the employee motivation system, from offering material benefits to activities aimed at improving their well-being,
- building employers' brands as socially responsible corporations.

**Decision-makers:**

- shaping a positive image of vocational education in society,
- promoting traditional (forgotten) professions among young people through organised social campaigns,
- creating a system of incentives aimed at making education more practical at every level.



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# The Polish Economic Institute

The Polish Economic Institute is a public economic think tank dating back to 1928. Its research primarily spans macroeconomics, energy and climate, foreign trade, economic foresight, the digital economy and behavioural economics. The Institute provides reports, analyses and recommendations for key areas of the economy and social life in Poland, taking into account the international situation.

