COMPETENCIES OF THE FUTURE IN LIGHT OF THE CHANGES TAKING PLACE IN LARGE-SIZED COMPANIES

KOMPETENCJE PRZYSZŁOŚCI W ŚWIETLE ZMIAN ZACHODZĄCYCH W DUŻYCH PRZEDSIĘBIORSTWACH

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Abstract: The reality of the labour market is that changes are determined by both internal and external factors. The COVID-19 pandemic and the Russo-Ukrainian War doubtlessly resulted in a significant transformation of the labour market. The consequences of both events belong to external factors, where the expectations of both employers and employees, as well the offers being made by both groups participating in the labour market, clashed anew, revealing the existing competencies and deficits in their scope. Given the aim of the article, the authors will focus primarily on the conditions created by employers in large-sized companies, and their influence on the reinforcement and development of competencies of the future. The conducted survey studies indicate the necessity to introduce changes in the process of work organisation; and of the kind which will foster the development of competencies of the future. The studies were conducted taking into account the social changes in the external environment of organisations and the changes which were imposed on employers, remote work among others, in response to the changing environment. Thus, the issues raised in the studies, apart from competencies of the future, include organisational changes faced by the employees. Based on the obtained results recommendations were formulated.
Keywords: competencies of the future, the environment of an organisation, remote and on-site work

Abstrakt: Rzeczywistość na rynku pracy podlega nieustannym zmianom. Zmiany te determinowane są zarówno czynnikami wewnętrznymi, jak i zewnętrznymi. Duża transformacja rynku pracy miała miejsce w okresie pandemii COVID-19 i w chwili rozpoczęcia wojny rosyjsko-ukraińskiej. Konsekwencje obu wspomnianych zdarzeń zaliczają się do czynników zewnętrznych. To one sprawiły, że zarówno oczekiwania pracodawców, jak i pracowników, oraz oferta oferowana przez obie grupy uczestników rynku pracy, zderzyły się ze sobą od nowa i obnażyły posiadane kompetencje, jak również deficyty w ich zakresie. Z uwagi na intencję artykułu, uwaga skupi się przede wszystkim na warunkach stworzonych przez pracodawcę w dużych przedsiębiorstwach i ich wpływie na wzmocnienie i rozwój kompetencji przyszłości. Przeprowadzone badania ankietowe wskazują na konieczność wprowadzania zmian w procesie organizacji pracy, które będą sprzyjały rozwojowi kompetencji przyszłości. Badania przeprowadzono z uwzględnieniem zmian społecznych w otoczeniu zewnętrznym organizacji oraz zmian, które zmuszony był wprowadzić pracodawca w odpowiedzi na zmieniające się otoczenie, m.in. pracę zdalną. Tym samym zagadnieniami poruszonymi w badaniach, oprócz kompetencji przyszłości, były zmiany organizacyjne, wobec których został postawiony pracownik. Na podstawie uzyskanych wyników zostały sformułowane rekomendacje.
Słowa kluczowe: kompetencje przyszłości, środowisko organizacji, praca zdalna i stacjonarna

Introduction

The COVID-19 pandemic and the Russo-Ukrainian War are factors which have determined numerous areas of social life. In the case of large companies, they have brought about a range of changes, among them remote work. Aside from this development, economic development and the demands of the market resulted in the identification

of competencies of the future that will ensure the active presence of employees in the labour market as well as the functioning of companies. The clash between the introduced changes and diligence with respect to the development of competencies of the future is a challenge for both employers and employees. Thus the aim of the article is to evaluate conditions created for the employees of large companies in order to reinforce and develop their competencies. Based on a review of source literature the following research problem has been formulated: *What conditions foster the development of competencies of the future in the context of selected changes introduced in large companies*?

Competencies as Resources in Organizations

The term competency is interdisciplinary, however, it is also present in colloquial speech. The term is derived from the Latin word *competentia* which means agreement, adequacy, scope of entitlement, powers (Markowski, Pawelec, 2003). *The Dictionary of the Polish Language* describes competencies as the "scope of a person's knowledge, skills and abilities, which determine that person's capacity to something and the conviction to use that capacity" (Drabik, 2009, p. 324). Czekaj defines the term as a group of individual requirements set for employees, which determine their professional adequacy to fulfil specific functions and organisational roles outlined in the job description (2010, p. 32). Coolahan stresses that "the term 'competence' and 'competencies' should be regarded as general capability based on knowledge, experience, values, dispositions which a person has developed through engagement with educational measures" (1996, p. 26). This means that competencies lie within the domain of education. Competencies are acquired through education, however, it needs to be said that this implies both formal and informal education (see Beck, 2000; Koźmiński, 2004; Kozek, 2015; Palacios-Huerta, 2016). Currently, we can observe the phenomenon of *lifelong learning*, which postulates learning throughout the course of one's life, and acquiring and developing competencies at the same time. This is especially significant in the context of external factors. It should be stressed that no new didactic tools can aid in education if education lacks creativity, a will to communicate and co-create or a culture of processing and critical reception of information. "Every person has his or her deposits of creativity, which result from the fact of being human. The challenge is to develop them. A culture of creativity must include all, not just the selected few" (Robinson, 2016, p. 8).

For the purpose of this article it is necessary to review the definition of the term "competency" from a scientific point of view, in order to grasp its essence and role for management. In literature on human resource management we can find the following definition of competency by Boyatzis: "the potential, existing in the human, leading to such a behaviour that helps to satisfy the requirements at a given post within the organisational environment, which in turn provides the desired results" (Oleksyn, 2006, p. 18). Boyatzis goes on to develop the term, stating that it is "a generic body of knowledge, motives, traits, self-images and social roles and skills that are causally related to superior or effective performance in the job" (Oleksyn, 2006, p. 18). Król characterizes competencies as "predispositions in the scope of knowledge, skills and attitudes, which ensure the realization of professional tasks on an effective and (or) distinguished level, in accordance with standards specified by an organization for a given position" (2006, p. 82). In turn, Whiddett and Hollyforde characterise competencies as "the ability to effectively carry out specific tasks connected with one's profession or to achieve desirable and measurable goals, and as the ability to display specific exemplary behaviours" (2003, p. 15).

The role of managers/superiors in the process is also crucial. This statement is further reinforced by Stańczyk, who stresses that the process of change occurring in an organisation is influenced by management, whose aim is to strengthen market position (2018, p. 65).

Ansoff notes an "increasing turbulence within the environment which is characterised by four tendencies: increased modernisation of change, increased intensity of the environment, increased rate of change, increased complexity of the environment" (2013, p. 58). The COVID-19 pandemic and the war in Ukraine are examples of outside factors which have brought about change in the development of information technology. These changes were also noted by the authors of the report titled *Beyond the Horizon, Course for Education*, who indicate that "the development of information technology, including artificial intelligence, will result in a radical rise in automation (robotization) of processes in many industries, including business and consumer services. A strong deficit of creative staff coupled with a surplus of employees capable of performing routine tasks will be experienced within the industries undergoing technological changes" (FCDSP, 2020).

A confirmation of this can be found in the research results published in *The future of jobs report 2020* (WEF, 2020) which show that the development of competencies of the future will change the division of work into one that is done using technology and one that is done by humans. According to the report the tasks which will undoubtedly still be performed by humans include coordinating, developing, managing and advising (72.5%), reasoning and decision-making (65.8%), communicating and interacting (64.7%). On the other hand, performing physical and manual work activities (59.6%), administering (56.4%) and performing complex and technical activities (53.9%) may become largely automatized.

The future is likely to bring the development of intelligent systems and machines, computerisation, automation and digitalisation, as well as changes in social and demographic processes, on the basis of which the following six factors of change can be highlighted:

1) extreme longevity: the increase in global life expectancy is changing career and learning models;
2) development of intelligent machines and systems: employees will move away from automatic and repetitive tasks;
3) a "computable world": an immense increase in possibilities of data analysis and processing will create a more programmable world;
4) a new media ecosystem: new means of communication require digital competencies which go beyond ordinary language;
5) organisational superstructures: social-networking technologies which power new forms of production and value creation;
6) a globally connected world: increased global connectivity places diversity and adaptability at the organisational centre of operations (www.obserwatorfinansowy.pl, 2024).

Some of the most important traits of modern employees are openness to change, a desire to improve and develop, as well as creativity, which are listed in the first three (alongside problem-solving and critical thinking) among the predictions regarding competencies and skills indispensable among future employees (www.pracuj.pl, 2024).

The authors of *Future Work Skills25* (FWS, 2011), *Trends Shaping Polish Industry Sectors and Competencies of the Future* (TSPI&CF, 2023) and *Report from Empirical Studies on the Scope of Competencies and Professions of the Future* (CPF, 2022) attempt to predict the competencies which will be required in the labour market. These competencies can be divided into several key categories, which are a reflection of various aspects of work and management in organisations where they belong:

1. **Communication, relations, cooperation**:
   - Building and developing business relations, including negotiations and effective communication.
   - Cooperation in a group both in a local and international context, taking into consideration cultural diversity.
   - Ability to work in interdisciplinary teams.
2. **Organisation, management, planning:**
   - Change management, including planning and implementing change.
   - Managing communication in a team, predicting and minimising risk.
   - Quick adaptation to changing conditions and effective crisis situation management.
3. **Analytical competencies:**
   - Ability to analyse data and make conscious decisions on their basis.
   - Processing and analysis of big data.
   - Diagnosing needs and interpreting research results.
4. **Digital competencies**:
   - The ability to use IT tools, knowledge in the scope of automation and robotics.
   - Competencies in the scope of cybersecurity.
   - Innovativeness and creativity in designing as well as seeking and implementing new technological solutions.
5. **Development, creativity, innovativeness**:
   - Readiness to develop and constantly follow new solutions in the industry.
   - Anticipating needs and initiative in taking action.
6. **Environmental protection, sustainability:**
   - Knowledge in the scope of environmental protection and regulations on the environment.
   - Ability to plan pro-environmental activities.

The WEF report showcases the desired job skills of employees in the 21 century in the changing realities of the market (FJ, 2020):

1. Analytical thinking and innovation.
2. Active learning and learning strategies.
3. Complex problem-solving.
4. Critical thinking and analysis.
5. Creativity, originality and initiative.
6. Leadership and social influence.
7. Technology use, monitoring and control.
8. Technology design and programming.

9. Resilience, stress tolerance and flexibility.
10. Reasoning, problem-solving and ideation.

Other skills include emotional intelligence, problem solving and user experience, orientation towards services, systems analysis and assessment, persuasion and negotiations. These skills are in fact difficult to automate, which makes them more important for employees who want to adapt to the changing labour market and its requirements.

Business enterprises should also strive to develop the skills listed above among their employees, in order to attain competitiveness and effectiveness on the demanding market. Moreover, the need for constant learning and adaptation to new conditions is highlighted as key to the future success of enterprises.

Methodology

An analysis of source literature, development of a research tool and empirical data analyses were conducted in order to reach the assumed objective of the study. A source literature search was conducted in renowned scientific databases such as Scopus, Web of Science, Ebsco. At the stage of development quantitative methods were selected. Information was collected indirectly using a questionnaire survey. The sample selection was deliberate and included large enterprises from various sectors, i.e. businesses with over 249 employees, which constitute 0.2 of all business enterprises in the Pomeranian Voivodeship. In 2023, the Pomeranian Voivodeship was ranked 3rd in Poland in terms of entrepreneurship (PARP, 2023). The

study for this article was conducted from February to April 2023. It was anonymous and participation was voluntary. The research was much broader in scope and the issues presented here constitute only part of the obtained material. The results of the quantitative studies were prepared based on responses from 170 respondents (200 surveys were disseminated). The study was not representative but can be useful for the labour market in Poland. The questionnaire contained questions regarding skills identified in analyses by McKinsey and the WEF as key competencies for employees in the evolving labour market.

According to the report titled *Competencies of the Future. How to Shape them in a Flexible Educational Ecosystem*, "the Polish economy is increasingly based on knowledge, and so an insufficient number of employees with adequate competencies is a challenge for companies competing on local and global markets and constitutes a threat to growth potential. Opportunities for the Polish economy depend on creativity, innovativeness, entrepreneurship, ability to cooperate and take responsibility, ability to cope with uncertainty and specific technical skills of Poles. However, numerous studies show that Poles do not display adequate competencies and skills. According to analyses by the OECD published in the *Getting Skills Right: Future--Ready Adult Learning Systems* report (2019), Poland ranks 9th among 34 member states in terms of an urgent necessity to increase competencies and skills among the adult population (aged 25--64)" (PFR, 2019) (Figure 1).
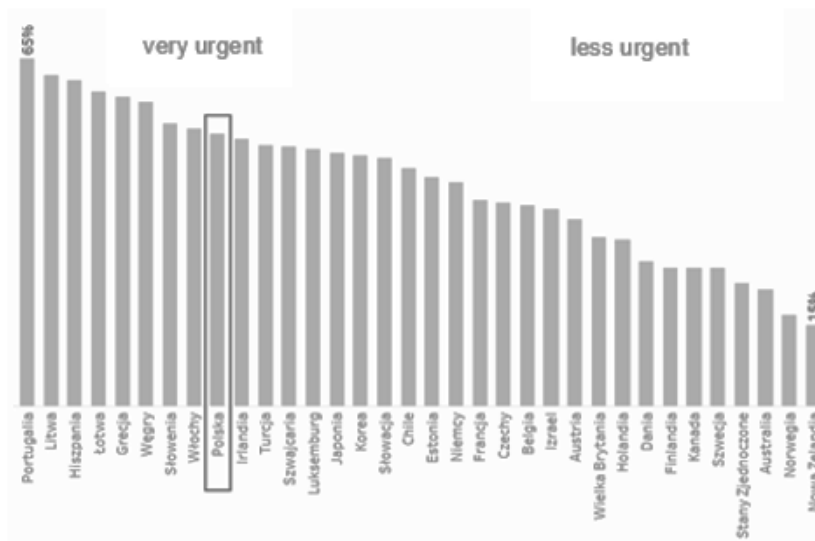
Figure 1. How urgent is the necessity to improve competencies among adults (according to the OECD index)
Source: *Competencies of the Future. How to Shape them in a Flexible Educational Ecosystem?,* PFR, 2019, p. 41.

Reports indicate that the employees of Polish companies represent one of the highest percentages among adult populations displaying low digital problem solving skills. This may result from the fact that the Polish system of education dedicated to adults is insufficiently adapted to the requirements of the labour market.

Results and Discussion

The geopolitical situation as well as the COVID-19 pandemic forced organisations to introduce a range of changes, which undermined the status quo of their employees. The biggest consequence of this situation was the introduction of remote work, which in turn resulted in further organisational changes. The co-occurrence of numerous changes interfered, among others, with human resource development, including the development of competencies. The obtained results are presented in tables 1–10.

Table 1. What changes have occurred in your organisation in the last three years?

Category	Nominal value	Percentage
The introduction of remote work	70	41%
The introduction of hybrid work	100	59%
A reduction in office space	47	28%
Decrease in the volume of paper documentation	121	71%
Loss of financial fluidity	42	25%
Cultural changes in the workplace	139	82%

Source: own calculation on the basis of research results.

Table 2. Which of the changes listed below were introduced during or after the COVID-19 pandemic in your organization in the scope of arranging and equipping your office?

Category	Nominal value	Percentage
Office space was reduced	24	14%
Office space was increased	1	1%
The entire office space was altered	41	24%
The number of desks was reduced	62	36%
The number of confined spaces was increased	133	78%
The number of soft-sitting areas (places for informal meetings, comfortable couches, armchairs, acoustic booths) was increased	16	9%
New technological solutions (e.g. teleconference systems) were introduced/upgraded	164	96%
New amenities to improve teamwork e.g. workshops, brainstorming sessions were introduced (e.g. furniture, boards)	23	14%
I haven't noticed any changes	13	8%

Source: own calculation on the basis of research results.

Table 3. Did you have difficulty adapting to remote work?

Category	Nominal value	Percentage
Yes	102	60%
No	68	40%
Neither agree nor disagree	0	0%

Source: own calculation on the basis of research results.

Table 4. How do you rate your participation in training sessions on a scale of 1 to 5, where 1 means the least satisfying and 5 means very satisfying?

Category	1	2	3	4	5
On-site training sessions	0	5	20	57	88
	0%	3%	12%	34%	52%
Remote training sessions	7	33	50	35	45
	4%	19%	29%	21%	26%

Source: own calculation on the basis of research results.

Table 5. How do you rate your satisfaction with the level of interaction with your coworkers during remote and on-site work on a scale of 1 to 5, where 1 means the least satisfying and 5 means very satisfying?

Category	1	2	3	4	5
On-site work	13	19	8	119	11
	8%	11%	5%	70%	6%
Remote work	23	47	63	15	22
	14%	28%	37%	9%	13%

Source: own calculation on the basis of research results.

Table 6. How do you rate the level of team building and company culture in your organization during remote and on-site work on a scale of 1 to 5, where 1 means the least satisfying and 5 means very satisfying?

Category		1	2	3	4	5
On-site work	Team integration	2	4	14	41	109
		1%	2%	8%	24%	64%
	Company culture	13	13	28	44	72
		8%	8%	16%	26%	42%
Remote work	Team integration	25	39	56	38	12
		15%	23%	33%	22%	7%
	Company culture	4	57	45	50	14
		2%	34%	26%	30%	8%

Source: own calculation on the basis of research results.

Table 7. How do you rate the level of contact/support from superiors during remote and on-site work on a scale of 1 to 5, where 1 means the least satisfying and 5 means very satisfying?

Category	1	2	3	4	5
On-site work	4	8	24	78	56
	2%	5%	14%	46%	33%
Remote work	15	29	30	81	15
	9%	17%	18%	48%	9%

Source: own calculation on the basis of research results.

Table 8. What forms of support can you use during remote and on-site work?

Category	Remote work		On-site work	
	Yes	No	Yes	No
Company guidebook	152	18	170	0
	89%	11%	100%	0%
Intranet	132	38	170	0
	78%	22%	100%	0%
Mentoring	35	135	147	23
	21%	79%	86%	14%
Coaching	24	146	135	35
	14%	86%	79%	21%

The "Buddy" system	6	164	6	164
	4%	96%	4%	96%
Training sessions	94	76	144	26
	55%	45%	85%	15%
Internal communicator	45	125	45	125
	26%	74%	26%	74%
Relaxation areas	37	133	49	121
	22%	78%	29%	71%
The Internet	156	14	168	2
	92%	8%	99%	1%

Source: own calculation on the basis of research results.

Table 9. Which of the competencies listed below do you have?

Category	Nominal value	Percentage
Innovative and analytical thinking	89	52%
Active learning	113	66%
Complex problem solving	64	38%
Critical thinking and analysis	53	31%
Creativity, innovativeness and initiative	107	63%
Leadership and social influence	46	27%
Use, monitoring and control of technology	39	23%
Designing and programming of technology	85	50%
Resilience and tolerance to stress, flexibility	32	19%
Reasoning, solving of problems and concepts	72	42%

Source: own calculation on the basis of research results.

Table 10. Which of the competencies listed below do you believe should be developed?

Category	Nominal value	Percentage
Innovative and analytical thinking	151	89%
Active learning	143	84%
Complex problem solving	139	82%
Critical thinking and analysis	160	94%
Creativity, innovativeness and initiative	168	99%
Leadership and social influence	137	81%
Use, monitoring and control of technology	159	94%
Designing and programming of technology	159	94%
Resilience and tolerance to stress, flexibility	128	75%
Reasoning, solving of problems and concepts	139	82%

Source: own calculation on the basis of research results.

Table 11. Which of the competencies listed below does the organisation you work for help you develop?

Category	Nominal value	Percentage
Innovative and analytical thinking	135	79%
Active learning	131	77%
Complex problem solving	115	68%
Critical thinking and analysis	135	79%
Creativity, innovativeness and initiative	124	73%
Leadership and social influence	106	62%
Use, monitoring and control of technology	143	84%

Designing and programming of technology	78	46%
Resilience and tolerance to stress, flexibility	109	64%
Reasoning, solving of problems and concepts	116	68%

Source: own calculation on the basis of research results.

When analysing the results, we need to emphasise that all respondents noticed changes in their organisations resulting from the pandemic and the war. Given the types of changes introduced, the respondents mostly referred to cultural changes in their work environment (82%). This may be the result of the ongoing conflict in Ukraine. The next change noticed in the organisations was the decrease in the volume of paper documentation (71%). This factor was caused by the pandemic situation, which also contributed to the introduction of hybrid (59%) and remote work (41%).

Respondents also noted changes in their work conditions. At the forefront was the introduction and/or upgrade of new technological solutions (96%). This resulted in increased competency among some employees in terms of technology as well as resistance and tolerance to stress. It also brought about an increase in flexibility among employees in terms of their tasks. Remote work often required the skills of independent problem solving and creativity. Unfortunately, for economic reasons the number of desks was also reduced (36%), which was connected with a lack of a permanent workstation. The office space was also altered (24%).

The changes introduced in the organisations prompted a significant percentage of respondents (40%) to indicate difficulties with adapting to the new working environment. As indicated earlier, this state of affairs could also impact effectiveness and competency development.

The respondents' evaluation of training participation reflected and confirmed earlier results. The respondents preferred on-site training sessions (86%) as opposed to online training (47%). Thus, direct, fate-to-face meetings were more effective. These results could be connected with fears regarding the aforementioned effectiveness, as online training has become a permanent feature.

An undeniable advantage of on-site training sessions and work is direct contact with co-workers and superiors. The respondents also highly value close contact at work, as can be seen in their appreciation of their relations with colleagues. 76% of respondents referred positively to on-site work, while 21% spoke favourably about remote work. The obtained results clearly indicate the advantages of on-site work, and thus direct meetings.

It would appear that on-site work fosters the development of employees' competencies. Further arguments in favour of such a position are team integration, understood as mutual cooperation of all members, sharing experiences, knowledge as well producing creative solutions. The results indicate that team integration in the case of on-site work is valued by 88% of respondents, while 71% reported insufficient interpersonal contact in the case of online work. Company culture was highly valued in the case of on-site work (68%) while in the case of remote work it received low ratings (62%).

79% of respondents declared having received support from superiors in the case of on-site work, while in the case of remote work that figure was 57%. Respondents indicated the following forms of support: company guidebook (on-site – 100%, remote – 89%), intranet (on-site – 100%, remote – 78%), the Internet (on-site – 99%, remote – 92%), training sessions (on-site – 85%, remote – 55%), mentoring (on-site – 86%, remote – 21%), coaching (on-site – 79%, remote – 14%).

When respondents were asked about competencies of the future the results were very similar in the context of existing, desired and developed competencies in the respondents' organisations. It is difficult to indicate the competencies which respondents considered the most important, as the results oscillate between 80 and 90%. What is surprising is the declaration made by respondents regarding the opportunities provided to them by their organisations in the scope of competency development. Respondents indicated that all suggested competencies of the future are supported by their organisations. However, it is difficult to determine the type of support received or its effectiveness, given the level of competencies of the future possessed by the respondents. Thus, despite the support, we can assume that remote work does not foster the development of competencies of the future.

Conclusion

Competencies of the future are of interest to both theoreticians and practitioners. However, they have gained special significance in the context of their development by employees of specific organisations. It is in the interest of these organisations to create conditions for their development.

We should take note of the fact that organisations do not exist in a void, and thus their external environment which demands the introduction of various changes is not without significance. The COVID-19 pandemic and the Russo-Ukrainian War are important examples of changes impacting existing reality. In consequence, competencies of the future, i.e. the conditions which companies create for their development among their employees, have attracted the interest of researchers. The conclusions drawn from the study suggest that remote work is not an optimal form for employees, and does not create conditions which would allow them to focus on developing their skills or knowledge.

The study has shown that forms of support such as mentoring and coaching are more effective in the case of on-site work, as opposed to remote work. Equally surprising are the results which indicate that line managers devote less time to supporting their employees during remote work. We can assume that, in a sense, employees who work remotely do not take advantage of the support offered to them to the degree expected by employers. What is more, we should pay attention to the discrepancy between the declared and desired competencies of the future, as reported by employees, and the support which they receive from superiors and the desired level of these competencies. It turns out that respondents are characterised by low levels of competencies of the future. In spite of this, these same respondents are failing to take full advantage of the support offered by employers, while claiming that competencies of the future are very desirable, and that employers offer support in their development.

This is confirmed in the analysis of the aforementioned reports on competencies of the future, which show that Polish companies increasingly rely on knowledge and the ability to apply it in practice. Employees are conscious of the fact that they need to develop their competencies as low skills can have a negative impact on the productivity of companies and on their developmental capacity, to include innovation introduction and technology adaptation. On the one hand, it is necessary to expand competencies which will allow one to freely function in a digital and automated world. On the other hand, it is necessary to develop the competencies which will never be acquired by machines, devices or computers.

The implications resulting from the study may indicate the need to create conditions fostering the development of such competencies in the work environment which support the culture of learning and constant development, encouraging employees to expand their competencies (including their soft skills) such as creativity, problem solving, flexibility, leadership, as well as the ability to predict changes, plan adaptive strategies, effective implementation and communication. Organisations should continue to optimise hybrid and remote forms of work, providing necessary technological tools.

In conclusion, we can state that the importance of competencies of the future is undeniable. However, the level of preparation of both employers and employees to create conditions for their development may raise doubts. This stems from the fact that, in the case of unforeseen large-scale social events, such as a pandemic or a war, the attention of employers is largely focused on maintaining the company in a healthy financial condition. This means that the claim that people are the most important resource of an organisation has lost its significance, which may, in the longer perspective, undermine the functioning of any organisation.

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