UNIVERSITY OF LJUBLJANA
SCHOOL OF ECONOMICS AND BUSINESS

TEAM MASTER'S THESIS

# REIMAGINING SKILLS AS AN OPPORTUNITY FOR SLOVENIAN COMPANIES TO GAIN A COMPETITIVE EDGE

Ljubljana, September 2024

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# TABLE OF CONTENTS

## LIST OF FIGURES

## LIST OF TABLES



## LIST OF APPENDICES



## LIST OF ABBREVIATIONS

sl. - Slovenian

**AI –** (sl. umetna inteligenca); artificial intelligence

**B2B –** (sl. poslovanje med podjetji); business to business

**B2C** – (sl. podjetje do potrošnika); business to consumer

**CAD** – (sl. računalniško podprto načrtovanje); computer-aided design

**CEDEFOP** – (sl. Evropski center za razvoj poklicnega usposabljanja); European Centre for the Development of Vocational Training

**CEO** – (sl. generalni direktor); chief executive officer

**COVID-19** – (sl. koronavirusna bolezen); coronavirus disease

**CRM** – (sl. upravljanje odnosov s strankami); customer relationship management

**ERP** – (sl. načrtovanje virov podjetja); enterprise resource planning

**EU** – (sl. Evropska unija); European Union

**GEN-Z** – (sl. generacija Z); Generation Z

**GPA** – (sl. povprečna ocena); grade point average

**HR** – (sl. človeški viri); human resources

**HRM** – (sl. upravljanje s človeškimi viri); human resource management

**ILO** – (sl. Mednarodna organizacija dela); International Labor Organization

**IMB** – (sl. magistrski program Poslovodenje in organizacija); International Full Time Master Programme in Business and Organisation

**IT –** (sl. informacijska tehnologija); information technology

**KPI** – (sl. ključni kazalnik uspešnosti); key performance indicator

**MOOC** – (sl. množični odprti spletni tečaj); massive open online course

**MNE** – (sl. mednarodno podjetje); multinational enterprise

**MKT** – (sl. trženje); marketing

**NACE** – (sl. statistična klasifikacija gospodarskih dejavnosti); Nomenclature statistique des Activites economiques dans la Communaute Europeenne' - Statistical classification of economic activities in the European Community

**OECD** – (sl. Organizacija za gospodarsko sodelovanje in razvoj); Organization for Economic Co-operation and Development

**PKP** – (sl. Poslovna konferenca Portorož); Business Conference Portorož

**PPC** – (sl. plačilo na klik); pay-per-click

**SEO –** (sl. optimizacija iskalnikov); search engine optimisation

**SME** – (sl. mala in srednje velika podjetja); small and medium-sized enterprises

**SQL** – (sl. strukturirani povpraševalni jezik za delo s podatkovnimi bazami); structured query language

**STEM** – (sl. znanost, tehnologija, inženiring in matematika); science, technology, engineering and mathematics

**UI** – (sl. uporabniški vmesnik); user interface

**US** – (sl. Združene države Amerike); United States of America

**UN** – (sl. Organizacija združenih narodov); United Nations

**UX** – (sl. uporabniška izkušnja); user experience

**WEF** – (sl. Svetovni gospodarski forum); World Economic Forum

**WW2 –** (sl. Druga svetovna vojna); Second World War

# 1 INTRODUCTION

In today's unpredictable environment, businesses must swiftly adapt to a continuously evolving landscape, where technological advancements such as automation, artificial intelligence and potential job displacement dominate discussions. While these digital innovations offer new opportunities for employment by boosting worker productivity and creating jobs, they also pose significant challenges. Adopting digital technologies depends not only on economic, social, ethical, and legal factors but also on the availability of the necessary skills to operate these new tools effectively (International Labor Organization & OECD, 2018).

And while digital transformation is a significant challenge, it is not the only one companies face - other megatrends, such as demographic shifts (ageing population leading to a shrinking workforce), urbanisation and labour mobility (with skills being transferred globally through migration), globalisation and trade (including outsourcing and the expanded integration of global markets), geopolitical uncertainties, climate change mitigation, and environmental degradation (which necessitate the transition to sustainable practices and the creation of "green" jobs) also heavily influence the demand for specific skills (Hogarth, 2019) and will be reshaping jobs and work environments in the future as well. Given these emerging megatrends, companies, or rather their employees, must focus on developing both hard and soft skills to maintain and advance their market position. Hard skills, which are technical and can be taught, include abilities such as strategic planning, economic analysis and design, as well as digital literacy, customer service and project management (Beheshti, 2018; Bennett & McWhorter, 2021). These skills are measurable and acquired through education and experience. In contrast, soft skills, which are people-oriented, involve interpersonal and intrapersonal abilities like teamwork, communication, and leadership. These are developed gradually through self-reflection, empathy, and consistent effort (Beheshti, 2018; Hurrell, 2016). Research shows that soft skills, such as teamwork, collaboration, communication and leadership skills, are frequently considered key critical strategic skills by human resources (HR) managers in Slovenia (Istenič et al., 2022). As functional expertise evolves rapidly, organisations should also focus on cultivating meta-skills, higher-order abilities like self-awareness, agility, resilience, flexibility and creativity among employees to enhance overall effectiveness by enabling individuals to adapt and continuously learn (Razzetti 2018). Since meta-skills govern the approach rather than the specific actions, they adapt to various situations. They are better conceived as principles that provide direction rather than a set of rigid instructions (Senova, 2020).

As the demand for new skills and competencies continues to rise - and this trend is expected to accelerate in the future - to stay competitive, companies must prioritise two key strategies: reskilling and upskilling their existing workforce (Kasriel, 2017). Upskilling involves equipping employees with new skills to advance in their current roles by expanding their skill set while

reskilling prepares them for entirely new jobs or career paths (Kovács-Ondrejkovic et al., 2019) by learning an entirely new set of skills outside of the already existing one. Both approaches are essential for companies to thrive in a rapidly evolving market, ensuring they remain agile and competitive as they navigate the complexities of the changed business environment. This need arises from a shortage of skilled labour in the market, particularly in specialised areas (Reymen et al., 2015). Without investing in these strategies, businesses are left with two options: engage in the often complex and expensive process of hiring new talent or risk falling behind with a technologically outdated workforce, leading to obsolete practices and a competitive disadvantage. According to the World Economic Forum (WEF) (2020), half of the global workforce will need reskilling by 2025. By 2030, around 14 percent (approximately 375 million workers) will require transitioning to new occupational categories due to these ongoing disruptions (Illanes et al., 2018). Yet, despite recognising the importance of upskilling and reskilling, some Slovenian companies face challenges in implementation, such as employee resistance, fear of change or losing their jobs, and constraints related to time, money, and selecting the right training programmes (Istenič et al., 2022).

The motivation and interest for this topic stem from the authors' work on the final project during their Master's studies at the School of Economics and Business in Ljubljana, which was also presented at Poslovna konferenca Portorož (PKP). Exploring the global trends, studying the skills required now and those in the future, as well as investigating the importance of reskilling and upskilling, the purpose of this thesis is to show how constant change will potentially influence the skills required for the companies to remain competitive and provide Slovenia-based companies (from now on Slovenian companies) with recommendations for the possible next steps on the integration of upskilling and reskilling practices in the corporate strategy to gain a competitive edge, by reimagining the current skill set of the workforce.

The goal of this thesis is to answer the following research questions:

1. Which skills does the Slovenian general population perceive as crucial future skills?
2. Is the Slovenian general public actively working on expanding their skill set?
3. How focused are Slovenian companies on integrating reskilling and upskilling in their strategy and daily operations?
4. What are the main challenges of implementing a new skill set into the corporate strategy in Slovenian companies?
5. What kind of skill set would enable Slovenian employees to tackle the emerging changes in the macroeconomic environment?
6. In a world without constraints, what would be an ideal set of actions to upskill and reskill the Slovenian workforce?

A descriptive method was used to provide a literature review of the relevant academic sources, and a mixed-method approach was used for the theoretical part. This thesis will use one quantitative and two qualitative research methods. An empirical quantitative analysis (online survey) was carried out to explore the perception of the Slovenian general public on the awareness of the ideal skill set of the future and their proactiveness in learning, a qualitative in-depth study of 28 semi-structured interviews with HR managers investigating the current strategic skills and reskilling and upskilling practices in Slovenian companies (obtained in the aforementioned project), and a qualitative focus group with Slovenian HR managers where future perceptions on the skill set and reskilling and upskilling programmes were studied.

The work consists of ten chapters. After the introduction, it starts by analysing the relevant literature on global trends changing the business environment and studying different types of current and potential future skills. Then, there is a literature review on upskilling and reskilling, as well as some selected best practices of reskilling and upskilling in companies abroad. Next, the results of an online survey exploring the Slovenian general public's perspective on future skills are analysed. Afterwards, to investigate the importance of upskilling and reskilling as ways of expanding the employees' potential and empowering employees to develop an agile mindset, the thesis explores the current strategic skills and upskilling and reskilling practices obtained by conducting semi-structured interviews with human resource managers of companies of different sizes and industries in Slovenia. Then, findings of a focus group with human resource managers from companies based in Slovenia, seeking to explore the ideal strategic set of skills and upskilling and reskilling techniques, are presented. Finally, all discoveries from the theoretical and practical part of the Master's thesis are combined to present the key findings but also to serve as a tool for making recommendations to Slovenian companies on how to take advantage of the opportunities in the expansion of the employees' skill sets in the future.

# 2 GLOBAL TRENDS CHANGING THE BUSINESS ENVIRONMENT

In recent decades, the entire labour market has changed significantly. The rise of the new fourth industrial revolution has significantly reshaped the needs of employers, and globalisation and the ever-ageing population are changing the social aspects of the workforce. Other megatrends, such as the COVID-19 pandemic and climate change, are severely affecting the workplace, as remote work is becoming more attractive. It is becoming evident that after the pandemic and due to digitalisation, the return to ordinary and traditional office jobs is highly unlikely.

There are also certain fears that these disruptions, especially automation, will decrease employment. As of today, these forecasts are far from reality, as the global unemployment rate decreased to 5.1 percent in 2023, compared to 6.6 percent in 2020, during the peak of the pandemic. Employment has spread to some of the previously marginalised demographic groups (e.g., women). Although employment in certain industries has declined, the future, where there

are fewer work opportunities, has not yet materialised (International Labour Organization, 2024).

Nonetheless, numerous megatrends will shape the future of employment. This chapter deals with demographic shifts and urbanisation, mobility and transportation of the future, technological progress, digitalisation and rise of AI, globalisation, geopolitical uncertainties, as well as the consequences of the COVID-19 pandemic and mitigation of climate change and energy transition.

## 2.1 Demographic shifts and urbanisation

The labour market is greatly affected by demographic shifts. The population, especially in developed countries, is ageing, while developed countries are also experiencing a severe influx of immigrants. Moreover, the workplace anticipation of the newer generations is different from that of the older generations.

On a global level, several projections claim that by the end of 2050, the number of people over 65 years old will double compared to 2021. In 2021, this demographic group represented 761 million people. In 2050, this number will be 1,603 million. By 2030, the number of older people will outnumber the number of people under the age of 20 in Europe. In developed countries, the fertility rate is deteriorating due to the change in the lifestyle of people, who are more and more focused on the development of careers (United Nations, 2023b). With better healthcare and, thus, longer life expectancy on a global scale, the ageing of the population is becoming a serious issue. Without some controversial policies, like increasing the retirement age, the labour market will experience labour shortages, especially in industries requiring a lot of experience. Moreover, one can anticipate higher pension and healthcare expenditures due to the ageing population, which represents another major issue for governments and an additional burden for the taxpayers.

Another issue that needs to be tackled by the global community is the skills mismatch. This phenomenon can be defined as a difference between skills possessed by the workforce and the skills required by the employers. There are numerous types of skills mismatches, such as overeducation, whereas the potential employees have more years of education than required by the current job. On the contrary, there is also undereducation. Similarly, there is overqualification and underqualification, whereas there are major differences between experience and the required job. Other types are also overskilling (the current job is unable to fully take advantage of all the skills acquired by the employee) and underskilling (the employee lacks skills to perform the current job at acceptable standards), skill shortage (the demand for a particular skill is greater than the number of employees that possess that skill) and surplus (there is a larger number of people with a certain skill than the number of jobs that require this skill), economic or physical obsolescence (skills previously required become obsolete or physical and

mental skills deteriorate due to atrophy). Skills mismatch can cause labour shortages and unemployment simultaneously, as the labour force is not skilful enough to perform the required job. It is thus vital to have better information systems of the labour market as well as a certain investment in reskilling and upskilling. It is also important to integrate the skills of the future into the present-day education systems to prevent skills mismatch in the future (CEDEFOP, 2010).

A possible but likely not sustainable solution to both the ageing population and the skills mismatch is migration. Migration can be voluntary or involuntary, and there are several reasons behind it: economic, environmental and social. People may leave their country of origin due to armed conflicts and climate change and move to a new, usually better-developed country to find a haven or due to better working conditions. In 2019, there were around 169 million migrant workers worldwide. According to the UN International Labor Organization, more than two-thirds were located in developed countries (European Parliament, 2024). The main issues of migrant workers in the new workplace are integration and discrimination. Language and culture barriers are sometimes present. Moreover, migrant workers are sometimes faced with discriminatory policies and hostile environments created by native workers who believe that migrant workers "will steal their jobs". However, if properly integrated into society, migrant workers can efficiently counter the issue of the ageing population, as they can contribute to the pension and healthcare expenditure. Moreover, the majority of these workers can cover the skill gap and thus diminish the skill gap (Forbes, 2023).

On the other end of migration is the brain drain phenomenon, which is an enormous issue, especially for countries where quality education is cheaper or free, yet salaries are lower. A highly-skilled workforce usually migrates to a better-developed country. Developed countries receive skilled labour, which diminishes the issues of the ageing population and skills mismatch. However, these two issues are then transferred to the country of origin, which is left with underqualified labour (European Commission, n.d.).

Another demographic issue that will change the workplace in the future is the shift of workplace expectations of the younger generation, also known as Generation Z (Gen-Z), which will make up 30 percent of the labour force by 2025. This generation desires flexible and remote work arrangements, a better work-life balance and a better quality of life in general. Moreover, they want to prioritise mental health and deem it necessary to work for employers with similar values in the areas of ethics, diversity, equity and inclusion. According to the US-based research, this generation is more racially and ethnically diverse in comparison to other generations. In addition, Gen-Z was born with the current technology and thus anticipates a workplace that will be integrated with the highest technological standards (Kelly, 2023). It is becoming evident that to incorporate Gen-Z in the workplace, corporations will need to adapt to their values and expectations.

Urbanisation, another megatrend related to demographics, has been present for several centuries but will even further change the workplace dynamics. In the last decade, the number of people living in urban areas has surpassed the number of people living in rural areas. This divide will further deepen, as in 2020, approximately 4.4 billion people lived in cities, while in 2050, this number is set to reach 6.7 billion. Even though urbanisation can be seen as a driver of positive and sustainable transformation, this is usually not the case. Instead, it is usually a driver of inequality. In 36 out of 42 countries with available data, the Gini coefficient of inequality is higher in urban areas than in rural areas. This trend is especially evident in larger cities, where the divide between richer areas and so-called slums is visible. This divide is noticeable in the overall quality of life and the development of public services (United Nations, 2020b). With the fast pace of urbanisation, the divide is expected to deepen, which could potentially harm the workplace situation. With the lack of public services, such as education, it will be harder for people living in slums to escape poverty. With the lack of proper infrastructure, such as electricity and connectivity to online services, as well as road infrastructure, these people are not able to work from home or have difficulties commuting to work.

### 2.2 Mobility and transportation of the future

The development of electric cars, but especially autonomous vehicles, will severely impact the future of mobility and transportation and, thus, the workplace. As artificial intelligence (AI) and sensor technology rapidly develop, self-driving cars are becoming a reality. These vehicles will be able to make autonomous decisions in real-time, be more reliable and safer, and, therefore, have the potential to massively reduce human error. As a result, there could be fewer collisions and traffic congestion (Alliance for Automotive Innovation, n.d.).

One of the benefits to the workplace is the expected growth of productivity. Due to faster commuting time to the workplace, one can anticipate greater quality of work during working hours and fewer delays. Workers would no longer be required to drive these autonomous vehicles. They could focus on work-related duties or off-time activities, meaning time could be spent more efficiently (Alliance for Automotive Innovation, n.d.).

The development of autonomous vehicles could also heavily impact the global supply chains. While it remains to be seen whether the job of a truck driver will become obsolete, autonomous vehicles will certainly modify that role in its entirety. While it is clear that some of the jobs will be lost, the creation of other employment opportunities brings many advantages. Jobs in this sector will become more specialised and IT-oriented (Deloitte Review, 2017).

Another megatrend in the field of mobility is the rapid growth of shared mobility. People share vehicles and use them either one after another or simultaneously, which impacts several areas. Fewer vehicles on the road mean less traffic and congestion. Fewer cars also result in lower levels of greenhouse gas emissions. As owning a car may no longer be a necessity for some

individuals, there may be a lower demand in the automotive industry, which once more reshapes the said industry (Deloitte Review, 2017).

### 2.3 Technological progress, digitalisation, and the rise of AI

Numerous inventions have brought us several industrial revolutions. The first one stems from the inventions of mechanisation and water or steam power. The second was led by mass production, enabled by the invention of the assembly line and electricity. The third industrial revolution was enabled by electronic and IT systems and automation. The world is currently experiencing the fourth industrial revolution, which will be primarily driven by inventions in cyber-physical systems, a merging between digital, physical and biological innovations (Schwab, n.d.).

Digitalisation has enormous potential and a significant impact on the future of the workplace. It fosters the development of on-demand logistics and the so-called gig economy, as well as enables remote work (this will be further discussed in the subchapter "Consequences of the COVID-19 pandemic"). Digitalisation has also enabled the rise of the workers on social media, so-called "influencers". With the help of social media apps, such as TikTok, some people have left behind the traditional ways of working. Instead, they earn money on social media thanks to paid subscriptions or advertising (Charles et al., 2022).

Digitalisation is presenting numerous new challenges. As mentioned in the chapter discussing the gig economy, employment relationships have become blurred, which severely impacts social protection. Due to flexibility in the workplace, the quality of jobs is decreasing, as they involve precarious or unpaid work. This type of work can be followed by social isolation and lack of work-life balance. Moreover, there is a high chance of discrimination based on gender, ethnicity, religion and location. Digital skills are becoming increasingly important. These skills are in high demand. In 2021, during the COVID-19 pandemic, around 63 percent of the global population was on the Internet. While the percentage of people with a decent computer literacy rate is increasing, it is still obvious that the skill gap is becoming an issue, and new inequalities seem inevitable (Charles et al., 2022).

Another aspect of technological progress is also automation. WEF estimates that from 2021 until 2025, at least 12 million more jobs will be created than lost due to automation. Automation does, however, not only create or destroy jobs but also transforms them. The first example is the pilot of the aeroplane. In the past, when the first commercial aircraft were established, pilots were paid more during the night, as it was hard to pilot the plane during that time. With digitalisation and automation, it is now easier to navigate a plane during the night, and the transformation of the job is evident. Another example is the case of the taxi drivers. In the past, when GPS navigation was not common and was not present in every vehicle, being a driver was only for people with a good sense of orientation around the city. With the establishment of

navigation systems, this job became available for almost everyone. Additionally, this opportunity was seized by companies like Uber, another example of digitalisation and on-demand service. One must also acknowledge that jobs that were lost are usually the most dangerous ones, such as mineworkers in potentially dangerous and toxic mines. While machines are used for digging mines, workers are now simply controlling or overseeing the work of the machines (Nunes, 2021).

Moreover, job automation can lead to an increase and a decrease in wages. On one hand, digital skills are in high demand, which results in higher wages for workers who possess such skills. On the other hand, people who do not possess such skills or have lost their jobs due to automation need to relocate to another industry, thus increasing the supply in that industry's labour market, and as a result, the wages in that industry may decrease (Nunes, 2021).

Technological progress has different effects on different parts of society. It varies, especially between men and women. Women face more difficulties when entering highly digitalised industries. They are, thus, not as represented as men. Moreover, technological progress also deepens the poverty of some regions, which are already lagging in digitalisation. A lack of internet access, digital infrastructure, and proper education means some people cannot fully benefit from the fourth industrial revolution (Charles et al., 2022).

Lastly, the most disruptive part of technological progress is the rise of artificial intelligence in recent years. In November 2022, an app called ChatGPT was launched by OpenAI, a Microsoft-backed company. It quickly became the application with the highest number of new users. A few months later, ChatGPT received competition from other IT players. Google introduced Bard; Chinese tech giant Baidu introduced Ernie (Al Jazeera, 2023).

The impact on the society as a whole is enormous. It has become a challenge in the education system since many students use artificial intelligence to write essays and research papers. While it is true that it makes life easier to some extent, it also decreases the overall quality of education for the future workforce. Additionally, even the current workforce is going through some disruptive changes. For example, some companies have already replaced people working in the online customer support service for AI or at least integrated AI into their customer support. Some other jobs will also likely become obsolete due to the rise of AI. It is becoming evident that AI will destroy jobs, but also create new ones. WEF (2020) estimated that about 85 million jobs would be lost due to the rise of artificial intelligence, while AI would generate 97 million new jobs at the global level by 2025. New jobs will be needed, especially in the IT sector, in areas such as machine learning and support for digital infrastructure.

### 2.4 Globalisation

Globalisation is a concept of the interconnection of nations, where due to the flow of goods, financial products, technology, information, services and jobs, the world is becoming harmonised. As the world is uniting into one, nations are becoming interdependent (Fernando, 2024). Globalisation has a strong effect on the workplace, but similarly to every megatrend, it has a lot of advantages as well as a lot of disadvantages. It brings a lot of job opportunities but may also eliminate jobs or transfer them elsewhere.

In the European Union (EU), one out of five jobs are directly or indirectly created by export, one of the main sources of globalisation. It is estimated that in 2019, around 38 million jobs were created due to exports outside of the European Union. Moreover, jobs connected to exports are, on average, 12 percent better paid than other jobs, mainly due to the requirement of a high level of skill. On the other hand, globalisation increases competitiveness on a global scale. In closed economies, companies compete with a small number of competitors, which is not the case in open economies, where there are numerous competitors, and finding a competitive advantage is a rather difficult task. As a result, companies often shut down, reduce the number of employees, or use offshoring, meaning they shift their production to a country with lower taxes or cheaper wages for labour. This decision also results in layoffs of low-skilled workers located in the country of origin, usually a highly developed country. Recent events have shown us that offshoring is not always the most appropriate solution, as some processes should remain in the country of origin. For example, when the global supply chains were temporarily frozen because of the COVID-19 pandemic. Nonetheless, this part of globalisation will strongly affect the workplace of the future (European Parliament, 2023a).

One of the benefits of globalisation is also the fact that due to the interconnection of the countries, information and skills easily migrate to less developed countries, meaning that labour in the less developed countries receives better education and is thus better prepared for entry into a competitive labour market. This development is a clear benefit, especially for the developing countries that gain a better and more productive workforce. On the other hand, interconnectivity also means faster and wider migration of (economic) crises. One of the best examples is the financial crisis of 2008. The crisis, which started in the US, had a domino effect and devastated several countries with open economies. In the EU, these countries were Portugal, Ireland, Italy, Greece and Spain (Fernando, 2024).

Due to recent events (e.g., the Russian illegal invasion of Ukraine, the COVID-19 pandemic, and the current situation in Gaza), the world is experiencing a counter phenomenon, the so-called deglobalisation. Several countries are diminishing their ties and connections with other countries and prefer putting their economies first. While this phenomenon is not yet entirely global, it is certain that globalisation is slowly coming to an end (WEF, 2023a).

### 2.5 Geopolitical uncertainties

Geopolitical situations have always presented an enormous opportunity or an obstacle in the business world. Nowadays, the world is facing several geopolitical challenges, such as, but not limited to, the rise of China, the Russian full-scale invasion of Ukraine, the current situation in the Middle East and the presidential election in the US.

In the past, the People's Republic of China was seen as a developing country and, together with other Southeast Asian countries, just a place of cheap labour and opportunity for offshoring. In recent decades, however, China has been on the rise and has become one of the largest global players. While the country has opened its borders for doing business, especially after joining the World Trade Organization in 2001, doing business with China is, to some extent, difficult but mostly different. China is becoming an influential player, also due to its Belt and Road initiative. With the help of direct investment, China is building infrastructure all over the world, thus spreading its influence. In addition, China has quite a competitive workforce and has managed to highly develop certain products and services, such as electric vehicles, chips, and mobile phones. It is competing with global players such as the US and the EU. Working with people from China thus seems inevitable. It will be vital for the workplace of the future to know how to speak Chinese and how to deal with the Chinese. Understanding Chinese technology and incorporating it in the workplace will become essential. It appears that China will become a trendsetter in the future; thus, the rest of the world and its workforce will need to adapt (World Politics Review, 2024).

In February 2022, eight years after the annexation of Crimea, Russia launched a full-scale invasion of Ukraine. In addition to Crimea, Russia occupied Donetsk, Luhansk, Zaporizhzhia and Kherson regions, and the war for the domination of the eastern part of Ukraine continues as of today (Burdyga & Shepeleva, 2023). This invasion impacted the workforce, especially the European one, in several ways. The European Union imposed several sanctions on Russia and some of its important figures. It has committed itself to reducing the amount of imported gas and oil from Russia (European Commission, 2024), which has heavily impacted the European economy. Moreover, there is also a challenge considering Ukrainian refugees. As of November 2023, 4.2 million Ukrainian refugees were recorded in the EU. Germany, Poland, and the Czech Republic accepted most refugees (European Commission, 2024). This presents an opportunity for EU employers, as several refugees are eligible to be integrated into the labour force. On the other hand, this presents a challenge for European citizens, as the competition in the labour market is more intense. Lastly, the Russian invasion also severely impacted several businesses that had been doing business with the Russian Federation in the past. Several global players have removed themselves from Russia and have condemned the atrocities happening there. In the near future, it is evident that knowledge of the Russian language and its customs will, for example, not be necessary in the workplace.

The conflict in the Middle East is one of the most persistent conflicts, which took place after the Second World War (WW2). The creation of the Israeli state after WW2 and, afterwards, several wars which attempted to destroy the Jewish state have severely impacted the Western civilisation and also the ways of doing business. The most recent conflict between Israel and the unrecognised state of Palestine stems from the attack of Hamas, an Islamist group labelled a terrorist organisation, on Israel in October 2023. Israeli retaliation can only be described as disproportional, while some international players even claim that Israel is committing genocide on the Palestinian people (BBC, 2024). This situation has severely impacted the Western civilisation, as one has seen a rise in both antisemitism and islamophobia in Europe and the US. While some do not recognise the state of Palestine and believe that Israel has the right to defend itself, others started protesting and calling for a boycott of everything related to Israel. Similarly to the case of the Russian invasion of Ukraine, the conflict impacts doing business with the perpetrator. Companies must adjust their strategies, cultures, and values to continue their operations.

One of the most significant impacts on the future of the work environment and jobs is, without a doubt, the US presidential election, which will take place in November 2024. In July 2024, the current president of the US, Joe Biden, announced that he would no longer seek re-election to the White House. Kamala Harris was announced as the next presidential candidate. The fragmentation of the left party can result in the victory of former US President Donald Trump. The victory can almost be guaranteed if the Republicans take full advantage of the failed assassination attempt on their nominee (Baker & Sheils McNamee, 2024). The second term of Donald Trump could have grave consequences on the world economy. He strongly supports closing the American economy and, thus, deglobalisation, ending the support to Ukraine, and curbing immigration. It is widely believed that his re-election could shatter the ties with the EU, which could impact the future of the work environment. As mentioned under the megatrend of globalisation, deglobalisation could result in a weaker transfer of skills on the global level. It could bring less immigration, weakening the quality of the workplace. While this scenario is yet to be confirmed in November, there is a high likelihood that the future of jobs will change.

Geopolitical uncertainties have a significant impact on the work environment. Most of these examples of uncertainties are, however, of a temporal nature, as geopolitics are constantly changing. Thus, it is vital for companies to stay vigilant about this megatrend. If companies are prepared to deal with the consequences of the change in the geopolitical environment, they may get ahead of their competition.

### 2.6 Consequences of the COVID-19 pandemic

The outbreak of the coronavirus disease, which was first found in China at the end of 2019 and, thus, derived the name COVID-19, reshaped the world in numerous ways. The virus killed

several million people, over 2 million people just in Europe (World Health Organization, n.d.). Due to the fear of spreading the deadly virus, the way of doing business has changed. The two most notorious changes are the rise of the so-called gig economy and remote work. At first, it appeared that these two changes were only temporary, but it appears that the gig economy and remote work are here to stay.

In the recent decade, the gig economy reshaped the traditional workplace into a more flexible one. Due to its rise, full-time employment is no longer the most favourable option, as the gig economy offers flexible time schedules and independence. The gig economy is most prevalent in the food delivery, transportation, and hospitality sectors. Some of the most prominent players in the gig economy are Airbnb, Wolt, Uber, and UberEats. Workers are employed as freelancers, part-time employees, or independent contractors. They work when there is a demand for work, and prices of their services vary depending on the availability of supply and the quantity of demand. To some extent, these workers can work when they want and focus on other activities, e.g., their studies. However, in numerous cases, workers exchange flexibility for numerous benefits, such as health insurance, pension funds, and sick days. Employers prefer to hire temporary workers because they are usually much cheaper than full-time employees. It is generally said that the gig economy diminishes workers' rights. As a result, lawmakers seek to reform and restrict this part of the economy and improve workers' rights. The rise of the gig economy happened especially during the pandemic, when people were working from home, and restaurants and bars were closed. It peaked during this period, especially the delivery of food and other groceries (Investopedia, 2024).

During the pandemic, it was almost impossible to work in the office, as it was important to curb the spread of COVID-19. This precaution was the direct reason for the rise of working from home. Because remote work became a necessity in the workplace, it was also the main reason for the success of some tech companies such as Zoom or Microsoft Teams, one of the applications of the tech giant Microsoft. Although the effects of COVID-19 are still present to some extent, safety precautions are no longer necessary. Despite that, teleworking is still present in post-COVID times. Nowadays, people can work in hybrid mode, meaning they spend several days working in the office and the rest at home. Moreover, workers can also combine their vacations with teleworking, meaning they can work from the other side of the globe. About 28 percent of all workers worked in a hybrid mode, while almost 13 percent worked entirely remotely. Around 98 percent expressed the desire to work from home at least sometimes (Haan, 2023).

The rise of remote working may also reverse the effects of urbanisation. Even though, at the moment, only 13 percent of employees work entirely remotely, the rise of this trend may make offices, or at least some offices, obsolete. There is currently 20 percent of empty offices in the US. If the trend continues, people may consider moving back to more spacious rural areas, which

could inevitably reverse the process of urbanisation. While this remains a hypothetical scenario, it may give an opportunity to develop sustainable cities where every human necessity will be available within walking distance (Devigne, 2024). Even if this scenario does not materialise, it is becoming evident that employers will need to rethink the existing and potential modes of working arrangements.

Some employers, however, argue that employees should return to the office and are reluctant to allow employees to work entirely remotely or in hybrid mode. Their main concern is the lack of teamwork, which could affect productivity. Stanford Institute for Economic Policy Research studied the issue. If done incorrectly, the productivity of the labour force during remote work can be up to 20 percent lower. This is mainly due to the lack of mentorship, motivation, and strong team culture (Rozentals, 2023).

### 2.7 Climate change and energy transition

Climate change has been recognised as a dire issue. To echo the words of António Guterres, the Secretary-General of the United Nations: "Global heating is busting budgets, ballooning food prices, upending energy markets, and feeding a cost-of-living crisis. But climate action can flip the switch. And renewable energy is the gift that keeps on giving. It is good for our planet, our health, and our economies. The economics are clear: the global shift to renewables is inevitable. The only question is how much heating our planet will endure before it happens." This quote perfectly summarises the current situation. Global warming is set to increase the cost of living, which will naturally also impact the working environment (United Nations, 2023c).

Even excluding the cost of living and its impact on doing business, climate change influences the way of working. Jobs in numerous sectors, such as but not limited to agriculture, fisheries, forestry, and tourism, are directly impacted by global warming. These sectors heavily rely on fresh water, the perfect range of both temperature of water and air, and biodiversity. The stability of these factors is strongly influenced by climate change, which then impacts the jobs in the mentioned industries (International Labor Organization, 2018).

Climate change has an indirect effect on other industries as well. With the temperatures rising, the standard working conditions worsen. Heat waves can strongly impact overall labour productivity, while changes in rain patterns can impact jobs that are done outside. Climate change, especially the rising temperatures and air quality, can be seen as a driver of migration, thus shaping the employment environment, as mentioned in the chapter dedicated to demographic shifts. In addition, climate change often impacts the most vulnerable, e.g., women, people living in poverty, migrant workers, tribal and indigenous people, and people with disabilities. It can be deduced that climate change can thus also create further inequalities (International Labor Organization, 2018).

Some steps were already undertaken to mitigate the effects of climate change. One of the most recent and important ones is the Paris Agreement, which entered into force in November 2016. In total, there are 195 parties to the agreement, which aims to reduce greenhouse gas emissions, limit the rise of the average increase of temperatures below 2°C or even to 1.5°C in comparison to pre-industrial levels, periodically assess the collective progress towards the long-term goals and provide financing to less developed countries (United Nations, n.d.).

The transition from fossil fuels to renewable energy is also one of the ways to limit greenhouse gas emissions. Energy transition is one of the main goals of the green transition. In the case of the EU, the European Green Deal aims for Europe to become the first climate-neutral continent by 2050. The goal of the European Commission is to invest €396 billion per year from 2021 until 2030 in energy transition. Afterwards, between €520 and 575 billion should be invested annually until 2050 (European Parliament, 2023b). Transition to renewable sources of energy would also have a net positive effect on job creation. Even though some jobs will be lost because it is anticipated that fossil fuels will eventually become obsolete, the International Labor Organization (ILO) predicts that more jobs will be created, providing a proper adaptation to climate change and energy transition (International Labor Organization, 2018).

# 3 SKILLS

In today's increasingly complex and interdependent world, possessing a diverse skill set is essential. Moreover, to excel both personally and professionally, one needs to be able to define, develop and utilise their skills (Lamri & Lubart, 2023). "Skills are considered as a resource – of individual and organisational nature – which would allow competitiveness and productivity advantages to companies" (Sousa & Rocha, 2019, p. 1), and success in the ever-changing labour market seems to be primarily dependent on two types of skills – hard and soft skills (Balcar, 2016). Given that they relate to people and what they can achieve, 'skill' is often used interchangeably with 'capacity', 'attribute', 'ability' or 'competence' – with the last having a broader meaning as they include knowledge, attitudes and values (Auzmendi et al., 2003).

## 3.1 Hard skills

Hard skills are closely related to knowledge and can be "relatively easily trained for and measured" (Balcar, 2016, p. 454) – they are technical skills related to their field (Permana et al., 2021) - for example, expertise in programming languages, engineering, accounting, and other occupational skills (Cimatti, 2016; Laker & Powell, 2011). They are core and domain skills (Binsaeed et al., 2017) and are, in essence, cognitive in nature and influenced by an individual's intelligence quotient (Rainsbury et al., 2002). They pertain to an individual's skill set and capability to perform a specific kind of task or activity (Hendarman & Tjakraatmadja, 2012; Cimatti, 2016) and can be defined as specific and learned (Binsaeed et al., 2017), as they arise

from knowledge acquired through academic training, that can lead to being recognised with certificates or diplomas (Nahla et al., 2016) – they are "embodied in acquired qualifications" (Balcar, 2016, p. 454).

While the sought-after hard skills that employees seek in candidates are often very position-dependent, the LinkedIn research team, upon analysing the professionals' profiles on the business and employment-focused social media platform LinkedIn, found customer service to be the top trending hard skill. It was followed by sales, accounting, business development, marketing, digital marketing, sales management, finance, social media, sales and marketing, financial analysis, engineering, social media marketing and SQL (LinkedIn, 2022). The team at Glassdoor (2021), one of the world's largest job and recruiting websites, also presented a couple of in-demand hard skills in the workplace:

- data analysis skills – to be able to research, observe, and understand different types of data to notice trends and make use of information (e.g., research, data mining, creative thinking, resource management, data presentation and visualisation, forecasting);
- technical skills – related to a specific field, usually engineering, information technology, science or technology (e.g., linear regression, computer-aided design (CAD), prototyping, customer relationship management (CRM) platforms, enterprise resource planning (ERP) systems, network and systems administration);
- design and marketing skills – e.g., pay-per-click (PPC) marketing, digital marketing, social media, user experience (UX) and user interface (UI) design, MailChimp, Adobe Creative Suite, search engine optimisation (SEO), Google Analytics, graphics design, email marketing;
- management skills – such as finance, business knowledge, logistics, hiring and business development skills, team management, negotiation, public speaking, etc.;
- computer skills – for instance, Microsoft Office Suite, email, database management, JavaScript, QuickBooks, etc.

Due to regular technological changes, updates in hard skills are a required and an expected part of most occupations. The COVID-19 pandemic caused a crisis with rapid shifts to remote working in a world already experiencing digital transformation. Therefore, hard skills such as digital literacy, customer service and project management were crucial (Bennett & McWhorter, 2021) – more on future skills in the following subchapters.

### 3.2 Soft skills

Soft skills, on the other hand, are "skills outside of technical and academic skills and prioritise intrapersonal and interpersonal skills" (Permana et al., 2021, p. 216) required to be effective in

the workplace (Keleher et al., 2007). They stress the behavioural elements and abilities to collaborate with others. Intrapersonal skills pertain to an individual's ability to manage oneself (e.g., creativity, independence, ethics and integrity, willingness to learn, analytical skills, stress and time management skills, problem-solving skills, persistence). In contrast, interpersonal skills are all about how the person handles the interactions with others (they consist of teamwork, verbal communication, active listening, motivation, flexibility and reliability) (Sandra et al., 2023). Soft skills "indicate personal transversal competencies such as social aptitudes, language and communication capability, friendliness and ability to work in a team and other personality traits that characterise relationships between people" and are traditionally considered complementary to hard skills (Cimatti, 2016, p. 97). They make up who we are – people's attitudes, habits and personality traits (Binsaeed et al., 2017). Given that they are cross-disciplinary and independent of job or industry, they are hard to define (Yan et al., 2019). As they include aspects of emotional intelligence such as the ability to communicate and work well with others, problem-solving and thinking outside of the box (Desjardins, 2018), they are often associated with a person's emotional intelligence quotient, a "cluster of personality traits that characterise one's relationships with other people. These skills can include social graces, communication abilities, language skills, personal habits, cognitive or emotional empathy, and leadership traits" (Nahla et al., 2016, p. 31).

When providing evidence on different aspects of wage returns to soft skills as a proxy of their productivity, Balcar (2016, p. 454) defines soft skills as "learned behavior based on an individual's pre-dispositions". On the example of communicativeness (which is a predisposition) versus the ability to communicate effectively in a work environment (a soft skill), Balcar illustrates that even a person with a low degree of communicativeness can be, when using appropriate methods and tools to become knowledgeable, very good at communicating and can utterly relay complex information to others.

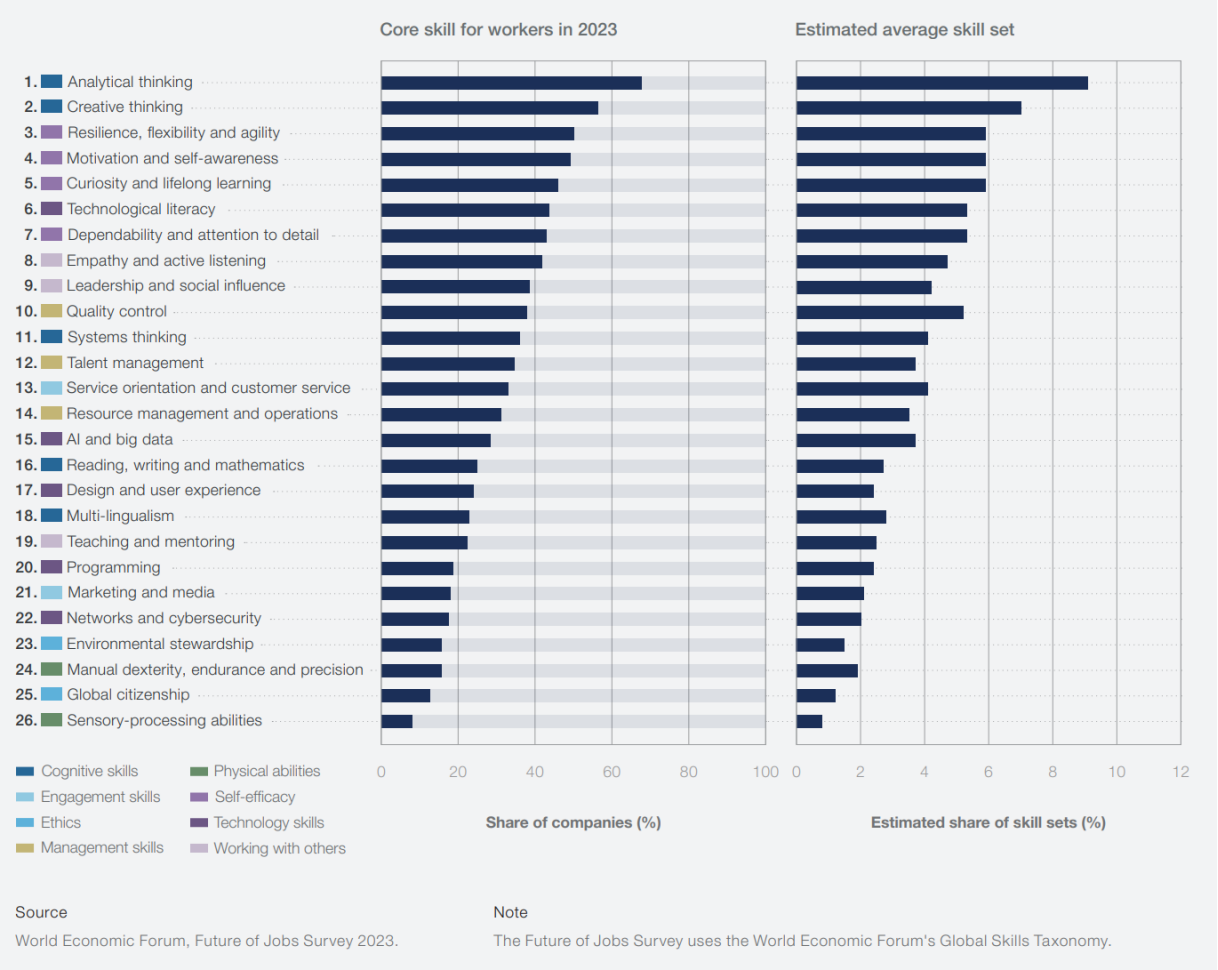
Soft skills mainly stem from psychological traits, preferences, experiences and backgrounds, so they are harder and slower to develop and difficult to measure as there is no objective test to assess the individual's workplace behaviour. Rather, it is an interactive process that depends on the context (Balcar, 2016). While one can finish a course on soft skill training, unless it is put into practice, no certification or scholarly achievement can confirm that an individual has a certain soft skill. Because they are not easily articulated, they are difficult to list, learn, and assess – and yet, they are essential for handling interpersonal relationships, communicating effectively and making appropriate decisions. What's more, Urs (2013, p. 138) even suggests that some of them (e.g., self-awareness) are practically unteachable as there is no acquisition model or training strategy – she argues that currently, "the "softest" of the soft skills are still beyond the conventional teaching range, a situation which, sooner or later, is likely to be re-evaluated by educators".

Different skills are used to represent soft skills in the literature: Balcar (2016, p. 467) uses "effective communication, cooperation, creativity, flexibility, consumer orientation, efficiency, independence, problem solving, planning and organising, life-long learning, proactive approach, stress resiliency, exploring and orientation in information, leadership and influencing others". Andrews and Higson (2008, p. 413) identify key transferable soft skills crucial for graduates' employability through synthesising available literature – they include "professionalism, reliability, the ability to cope with uncertainty, the ability to work under pressure, the ability to plan and think strategically, the capability to communicate and interact with others, either in teams or through networking, good written and communication skills, information and communication technology skills, creativity and self-confidence, good self-management and time-management skills, a willingness to learn and accept responsibility". As for the top hard skills, the team at LinkedIn (2022) also identified the top soft skills one needs to future-proof their career: leadership, communication, problem-solving, management, time management, and strategy. They are in demand across industries and are just as important as hard skills, if not more. The rise of the 'soft skill revolution' has sparked increased interest in cultivating and evaluating these skills as organisations have become increasingly aware of their importance in the work setting (Lamri & Lubart, 2023). Linda Jingfang Cai, former VP of Talent Development at LinkedIn, describes soft skills as the "currency of the future workplace". Communication, collaboration, and the ability to form connections and to start and participate in intentional conversations are considered among the most important soft skills working individuals need to master. Cai says, "These skills aren't soft; they're powerful", and acknowledging them is crucial (Thier, 2022).

### 3.3 Core skills

To identify the most important skills for workers in 2023, the World Economic Forum summarised the findings of a wide cross-section survey, bringing together perspectives of more than eight hundred world's largest companies, altogether employing more than 11 million people across several industries and economies from all over the world, in the 'Future of Jobs' report. The first and most crucial core skill recognised was analytical thinking. It was followed by creative thinking, while resilience, flexibility and agility ranked third. Next on the list are motivation and self-awareness, followed by curiosity and lifelong learning, and, as depicted in Figure 1, dependability and attention to detail are ranked after technological literacy. In comparison with 2018 and 2020 survey results, companies increasingly perceive creative thinking as a core skill, outnumbering those considering analytical thinking to be the number one due to workplace tasks becoming increasingly automated (WEF, 2023b).

*Figure 1: Core skills for workers in 2023*




*Source: WEF (2023b, p. 38).*

Moreover, in the Tuning project, carried out by over 100 universities, over 20 studies were reviewed in the field of generic skills and competencies to prepare the questionnaire for identifying generic skills and competencies by graduates and employers, as well as academics. Thirty competencies were selected for the definitive questionnaire and classified into three groups (Auzmendi et al., 2003):

- Instrumental:
    - cognitive abilities – understanding and manipulating ideas and thoughts,
    - methodological capacities – decision-making, problem-solving, time and learning-strategy organisation,
    - technological – relating to the use of technological devices and computing and

- linguistic skills – oral and written communication, knowledge of the second language.

- Interpersonal:
  - individual abilities – relating to the ability to express one's feelings and
  - social skills – relating to interpersonal skills, teamwork or expression of social commitment.

- Systemic:
  - concerning whole systems – "a combination of understanding, sensibility and knowledge that allows one to see how the parts of a whole relate and come together" (Auzmendi et al., 2003, p. 71).

The questionnaire's results show that graduates and employers consider "capacity for analysis and synthesis, capacity to learn, problem-solving, capacity for applying knowledge in practice, capacity to adapt to new situations concern for quality, information management skills, ability to work autonomously and teamwork" to be the most important to develop (Auzmendi et al., 2003, p. 92).

In 2015, Bloomberg also surveyed more than 1,300 job recruiters at over 600 firms to identify skills that are desired by employers but are hard to find. It seems that industry-wide, many graduates possess skills such as entrepreneurship, global mindset, motivation/drive, quantitative skills, decision making and risk-taking, yet they are not highly prized by companies - as opposed to analytical thinking and ability to work collaboratively. On the other hand, although more infrequently found, strategic thinking, creative problem-solving, leadership and communication skills appear to be more desired by employers than qualities such as industry-related experience and adaptability (Levy & Rodkin, 2015).

### 3.4 Acquisition of skills

While there appears to be a generally accepted fact that hard skills, reflected in attained qualifications across education systems, are necessary for success in the labour market, the most appropriate solution would be to accumulate soft and hard skills in the education system framework simultaneously (Balcar, 2016) - so that the misalignment of the educational system with the labour market needs is minimised. The key is to transform the acquired skills and knowledge into successful performance at work. In the mid-seventies, Henry Mintzberg, a contemporary theorist best known for his work on business strategy, depicted this need for the change of education to better meet the needs of business: "In particular, greater use should be made of the powerful new skill-development techniques which are experiential and creative in

nature, /.../ Educators need to put students into situations, /.../ where they can practice managerial skills, not only interpersonal but also informational and decisional" (Mintzberg, 1976, p. 23).

Sandra and others (2023) show that in addition to providing graduates with technical skills in studies (i.e., hard skills), higher education institutions play an essential role in developing their character to become people with excellent intrapersonal and interpersonal skills (i.e., soft skills). Candidates who excel in promoting themselves stand a better chance of succeeding in various competitive scenarios, thereby increasing their employability (Elmoutanna & Motii, 2022). Teaching soft skills should, therefore, start as early as primary school. What is more, it should start before even starting school (Cimatti, 2016). They are vital not only in the workplace later on but also in daily life. Hence, with the future often being unpredictable, educational institutions have to concentrate on approaches and tactics aimed at fostering transversal competencies that will benefit students in various situations (Cimatti, 2016). Elmoutanna and Motii (2022) present two types of training to facilitate soft skills development, the first being the 'inside training activities' (role-playing and problem-solving activities and strategies, team-building workshops, and business simulation) and the second being 'outside training activities', such as volunteering and working on entrepreneurial business projects. Considering the highly competitive global work environment, Dean and East (2019) demonstrate how essential the development and integration of strategies for developing soft skills training programmes are for businesses to tackle the potential soft skills deficit and avoid negative business outcomes in case of failing to do so. Findings of their research with logistics company leaders suggest that people being trained earlier in soft skills may become more resistant to change in the coming years.

Organisation for Economic Co-operation and Development (OECD) reports that at one of the informal meetings, policymakers "unanimously agreed on the need to develop a "whole child" with a balanced set of cognitive, social and emotional skills so that they can better face the challenges of the 21st century" (OECD, 2015, p. 13). Thus, through innovative teaching approaches, the integration of soft skills development into curricula is essential. Binsaeed and others (2017) stress the importance of creating a learning environment with governmental support in terms of the allocation of financial resources, priority-setting, reviewing, and approving of programmes, as well as having clarity on the market demands, the industry-specific cognitive and soft skills needed and technologies for easier skill acquisition.

### 3.5 Balance between soft and hard skills

Globalisation and demands on tertiary education have reevaluated and elevated soft skills and their importance, lowering the significance of solely academic and technical excellence (Urs, 2013). People with strong interpersonal skills, in addition to their technical expertise, are considered exceptional human resources in the job sector (Sandra et al., 2023). Literature

suggests that graduates also realise that while it is an essential and integral part of the portfolio, being qualified for only discipline-focused abilities is not enough (Andrews & Higson, 2008).

As presented by Cimatti (2016), per R. Bonomo's workshop in 2015 on soft skills and organisational leadership, "The border between Soft Skills and Hard Skills is difficult to be defined because Soft Skills and Hard Skills are integrated and the same task always requires using both together. For instance, a project manager must know economics, planning, and informatics, but at the same time, he needs to be able to manage a team, to communicate with providers, to motivate employees, etc. Then the most effective way to teach Soft Skills can be proposed in terms of learning them integrated with the Hard Skills" (Cimatti, 2016, p. 108).

While hard skills are a minimum requirement for a person to be considered for a certain role when entering different occupations and are utilised to preselect job applicants, soft skills determine the development in the job (Prihatiningsih, 2018) and are thus often a deciding factor in hiring, suggesting that while hard skills may get one an interview, soft skills are the ones one needs to get the job. Soft skills are the ones that are required at every level in the organisation to perform and thrive (Binsaeed et al., 2017). Instead of being connected to a specific task, but rather referring to the relationships among people in the organisation, they are necessary for any role and are considered a strategic element that deserves a focus not only in the recruitment phase but throughout employees' entire professional journey as the quality of the human capital relies on them (Cimatti, 2016).

To rate the importance of soft and hard skills over six years within 262 Moroccan organisations, Nahla and others (2016) present a model of the evolution of soft and hard skills in career development within a company. Their findings are depicted in Figure 2, and the weight of both types of skills and their exchange over time is visualised (with a transposition that they are both necessary and complementary). Suggesting there are four different levels of the system of command of the organisation: one where decisions are strategic, tactical, operational and executive, they argue that while soft skills dominate when it comes to managing people, it is due to hard skills that people in those positions were able to reach those opportunities. Cimatti's (2016, p. 116) research also argues, "The competencies needed to advance in the career change along its development are mainly Soft Skills."

*Figure 2: Evolution in soft and hard skills within companies by level of decision*


*Source: Adapted from Nahla et al. (2016, p. 38).*

"People with the right mindset can develop the required skill set; the reverse does not apply. Furthermore, the hard skills needed for a job change over time, but the fundamental mindset persists" (Yan et al., 2019, p. 2).

Among the findings of Sandra and others (2023), consisting of the interviews with HR managers, is the remark from an HR director of a privately owned company: "Because developing one's character is much harder than learning technical skills, we consider both hard and soft skills when conducting the recruitment process." (p. 467). Rather than the high GPA and the developed hard skills, businesses seem to instead choose their future employees based on a good personality and character. This concept is far from new – the record from 1918 on the research of the US engineers' who were asked to rank six groups of qualities in terms of their importance for success in engineering states that among character, judgement, efficiency, understanding of men, knowledge and technique, character made it to the head of the list by a majority of 94.5 percent. In contrast, the voters placed technique at the bottom of the list. "This definition of the essential characteristics of the professional engineer is important because it proves that despite the enormous development of scientific information and technical skill, the engineers of America have not been beguiled into thinking that efficient control of the forces of nature is the sole requirement for achievement in applied science. Therefore, the schools that intend to train engineers cannot afford to neglect wholly the personalities of the students" (Mann, 1918, p. 107).

It seems that strong technical skills alone do not guarantee optimal performance without proficient soft skills, which brings us to a question - with soft and hard skills being complementary, in which ones is it better to invest? Balcar (2016, p. 466) provides evidence that hard skills are a significant wage determinant but that soft skills are just as important. Analysis shows that "one standard deviation increase in hard skills brought a wage premium on the order of 8.84%; the same increase of soft skills was accompanied by an 8.51% wage increase", suggesting a similar amount of attention should be devoted to the development of the two (Balcar, 2016). Findings – an additional year of schooling is associated with a 6.51 percent wage premium, and a year of work experience also being associated with a 1.47 percent wage premium – confirm the important role of the education system in accumulating soft and hard skills. Furthermore, looking at the gender differences, research shows that returns to hard skills for women in case of an additional year of schooling are double in comparison with men, while the returns to soft skills seem to be gender neutral (Balcar, 2016).

### 3.6 Meta-skills and skills of tomorrow

Yet, the complex reality does not allow us to use the black-or-white, success or failure binary approach – ambiguity needs to be embraced. As functional expertise is shifting rapidly, society must understand these changes and adapt to the era of continuous change. In this ever-changing world, it is crucial that individuals are not only adaptable but also encouraged to proactively keep learning and expanding their skill set by acquiring new knowledge and competencies and being open and accepting of change. Organisations need to recognise that it is impossible to predict the future and have to let go of the idea of only being able to thrive in predictable and controlled scenarios (Razzetti, 2018).

As automation and AI transform the job market, meta-skills focus on innate psychological capacities that enable continuous learning and creative problem-solving and help individuals learn and develop other skills. They are "timeless, higher-order skills that create adaptive learners and promote success in whatever context the future brings. These are the skills that enable individuals to perform highly today; in a changed world of work, they will be required by all of us" (Skills Development Scotland, 2018, p. 8). They equip individuals to excel in uncertain environments by fostering adaptability, resilience, and the capability to approach complex challenges with a growth-oriented mindset. Using these, individuals can use introspection to advance their learning, thinking and cognitive comprehension (Stephen et al., 2020), become excited about learning, problem-solving and finding new ways of doing things, which in turn results in individuals being prepared for change in the future (Prasittichok & Klaykaew, 2022). One way to think about meta-skills is as master or high-order skills that amplify and activate other skills and allow for more effective engagement with functional expertise by acting as a catalyst for quicker learning and skills acquisition. For instance, while learning a new language is a skill, meta-skill is the ability to learn new languages. Once it is

developed, learning a third or fourth language becomes much easier. Hence, skills are temporary, and meta-skills are permanent (Razzetti, 2018).

Examples of such meta-skills can be classified under three pillars (Skills Development Scotland, 2018):

1. self-management: coping with change and taking responsibility for one's own behaviour, well-being, growth and performance by being focused, having integrity (being self-aware and having a clear understanding of personal values), being adaptive and taking initiative;
2. social intelligence: being aware of other people's feelings, needs and concerns to navigate through various social situations by communicating, feeling (being empathetic and taking into account different feelings and perspectives), collaborating with others and leading (inspiring, motivating, developing others and influencing them, igniting change);
3. innovation: creating positive change by being curious and creative, making sense of available information, and thinking critically.

Communication, interpersonal and problem-solving skills are fundamental and applicable across various situations. When examining the database of online job postings from 2010 to 2019, Lyu and Liu (2021) found that job vacancies in the US energy sector are showing an 'upskilling pattern' (more on upskilling in the following chapter), as they increasingly require high levels of soft skills (social, cognitive, people management, project management and customer service skills). Employers seem to value these most as they can be applied in various situations across different industries (McCale, 2008). They seek well-rounded individuals who can combine hard with soft skills and adapt to changing conditions.

It is no secret that the growing demand for complex problem-solving cognitive skills is becoming increasingly vital in the workplace. The findings of the WEF's (2023b) 'Future of Jobs' report also present the participating organisations' expectations of the cross-functional skills on the rise in the next five years and rank them by upskilling and reskilling priorities until 2027. It indicates that creative thinking is gaining importance at a marginally faster rate than analytical thinking, with technology literacy not far behind. The growing importance of the socio-economic attributes (curiosity, lifelong learning, resilience, flexibility, agility, motivation, and self-awareness) highlights the emphasis placed by businesses on resilient employees who embrace "a culture of lifelong learning as the lifecycle of their skills decreases" (WEF, 2023b, p. 40). Additionally, skills such as systems thinking, proficiency in AI and big data, talent management, service orientation and customer service have also been identified as the top ten skills of the future (WEF, 2023b).

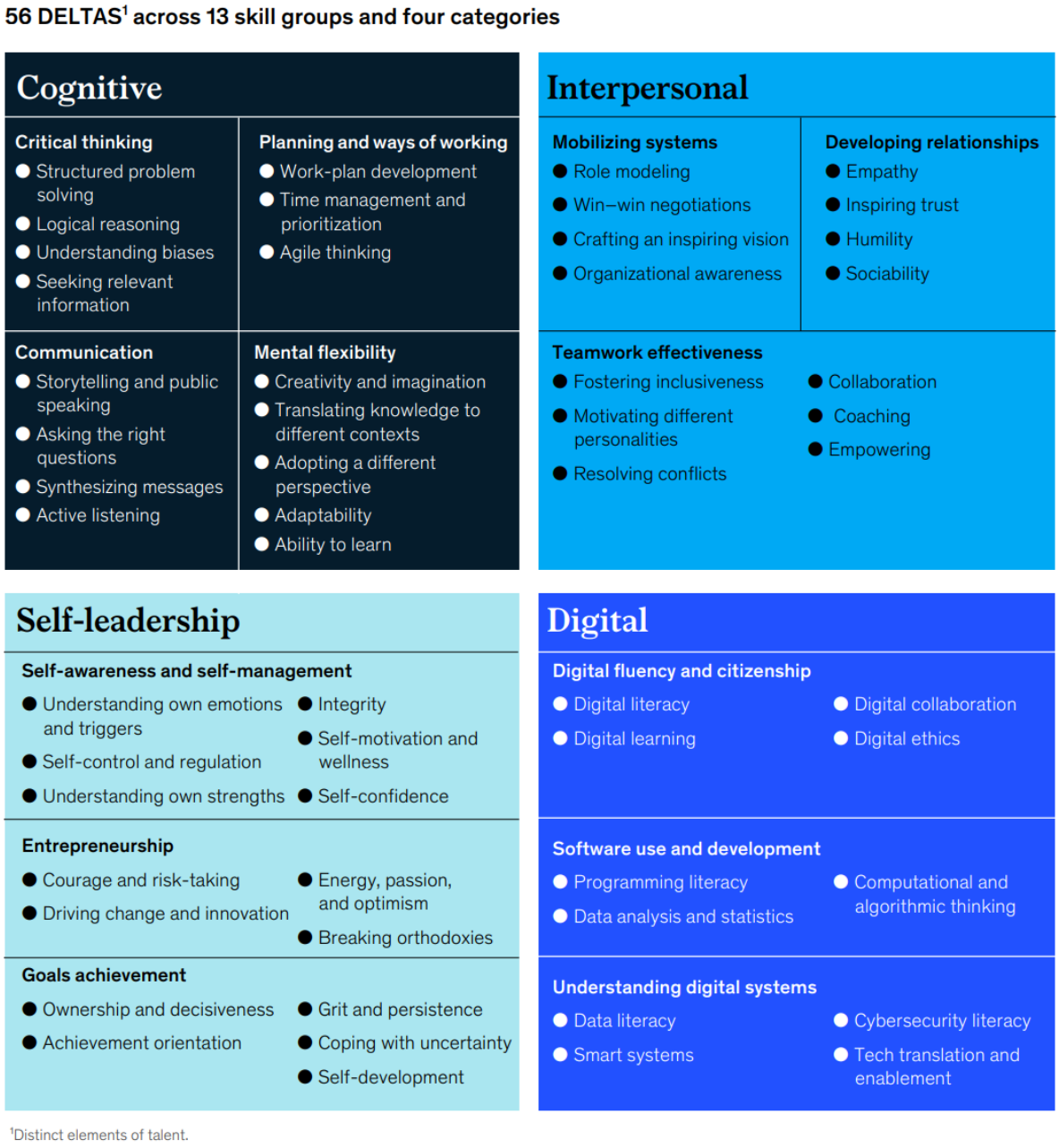
However, although the companies currently deem self-efficacy skills to be of high importance, the greater strategic emphasis (relative to their current status) in the next couple of years will be on technology skills. The most considerable ranking difference compared to 2023's core skills is observed in AI and big data, which ranked 12 places higher in strategic priorities for

companies in the next couple of years, environmental stewardship (up ten places) and design and user experience (up nine places). Other strategic focuses for businesses when it comes to skills are marketing and media (engagement skills), leadership and social influence (working with others), as well as networks and cybersecurity (technology skills) (WEF, 2023b).

At McKinsey, research was conducted to identify the foundational skills and attitudes (i.e., 'DELTAs' – distinct elements of talent) that will help citizens thrive in the future. The research identified 56 DELTAs and put them in 13 groups among four categories, represented in Figure 3. They found that proficiency in certain DELTAs (e.g., adaptability, coping with uncertainty, synthesising messages) is linked with a higher likelihood of being employed and that respondents with work-plan developments, organisational awareness, self-confidence, etc., have an increased chance of earning high income. Looking at job satisfaction, the research found that having self-motivation and wellness, being able to cope with uncertainty, and being self-confident and social bring a higher chance of being fulfilled and satisfied with the job (Dondi et al., 2021).

Interestingly, survey participants with higher levels of education had higher average proficiency scores across these DELTAs (especially in cognitive and digital categories), implying that they are better equipped to adapt to changes in the workplace; however, no such association was linked to interpersonal and self-leadership categories – what's more, for some DELTAs (e.g., humility) higher levels of education were even associated with lower proficiency. The importance of lifelong learning (i.e., learning even when no longer included in education systems) is yet again solidified as crucial for future success (Dondi et al., 2021).

*Figure 3: Foundational skills and attitudes, distinct elements of talent*




*Source: Dondi et al. (2021, p. 3).*

# 4 RESKILLING AND UPSKILLING

Due to the megatrends affecting the global workforce, it is now more important than ever for the workforce to be well-prepared to handle the changes. Companies and employees are tackling the constant change by acquiring skills and fostering a culture of lifelong learning. Specifically, the focus is on two approaches - upskilling and reskilling.

## 4.1 Importance of upskilling and reskilling

Upskilling refers to the process of learning new skills to be better equipped to perform the same job. Employees improve their existing skills and learn skills related to their current position (Evans, 2022). An example of upskilling would be a software developer needing to learn new technical skills to program applications that function in the cloud environment. The employee does not change their role but needs to add new skills to their skillset to adapt to the changing requirements of their job. The motivation to upskill can come from new skill requirements emerging due to technological advancement or updating the skill portfolio for career progression purposes (Valente, 2022).

Reskilling refers to the process of acquiring new skills for a transition to a new job. The need for reskilling is becoming more and more important, with some jobs becoming redundant and obsolete, which means these employees will need to adapt and learn new skills. Due to automation and the emergence of new technologies in the time of Industry 4.0, some jobs will be performed entirely by machines. Reskilling is a way of moving employees with job roles in declining demand to job roles with increasing demand (Valente, 2022). Therefore, reskilling could also be described as a strategy for adapting to the changing skill requirements in the workforce (Claesson & Issa, 2021).

The changes in the labour market are expected to not only significantly change the work processes of some professions but also make certain jobs obsolete due to the emergence of new technologies. Therefore, all levels of employees need to be prepared for these changes, and the best way to handle change is by adopting the mindset of lifelong learning. Keeping up with new technologies and scientific advancement is crucial, and employees have to understand the only way of keeping up is by constantly learning new skills, updating their existing skills and fostering a sense of curiosity about what is yet to come (Flintberg, 2022).

By learning new skills, employees have an opportunity to grow, gain confidence in their abilities and see themselves progressing in their professions. When companies provide their employees with learning opportunities within the company, employees feel valued, which also helps with employee retention. In times of a skill shortage, this benefit of upskilling and reskilling is especially important since it minimises the costs of recruiting new employees. Having well-

trained and skilled employees also makes the company more resilient and agile. The company can react to changes more effectively and efficiently. Therefore, continuous skill mapping is beneficial. By identifying the skill gaps, the company can then strategically fill those gaps with the help of upskilling and reskilling (Achoki, 2023).

According to the WEF Future of Jobs Report (2023b), six in 10 workers will require training before 2027, but only half of the workers are seen to have access to adequate training opportunities today. Companies need to do better, especially since reskilling and upskilling employees are important corporate strategies to stay relevant in the market, tackle recruitment challenges, and deal with the talent shortage. However, training is not just the responsibility of the companies. Employees with jobs that will become obsolete due to the emergence of new technologies will need to be reskilled for new jobs, and these employees could consequently help combat the talent shortage. Additionally, workers whose profession is not yet endangered could face being redundant if they refuse to develop and acquire new skills. However, this depends on how ready the employees and the companies are to initiate and complete the reskilling process. It is a big investment that could, however, bring significant results. Employees should be aware of the importance of lifelong learning, have a mindset of flexibility and agility, and have a diverse skill portfolio, which is key to tackling constant change (Pedron, 2018).

The most influential megatrend seems to be the emergence of new technologies and the general digitalisation of work processes. Therefore, upskilling and reskilling are also important strategies for adapting to a changing job market. Jobs now require digital competencies, and this applies not only to office jobs but also to those that are not traditionally related to the digital economy (Valente, 2022). On one hand, technological advancement brings up the issue of automation of work processes. With routine tasks now being done automatically, employees also have to focus on soft skills, such as creativity, critical thinking and emotional competencies (Pedron, 2018). On the other hand, a significant part of the workforce requires upskilling due to new digital elements in their jobs. In light of rapid technological advancement, companies have to make considerable investments in training their workers to be digitally literate. Since the digital skill shortage significantly hinders people's career prospects, people must adopt the mindset of lifelong learning (Gorski et al., 2023). However, according to the European Commission (2020), less than two in five adults participate in learning every year in the EU, which is definitely not enough to tackle the upcoming changes in Industry 4.0.

Upskilling and reskilling are crucial tools for enabling and encouraging lifelong learning among employees. These two approaches are also tools to complement the current educational system, which lags behind the rapid digital development. Formal education is not enough anymore, which is why upskilling and reskilling and a mindset of continuous learning are crucial for the workforce of the 21st century (Claesson & Issa, 2021).

### 4.2 Company attitude towards upskilling and reskilling

Lifelong learning should be a priority of every organisation and should have a place among its strategic goals (Li, 2022). Ample opportunities for training, career growth and skill development should be at the forefront, and the goal should be to provide employees with an environment where they are motivated and empowered to develop further and cope with any challenge coming their way (Ekuma, 2023).

According to a WEF survey (2023b), 60 percent of companies named skills gaps and 53 percent of companies highlighted talent shortage as the key obstacle to business transformation. Furthermore, companies see the talent shortage as a larger challenge than the shortage of investment capital, which further underscores the severity of the labour shortage. Companies are investing in training to close the skills gap, with 77 percent of respondents feeling optimistic about talent development.

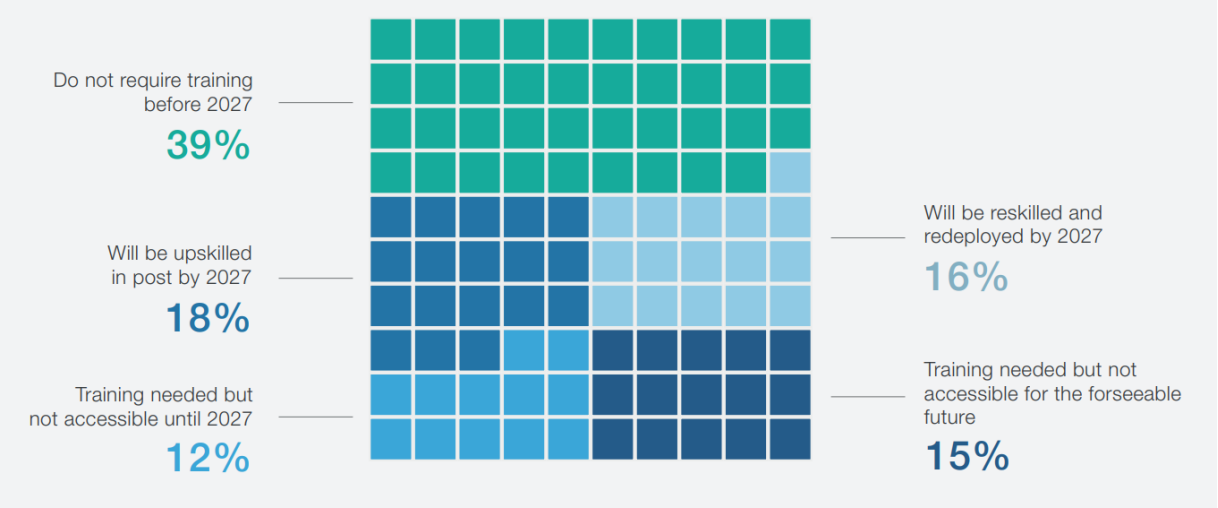
Establishing a training process comprises four phases: identifying the needed skills, creating a learning plan, executing the plan and evaluating the level of acquired skills after the end of training. Companies can use various methods to identify skill gaps, such as role profiles, competency modelling, and performance reviews. When creating a learning plan, it is essential to define training objectives. Based on the objectives, the company decides on the training content, the methods used, the trainer, the training budget, and the location. After the end of the training, an evaluation needs to be conducted to establish whether the objectives were reached. The company should evaluate the effectiveness of the training, assess the performance of the employee after the training and look at the operational and financial results of the training (Valente, 2022).

As already touched upon in previous chapters, soft skills are an important consideration when recruiting new employees because this is an opportunity for companies to fill the skill gaps. Their recruitment process should be adjusted so that they aim to select candidates who may not have all of the needed skills now but show potential and motivation to acquire these skills quickly and successfully. In other words, rather than look for a perfect candidate for months, consider a candidate who lives by the values of lifelong learning and will be able to learn the necessary skills and adapt to changes quickly. As technical skills can be learned later on in most cases, companies should focus on employing people with strong interpersonal skills even if their technical skill portfolio is not perfect (Valente, 2022).

WEF (2023b) asked companies about their reskilling strategies from 2023 to 2027. Figure 4 shows a breakdown of the average training strategy for a representative group of 100 employees, calculated based on the training strategies that were reported by the surveyed companies. Out of a representative sample of 100, companies believe that 39 will not need training before 2027,

12 will require training that will not be accessible until 2027, 15 will need training that will not be accessible even after 2027, and 18 will be upskilled by 2027. Companies estimate that 16 out of the representative group of 100 workers will be reskilled and will work in new job positions within the company by 2027. Based on this data, the skill gap will not go anywhere anytime soon, which is why the tactic of closing the skill gap with upskilling and reskilling programmes is so crucial.

*Figure 4: Upskilling and reskilling outlook, 2023-2027, by workforce fraction*




*Source: WEF (2023b, p. 59).*

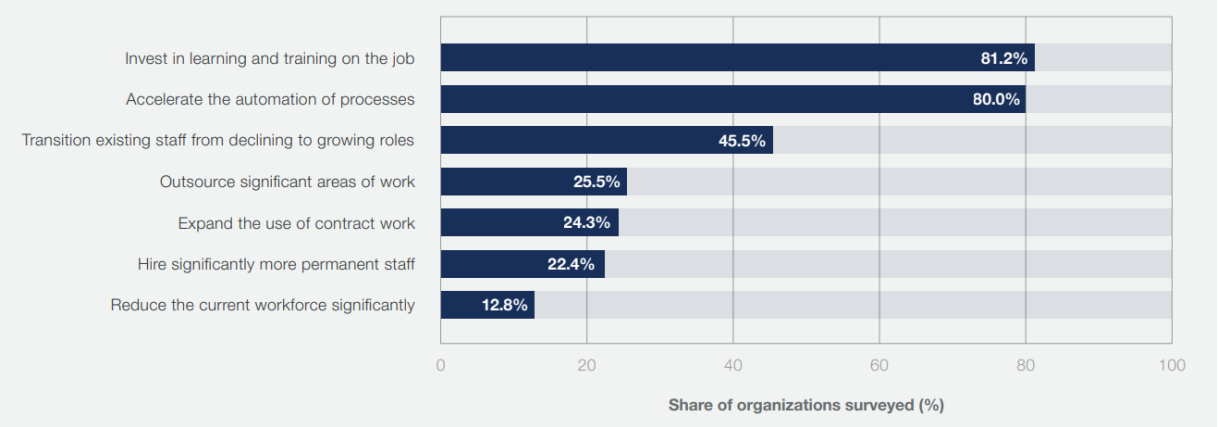
Upskilling and reskilling can have benefits and risks when used as a strategy to fill the skill gaps. Among the benefits, the company avoids high hiring costs for the salaries of workers with skills in high demand. Also, engagement and retention improve due to the company's investment in training its employees, and the company's knowledge stays with the company by closing the skill gap internally. However, training often takes a lot longer than just hiring someone new who already has that skill, and there is no guarantee that the training will be successful. Additionally, there is a risk of not being able to retain the employee who now has the new skill, which would mean the company would have to start the process all over again (Valente, 2022). On a positive note, along with closing skill gaps, retraining the current workforce is proven to lead to higher productivity, greater business growth, and better talent acquisition and retention while also increasing the company's flexibility and adaptability to change (Claesson & Issa, 2021). Additionally, upskilling and reskilling increase the organisation's financial gain and maintain market share for organisational survival (Yaseen et al., 2022).

While investments in infrastructure are essential in the process of digital transformation, success still stems from employees who use the infrastructure. Therefore, the workforce needs to be

properly trained (Gorski et al., 2023). A large majority of companies, specifically 81 percent, see learning and on-the-job training and automating processes as crucial strategies for delivering the company's business goals in the next five years (see Figure 5). In 2023, 41 percent of workers had completed training and managed to bridge the skill gap. As reskilling and upskilling are said to be the most promising strategies towards managing the skill gap and achieving the company goals, organisations need to work hard on training plans to maximise business performance (WEF, 2023b).

According to the WEF Future of Jobs Report (2023b), analytical thinking will be the top training priority from 2023 to 2027, followed by creative thinking and utilising AI and big data. While AI and big data stand significantly lower in the ratings of current core skills, companies see AI as one of the priorities of their skill strategies in the next five years, which also indicates that companies will begin or further develop the automation process. There are mixed expectations regarding artificial intelligence and what consequences it will have. However, studies show that the emergence of new technologies, such as AI and machine learning, will not cause mass unemployment. Some jobs will become obsolete and gradually disappear due to AI performing certain tasks more efficiently and accurately, but new professions will emerge in connection to these new technologies. Therefore, companies must think ahead and start reskilling and upskilling their employees as soon as possible so they will be able to exploit AI and big data, harness its potential and better cope with the technological changes of Industry 4.0. Quick reactions to change improve overall competitiveness, drive innovation and create value for the company (Li, 2022; Morandini et al., 2023; WEF, 2023b). According to a WEF survey (2023b), 46 percent of respondents expect to transition workers from roles that are slowly disappearing to roles that are newly emerging. Among the surveyed companies, 22 percent think they will have to expand their workforce, and only 13 percent believe they will have to significantly reduce their number of employees (see Figure 5). Companies seem to expect megatrends, including the emergence of new technologies, to have a positive effect in terms of workforce size, and job creation is expected to be the trend over the next five years, not job destruction. On the other hand, if companies fail to introduce the necessary training for working with new technologies, this could have a severe negative impact on the company's future competitiveness and success. Most companies that implemented training programmes felt more prepared to address skill gaps in the future since they did it once before (Bick et al., 2020). While CEOs seem aware of the vitality of reskilling, only 18 percent of the surveyed CEOs believed that their company has progressed since introducing upskilling and reskilling programmes. However, the benefit of upskilling and reskilling is visible even when companies report their training programmes were unsuccessful. The companies state that even though the training did not yield the desired results, they now have a better understanding of the skill gaps and the workforce situation in the company (Claesson & Issa, 2021). The act of analysing the skill gaps and at least trying to build resilience is, in every case, better than doing nothing at all (Bick et al., 2020).

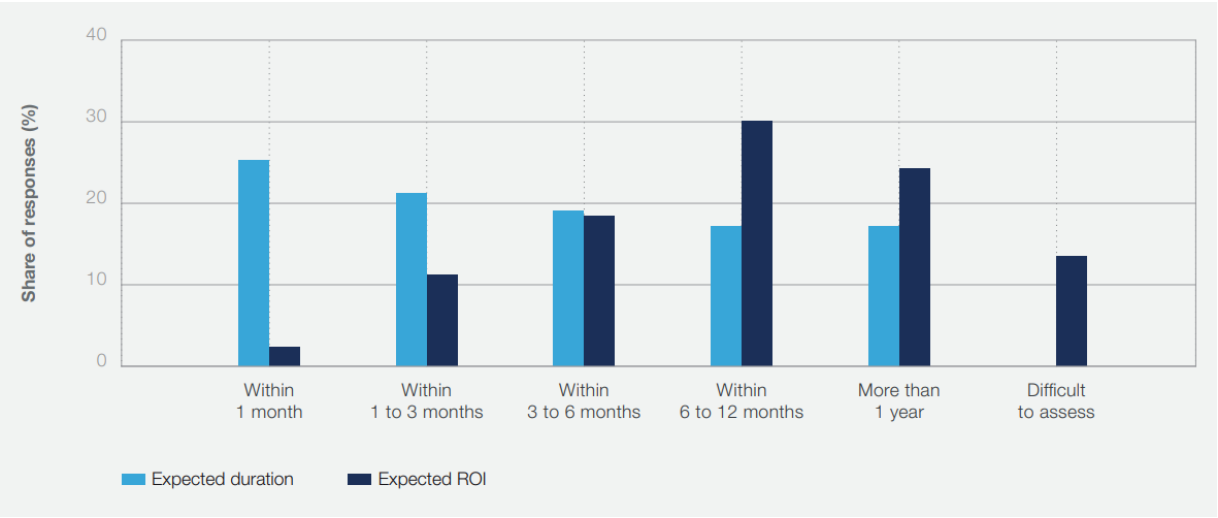
*Figure 5: Workforce strategies, 2023-2027*




*Source: WEF (2023b, p. 50).*

According to a WEF survey (2023b), companies expect training to be effective and efficient. Figure 6 shows the expected duration of training programmes from 2023 to 2027 and how long the companies expect to wait after the training to see a return on investment. When asked about the optimal length of training, companies responded that from 2023 to 2027, 25 percent of their training programmes would last less than a month, and only 17 percent would take longer than a year. Additionally, companies want to see results quickly. Around two-thirds of respondents expect a return on investment within a year, and one-third want their investment covered within six months of training.

*Figure 6: Duration of training and expected return on investment*




*Source: WEF (2023b, p. 58).*

### 4.3 Employees' attitudes towards upskilling and reskilling

New technologies are emerging at a rapid pace, and employees will need to develop new skills and improve their competencies throughout their careers. Learning to learn skills or obtaining "meta-skills" is a responsibility of every individual, but also adopting a mindset that learning is part of a worker's development and is an essential part of every job (Claesson & Issa, 2021). Lifelong learning should be a priority for every individual to remain competitive in the job market and prevent them from becoming obsolete (Gorski et al., 2023).

According to Claesson and Issa (2021), lifelong learning is perceived from two dimensions: adapting to the market and personal development. The first dimension of 'adapting to the market' highlights the employees' view of lifelong learning as a vital component of their careers and the external pressure that the employee feels to learn and develop. One of the reasons for this pressure is the rapid technological advancement in the market and the fear of not being able to keep up and not being able to perform the tasks of their job. Another reason for the pressure comes from the fear of no longer being relevant to their coworkers and their company. Learning new skills is seen as a way of staying attractive in the labour market. Employees are also often encouraged to learn new skills by their managers or company to satisfy the demands of the company's goals and strategy. If the business models and processes change, employees often feel external pressure to upskill to ensure they do not lose their jobs. The second dimension of 'personal development' highlights the internal pressure to engage in lifelong learning, coming from the general belief that lifelong learning is crucial in an employee's career as it boosts employability and helps with career growth. This includes developing current skills and learning new skills.

Kar and others (2020) identified factors that influenced the employees' learning aspirations. Younger employees are more eager to upskill or reskill than older employees. Workers with more work experience feel more secure in their jobs and see upskilling as unnecessary. The convenience of the training location matters. Many more workers were willing to attend the training if this did not involve relocating and the training was executed at the workplace. Also, high performance is highly connected to high aspiration to learn, as the most high-performing employees were the most curious. When identifying factors that influence actual learning behaviour, they confirmed high workload as a reason for employees not wanting to attend training as they feel they do not have time. Similarly, time is also a constraint when workers are offered to learn a completely new skill that is unrelated to their current skills because this often means they need to invest more time and effort into learning the skill. However, if there is potential to use the skill in the near future, employees are more eager to learn the skill as they see the immediate value of the learning process.

Workers perceive training provided by the company as a valuable resource. Additionally, employees see this kind of training as a sign of organisational support. They feel the company values their contributions and want the employees to feel good and confident about their skills. In times of volatile changes, the feeling of support can provide a sense of safety and security (Lee et al., 2022). Additionally, employees feel more secure if they have someone to turn to if something goes wrong. Therefore, companies need to first upskill and reskill the managers since they are the leaders of organisational change (Čirčova & Blštakova, 2023).

For training to be successful, it needs to be relevant. The goal of every company should be to have motivated employees who are enthusiastic about new learning opportunities. A successful upskilling strategy can have a positive effect on the employees by improving employee satisfaction and strengthening their engagement and loyalty to the organisation (Valente, 2022). Furthermore, learning opportunities can invoke a feeling of intrinsic worth and motivation (Ekuma, 2023). However, the attitude of employees towards learning can be negatively affected if the company organises training that the employees find irrelevant and see as a waste of time. According to a WEF survey (2023b), employees across age ranges expressed dissatisfaction about the training opportunities offered by their companies. Data show that 57 percent of surveyed employees sought training outside of work because they believe their company's training programmes do not teach them relevant skills, help them with career development or ensure they stay competitive in the labour market. Companies should reward their employees' willingness to learn by making sure that corporate training is well organised, high-quality, relevant and brings added value to the employees. Not only should the employees develop their skills with the help of the training, but the training should also equip them with the skills they can use to handle change further. The training is not meant to fully train employees but rather to provide them with tools to continue learning on their own (Claesson & Issa, 2021).

However, constant change can also have negative effects on the workforce. The inability to cope with changes and the feeling of failure when employees are unable to master new skills can cause stress, frustration and fear, most often the fear of potential job loss. Letting go of traditional work approaches and learning new ones can be a struggle. Therefore, the company needs to prepare the employees for the change ahead of time with the potential consequences of the change, where they can find the necessary information and learning material and what they can do if something goes wrong (Gorski et al., 2023).

### 4.4 Methods of reskilling and upskilling

In response to the constantly changing business environment, companies invest resources in training programmes to prepare their workforce. To achieve the desired effect, upskilling and reskilling need to be continuous and should include various learning methods (Gorski et al., 2023). Training will be most effective if employees know the objectives of the training they are

trying to achieve, get feedback on how they are progressing and can apply the acquired knowledge in practical tasks (Valente, 2022). Employees also greatly benefit when they can learn in a company with a great learning environment and a learning culture. Employees are more likely to be successful in their learning if they work in a supportive and collaborative environment where people are open and willing to help and learn from each other, and employees feel they can ask questions without negative consequences. People also benefit from a flatter organisational structure as they feel there is less hierarchy and the knowledge sharing between juniors and seniors is easier. Another factor that positively impacts employee learning is the company's learning culture. If the company stresses the importance of learning, invests money into training and encourages employees to take on various types of training, workers are more likely to adopt the same mindset (Claesson & Issa, 2021).

Training methods can be classified based on the learning objective. If the objective is to transmit knowledge or information, then the most appropriate methods would be reading books on this topic, classes or e-learning. If the objective is to change an attitude or develop personal skills, employees should try roleplaying, case studies or group work. When the two previously mentioned objectives are combined, the most fitting methods are on-the-job training, mentorship, coaching or job rotation (Valente, 2022). Companies tend to prefer informal learning over formal types of learning as they feel it is more effective and they can tailor the training to their needs. Based on the survey of White and Rittie (2022), more than half of employers, specifically 55.5 percent, used informal training and unaccredited training, either provided by the employer (50.3 percent) or carried out by an external provider (22 percent). Additionally, online training has been on the rise ever since the pandemic forced companies to move everything on the internet. Since then, companies have realised the convenience of this method, and many companies invested resources into digital platforms to support the blended way of learning even after the pandemic.

Artificial intelligence can help improve employee training by drawing up personalised learning experiences and providing real-time feedback. With companies facing time constraints, it is difficult, if not impossible, to personalise the learning approach. This way, AI could start the process and provide suggestions, and the employee would at least have a blueprint that they could then discuss with the HR department. Some AI systems are already being used for virtual coaching, providing real-time feedback on their performance and creating personal learning plans. Even though this approach excludes the 'human' part of human resources, organisations can simplify the customisation process, leave the data crunching to artificial intelligence and then discuss the provided suggestions with the employees in person (Morandini et al., 2023).

Despite operating in a world of constant change, some traditional learning approaches are still used, e.g., the 70-20-10 learning model, which combines 70 percent of experience-based learning, 20 percent relationship-based learning and 10 percent of formal training. However,

many times, companies only focus on the 10 percent and leave the remaining two parts to the employees, which defeats the purpose since experience-based learning supports the daily business operations by learning while doing cross-functional projects, discussing challenges the company is facing and brainstorming solutions. This approach requires the company to be flexible, move away from rigid job descriptions and foster a culture of workers learning from each other (Strack et al., 2021).

New learning methods and tools, such as personalised learning journeys, gamification, hackathons and massive open online courses (MOOCs), are also becoming popular (Strack et al., 2021). Additionally, with the emergence of new technologies and digital education, micro-credentials have become a hot topic among decision-makers across the world, even though they are still fairly unknown among the general public (Flintberg, 2022).

Massive open online courses (from here on MOOCs) have radically changed access to knowledge. Due to the opportunities of technological advancement, learning has moved online and is often free or following the freemium business model. MOOCs feature engaging learning opportunities that are easy to use and can be accessed anytime and anywhere. The courses usually consist of a balance of theory and practice while including videos, additional reading, tests and quizzes, examples and case studies (Knihova & Hronova, 2019; Escobari et al., 2019). They are especially popular among the tech-savvy younger generation. However, Resei and others (2018) noticed that the real audience of MOOCs is not the universities and the higher education market but the labour market, with employees wanting to achieve professional growth. Therefore, individuals and companies are choosing MOOCs as their preferred method of upskilling and reskilling, especially in digital skills (Knihova & Hronova, 2019). However, MOOCs also have disadvantages. There is no personal touch and interpersonal communication as the entirety of the learning process is carried out online. Also, MOOCs are not equivalent to university degree courses; therefore, they can only serve as a complementary method of learning (Claesson & Issa, 2021).

Hackathons are another way of fostering a learning culture in the company. A hackathon is an event where people work together on a project, usually over a limited amount of time. The goal is to come up with an idea and develop it with your team. Hackathons originate from the world of information technology, where the goal is to develop working software or hardware. Usually, hackathons focus on a specific topic and provide resources, workshops, and mentors from which the participants can learn. The goal of a hackathon is for participants to learn new skills, work together in a team, develop problem-solving skills and learn from each other (Morandini et al., 2023).

Micro-credentials are another contemporary method of learning, defined as certificates of short-term learning experiences, often targeting a specific skill set. With the rising importance of

lifelong learning, the option of micro-credentials could become very popular in the future, which is why more and more universities, professional organisations and online platforms are including them in their offers. As the learning is very targeted and often only includes a very specific skill, this learning method is less time-consuming as a whole course, which could benefit people with a fast-paced life who struggle to find the time to upskill. Micro-credentials also provide employees with a sense of control over their learning data and the ability to customise their learning path and career (Flintberg, 2022). According to a WEF survey (2023b), only 20 percent of companies currently consider micro-credentials among their top three criteria for skills assessment. However, this could change in the future since 82 percent of employers plan to implement education and workforce development technologies in the next five years. Micro-credentials could enable more effective and targeted training at the right time and for a specific skill they need (Flintberg, 2022).

### 4.5 Challenges of reskilling and upskilling

Even though the benefits of upskilling and reskilling are clear, companies are facing several challenges when implementing training programmes. The most significant and most common are time and financial constraints. Organising training opportunities is expensive, especially hiring external trainers and paying for courses and workshops. Also, when employees are taking part in training, they are not working, which lowers productivity and potentially leads to delays. Therefore, companies are reluctant to invest financial resources in training their employees since there is no guarantee training will be successful or bring significant results (Morandini et al., 2023), especially if this is combined with inadequate leadership and a lack of commitment by management. Many leaders still do not consider training as important as other strategic goals and do not see the need to invest their time or money into this topic (Evans, 2022; Gorski et al., 2023). Also, upskilling takes time, and often, it is faster to hire someone who already possesses the necessary skills. Even for employees, it is difficult to find time and resources to upskill if they have other responsibilities and have to work full-time (Weber, 2019).

In a constantly changing environment, companies lack the awareness and understanding about predicting the skills they will need in the future, which affects the design of training methods and consequently negatively impacts the company's strategic workforce development efforts (Ekuma, 2023). Often, companies also lack knowledge of the skills they already have in the company because they do not perform skill mapping analyses and do not have a company skill portfolio or a database where the information on skills, learning capacity, ambitions and interests could be stored. Additionally, organisations do not always include their employees in their decisions. For example, when deciding on a new technology to implement, companies often miss out on huge optimisations because they are unaware that their employees already have the skill set for a certain technology or are very interested in learning a specific skill (Weber, 2019).

Companies may face employee pushback if workers are resistant to change and do not see the value of learning new skills. If opportunities for career advancement are limited, employees could lack motivation to invest their time and effort into reskilling and upskilling. Also, if workers have previous experience of the company pushing them to learn skills that are irrelevant to their jobs, this could negatively impact their willingness to take part in training. To avoid this, the training must be well-organised, relevant and supported by the company (Morandini et al., 2023).

Even though companies face significant challenges, it is important to realise that overall, the benefits of training can outweigh the costs. However, for this to happen, training needs to be well-designed and implemented effectively. In the long run, upskilling and reskilling ensure that the workforce can adapt to changes and is well-skilled to tackle future challenges. According to the European Centre for the Development of Vocational Training - CEDEFOP (2020), the return on investment of upskilling and reskilling can be anywhere from 10 to 30 percent depending on the sector and the specific training. Therefore, investments in training benefit not only the workers but also organisations. However, the investment in reskilling and upskilling is usually quite substantial, so companies should not only invest in training opportunities but also ensure that retention is a key objective of the company's talent management strategy. Otherwise, the high investment in training could be lost if the trained employee decides to leave the company (Valente, 2022).

# 5 BEST PRACTICES OF RESKILLING AND UPSKILLING FROM ABROAD

According to WEF (2021), by investing in upskilling and reskilling, by 2030, 5.3 million new jobs could be created, and such accelerated investment could add $6.4 trillion to the global GDP, as well as help develop more inclusive and sustainable economies around the world. Thus, related to the development of the upskilling and reskilling methods and initiatives, practices already implemented in leading global companies have been analysed as examples – how to create an agile enough workforce to be able to adapt to the ever-changing work and meet the future needs of organisations? How can corporations pave a path in the uncertain future?

"Reskilling or upskilling employees – reskilling involves learning new skills for different jobs while upskilling improves employee skills that are applied in their current roles – is no longer a trend but a survival strategy that fuels or sustains a company's growth" (Patton, 2020).

## 5.1 Investing in education and skills to improve the day-to-day

In 2021, Walmart, the largest private company in the United States, declared its investment of close to $1 billion over the following five years to enable free access to higher education and

skill development for its employees through its 'Live Better U' programme. The programme initially launched in 2018 and used to have a $1 daily fee. However, with this new investment initiative and partnering with Guild, a company providing education solutions for businesses looking for employee retention, Walmart's 1.6 million U.S. employees can now enjoy it at zero cost. The business also announced four academic alliances (Johnson & Wales University, the University of Arizona, the University of Denver and Pathstream), working on providing courses specifically designed for working adults (GOi, 2022). Walmart completely reimburses all tuition, registration, technology, exam fees, and books when studying at partner universities and colleges or obtaining certifications.

A similar cost-covered debt-free education assistance benefit called 'Dream to Be' was also implemented by Target, again in partnership with Guild Education. It provides industry-leading business-related education to support continuous learning, create a more equitable and inclusive workforce and open more career paths as their team members build skills for a lifetime. The four-year plan of $200 million has been covering tuition fees at more than 250 universities, colleges, boot camps, undergraduate programmes, certifications, and covers for books and other essential costs of participating employees (Chorna, 2022; Target, 2022).

The aim of McDonald's 'Archways to Opportunity', a broad education campaign encompassing several different programmes, is to ease employees' access to higher education and employment opportunities by developing their English language skills, obtaining high school or college diplomas, and making educational and career counselling services widely available for free. McDonald's is additionally focused on several networks, increasing education opportunities for the Hispanic American Community, supporting students from Black communities, and supporting young people who are ready to enter the workforce. Since its launch in 2015, they have been able to help 75,000 people in the span of six years and invested over $165 million in tuition (GOi, 2022).

Starbucks also covers tuition for its employees through the Starbucks College Achievement plan. Employees can choose among more than 150 bachelor's programmes offered by Arizona State University (Starbucks, n.d.). Additionally, devised around the company's culture and values and putting people in the centrepiece, e-learning programmes like Starbucks Experience and Shift Supervision were created to upskill its workforce and develop softer skills used in the daily lives of Starbucks employees as well (Chorna, 2022).

At Accenture, a multinational consumer electronics retailer, millions of hours were invested in 2021 into reskilling its workforce and extending its reskilling efforts to its clients (Sharma, 2021). Through the Connected Learning Platform, a blend of classroom-based and digital learning environments with online internal and external subject matters, employees can practise the potential scenarios with their clients and train the cloud and remote collaboration tools if they wish (Eightfold.ai, 2021). Nearly $1 billion investment was focused on the development of

basic and industry-specific skills at scale, enriching their professional capabilities, developing the skills needed to stay relevant in the market, as well as enhancing their career opportunities (Accenture, 2016) and was available anywhere at any time (Eightfold.ai, 2021). The platform comprises connected classrooms that enable people from multiple different locations to participate in interactive and collaborative sessions by senior leaders and specialised professionals, tens of thousands of online courses and learning boards curated by subject matter experts, regional learning centres in Bangalore, Kuala Lumpur, London, Madrid and St. Charles with traditional classrooms, as well as Professional Communities consisting of employees around the world who do similar work to harness the power of the company's global network for new ideas, collaborations, answers, industry insights and professional development. Connected Learning is helping people succeed both professionally and personally (Accenture, 2016). Accenture has also announced that it will be creating 1,000 new jobs in the tech industry. Moreover, their 2020 annual report indicates that by using digital learning platforms, they were able to cut training costs by 11 percent to $866 million and increase training hours by six percent (Sharma, 2021). With this reinvention of their approach to learning, and by focusing on digital learning, the company enables their employees to unleash their ideas, drive innovation forward and develop the highly specialised skills needed to serve their clients and communities (Accenture, 2016).

Also, at Pfizer, learning is promoted rather than forced: "We are trying to create a space where learning is something that everyone wants to do", according to the Head of Learning and Development at Pfizer, Sean Hudson (Chorna, 2022). The multinational pharmaceutical company has created a special learning and development programme with the goal of motivating and engaging its specialists. There are three different kinds of learning: necessary, desirable and required. Due to the highly regulated and complex industry environment, Pfizer strives to strike a balance between the learning that is required (essential knowledge and training) and desired learning. To grow in their professions, the organisation encourages its professionals to push the envelope and acquire new abilities to advance in their careers. Peer evaluations, competency maps, learner profiles, and other tools aid Pfizer in designing the learning journeys of its employees (Chorna, 2022).

### 5.2 Investing in the development of skills to prepare for the future

Google's numerous upskilling and reskilling programmes offer various opportunities not only for their Googlers but also for external organisations and people. Most of their initiatives are run by the g2g (Googler-to-Googler) community, company employees volunteering to devise mentoring and training courses and supervise learners (Chorna, 2022). Google collaborated with Jobs of the Future to integrate their 'IT Support Professional Certificate', a programme to learn about both basic and advanced IT concepts, into community colleges. Additionally, to create a more inclusive labour market, Google has joined forces with several nonprofits, and their $100

million ‘Google Career Certificates Fund’ is upskilling more than 20,000 American workers. Both initiatives are under the umbrella of the ‘Grow with Google’ programme, giving people the necessary training and resources to enable them to find jobs (GOi, 2022).

At Verizon, a free, fully online upskilling programme, ‘Skill Forward,’ ensures that the U.S. workforce can enjoy the learning experience and advance their technology careers by attending ten-to-fifteen-week programmes with the aim of expanding their skill sets on cybersecurity, IT support, website development, JavaScript and digital marketing. Upon the completion of the programme, the participants are supported in either continuation of such education or aided in finding employment, apprenticeship, or an internship. Verizon has committed $44 million to train half a million workers for technology jobs by 2030 (GOi, 2022).

When it comes to technology, more specifically, AI adoption, McKinsey research suggests higher returns for business units where their companies use artificial intelligence (McKinsey, 2019). It is becoming increasingly important to continuously and consciously identify ways of applying technology to change the company part by part. Making technology an important part of their business, at JPMorgan Chase & Co, new investment banking and asset management analysts must attend coding courses, as “Coding is not for just tech people, it is for anyone who wants to run a competitive company in the 21st century” (Parkershi, 2020).

Recognising a greater need for technical skills and great opportunities for people with the right skill set to move into better-paying jobs, Amazon’s Upskilling 2025 initiative aims to equip workers with skills for a more digitised workplace in the future. “For us, creating these opportunities is just the beginning. While many of our employees want to build their careers here, for others, it might be a stepping stone to different aspirations. We think it’s important to invest in our employees to help them gain new skills and create more professional options for themselves,” writes Beth Galetti, Senior Vice President of Human Resources (Amazon Staff, 2020). Starting in 2019 and through 2025, they have been dedicating over $1.2 billion to launch, scale and invest in free training programmes for their 300,000 ‘Amazonians’ to get trained in well-paid, high-demand areas (e.g., medicine, cloud computing and machine learning) (Amazon Staff, 2020). One of the offered programmes within the initiative is the Mechatronics and Robotics Apprenticeship Program, where the employees attend classes, get on-the-job- training, and acquire a wide range of technical skills (e.g., industrial electricity, mechanical components, and fluid power) to prepare themselves to start working as mechatronics and robotics technicians. Upon completion, they get an industry-recognised certificate, earn college credits toward a degree, and potentially secure better career opportunities and receive a competitive pay increase (Eightfold.ai, 2021).

At AT&T, a nearly 140-year-old phone business, they found that nearly of the 250,000 employees lacked the necessary STEM (science, technology, engineering, and mathematics) skills needed to keep the company competitive in the future (e.g., data science, cybersecurity,

agile project management and computer science). Bill Blase, senior executive vice president of human resources, explains the two daunting options the company was facing: “We could go out and try to hire all these software and engineering people and probably pay through the nose to get them, but even that wouldn’t have been adequate. Or we could try to reskill our existing workforce so they could be competent in the technology and the skills required to run the business going forward”. High costs of turnover and the ability to keep valuable institutional knowledge (e.g., the structure and culture of the institution) in place seemed to sway the company into retraining workers for new, more highly skilled jobs (Caminiti, 2018). Thus, they focused on collaborating with online education platforms such as Coursera and Udacity to offer their employees the opportunity to acquire these skills online in a career portal, where these experiences can be personalised by identifying the skills needed to learn and planning their future (Eightfold.ai, 2021). Future Ready, a $1 billion web-based initiative, also includes a career centre with which the employees can identify jobs and train for the kinds of jobs that the company not only needs in the present moment but also down the road. This way, if successful, AT&T will create the nimble workforce it needs to stay competitive (Caminiti, 2018).

In 2019, PricewaterhouseCoopers announced an investment of three billion US Dollars in the New World, New Skills programme for job training of its employees. “At PwC, we are in the business of people, and one of the most important things we do is to continuously scan the horizon to help our clients (and ourselves) prepare for what will affect people in the future. My firm’s own leadership team sees the digital skills inflection point emerging today, and we are acting now,” shared Joe Atkinson, Global Chief AI officer at PwC (Atkinson, 2019). Their commitment to upskilling means giving 276,000 of their people, regardless of the title, tenure, or role, critical skills to spark lifelong learning and guide them on their growth and development paths. “This investment helps solve an important problem, and the shared value of our effort is obvious: We are preparing our people’s careers for the future, as well as creating opportunities for them to apply their new skills to tackle the challenges of tomorrow for our clients and communities,” adds Mr Atkinson (Atkinson, 2019). With two elements of this initiative, the Digital Fitness app, where the employees can assess their digital knowledge and create personalised plans for learning, and the Digital Lab, which allows them to cooperate and share technology creative solutions among themselves through gamification, they were able to learn not only from one another but also try out their new skills by sharing them with a wider audience. The app is there to “help our people think differently and unlock their innovative creativity at scale,” writes the Global Chief AI officer at PwC (Eightfold.ai, 2021). To scale such digital upskilling strategies, an organisation must undertake several actions, such as commitment to upskilling inclusivity, as that yields inspiration. Everyone, without regard to level and role throughout the organisation, must recognise that development and upskilling are business priorities. Next, instead of solely integrating emerging technology and producing digital organisation, a culture of continuous innovation and constructive disruption needs to be created

for employees to feel inspired and motivated to learn and make things better. Finally, organisations must support and encourage employees to share what they learned, as well as celebrate the demonstrated impact and the acquisition of new skills while continuously supporting technology learning with the right investments, assessments and processes (Atkinson, 2019).

Marriott International, consistently ranked as the best employer in the Asia Pacific area, offers two development programmes for its employees. Recent university graduates are trained to become the new generation of leaders through the 12- to-18-month 'Global Voyage Leadership Development' programme that is recognised internationally and offers practical and online training in fields like accounting and finance, culinary arts, engineering, human resources, event and revenue management, etc. The 'Marriott Development Academy', on the other hand, provides a self-paced, blended learning option for the participants to develop their careers. In the Australian market alone, these programmes have aided in filling more than 55 percent of internally posted leadership roles (GOi, 2022).

All in all, there are many examples of successful upskilling and reskilling efforts. Some are more suitable than others, depending on the company culture and the industry that employees find themselves in. It is important to note that some of these programmes may not be financially feasible for all firms. While it is hard to assess which techniques are the most effective and put a price on potentially improving one's quality of life, given the employees' reactions, the benefits seem to outweigh the company's initial financial investments. Nonetheless, it is essential to find cost-effective ways by leveraging the existing resources, such as internal mentorships and apprenticeship programmes, to upskill and reskill the staff to stay competitive in the future.

# 6 SLOVENIAN GENERAL PUBLIC'S PERSPECTIVE ON FUTURE SKILLS

## 6.1 Research methodology

The following section presents the research methodology, which we selected to investigate the Slovenian general public's opinion regarding upskilling and reskilling, as well as their standpoints on skills, which will be crucial in the future work environment. Before performing the study itself, we identified the primary research questions which guide this part of the study:

1. Which skills does the Slovenian general population perceive as crucial future skills?
2. Is the Slovenian general public actively working on expanding their skill set?

This study was executed by adopting a cross-sectional survey design, as it enabled us to collect data at a single point in time. With this approach, we can easily capture the most recent opinions and current practices of the target population related to upskilling, reskilling, and future skills.

For the target population in this survey, we selected individuals aged from 18 to 65 years old living in Slovenia, as we assume that most of the working population belongs to this age range. We used a convenience sampling method. We shared our survey on social media with our friends and family and asked all the existing respondents to share it with others as well. This way, we tried to limit the bias, as we wanted to give every Slovenian citizen an opportunity to complete the survey, even though we are aware that some selection bias is present due to the method of sharing the survey.

We collected the data using the online survey platform 1ka, which is a popular tool for online survey execution. We chose an online survey platform as it is practical, accessible and easy to complete. It also allowed us to reach a broad audience range efficiently.

The survey included a sequence of questions designed to obtain respondents' perceptions of their employers' current efforts in upskilling and reskilling, as well as which future skills will be crucial in workplaces. The survey was divided into sections:

- Future skills: Questions that provided the respondents' identification of crucial future skills.
- Upskilling and reskilling: Questions aimed at determining if the respondents are constantly and actively engaged in their skill set expansion, including the kinds of training or educational programmes they are engaged in.
- Demographic data: Questions about age, gender, education level, and employment status in order to match the respondents accordingly with their responses.

Some of the questions were open-ended, meaning that the respondents could input the answers themselves. In other questions, people needed to rank the importance of skills from 1 to 5, select the three most important skills, and either reply affirmatively or negatively. We tried to avoid close-ended questions since it is, for example, hard to list all the learning opportunities available for workers within a company. Therefore, even if we have listed some answers, we have also left the option for respondents to write another option, which was not initially listed. The survey questions can be found in Appendix 2.

Before we fully deployed the survey, we pilot-tested it with a small group of participants to ensure that it was clear and practical. This way, we could also test the time needed for the survey to be completed. After receiving feedback from the pilot test, we modified some of the questions, which ensured that the questions were comprehensive and relevant, as well as that the survey was not excessively time-consuming.

The collected data was cleaned and prepared for analysis. Descriptive statistics were used to summarise the demographic characteristics of the respondents and their responses to key questions. Frequencies and percentages were calculated to identify the most commonly perceived crucial future skills and the extent to which respondents are engaged in upskilling and reskilling activities.

Inferential statistical techniques were also employed to explore relationships between demographic variables and opinions on future skills and upskilling practices. Statistical software R Studio was used for data analysis to ensure accurate results.

In our study, we carefully considered ethical concerns. Participation was voluntary, and informed consent was obtained from all respondents. The survey was designed to ensure anonymity and confidentiality, with no personally identifiable information being collected. Data was stored securely and used solely for research purposes.

## 6.2 Survey analysis

### 6.2.1 Demographic characteristics

Our survey has reached 821 potential respondents but was only completed in entirety by 223 Slovenian-speaking individuals. Therefore, the response rate was 27.16 percent. One respondent disclosed their gender as ‘Other’, while 127 respondents identified as ‘Female’ and 95 as ‘Male’. Hence, some analyses are based on 222 respondents only. When sorting the responses by age, we can observe that none of the participants was younger than 18 years old. Among those who completed the survey, 37 individuals were aged between 18 and 24, and 80 participants were aged between 25 and 34. Both age groups, from 35 to 44 and from 45 to 54, were represented by 39 individuals each. In the age group between 55 and 64, there were 24 people, and four people were older than 65. Even though we intended to only include respondents in the age range between 18 and 65, we decided to include these four respondents who were older than 65 because they were still active in the labour market. Of all (223) participants, 177 reported having at least a bachelor’s degree.

Twenty-one respondents are working in administration or production, and the work of 101 participants can be described as technical work. Twenty-nine respondents engage directly with customers, and 71 have a leadership or managerial role. The most common activities of the respondents are financial and insurance activities, followed by professional, scientific and technical activities.

### 6.2.2 Association between gender and the importance of technological skills

In the first question of our survey, respondents were asked to name at least one skill that will have the utmost importance in the future. The majority of respondents listed two or more skills. The goal of this question was to see which skills are, in the opinion of Slovenians, of greater importance for the future and whether technological skills are most commonly named as the skillset of the future. Around 44 percent of all respondents have listed technological skills among their answers. Among other common answers were communication, reliability, flexibility, empathy, and analytical thinking.

Throughout the testing of the first hypothesis, we wanted to see if there is any association between gender and the belief that technological skills would play a vital role in the future of the workplace. The goal of this hypothesis is to disprove the common, stereotypical belief that females prioritise soft skills and believe that technological skills are of lesser importance in the workplace. In the first question of our survey, respondents were required to list one or more skills that would be important in the future. Their answers were compared by gender. The results can be seen in Table 1.

*Table 1: Technological skills and their importance in the future (in %; n=222)*

| | |
|---|---|
| Male (n=95) | 44.21 |
| Female (n=127) | 44.09 |
| Total (n=222) | 44.14 |

*Source: Own work.*

We have also established two hypotheses:

- $H_0$: There is no association between gender and the belief that technological skills are of great importance.
- $H_1$: There is an association between gender and the belief that technological skills are of great importance.

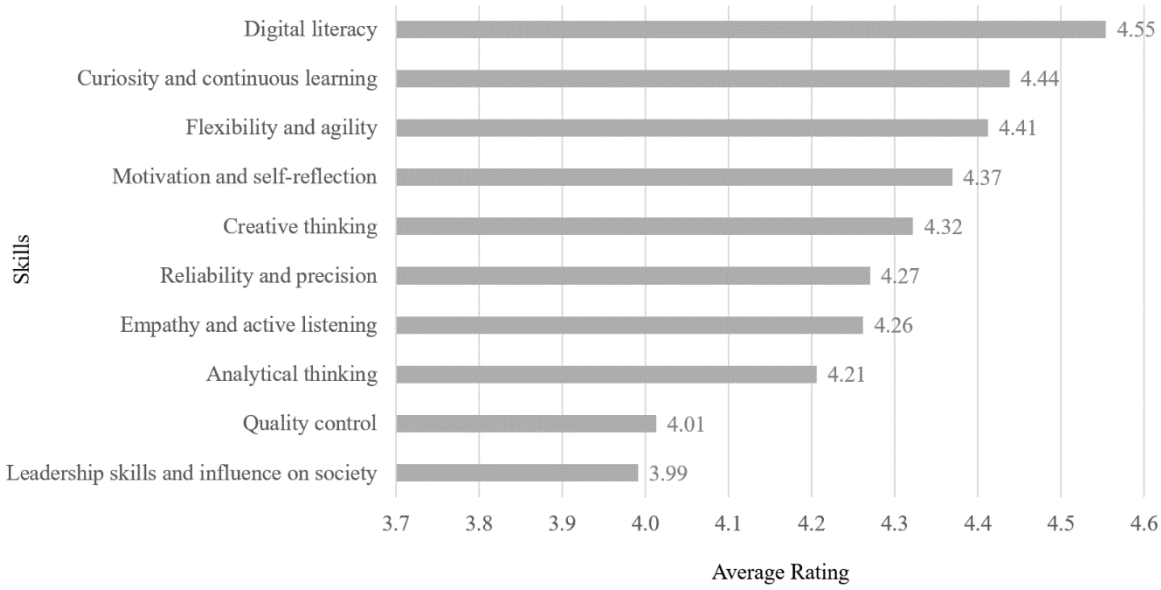
Out of 222 respondents (not accounting for the individual that chose 'Other' as their gender), 44.14 percent have listed technological skills as one of the most vital skills of the future. If we further break down this percentage, we see that 44.21 percent of all male respondents share this belief, while around 44.09 percent of females are of that opinion. We can see a slightly higher percentage of males who believe that technological skills are of great importance.

To reject the null hypothesis, we performed a Pearson's Chi-squared test in R Studio. The p-value is 0.9863, meaning that there is insufficient evidence to reject the null hypothesis. It can be said that gender does not play a significant role in defining important skills of the future.

### 6.2.3 The ranking of digital literacy

In the second question of this survey, people were asked to rank each of the ten listed skills from 1 (not important at all) to 5 (very important). In this question, people were not requested to rank skills by their importance, as they could, for example, give the ranking 5 (very important) to multiple listed skills. The skills, which were listed are the following: 'analytical thinking', 'creative thinking', 'flexibility and agility', 'motivation and self-reflection', 'curiosity and continuous learning', 'digital literacy', 'reliability and precision', 'empathy and active listening', 'leadership skills and influence on society' and 'quality control'. The results are summarised in Figure 7.

*Figure 7: Average importance of the ten skills (n=233)*




*Source: Own work.*

The goal of this question was to see whether people rank digital literacy as considerably higher in comparison to the other nine skills. It can be seen in Figure 7 that the average level of digital literacy is indeed higher than the average level of all the other skills.

The question is, however, whether this average is significantly higher. Firstly, we performed the Kruskal-Wallis rank sum test to see whether there was a difference between the medians of ranked skills. We thus proposed two hypotheses:

- $H_0$: The medians of all the skills are equal.

- $H_1$: At least one skill's median is different from the others.

After performing the Kruskal-Wallis rank sum test, we found out that the p-value is smaller than $2.2e^{-16}$. We are able to reject the null hypothesis and claim that there is indeed a difference between the medians.

Afterwards, we wanted to identify the skills that have a different median from other skills and additionally prove that digital literacy has a significantly higher median than every other listed skill. We have thus decided upon numerous different pairs of hypotheses, which can be summarised as follows:

- $H_0$: The distribution of [skill1] and [skill2] are equal.

- $H_1$: The distribution of [skill1] and [skill2] are different.

We have conducted a Wilcoxon rank sum test with continuity correction in order to test our hypotheses. As seen in Appendix 3, we have first compared all the possible pairs but have only shown pairs of skills where the difference is significant. There were 28 such pairs. Afterwards, we performed the same test, but only between digital literacy and other skills. The corresponding p-values can be found in Table 2.

As seen in Table 2, we can reject the majority of null hypotheses in favour of the alternative hypotheses due to sufficient evidence. There are only two p-values that really stand out – flexibility and agility and curiosity and continuous learning (with p-values of 0.1264 and 0.1779, respectively). Due to insufficient evidence, we cannot reject these two null hypotheses. To summarise, digital literacy is one of the most important skills, according to the Slovenian respondents. At least from their perspective, the possession of this skill will play a crucial role in the future of the labour market.

*Table 2: Testing the distribution of digital literacy and other skills*

| | Corresponding p-value |
|---|---|
| Analytical thinking | $2.124e^{-07}$ |
| Creative thinking | 0.002 |
| Flexibility and agility | 0.126 |

(table continues)

*Table 2: Testing the distribution of digital literacy and other skills*

(continued)

| | Corresponding p-value |
|---|---|
| Motivation and self-reflection | 0.002 |
| Curiosity and continuous learning | 0.178 |
| Reliability and precision | $6.566e^{-05}$ |
| Empathy and active listening | 0.001 |
| Leadership skills and influence on society | $1.522e^{-12}$ |
| Quality control | $2.354e^{-11}$ |

*Source: Own work.*

### 6.2.4 Opinion of the youth and the older population on technological skills

Similarly to the second question, the third question listed ten skills, yet in this part of the survey, respondents needed to select the top three skills which will, in their opinion, be the most significant in the future.

The goal of this question was to further observe which skills are considered crucial in the future and whether digital literacy will play one of the most important roles, according to the respondents. Table 3 shows how often each skill was selected.

Because each respondent had to pick three skills, the sum of all percentages is 300. This stage of the survey was completed by 229 respondents. As observed, digital literacy was selected by 54.59 percent of all respondents as one of the three most important skills of the future.

*Table 3: Three most frequently selected skills (in %; n=229)*

| | |
|---|---|
| Digital literacy | 54.59 |
| Flexibility and agility | 39.30 |
| Curiosity and continuous learning | 37.12 |
| Creative thinking | 35.81 |

(table continues)

*Table 3: Three most frequently selected skills (in %; n=229)*

(continued)

| | |
|---|---|
| Empathy and active listening | 32.75 |
| Reliability and precision | 29.26 |
| Motivation and self-reflection | 23.58 |
| Analytical thinking | 21.83 |
| Leadership skills and influence on society | 20.09 |
| Quality control | 5.68 |

*Source: Own work.*

We have linked this segment of the survey to the age of respondents in order to see if the perception of different generations differs. Firstly, we matched the people younger than 24 years old, as the youth are defined by the United Nations (2020a), with their responses. Their responses can be seen in Table 4.

Out of 38 respondents in this category, 57.9 percent believe that digital literacy is one of the three most important future skills. Since each respondent had to select three out of ten skills, the probability of a skill being selected is equal to 30 percent. Therefore, the most crucial skills would have to be selected significantly more often than 30 percent of the time. To analyse the skill of digital literacy, we have established two hypotheses:

- $H_0$: The proportion of the youth who selected digital literacy as one of the most important skills for the future is equal to 30 percent.

- $H_1$: The proportion of the youth who selected digital literacy as one of the most important skills for the future is greater than 30 percent.

We have performed the exact binomial test to see if we can reject the null hypothesis in favour of the alternative one. The p-value was equal to 0.0005155, meaning we can reject the null hypothesis with sufficient evidence. Despite the relatively small sample size, we can claim that the youth believes that digital literacy, one of the most important technological skills, is also one of the most important skills of the future.

*Table 4: Frequency of selected skills by the youth (in %; n=38)*

| | |
|---|---|
| Digital literacy | 57.90 |
| Curiosity and continuous learning | 44.74 |
| Flexibility and agility | 44.74 |
| Creative thinking | 34.21 |
| Reliability and precision | 31.58 |
| Empathy and active listening | 28.95 |
| Motivation and self-reflection | 26.32 |
| Leadership skills and influence on society | 13.16 |
| Analytical thinking | 10.53 |
| Quality control | 7.90 |

*Source: Own work.*

Similarly, we have also matched the older generation, people older than 55 years old, with their answers to the third question and obtained the results as seen in Table 5. The age of 55 years old was chosen based on the literature by the United Nations (2023a), defining the people in the age range between 55 and 64 years old as the older working-age people.

Out of 28 individuals older than 55 years old, 46.4 percent have selected digital literacy. At a glance, this skill is not even the most important skill from the perspective of the older generation, as this place belongs to creative thinking. Together with curiosity and continuous learning, this skill is placed second among the ten listed skills.

We have performed the exact binomial test to confirm that digital literacy is not placed as a skill with greater importance than the rest. We have set two hypotheses:

- $H_0$: The proportion of the older population who selected digital literacy as one of the most important skills for the future is equal to 30 percent.
- $H_1$: The proportion of the older population who selected digital literacy as one of the most important skills for the future is greater than 30 percent.

*Table 5: Frequency of selected skills by the older population (in %; n=28)*

| | |
|---|---|
| Creative thinking | 57.14 |
| Curiosity and continuous learning | 46.43 |
| Digital literacy | 46.43 |
| Flexibility and agility | 32.14 |
| Motivation and self-reflection | 32.14 |
| Empathy and active listening | 28.57 |
| Reliability and precision | 21.43 |
| Analytical thinking | 17.86 |
| Leadership skills and influence on society | 14.29 |
| Quality control | 3.57 |

*Source: Own work.*

After conducting the exact binomial test, we obtained the p-value of 0.06476. There is insufficient evidence to reject the null hypothesis in favour of the alternative hypothesis. Despite the relatively small sample size, we can conclude that the older generations deem digital literacy to be an important skill but only equally important to other skills, such as creative thinking or curiosity and continuous learning.

### 6.2.5 Association between the industry type and the expected job changes

The essence of the fourth question was to discover how the citizens of Slovenia anticipate that their jobs will change due to automation and digitalisation. They were asked how much their jobs are expected to change in the next five years due to automation and the discovery of new technologies. The possible answers were ‘Yes, a lot’, ‘Yes, a little’, ‘No’, and ‘I don’t know’. This question was answered by 229 respondents, and 36 percent of all respondents were of the opinion that digitalisation and automation would change their jobs significantly. Out of the surveyed people, 52 percent were certain that their job would at least slightly change. On the other hand, only 11 percent of respondents were confident that automation and digitalisation would not have an impact on their current job. Two respondents were not certain whether these two factors would have an impact on their jobs.

In our hypotheses, we matched this question with the industry where the respondents operate, as we wanted to get a glimpse of whether there are industries where people feel that their jobs will change significantly in the next five years. Respondents were able to pick one among 18 industries, which can be found in Appendix 4. We have selected activities which are classified by the European Commission in the NACE classification.

We encountered an issue because several activities were severely underrepresented in our survey. As a result, we only included seven industries in our analysis. We have excluded industries with less than 18 representatives. The results of our survey, in connection with the industry, can be seen in Table 6.

For this test, we have decided to establish the following hypotheses:

- $H_0$: There is no association between the industry type and the level of expected job change due to digitalisation and automation.

- $H_1$: There is an association between the industry type and the level of expected job change due to digitalisation and automation.

*Table 6: Anticipated job change in the next five years, relating to industry (in %)*

| | Yes, a lot | Yes, a little | No |
|---|---|---|---|
| Wholesale and retail trade; repair of motor vehicles and motorcycles (n=22) | 40.91 | 40.91 | 18.18 |
| Information and communication (n=21) | 57.14 | 42.86 | 0.00 |
| Financial and insurance activities (n=39) | 28.201 | 64.10 | 7.69 |
| Professional, scientific and technical activities (n=36) | 22.22 | 61.11 | 16.67 |
| Administrative and support service activities (n=19) | 52.63 | 42.11 | 5.26 |
| Education (n=18) | 22.22 | 50.00 | 27.78 |
| Human health and social work activities (n=22) | 40.90 | 40.91 | 18.18 |

*Source: Own work.*

We performed the Pearson Chi-Square test to find the possible association between these two variables. With a p-value of 0.06896, we could not reject the null hypothesis in favour of our main hypothesis. We do not have sufficient evidence to claim that there are only certain industries where people fear that their jobs will significantly change in the next five years. Overall, 87 percent believe that changes in their industry are anticipated due to automation and digitalisation.

### 6.2.6 Association between the job type and the expected job changes

In our fifth question, we wanted to see whether people believe that their jobs will disappear or be completely automated in the next ten years. People could answer either with "Yes", "No" or "Don't know". Only 7 percent of all respondents are of the opinion that their job will disappear in the next ten years. On the other hand, a large majority (82 percent) believe that their job will remain in the job market in the following decade. The remaining 26 respondents (11 percent) are not certain about the availability of their jobs in the next decade.

We wanted to test whether there is some connection between this belief and the type of job the respondents are performing. Survey participants could either define their type of work as 'operative work in production or administration', 'technical work', 'direct work with customers', or 'manager/leader'. Our main goal was to better understand if the association exists, as there is a belief that certain types of jobs can easily be replaced by artificial intelligence and automation while others would be much harder to replace. The results can be seen in Table 7.

*Table 7: Job type and the belief of job disappearance or complete automation (in %; n=222)*

| | Yes | No | Don't know |
|---|---|---|---|
| Operative work in production or administration (n=21) | 23.81 | 66.67 | 9.52 |
| Technical work (n=101) | 3.96 | 83.17 | 12.87 |
| Direct work with customers (n=29) | 10.35 | 68.97 | 20.69 |
| Manager/leader (n=71) | 5.63 | 90.14 | 4.23 |
| Total (n=222) | 7.21 | 81.98 | 10.81 |

*Source: Own work.*

We can observe that only 7.2 percent out of 222 people fear that they will lose their current position due to automation and digitalisation or that their job will become obsolete in the next

ten years. Among the people that either perform technical or managerial work, a small percentage of people believe that job replacement is possible (3.9 percent and 5.6 percent, respectively). This sentiment cannot be shared by people with direct work with customers and operative work in production or administration (23.8 percent and 10.3 percent, respectively).

At a glance, it can be said that there is some association between the type of job people are performing and the belief that their job will be automated or will disappear completely. We have created two hypotheses:

- $H_0$: There is no association between the type of job and the belief that the job will disappear or be completely automated in the next ten years.

- $H_1$: There is an association between the type of job and the belief that the job will disappear or be completely automated in the next ten years.

We have performed the Pearson Chi-Square test in R Studio in order to either confirm or reject the null hypothesis. With a p-value of 0.006651, we have sufficient evidence to reject the null hypothesis in favour of the main hypothesis. It, however, remains to be seen whether the fear of losing these types of jobs to automation in the next ten years is legitimate. Digitalisation is happening at an accelerated pace but remains unpredictable. We will only be able to tell whether the beliefs of the respondents were genuine once the automation in their workplace actually takes place.

### 6.2.7 Association between the highest education level and learning outside of work

The sixth question dealt with learning outside of work. Our main goal was to understand whether people are willing to commit themselves to learning and developing new skills outside of the working environment. Sometimes, people need to take their own initiative in order to achieve reskilling or upskilling. The question was answered by 225 people, and 152 respondents (67.6 percent) replied that they were educating themselves outside of the working environment.

We wanted to go a step further and find an association between learning outside of work and the highest level of education that the respondents have obtained. We wanted to confirm the hypothesis that people with higher education also prefer continuous learning and thus educate and acquire new skills after their academic years and outside their working hours. The results can be seen in Table 8.

*Table 8: Learning outside of work in relation to highest education level (in %; n=225)*

| | Yes | No |
|---|---|---|
| Primary education (n=1) | 0.00 | 100.00 |
| Secondary education (n=24) | 45.83 | 54.17 |
| Post-secondary education (n=22) | 50.00 | 50.00 |
| Higher education (n=178) | 73.03 | 26.97 |
| Total (n=225) | 67.56 | 32.44 |

*Source: Own work.*

We have established two hypotheses to see whether there is any association between these two variables. These two hypotheses are:

- $H_0$: There is no association between the highest education level obtained and active learning outside of work.
- $H_1$: There is an association between the highest education level obtained and active learning outside of work.

Once again, we performed the Pearson Chi-Square Test to test hypotheses. The p-value amounted to 0.005138, which is low enough to reject the null hypothesis in favour of our main hypothesis. We can thus claim to some extent that there is an association between the obtained level of education and the eagerness to learn outside of the working environment. Continuous learning is a vital part of upskilling and reskilling, and acquiring these skills outside of work is of great importance.

### 6.2.8 Other questions from the survey – descriptive statistics

In addition to questions already mentioned during the testing of the hypotheses, the respondents also had to answer some other questions related to upskilling and reskilling. These questions will be described without using the statistical software R Studio.

In the survey, there was a follow-up question to the question about education outside of the workplace. After 155 respondents confirmed that they are obtaining education outside of work, they were asked about the learning methods they are using. We listed several learning

opportunities outside of work, and multiple could have been selected. The results are listed in Table 9.

*Table 9: Learning opportunities outside of work (in %; n=155)*

| | |
|---|---|
| Literature | 67.74 |
| Online workshops and seminars | 56.77 |
| Podcasts | 56.13 |
| Workshops and seminars in person | 45.81 |
| External learning platforms (Coursera, Udemy, Linkedin, etc.) | 39.36 |
| Internal learning platforms (after working hours) | 21.94 |
| Obtaining digital badges | 6.45 |

*Source: Own work.*

Table 9 gives us insight into educational opportunities that are not part of the workplace. The majority of people still resort to reading literature, while other popular options are workshops, both online and offline, and podcasts, which have recently increased in popularity.

People were also asked whether they were attending educational programmes at the workplace. At this stage of the survey, 227 people responded to this question, and almost 68 percent of the answers were affirmative. We wanted to further understand what type of educational programs they attend, which is the main reason for the follow-up question, in case they respond affirmatively. We listed nine types of programmes, and Table 10 provides the complete list, together with the number of respondents engaging in these learning opportunities.

Among the 154 respondents, the majority educate themselves in the workplace using the privileges of mentorship, workshops, seminars and conferences, and knowledge sharing among colleagues. Workplace rotation, which can be described as a relatively new concept, is still not a popular option in Slovenian companies but could nonetheless gain importance as a way of obtaining new knowledge of different employment opportunities within the company. A similar trend can also be seen in coaching, while some companies still do not invest much in learning platforms, which could be of great importance for the future of the workplace.

*Table 10: Learning opportunities at the workplace (in %; n=154)*

| | |
|---|---|
| Seminars and conferences | 63.64 |
| Workshops in person | 55.20 |
| Knowledge sharing | 53.90 |
| Mentorship | 52.60 |
| Online workshops | 45.46 |
| Internal learning platforms | 31.17 |
| External learning platforms (Coursera, Udemy, Linkedin, etc.) | 27.27 |
| Coaching | 18.83 |
| Workplace rotation | 14.29 |

*Source: Own work.*

In the second to last question (apart from the questions regarding the demographics), we asked respondents whether their employers pay enough attention to the educational programmes of the workforce. While 123 respondents replied that the employer takes care of upskilling and educating the workforce, 81 respondents believe that their employer does not offer enough learning opportunities to the workforce, while the remaining 23 people were not certain about the answer.

The last question revolved around the responsibility to educate the employees in order to perform their jobs successfully. The results are summarised in Table 11. While a large majority of respondents (67.7 percent) believe that the responsibility to educate the workforce lies on both the employee and the employer, we were surprised to see that among the 226 respondents, no one believes that the responsibility should be solely on the employee. This finding really resonates with the belief that employers should prepare the employees to perform their duties in line with the company's expectations.

*Table 11: Responsibility of learning (in %; n=226)*

| | |
|---|---|
| Entirely the employer's responsibility | 4.87 |
| Partially employer's responsibility | 20.80 |
| Both employer and employee's responsibility | 67.70 |
| Partially employee's responsibility | 6.64 |
| Entirely the employee's responsibility | 0.00 |

*Source: Own work.*

### 6.2.9 Summary of hypothesis testing

In this chapter, we have introduced several hypotheses, some of which were accepted due to sufficient evidence, while some could not be accepted. Table 12 provides a summary of all the hypotheses.

The tested hypotheses have provided some interesting insights. Technological skills are deemed quite important by the general public, and there is almost no difference based on gender. There are, however, some generational differences, which were noted in our analysis, as the youth deems digital literacy as an important skill, whereas the older respondents do not consider it as the most important skill. We could not reject the hypothesis that job changes due to automation are linked to the type of industry. However, we can connect the belief that a certain job will disappear in the next ten years with the type of job the respondents are performing. The last hypothesis tested whether there is an association between people who educate themselves outside of the working environment and the level of their education, meaning that people with higher levels of education are also likely to use learning platforms outside of work. We also described some of the results obtained in the survey. Literature remains the most common method of obtaining knowledge outside of work, while seminars and workshops are the main tools for educating during working hours. The majority of respondents are satisfied with the number of upskilling and reskilling opportunities within the company, while no one believes that it is solely the employees' responsibility to learn and prepare for the jobs that they need to perform.

*Table 12: Summary of hypotheses*

| Hypothesis | Status | P-value |
|---|---|---|
| There is an association between gender and the belief that technological skills are of great importance. | There is insufficient evidence to reject the null hypothesis. | 0.986 |
| At least one skill's median is different from the others. | There is sufficient evidence to reject the null hypothesis. | $<2.2e^{-16}$ |
| The distribution of [skill1] and [skill2] are different. | Sufficient evidence to reject the null hypothesis was found in 28 out of 45 combinations. | / |
| The distribution of digital literacy and [skill2] are different. | Sufficient evidence to reject the null hypothesis was found in 7 out of 9 combinations. | / |
| The proportion of the youth who selected digital literacy as one of the most important skills for the future is greater than 30 percent. | There is sufficient evidence to reject the null hypothesis. | 0.001 |
| The proportion of the older population who selected digital literacy as one of the most important skills for the future is greater than 30 percent. | There is insufficient evidence to reject the null hypothesis. | 0.065 |
| There is an association between the industry type and the level of expected job change due to digitalisation and automation. | There is insufficient evidence to reject the null hypothesis. | 0.069 |
| There is an association between the type of job and the belief that the job will disappear or be completely automated in the next ten years. | There is sufficient evidence to reject the null hypothesis. | 0.007 |
| There is an association between the highest education level obtained and active learning outside of work. | There is sufficient evidence to reject the null hypothesis. | 0.005 |

*Source: Own work.*

# 7 CURRENT STRATEGIC SKILLS, UPSKILLING AND RESKILLING IN SLOVENIAN COMPANIES

## 7.1 Research methodology

As will be explained later on, we conducted 28 interviews as a part of our final PKP project during our studies in the IMB programme. The results of our research were published in the chapter titled “Reskilling and Upskilling in Support of Company Competitiveness” of the book “Metaversing the Corporate Strategy: The Opportunities and Challenges of Digital Transformation”, written by the students and mentors of the IMB programme. For the purpose of presenting the results of our research methodology in more detail, we expanded the analysis, which will be discussed in the following subchapter. By performing this qualitative study, we aimed to identify and observe the key strategic skills and the upskilling and reskilling efforts in Slovenian companies. Predominantly, our research targeted HR managers. However, if they were unavailable, we conducted interviews with company representatives responsible for HR practices and strategy. We sought to collect insights from industry leaders who, at the time of the interviews, were recognised for their excellence in human resource practices. Therefore, we selected companies that had received professional awards such as the Zlata Nit award, Most Respected Employer, HR Manager of the Year, and Best HR Project of the Year.

The main goal of this section was to answer the following research questions:

1. How focused are Slovenian companies on integrating reskilling and upskilling in their strategy and daily operations?
2. What are the main challenges of implementing a new skill set into the corporate strategy in Slovenian companies?

We argue that conducting semi-structured interviews was the most appropriate method for this qualitative research. Through this methodology, we aimed to extract a complete overview of the participants' practices and experiences of implementing reskilling and upskilling practices. We collected comprehensive and detailed data that enabled us to uncover core insights from the best HR practices in Slovenia.

We followed purposive sampling with the aim of selecting companies recognised as industry leaders and awarded for their high-level HR practices. This approach enabled us to collect insights from organisations known for their excellent HR strategies, specifically in training employees. Of the twenty-eight interviews conducted, nineteen were with large organisations, while nine were with small and medium enterprises (SMEs). This distribution allowed us to compare HR practices across different organisational categories. The sample includes a wide

range of industries: ten companies from the manufacturing sector, nine from IT and telecommunications, and nine from the service industry. Geographically, nineteen companies are based in Ljubljana, while nine are established outside of Ljubljana. This variety in organisational size, industry and sector, and geographical location provides a broad understanding of practices across several categories. Appendix 5 shows more details of the interview sample characteristics of all 28 companies included in this part of the research.

The qualitative data was collected and examined through semi-structured interviews, providing a balance between guided questions and open-ended questions that allowed us the flexibility to explore more topics and discover new insights. The selected method is particularly effective for capturing the complexity and importance of HR practices. We developed interview guide notes (see Appendix 6) to ensure that the questions asked were consistent for all companies, yet they still allowed for open-ended responses. The core topics covered key strategic skills, methods of reskilling and upskilling and the challenges companies face when training their workforce. We conducted the interviews either via online video conference apps (Zoom or MS Teams) or face-to-face, depending on the participants' preferences and availability. Each interview lasted between 45 to 60 minutes. The consent was obtained from all the participants for the interviews to be recorded for transcription purposes to ensure accuracy in capturing their responses. The audio tapes were deleted after we transcribed the recorded interviews accurately.

The data analysis and assessment included thematic coding supported by interview transcripts. Initially, all transcripts were thoroughly analysed to identify crucial statements, opinions, and concepts, as well as to recognise recurring patterns. They were then classified into categories and subsections, which enabled us to establish connections between different concepts and perceptions. Last but not least, we selected core themes that addressed our research questions and highlighted some of the best practices. To ensure that the analysis was valid and accurate, we employed several strategies. We grouped the data by comparing responses across different company sizes, industries, and locations. Participants were given the opportunity to evaluate and validate the findings to ensure that their viewpoints were accurately captured. Furthermore, the analysis process and coding were reviewed by our peers to ensure that the results were consistent and reliable.

In addition, we also considered ethical concerns, as we believe they are integral to the research process. The selected participants were fully informed about the purpose of our study and their role. Before the interviews were conducted, they provided written consent for participation. To protect the identities of the participants, all company names with identifying details were coded and kept anonymous in the reporting of the findings and results. All data was carefully stored and accessible only to the research team. As mentioned, the interview audio recordings were disposed of immediately after we prepared the written transcriptions. Due to the

comprehensiveness of the transcripts, they are not included in this thesis but are kept by the authors of this thesis and available upon request.

We acknowledge that the purposive sampling of prize-winning companies provides significant insights into the best HR practices in Slovenia; however, it also poses a generalising dilemma, as our key findings cannot be applied to all Slovenian companies. Moreover, our outcomes and results depend on self-reported information, which could potentially introduce biases such as social desirability bias. More on limitations can be found in the chapter Limitations and further research.

By approaching industry leaders recognised for their HR quality practices, the study's objective is to offer constructive insights into successful practices of upskilling and reskilling. The diverse sample selection and thorough data analysis were crucial for our comprehensive and credible understanding of the subject. In the following subchapter, we present the findings of the research of Istenič and others (2022) and expand the analysis with more detailed insights.

### 7.2 Interview analysis

Between 24 August and 7 September 2022, we conducted 28 semi-structured interviews with human resource (HR) managers. Our main idea was to explore the perspective of Slovenian companies in the area of human resource management (HRM), particularly when discussing digital transformation and how important it is to develop certain strategic skills. This way, we were able to receive an overview of some main challenges as well as strategies in HRM implementation concerning how the workforce is developing in times of constant change and technological advancements.

In general, we started all the interviews with a short introduction and a brief company presentation. We got familiar with the topic and thoroughly described our main research purpose to the companies' representatives. Later on, we initiated the debate with questions that concerned some of the main human resource management practices that are significant for the examined company. With this question, we wanted to get an initial idea of how Slovenian companies deal with managing the workforce, especially now, when digital transformation and technological advancements occur on a daily basis and redefine businesses worldwide. In the introductory part, we mainly asked the HR managers to provide insights into how successful they are at linking integrated digital technologies with managing talent from within the organisation. They were also asked to explain the main role of HR and how important it is to support the digital transition of the company and its business operations.

After the introductory part, we concentrated on the specific skills and competencies that are crucial for employees to be as effective in executing their company's business strategy, which

is driven by digitalisation. The key purpose was to discover which strategic skills are perceived as valuable by the market and which will be of the utmost importance in the future. We encouraged the HR managers to point out their views on how well prepared their employees are for working in such a constantly changing agile environment, as well as if or how fast they are ready to adapt to new technologies and digital tools that are on the rise.

We continued the debate by posing questions about the main obstacles and challenges they faced when it came to the implementation of reskilling and upskilling practices. The main challenges pointed out were either employees' resilience to change, logistical challenges or financial issues that arise by implementing new technologies. The answers provided a clear picture of the factors that prevented HR from supporting continuous learning and talent development in the company. With a view to tackling these challenges, the managers shared some real-life cases and stories of how they have addressed these issues in their companies, which gave us an insight into how Slovenian companies are developing their strategic skill sets. Through these examples, other companies could be stimulated and would potentially be keen on implementing some of these best practices into their business strategy.

In addition, our debate touched upon the topic of training and learning opportunities provided by the interviewed employers. The interviewed participants highlighted several programmes which enabled their employees to upskill and reskill on the job. They also described which approaches and training methods are deemed to be the most appropriate and effective when trying to increase the capabilities of the workforce to enhance the company's strategy. To maintain the competitiveness of their employees and to ensure that the employees are participating in accomplishing key strategic objectives, introducing such training is essential in times of digital transformation.

Our main findings gathered from the interviews disclose how important it is for companies to keep engaged in continuous learning of their talent pool. Moreover, they provide useful guidelines for other companies on how to effectively transfer skills to employees in order to gain a competitive edge in an increasingly digital business world, where quick reaction and employee adaptation are crucial for the future. By analysing these questions, we can understand the present status of HRM practices in Slovenia, specifically in upskilling and reskilling.

We observed that many HR managers shared a common concern for their companies – the labour shortage. They especially emphasised that the labour market is lacking individuals who specialise in the field of IT. Company 6 was worried due to a significant gap between the talent pool of available workers and the needs of their business for particular skills, stating: "There is a huge gap in the requirements of the businesses and available talent in the market." Perspective-wise, Company 8 was quite similar to Company 6, as it indicated that the challenges of digital transformation are not only the newest hardware technology and implementation but also

finding the right workforce that has the skills to operate successfully in an environment that is driven by technological developments. They provided an example of how difficult it is to find talents, such as IT or electrical engineers, who possess the technical skills that are needed for the future governed by AI and automation.

When the interviewees were asked if they would rather employ new talents or invest in upskilling their current workforce, the replies varied. The majority of companies share the opinion that the decision depends on the type of job position and skills needed for it, as well as on how urgent it is to obtain a new skill set within the company. Because the labour market is lacking potential candidates equipped with the required skills, a lot of companies are leaning towards investing in their current employees. However, the prerequisite is that they have the right agile mindset and are willing to learn. A perfect example was explained by Company 12, as they claimed that: "Due to the lack of people in the labour market, we are in a situation that if we feel the right energy, drive and the right attitude in the employee, the company is prepared to pay for additional education, training and exams if needed."

Promoting skills development in the current talent pool over recruiting new employees was visibly dominant among the interviewed company representatives. Companies further argued that the existing employees already have an established understanding of the company's strategy and culture. Moreover, they are accustomed to the company's processes, which could serve as a competitive advantage in comparison to the potential new hires. Retaining employees is not necessarily an immediate reaction to a company's needs but can serve well in the long run. Keeping the people and, consequently, the know-how within the organisation can be seen as a part of their strategy to maintain a competitive edge in the market.

It is interesting to observe that some companies have even considered incorporating (or have already incorporated) upskilling into the talent retention strategy. This way, they can ensure that their employees are loyal in the long run and more committed to work as they see more opportunities for personal growth. Further on, by implementing such a retention strategy, they simultaneously tackle the problem of labour shortage. Most companies are aware that the only way to adapt to the increasing demands of the digital era is to invest in their own employees' development and personal growth, as this is a way to give them a motivational boost and keep them in the company.

In terms of how confident the companies are in operating and staying competitive in their industry, we noticed that they were, in general, quite optimistic about the ability of their employees to work in a technologically advanced environment. They also seemed to be prepared to adapt quickly to new emerging trends. For instance, many HR managers have described that they are taking certain proactive measures towards enabling their workforce to improve their digital literacy skills. Some even implement specific technological tools into their HR systems

and practices to support the transition to the digital environment. Company 1 stated: “When the company’s HR system was digitised, employees could ask for vacation time and see their pay slips digitally. Because this benefited them, employees were motivated to learn how to use it and learned very fast.” Not only did this approach speed up the administrative processes, but it also gave the employees an insight into the benefits of the digital world, which gave them additional motivation to embrace the newest tools and technologies.

A lot of companies have introduced various digital training and programmes for technological tools to facilitate their employees in the process of digital transformation. The companies tailored the programmes to meet the specific needs of the employees, meaning that the employees are given additional attention if they require additional assistance. We could conclude that the majority of companies are ready for the digital future; however, we must consider that there are certain disparities between the preparedness of blue-collar and white-collar workers. Blue-collar workers are seemingly less likely to adapt and are less equipped to follow the technological transition.

Companies have made creative efforts to tackle the gap or the technological disparities between blue-collar and white-collar workers. Company 26 talked about an insightful project, where the main idea was to transform their business and introduce a paperless production approach. This change pushed blue-collar employees to start using smart devices, such as tablets and smartphones, during their shifts. The company was aware that this was a tremendous shift from the traditional approach, so they needed to pay additional attention to planning and careful execution of the project. The project had to be clearly communicated to the employees, and they explained, “The project was very well prepared by the technology department before implementing it in manufacturing. When the process was prepared, production workers were transparently informed of what this meant for them and which things they would need to learn.” Initially, some workers showed concern, but in the end, they were sufficiently prepared for this major transition. The success of the project can be attributed to change management: “We focus on the result, handle the task but with change management in mind as well.” Through this approach, they achieved the employees' acceptance of the change faster, and they were willing to adapt to other emerging trends within the company as well.

Through interviews, we found out that because workplaces are constantly evolving, it is critical that companies establish a change management department or at least employ HR professionals with such skills. Additionally, some of the other frequently mentioned strategic skills are mostly technology-driven, e.g., IT skills and specific technical skills, which will only gain importance in the future. Companies also pointed out that eagerness to learn, agility, leadership skills, and the ability to communicate effectively are crucial strategic skills. Apart from that, collaboration skills and the ability to work well in teams were also recognised as strategically important skills,

as they are crucial for companies to successfully achieve common business goals and objectives in such a volatile environment.

From the discussions with HR managers, it was evident that when thinking about future strategic assets, most companies focus more on soft skills rather than on hard and technical skills. They are convinced that soft skills such as interpersonal skills, communication skills, and the ability to adapt quickly are fundamental for their talents to develop and give them an opportunity to grow. Company 7 confirmed this observation by stating, "Soft skills are strongly connected with the development of other technical knowledge. Improving soft skills is also important because they help our employees to perform better in their professional development." Moreover, Company 13 confirmed they believe that only hard skills are not enough for the company to be successful: "Technical skills are important, but you really cannot do anything without the soft skills."

We have already explained that one of the main issues that companies face is the skill gap, meaning that there are no employees within the company who have the required skills at a specific moment. To tackle this issue, companies are primarily focusing on the current skills. In order to know exactly which skills they already have among their employees, companies use different approaches, methods and tools which facilitate skills assessment. The approaches include structural skills mapping techniques, which can be done with a skill matrix or a competency model. Other approaches include in-depth job profile mapping and performing detailed performance evaluations. This way, companies are able to filter specific competencies that the employees should improve. They know exactly in which areas they should provide more training to decrease the skills gap and balance the demand for the current skills needed.

Some companies, however, have a different perspective and are more future-oriented when it comes to upskilling and reskilling. For instance, Company 5 addresses the skill gap strategically. It takes into account the current skills that are required but also looks ahead in terms of which issues or challenges the organisation could face. In giving us an explanation of their proactive approach, they stated: "First, we establish what kind of skill set is needed, not just needed right now but also for the future strategic and business challenges. We specifically are focused on those competencies we do not have in the company so that we can combine something we are really strong in and then acquire, through talent acquisition, some skill sets we do not have. Combination of both is important." By following such an approach, they can easily balance out the current strengths they have within the company and the acquisition of new skills, which are expected to dominate the future.

Prioritising soft skills and developing strategic skill gap studies demonstrates how complicated it is for HR managers to master employee development in a constantly changing business environment. Companies are becoming more and more aware of how important it is to promote

a skill set that is as complete as possible. This means that the skill set should be a combination of technical skills, which are crucial when dealing with specialised tasks, as well as soft skills, which are necessary for tackling interpersonal challenges. This approach will enable companies to meet the current demands as well as help them prepare for future challenges and opportunities.

When studying skill mapping, Company 18 presented quite an interesting approach. When it comes to the onboarding procedure, the company introduced a High Potential Assessment, which is intended to reveal some of the main traits of the new joiners, especially their strengths and weaknesses, competencies, and skills that are strategically important. The assessment is designed in such a way that the new employees are given particular tasks, both individually and in groups, which can be measured in terms of their skills and overall potential. By performing these tests, the HR representatives can quickly draw conclusions about whether a new hire has a high potential for growth in the company. If the high potential is recognised, the employees often join the company's talent pool in one year's time.

In terms of talent search, if Company 18 has an available position, they first try to find appropriately skilled candidates internally within their talent pool. The conditions are employees who have proven their potential and have been successful at demonstrating their capabilities. The so-called "Internally-First" strategy enables employees to be promoted within the organisation, giving them the opportunity to improve and advance in their areas of expertise. Furthermore, through this strategy, they are motivated to perform even better on a higher level. In the scenario that HR does not find a good skills match internally, they outsource to external recruitment to find the best fit for the open position.

Identifying appropriate candidates and striving for their development is not in the company's interest only because they want to fill an open position, but it has a broader meaning, which is investing in their ongoing skills development. When companies understand the skills and potential their employees have, they are able to tailor upskilling and reskilling programmes to their employees' career ambitions as well as align them with the company's strategy. This proactive approach was evidently followed by Company 18, which resulted not only in meeting the current company needs but it also supported their employees to prepare for challenges and skill gaps that could occur in the future.

When asking the companies about their approach towards upskilling and reskilling, in terms of it being either proactive or reactive, we noticed that a lot of companies have already integrated upskilling and reskilling into their core business strategy. However, we should disclaim that their approach still tends to be more reactive, which means they are prioritising the skill needs that are required immediately rather than focusing on which skills they might need in the future of skills development. This finding implies that most companies are still missing strategic skills planning, as they do not focus enough on skills that will be needed a decade from now.

Consequently, this prevents them from preparing their employees for the future, which could potentially result in a skill gap shock.

As already explained, the majority of companies are experiencing the challenge of a tight labour market, which makes it tougher for them to find the right workforce with specific skills instantly. Company 11 expressed how this situation pressures strategic thinking: "We are tired. We are under stress, and we are so focused on the situation now – what will we do tomorrow when we have a shortage of 300 to 400 employees? Maybe we forget to think more strategically, but we tried many things, and nothing really helps." From this perspective, we can draw conclusions on how difficult it is to balance on one side the urgency to get the right skills immediately and on the other side to predict which skills will become important in the future, as well as already starting to implement them into the corporate strategy.

On the contrary, particularly IT and telecommunication companies tend to follow a more proactive way of thinking. For example, Company 22 focuses on skills such as agility and forward-thinking: "We are in a fast-paced industry, we need to think differently, we cannot wait for others and just copy what they are doing. We need to be faster than our competitors. To do that, you need to have smart people, people who are thinking two steps ahead. If you want to be ahead of others, you do not have a clear list of skills you need. That is why we also let people explore where they want to go and where they want to develop. Because maybe something that we do not think is important will become important. And if we have someone who knows these skills and is passionate about them, we will be able to use them when we need them." This approach has been recognised as beneficial as it promotes and facilitates a constant learning culture while at the same time enabling the company to maintain its competitive edge by employing innovative and adaptable talents in the talent pool.

When highlighting observations from the interviewees, we observed that Company 28 had an interesting perspective on upskilling and reskilling practices as one of the key solutions for retaining employees in such a volatile labour market: "Upskilling and reskilling will be very important in the future because the world and the business are changing. Companies need to motivate employees because there is a lack of candidates in the labour market, so it is very important to keep existing employees in the company and develop them. /…/ Reskilling and upskilling opportunities provide new challenges to employees, which can be part of the strategy for retaining employees." Company 28 is aware of how important it is to invest in their employees' growth, not only because it gives them personal fulfilment and motivation but also because it helps to preserve the company's sustainability.

Companies are aware of the importance of upskilling and reskilling. Nevertheless, they may come across many obstacles when trying to implement these practices. The most commonly mentioned are lack of motivation to gain a new skill set, time constraints, employees' resistance

to change and employees' fear of losing a job. Additional challenges might be the identification of employees with high potential, budgetary boundaries, deciding on the right upskilling and reskilling programmes, and choosing the trainers who will implement those programmes most efficiently. The obstacles mentioned by the participants did not vary across different industry sectors.

The far most common constraint when discussing what prevents the company from upskilling and reskilling their employees is a lack of time. Because the companies operate in a fast-paced and competitive environment, demands are high as well, which means that the companies have difficulties committing time to employees' development, training, and everyday learning ambitions. Evidently, Company 17 expressed their original solution to this problem, saying: "Every day, 30 minutes of working time are allocated to learning time. This accumulates throughout the week or month, and employees can use this time for whichever topic or activity they want. The only rule is that it has to involve learning and be related to their job." This way, employees are encouraged to engage in non-stop learning as well, and they are pushed to shift their mindsets as learning becomes a part of their daily routine and a crucial part of their lives. Company 17 has also added that productivity has not been disrupted when implementing this continuous learning approach.

Another limitation worth mentioning is employees' resistance to developing a change mindset, either because they are afraid of change or because they are worried about their job stability due to the potential threat of automation. However, Company 26 talked about this concern by promoting automation and how it can provide several benefits, including increasing project intake. However, in order to increase the work volume, employees must be more efficient and possess advanced skills. They stated that: "A cycle has been established. The company invests in automation, which brings in more projects because the company can do more with automatised processes. This means more work, and consequently, the company needs more people. Because human resources are limited, the focus should not be on bringing in more people but rather on increasing the possibility of doing more with existing people – through automation, investing in production and technology, and increasing efficiency." It is clear that companies emphasise the importance of upskilling with a view to enhancing the skills and competencies of current employees rather than finding their substitutes.

In relation, Company 19 argued that digital equipment can rationalise work and administrative tasks, yet it will not replace human resources. People will still have a significant role in the future of work: "Digitalisation is a tool that can help you with working more efficiently, reducing administrative work so people can focus more on strategic tasks but you cannot replace people with technology and programmes. Some positions will probably be replaced in the future, but what I think will happen most is that people will need to learn new competencies - to be agile, think fast, and have interdisciplinary skills. But people will stay, for sure." This quote

clearly reveals how some companies strongly believe in the long-lasting value of people skills while at the same time striving for employees who are agile and can master a wide range of skills.

Company 7 has provided an interesting insight into their practices of promoting change within the company. In case some employees do not have formal leadership roles but are still important drivers of change, they have a unique approach to utilise their role, which was explained by the following statement: "I believe that there are influencers in different departments, people who are not defined as leaders but are natural leaders and people follow them. So, you have to find them to implement change." Identifying the internal "company influencers" and engaging them to promote change and digital transformation can benefit the company, as their followers within the company will respect and likely follow their beliefs.

When tackling challenges linked to upskilling and reskilling, all of the companies understand that preparing the workforce for the increased demands in the current business environment is a highly complex process that does not happen overnight. Therefore, many companies are deploying quite original and unique approaches. All the participants in our interviews believe that upskilling and reskilling practices are an integral part of employee development in terms of both career and personal development. This is why they have introduced many methods that facilitate employees' growth. The approaches of upskilling and reskilling practices varied among the interviewed companies. Nonetheless, they all shared a common perspective that their employees should be able to choose from as many learning possibilities as possible.

With a view to enhancing and expanding employee skills, on-the-job training is one of the most effective approaches. It includes coaching, mentorship programmes, learning by doing, knowledge sharing, and involvement in internal projects. This way, employees are able to learn as they work, and they can apply additional skills that are currently applicable to their job positions. The process of knowledge transfer was described by Company 1: "There are people who are at the end of their career, and they would like to give knowledge to somebody else and, on the other side, young people who are hungry like wolves for this knowledge. This is a perfect combination." The mentorship programme indeed has many advantages, as it can foster expertise and knowledge sharing while facilitating a collaborative culture where a teamwork mindset and mutual respect are of the utmost importance.

Training, which is done in person, is usually accompanied by learning and training on digital platforms. Some companies have established internal e-learning systems, while most are seeking assistance from well-known external platforms such as Coursera, LinkedIn and Udemy. These well-established training platforms offer various courses and materials and enable employees to educate themselves and improve their skills at their own pace. Seminars, workshops and conferences are important parts of the reskilling and upskilling ecosystem. Employees and

employers are given the opportunity to engage with experts who usually share valuable and irreplaceable insights and expertise. Lastly, there is also technical training, which is used for employees to learn how to use digital tools and operate machinery. Companies allocate a lot of funds to fund this type of education so that the workers stay competitive and competent. This investment is essential for obtaining or maintaining a competitive advantage in the long run.

Companies usually rely on employee's feedback to adjust their learning programmes. In-person training is usually the most important, while employees also positively rank workshops and e-learning platforms. Company 27 emphasised the importance of feedback regarding the required training: "We want to hear from them what they think they need and what they want to have to do their job and to reach KPIs. We listen to them, and we try to provide it. We try to hear what they want and what they need to be successful at their job. If they are successful, we are successful."

Employees usually rank the training initiatives exceptionally highly, which can be attributed to the recognised importance of continuous learning, which is quickly becoming embedded in the culture of the companies. Company 21 also emphasised the importance of learning: "Organisations need to understand that learning should be one of the key responsibilities of any job; learning is part of the job. We expect people to learn constantly." Company 23 stated that learning was not always a part of the company's culture: "Ten or twenty years ago, the company offered additional payment to employees who were teaching other employees, but nowadays it is part of the job, part of our culture." Learning culture is usually maintained with numerous opportunities for training and possibilities for reskilling and upskilling. By investing in these opportunities, individual capabilities and the organisational capacity to adapt to the fast-paced environment are usually enhanced.

Due to this type of environment, which is especially present in the IT sector, these companies and their employees are usually trend-setters and early adopters of the new tools. It is of utmost importance to be adaptable in this sector as it is characterised by innovation and constant change. As they are in the advanced stage of digitalisation, learning culture plays a vital role in this sector. Company 6 explained this culture in great detail: "We are a network of knowledge; this is in our DNA. All employees are eager to learn and are resourceful, and from that perspective, it is normal for us to learn constantly. This is a base for everything we do; the network of knowledge is part of our vision, and it is a part of who we are. Lifelong learning is also our value."

Another great example is Company 5. Their HR manager explained how their learning culture is nurtured: "Everyone at the company knows that if you want to bring up a good idea, you need to elaborate and explain. If you want to bring something new, you need to go and research and do the work." The majority of companies, especially those from the IT sector, are aware that continuous learning is the way forward. As a result, they offer numerous upskilling

opportunities, which are usually practical, relevant, applicable to the current situation, and usually personalised to meet the workers' specific needs. These companies also appreciate knowledge exchange and joint learning experiences. For instance, Company 5 has established regular reading sessions, where employees read books about management, leadership and other work-related topics. These reading sessions can help spark discussions and knowledge sharing by providing personal insights.

Company 17 has created a programme with a similar goal. Every Tuesday, workers gather together and talk about various topics. With the help of this platform, employees are given the floor to share their experiences and their past and potential future growth opportunities inside the company. They are given the opportunity to find the solutions to their everyday problems and challenges together. This approach also helps to create a feeling of belonging to the company and fosters a united community within the organisation.

The mentioned practices, together with training from external sources and coaching, further emphasise the environment fostered by IT companies, where employees can learn from one another. Such exchanges of knowledge, insights and experiences help workers and entire organisations as they enrich the knowledge pool. IT companies are continuously investing in the development of their employees, which not only improves the productivity and capability of workers but also enables companies to be competitive in the industry, which is constantly changing. Table 13 summarises the key findings about reskilling and upskilling from the interviews with numerous Slovenian companies conducted in August and September 2022.

*Table 13: Summary of key findings*

| Reskilling/Upskilling | Key highlights |
|---|---|
| **Key strategic skills** | • Change management skills<br>• Technical skills (especially IT skills)<br>• Leadership skills<br>• Agility<br>• Willingness to learn<br>• Ability to communicate effectively<br>• Teamwork and collaboration<br>• Openness to change<br>• Flexibility |

(table continues)

*Table 13: Summary of key findings*

(continued)

| Reskilling/Upskilling | Key highlights |
|---|---|
| **Identifying skill gaps** | • Skill mapping methods (competency models, skill matrices, assessments of high potential)<br>• Performance reviews<br>• Job profiles (hiring) |
| **A proactive or reactive approach to reskilling and upskilling** | • A large majority of interviewed companies incorporate reskilling and upskilling in their corporate strategies<br>• The majority of the companies seem to take a reactive approach rather than a proactive one, resulting in a lack of strategic skill planning<br>• Among the proactive companies, a large part of them are IT & telecommunications companies |
| **Methods of reskilling and upskilling** | • On-the-job learning (mentoring, coaching, knowledge sharing, projects)<br>• Personal development plans<br>• Internal e-learning platforms<br>• External e-learning platforms (Coursera, Udemy, LinkedIn)<br>• Internal digital training<br>• Seminars<br>• Workshops<br>• Conferences<br>• Technical training (for using digital tools and operating machinery) |

(table continues)

*Table 13: Summary of key findings*

(continued)

| Reskilling/Upskilling | Key highlights |
|---|---|
| **Obstacles to reskilling and upskilling** | • Time constraints and struggle to find balance between the operational demands and dedicating time for employee learning and development<br>• Budgetary limitations<br>• Employee resistance (due to fear of change or losing their jobs)<br>• Lack of motivation of employees and their unwillingness to learn<br>• A challenge in recognising high-potential employees to upskill and reskill<br>• Difficulty choosing the right training programme and a trainer |

*Source: Adapted from Istenič et al. (2022).*

# 8 THE FUTURE SKILL SET IN SLOVENIAN COMPANIES

## 8.1 Research methodology

The focus group was used to explore future skills from the perspective of Slovenian companies. Two main research questions were investigating both the future skillset projections, as well as reskilling and upskilling actions of the companies, to be contrasted against the findings of the survey and the interviews:

1. What kind of skill set would enable Slovenian employees to tackle the emerging changes in the macroeconomic environment?
2. In a world without constraints, what would be an ideal set of actions to upskill and reskill the Slovenian workforce?

The goal was to get six to eight participating companies from different industries (manufacturing, services – retail, insurance and banking, and IT and telecommunications). Companies were selected based on our previous research (conducting interviews with HR managers) and based on being the recipients of the TOP investor in education certificates in 2023 as per the Edutainment conference. Eighteen invitations for participation in our research

were sent via e-mails, of which three declined, six accepted the invitation, and nine did not respond (even after two follow-ups). Ultimately, upon setting the date, only two HR managers from two companies ('Manager 1' from Company 'A' and 'Manager 2' from Company 'B') in two different industries (Company 'A' from Manufacturing and Company 'B' from IT & Communications, as shown in Table 14) participated in the focus group either due to last minute work obligations or planned annual leave. The focus group was conducted on June 6, 2024, using the Zoom platform. It lasted for one hour and was executed in Slovenian. The session was recorded.

*Table 14: Focus group sample characteristics*

| Code | Industry | Size | Location | Ownership | Participant's Position |
|---|---|---|---|---|---|
| Company A | Manufacturing | Large | Ljubljana | MNE subsidiary | Regional Head of HR |
| Company B | IT & telecommunications | Large | Ljubljana | Domestic | HR Business Partner and Head of Training and Personnel Development |

*Source: Own work.*

Moderating the discussion, we first explored the importance of upskilling and reskilling and what that terminology means to them. Then, we discussed their expectations of the crucial skills for the next five to ten years, the significance of soft and hard skills in employment, and lifelong learning. Thirdly, we explored the reskilling and upskilling methods, employees' reactions, potential changes in individuals (e.g., their productivity), and their future plans and actions. The last question focused on how an upskilling and reskilling programme looks like in an ideal world without financial, time, HR or individual constraints. The complete list of questions is available in Appendix 7.

The contents of the focus group were transcribed (the transcript can be found in Appendix 8), and the scissor-and-sort technique was used to analyse the transcript of the focus group discussion. By grouping the major topics, sections relevant to the two research questions were identified and studied further. This focus group served as a tool for making recommendations to Slovenian companies on tackling the issue of preparing their employees for the future.

## 8.2 Focus group analysis

### 8.2.1 The skill set to tackle the ever-changing environment

After exploring the mix of skills and their importance in terms of talent acquisition, the focus appears to be on soft skills compared to hard ones. Both managers agreed that technical knowledge can be obtained later on, yet possessing soft skills is often the deciding factor in the recruitment phase. “As far as recruitment is concerned in our company, attitude is absolutely important to us, i.e., soft skills. We are a service company. A quarter of the company are salespeople of one kind or another – either to B2C or B2B customers. We have more and more complex projects, and on the other hand, we always have some negotiations or [have to use] negotiation skills. So, we really believe that anyone can learn these skills or technical knowledge, especially if they went to college. I believe that you can learn these things - if not, you can always look them up; now we have the technology, and you can browse a bit. With soft skills, you are raised and born with them. You can upskill a bit, but, in reality, it is very difficult for people to change.” (Manager 2) This participant also mentioned they identify the potential of a new employee through tests – whether they are accepting of change, open and communicative, like teamwork or are more of an individual who prefers to work alone. They check how organised the person is, how much structure they need, if they are orderly, precise, need to know everything, or are they calmer. Ultimately, she says, it is dependent on the role and the environment, as well as the team. “It really depends a lot on what you lack in that team at a certain moment because it is good to have all kinds of people in the team. Then it really depends – if you have a lot of extroverts and unstructured people, you are looking for somebody a bit more structured, and the other way around, so it is very individual.” (Manager 2) In line with our literature review findings, soft skills appear to triumph in importance over hard skills. “We will not employ somebody that is just technically very, very strong - it is important to know that these individuals work on several projects, work together with different people not only locally, but they also connect regionally, globally. You have to know how to present, how to argument, negotiate, how to work in a team; regardless of how well you know the tool or not.” (Manager 1) Manager 2 shared what the company’s Vice President told her a week prior: “‘You know [Manager 2], we need people who have the energy’, so essentially, this is what is important. Because you can have a top expert, but if they do not give you the energy, proactiveness, those soft [skills] … You can have a couple of them, but not [the full team]”.

When asked about the skills they deem to be the most important in their company and industry in the next five and ten years, Manager 1 said it depends on the generation: “/…/younger generation, /…/ they are digitally very, very savvy, but less skilful at [forming] relationships, conversations, networking, teamwork.” They identified automation, digitalisation, and the accompanying digital skills (e.g., being dexterous in handling various digital tools, such as Microsoft Teams) as the areas where we will be heading over the next few years. They also pointed out the importance of developing people skills in an era of accelerated technological

advancements and reiterated the importance of those skills in the future. "/…/ the ability to think critically, find solutions, collaborate, connect. In the end, the company is people, and we create the culture and add value – yes, with the help of the tools - not with the tools but with their help. We are still intellectual beings, and we ultimately develop these tools. And that is on us – the company is people. And here, no tool can ever replace human relations. And we must be very aware of that, and this is what we will have to be careful of in the future." (Manager 1) The importance of the human touch – people skills (especially networking and collaboration) and leadership skills were emphasised several times throughout the session. "To lead people; because if you have the right leaders, they know how to both connect and establish trust, as well as guide and develop people." (Manager 2) Manager 1 emphasised that it is important that the employees themselves express the desire to either lead a team or work more narrowly focused in their technical field. However, as mentioned, primarily operating with the tools and the hard skillset is far from ideal: "If we will only have technical knowledge, good technical knowledge, and good tools, but who will then inspire us, who will speak to us, who will pull us forward, who will reassure us when things are difficult, who will keep the team together? In this flood of digitalisation, we really should not forget about soft skills." (Manager 1) Both participants agreed that change management would be critical in the future for society in general. Thus, it is crucial to build and strengthen adaptability skills and be embracive of change. "It will be important to learn change management – that stepping out of the comfort zone becomes something normal." (Manager 1)

Additionally, when it comes to working in companies both now and in the future, Manager 1 stressed the importance of collaboration, community and taking care of each other: "One individual cannot do anything. Before you enter a really big world, in the job market or some company, you see that as an individual, you cannot move mountains and that the strength lies precisely in this cooperation. This is where the added value is. Never in life, as an individual, you cannot succeed if you do not connect, talk, learn from others, if you do not give and receive, and if you do not share. Impossible! And this is what young people do not learn in the education stream, we do not learn, and it is a shame. But one individual will never succeed in life as an individual, you always need company. /…/ You always need company to create something. You need people who inspire you, with whom you collaborate, you need people who inspire you, with whom you consult, you need people to pull behind you." (Manager 1)

### 8.2.2 Ideal set of actions to upskill and reskill the Slovenian workforce

Since changes are inevitable, constant and rapid, companies must prepare their workforce to adapt. One of the best ways to do this is to encourage a culture of lifelong learning, curiosity and knowledge sharing in the company. Both participants agreed and emphasised the importance of constant learning. "Considering the technological development, scientific advancement, the changes in the workplace and the changes in the way of working, if you want

to remain competitive in today's world not just as an individual but also as a company, constant learning on the job is necessary." (Manager 1) The megatrends affecting companies are forcing them to be flexible, which means the workforce needs to be flexible as well. "In our company, the learning process is ongoing, and employees cannot say they will not learn because it does not work this way. /…/ The company's vision is to be a leading company in technology which forces us to constantly implement new things, better things, and this is a part of the company." (Manager 1) The second participant agreed that constant learning needs to be crucial for employees since this is now part of the company's culture. "The company encourages constant learning and training; we actively want to establish a workplace culture of employees wanting to make an effort and work on their skills. As much as they do and achieve, that much they will be able to advance and develop. If they do not invest in themselves, they cannot stay in the company." (Manager 2)

Both participants agreed that a culture of learning is crucial for them to be flexible and adapt to change quickly. According to the participants, upskilling and reskilling are a part of everyday life. However, they also added that the circumstances are changing so quickly that it is almost impossible to be proactive, and they would rather focus on reacting to the changes quickly, effectively, and efficiently. "You are faced with it. If you don't upskill or reskill, it is not possible. It's hard to plan these things in a very systematic way, but you are faced with the development and the progress of the business itself, and you go straight into it." (Manager 1) However, for companies to be able to react quickly, their values and vision need to focus on establishing a learning culture so that employees are flexible, agile, and motivated to pitch in.

When asked how they establish a learning culture in the company and which methods they use, the companies differed in their approach. The difference can be largely attributed to a difference in the organisational structure. While Company B is a Slovenian company with complete control over the HR practices in Slovenia, Company A is a part of a global company, which means they have a set of global and regional HR practices they must follow. Locally, the focus is on detecting the current needs and adapting the training to fill those needs. "We are adapting to what is going on at the moment. There are very few constants, but we have many workshops and projects based on our needs. For example, we see that we are entering a market where the situation may be a little bit different, and we see that some additional skills may need to be developed. And we start working on that. We do it internally. We have certain in-house trainers who do that. But this is a more strategic HR." (Manager 1)

Company B prides itself on being "a sandbox for learning" because it offers a wide variety of learning opportunities. The employees can use the internal learning platform with educational videos and other content. The company has a mentorship programme and offers external educational opportunities when needed. Employees can also take part in the rotation programme. "First, we started the rotation programme with our most promising employees, and

then we started getting questions, 'That's good. Why is it just available to a select few?' So, halfway through, we introduced it as a part of onboarding, and now we're basically making it available to everyone so that they can access it as part of their training planning. How does it work? It is usually eight weeks, and depending on where they go, they are in another organisational unit for one to two days. For example, the employees go to our call centres, they go with a technician to the field, they go to see our development programmes." (Manager 2)

Company A follows the 70-20-10 approach. On-the-job learning represents 70 percent, mentorship is 20 percent, and 10 percent consists of learning outside the company. "At our company, learning on the job does not just mean the training required for their job description, but it means they are included in several different activities – different projects, projects on social responsibility, internal events, and so on." (Manager 1) Their approach to learning stems from the learning mindset the company has. They believe their employees learn by being exposed to the company culture and the environment. "We are constantly improving ourselves, improving our productivity, not only in production but also at the overhead level. We are always improving our efficiency and we are always looking for some solutions, some improvements, some optimisations. We are introducing new technologies, new tools, new approaches; we are developing new things ourselves." (Manager 1) In this kind of environment, employees learn from each other, are constantly exposed to new projects and workshops, and can learn something new every day. Employees value this learning mindset and know that their ideas for learning will also be supported and implemented, which encourages them to contribute to the company culture and co-create it. "We organise internal events because employees come to me and say that they want to work together on a certain topic and brainstorm ideas together. Currently, we are putting together an internal hackathon. They will come from different departments and collaborate, which will be an excellent way for them to learn from each other and learn new skills." (Manager 1)

In Company A, they track employees' progress by organising personal reviews. They look at their performance, and they set development and performance goals. Every employee has their own set of goals, but most development goals are met within the company. If an employee has a skill shortage, they can work on that skill by joining specific project teams, helping develop a tool, working with colleagues and learning from them. "We expose them to specific challenges to develop the competence that they are missing. We have different mentoring programmes, which can be at the global level, regional level, or local level. We are not exactly sending them outside of the company, but we are exposing them here to maybe work with a team and then be exposed to certain tasks here to develop certain skills. /…/ For example, if somebody is weak in project management, they would start working alongside and together with a project manager, and they develop things together. So that there is a connection, involvement, exposure, and then they develop their skills." (Manager 1) Since this is a global company, it can also offer

exchanges to its employees. “For example, our people go to Poland to do certain projects, and then we have exchanges across the company.” (Manager 1)

The focus is also on the employees having a comprehensive skill set. Technical profiles develop technical competencies but also acquire soft skills that may help them later in their career when they might want to become a manager, go into sales, and so on. “For example, if some of our engineering colleagues don't have the presentation skills, or we see that there is a skill shortage, they get their own ‘development programme’. 'Now you're going to present something for a department', and then they develop that skill through work.” (Manager 1)

In Company A, team leaders are responsible for directing employees to training. Leaders need to define what individuals need to achieve at the next level in their development. When deciding on the following steps, leaders can direct the employees to all the company's learning methods. Whether they find it within the company, they find a mentor or the employee gets involved in a specific project or does an exchange. “The manager has to define what these training needs are and make some suggestions because they know their team and the work they do. The manager knows where in the business there would be a potential opportunity to involve their subordinate so that he can draw on these skills. So, HR doesn't even get involved locally, except when there are some general skills or soft skills employees need to develop. And we support the managers if needed.” (Manager 1)

However, since leaders have additional responsibilities connected to training the workforce, the managers must also be trained. They need to learn to recognise when an employee is struggling and decide on the proper training method to help them. Or they need to be able to discern someone’s potential and direct them to training that will help them realise this potential and contribute their best to the company. Managers also need to lead their teams as effectively as possible, adapting their leadership styles to the employees. All this means that the company also needs to invest their resources into training leaders. Both participants mentioned they offer leadership training to their managers. One of the companies also shared an initiative they started with the desire to learn what is happening in the company and in the teams and which issues are coming up that need to be tackled. “I have set up a leadership club where we bring all our leaders together and talk about current issues – where we have problems, what needs to be solved and so on. Because there are approximately 50 of them on site, I get them all together, and I listen to them.” (Manager 1) The company also makes sure to address the issues the leaders share in these meetings so that they feel heard and encouraged to share the issues in the future, which benefits the team, the team leader, and the company as a whole. “One of the leaders said: 'We don't understand the younger generation very well, how they function, what their values are.' We immediately formed an employee resource group, where young people up to the age of 30 got together and they are cocreating a culture through different projects. It is a way of connecting people. So, we are working a lot on these informal ways of learning. Or a manager comes to us

and says, 'I'm having a bit of trouble with team dynamics, let's do something', and we organise a workshop for them and so on." (Manager 1)

For the learning process to be successful, it is essential that the employees feel included. The feeling of agency in their learning process can be a source of additional motivation and pride. Companies need to listen to their employees and empower them to propose change. "We have an environment where if someone comes to me and says, 'We don't have that, but we should have that', I tell them to just do it! Tell me who you need, who has that knowledge in the company, and we'll do it." (Manager 1) Another way of learning is by sharing knowledge and discussing the topics with colleagues. Both companies are very aware of this, and they make sure employees are involved in the learning process not just by voicing their wishes on the topics they want to learn about but also by sharing the knowledge they acquired through presentations, workshops and projects. "We organise various activities to foster proactivity, innovation, fresh ideas, etc. We have company chats every third Friday of the month - we have it online, or we have it in-person, so whoever is on-site can join in person; otherwise, we have a Teams broadcast, and employees can join in. The purpose of the chats is to present the company's products and services to employees. Whether they are about commercial products that we put on the market or we present a development programme, employees can attend. We put it on our intranet portal, and any employees can come. It's been very popular with us - they send in suggestions for what content they would like to listen to. For example, we're introducing chatbots for customer service now, and our developers have presented how they've developed them." (Manager 2)

Both participants stated that learning and training are incredibly well-received in their companies. Employees see it as necessary and see the value of learning as a tool to cope with constant change. The participants agree that employees like to learn and appreciate it when they can be involved in the decisions regarding the topics they are learning about. "After the training or any event, we collect feedback, either in writing or at the end of the workshop with Mentimeter or something similar. We measure the vitality of the culture and so on, and it is easy to say that the field of education and training is very highly rated and almost always has the top rating. In short, the staff feel and recognise that there is a lot of opportunity for education and training and that they have this space, so I would say that they are very happy about that and that the feedback is good. Also, when we measure different competencies and skills, they have the feeling that after the training, they can do something easier or better." (Manager 2) To maintain a positive attitude about on-the-job training and the learning and development process, companies need to ensure that employees trust them to prepare them sufficiently for any changes they plan to implement. The company's support and guidance during the initial steps of learning about a new tool or business process are crucial to keep the employee morale high and avoid unnecessary stress. Companies should provide the needed information, organise the learning process, and then let employees use the knowledge they have gained on their own. "We make

sure that whatever new thing we introduce, we don't just present it, and we don’t care about how it will be accepted. We always prepare, whether it's articles, training, presentations, an open day, or an allocated time when people can come and ask. So, we are working very hard on the fact that before we expect people to be independent in a certain area, we are making a very big investment. We invest a lot to get them to a certain point, and after that, we expect them to use it. They have the instructions, they have the articles, they have had the training, it is time for them to use it.” (Manager 1)

As already mentioned, both companies offer a large variety of learning methods for employees to choose from. One reason is to ensure employees have all opportunities to address the skill shortages they face at the workplace as seamlessly as possible. If there are learning and skill development processes in place, employees can access them with minimal disruptions to the working process. Another important aspect of the variety of learning options is employee retention. Both participants agreed that the company offering their employees a large variety of learning opportunities is a tactic for retaining talent. In some cases, companies are even offering to pay for employees to learn about topics that are unrelated to their current job. “Employees want to learn about topics that are completely unrelated to their current work. We try to enable this as well. Of course, this has limits, but this is also a way of retaining employees – giving them the opportunity and sometimes paying for learning skills unrelated to their job.” (Manager 2) Employees not only learn on the job but also invest time in their free time. “We have noticed they read a lot. They invest more and more time in the development of soft skills even in their private lives, which is quite surprising.” (Manager 2) Since offering training and learning opportunities is crucial in retaining employees, this also needs to be communicated with management – why investing in education and learning is essential and worth the financial resources. “We are constantly trying to communicate, especially to the management - and they are listening to that, but it has to be emphasised that education and training is not a cost; it is an investment, and we are trying to take that forward. The KPI of the number of trainings per employee is one of our key KPIs, which we report to our owners as well, so that is at the top of our agenda.” (Manager 2)

When asked about their ideal learning programme in a world without external constraints (constraints in time, finance or talent), one participant mentioned a completely personalised approach to creating learning programmes for their employees. “Ideally, I would love to create an individual learning programme for each employee. At this moment, this is impossible. Creating a detailed personalised programme for each employee would be an ideal way for me, but this only works in an ideal world with no time restraints and no financial restraints. Yes, this would be really nice.” (Manager 1) The second participant mentioned a dedicated space that would serve as a training centre. “Somewhere in Bled, a really cool place, a training centre, which would combine well-being on the one hand, wellness, stress management, and sports activities, but on the other hand, employees would also learn professional and soft skills

alongside. Each employee could go there for three weeks." (Manager 2) These quotes show that companies are thinking about what more they can offer the employees and how to improve the learning process, but they face challenges and constraints. However, one participant mentioned a very realistic wish for the future of learning. "I would like us to have as little formal education as possible and instead develop our culture so that people know how to find what they need and to share their knowledge. Less of this formal learning - you send the employee somewhere, and you expect them to learn. Because it should be about problem-solving and finding solutions. When you don't know something, and there will always be something, because development is going so fast, you know how to raise your hand, you know how to find the right person, you know how to ask, you know how to share knowledge. To be able to find information and learn from each other. Because that's what lifelong learning is about." (Manager 1)

# 9 DISCUSSION

## 9.1 Main findings

This chapter presents the main findings of this thesis after conducting and analysing all three research methodologies – the survey of the general public, interviews with 28 Slovenian companies and a focus group with two Slovenian companies. The purpose of the chapter is to present the research results and compare them to the data from the existing literature while also relating these results to the corresponding research questions.

### 9.1.1 Slovenian general population's perception of crucial future skills

In connection to the first research question on the perception of the Slovenian general population about crucial future skills, the survey results show a lack of understanding of what the future will bring. According to WEF (2023b), the top three core skills of 2023 are analytical thinking, creative thinking and resilience, flexibility and agility. The first two are connected to the workplace becoming increasingly automated, and the third relates to the constant change and the importance of adapting. In the WEF survey, digital literacy is in sixth place. Considering that the Slovenian general population was asked about future skills, and WEF reported on core skills, the thesis assumes the core skills of 2023 will also be the core skills in the near future and can thus be compared. In doing so, there are obvious discrepancies between the WEF's report and the survey results. The most obvious difference pertains to the skill of analytical thinking. While it is considered the most important skill in the WEF survey, Slovenian respondents do not consider it as crucial, ranking it in eighth place out of 10. When asked about the top three most important skills, analytical thinking is not one of them. Interestingly, the respondents consider digital literacy to be the most crucial future skill. Among the respondents, 55 percent chose digital literacy as one of the top three most important skills, while only 22 percent thought analytical thinking should be among the top three future skills. Among the youth (younger than

24 years old), 58 percent consider digital literacy among the top three future skills, while only 11 percent chose analytical thinking. The older generation (older than 55 years old) also considers digital literacy quite important since it was selected among the top three by 46 percent of respondents, while 18 percent chose analytical thinking.

According to Bennett and McWhorter (2021), this result could be attributed to the rapid technological advancement, especially after COVID-19, and the emphasis on digitalisation and digital literacy in the working environment and the media in the last few years. Because businesses are undergoing the process of digital transformation and organising digital training workshops, people hear the term 'digital literacy' daily and therefore assume it to be incredibly important, even the most important among all other skills. However, digitalisation pertains not only to digital literacy but also to analytical thinking, which is becoming incredibly important in the process of automation. The discrepancy between the results of the WEF survey and this survey could indicate a lack of understanding of the term 'analytical thinking' and its relation to digitalisation and automation.

On a positive note, respondents are aware of the importance of continuous learning since 37 percent consider it among the top three future skills. Among the youth and the older population, the skill of 'curiosity and continuous learning' was chosen in the top three by 45 percent of respondents and 46 percent, respectively. This mindset benefits Slovenian companies because the high awareness will make fostering a learning culture easier. Overall, the Slovenian general population seems aware of the importance of soft skills. Among the listed skills, 39 percent chose flexibility and agility as one of the top three most important skills, and 36 percent chose creative thinking. The results of this research are supported by Lamri and Lubart (2023), who claim there is a 'soft skill revolution' happening at the moment because individuals and organisations have become aware of the importance of soft skills.

### 9.1.2 Slovenian general public's efforts in expanding their skill set

The second research question studies the Slovenian general public's perception of the upcoming changes in the workplace and how people are preparing for these changes by expanding their skill sets. Due to digitalisation and automation, jobs will change, and the Slovenian general public expects these changes. A large majority think that digitalisation and automation will change their job, out of which 36 percent believe the changes will be significant, and 52 percent only expect slight changes. Even though employees expect changes, a large majority (82 percent) believe they will not lose their job due to digitalisation in the next ten years, while only 7 percent think their job will disappear in the next ten years and they will have to reskill. Employees in technical or managerial positions believe it is less likely for them to be replaced by automation than employees in customer service and production or administration. These findings align with WEF's research (2023b), which states that new technologies are expected to

drive the trend of job creation and not job destruction. Some jobs will become obsolete, but many new professions will emerge due to the new technologies.

A majority (68 percent) of respondents are educating themselves outside of work. There is a connection between the obtained education level and willingness to learn outside of the working environment. Formally higher-educated employees are also more willing to learn outside of work. Among the learning methods, reading is by far the most popular, followed by workshops and seminars, both online and offline, and podcasts, which have recently increased in popularity. A minority learns by obtaining digital badges, which supports the findings from Flintberg (2022) and WEF (2023b), who state that micro-credentials and digital badges are not a widespread learning method yet, but they expect this to change in the near future.

A majority (68 percent) of the respondents also join educational programmes at the workplace. The most popular methods are workshops, seminars, and conferences, as well as knowledge sharing and mentorship. While online learning platforms are very popular for learning outside work, companies prefer other learning methods. This finding aligns with the research of Resei and others (2018), who noticed that the real audience of the massive open online courses is employees wanting to upskill to achieve professional growth. Also, the method of workplace rotation is slowly gaining popularity. In the focus group, one of the participants confirmed this by presenting the rotation programme as something special the company offers, which indicates that rotation programmes are only starting to become a popular learning method in Slovenian companies.

A majority of the respondents (54 percent) are satisfied with the learning opportunities provided by their company. However, employees do not put the responsibility of education and training only on the company. A majority believes that learning is the responsibility of both the employer and the employee, aligning with the findings of Pedron (2018) and Claesson and Issa (2021). Companies have to offer learning opportunities to their employees, but the workers also have to invest their own time and resources into learning and expanding their skill portfolios.

### 9.1.3 Reskilling and upskilling in the strategies of Slovenian companies

According to the research in this thesis, Slovenian companies consider reskilling and upskilling as a strategy to tackle the labour shortage. Companies agree they would rather develop existing employees than hire new people because existing workers already know the company and the corporate culture. Due to the shortage of available labour, companies are also prepared to train future employees if they see that the candidate has the right attitude and would fit into the company culture. This approach is also represented in Valente's research (2022) and Sandra and others (2023), where it is highlighted that technical skills are much easier to develop than an individual's character. Training and learning opportunities also serve as a retention strategy – employees value these opportunities and are more likely to stay in the company, which consequently helps offset the labour shortage.

Companies predominately mention soft skills (e.g., change management, leadership skills, effective communication, and teamwork) as key strategic skills but emphasise that they must be complementary to hard skills. Therefore, ideal employees have a comprehensive skill set. However, when recruiting or training, companies focus mainly on identifying the current skill gaps and not future skills, which would help them gain a competitive edge. Even though a large majority of analysed companies include reskilling and upskilling in their corporate strategies, their approach to identifying and filling skill gaps is mainly reactive. Companies not only find it hard to predict the skills they will need in 10 years but also struggle to plan ahead if they are facing a shortage of labour in the present and are struggling to fill the positions they need now to execute daily operations.

Slovenian companies realise that constant change is a part of the new reality and need to be prepared to tackle change by preparing the workforce. Aligning with the findings of Gorski and others (2023), change must be communicated transparently, and companies have to put mechanisms in place to help employees learn the new processes and accept the new ways of working. The company's support during the initial steps of learning about a new tool or business process is crucial to keep the employee morale high and avoid unnecessary stress. The preparation for the implementation of changes and the execution plan should, therefore, start well before the changes are communicated to the employees. Good change management is crucial to ensure employees accept changes openly and quickly.

Companies are dedicated to making continuous learning a part of their corporate culture. Among the learning methods companies offer, on-the-job training is the most effective (e.g., mentoring, coaching, knowledge sharing, internal projects) because it enables workers to learn in the context of their actual work environment, apply skills in real-time and see the immediate impact of learning. Companies encourage employees to suggest topics they want to learn about and create an environment where employees can learn from each other, exchanging experiences and insights. Nurturing employee curiosity and innovation strengthens the organisational capacity to adapt and thrive in a constantly changing business environment, which is also supported by Valente's research (2022).

### 9.1.4 The main challenges of implementing reskilling and upskilling

In Slovenian companies, the main challenges of implementing upskilling and reskilling are time, financial resources, employee pushback due to fear of losing their job and lack of motivation to learn, which aligns with the findings of Morandini and others (2023). Similar to Ekuma's findings (2023), companies struggle to recognise the high potential employees and choose the most suitable training method for specific skills.

Time was the most frequently mentioned obstacle to learning as businesses struggle to find the balance between operational demands and dedicating time to employee learning and development. Employees cannot take the time to learn because they feel they have other, more

important work responsibilities, and learning would interfere with the business process and decrease productivity. However, according to Claesson and Issa (2021), retraining the workforce leads to higher productivity. Therefore, intentionally allocating time for upskilling during business hours and incorporating the learning process into their daily routine would ensure that learning does not significantly interfere with productivity. It would even increase productivity and employee satisfaction in the long run.

Another obstacle mentioned was employee pushback due to fear of change or losing their jobs. According to the theory of Li (2022), Morandini (2023) and WEF (2023b), new technologies and automation will not cause massive unemployment. By automating repetitive processes, companies can relocate employees to more strategic tasks requiring more intricate skills, taking advantage of their full potential and increasing productivity.

### 9.1.5 Skills for tackling emerging changes in the macroeconomic environment

In terms of the skill set needed to tackle the changes in the macroeconomic environment, the participants in the focus group emphasised the importance of soft skills. Technical skills can mostly be acquired later on, while soft skills are more difficult to develop. The companies stated they recruit candidates based on current needs, considering which skills would benefit a specific team, which skills are missing in the company, and so on. However, they always focus on hiring candidates who possess the soft skills needed for working in the company and in the changing business environment (e.g., adaptability, communication and teamwork), which aligns with the findings of Cimatti (2016) and Sandra and others (2023). A candidate who is technically very strong but does not have the necessary soft skills would not do well in a workplace that involves working on projects, collaborating in teams and presenting ideas, which is why companies focus so much on employing well-rounded people with a comprehensive skill set. Employees with technical profiles should not just develop technical competencies but also acquire soft skills that enable them to function effectively and efficiently in their daily operations. These results align with the theory of Sandra and others (2023), who describe people with strong interpersonal skills and technical expertise as exceptional human resources.

In the times of accelerated technological advancement, the focus group participants identified digital skills as essential skills in the next ten years. However, they agree with Razzetti (2018) that people skills will create added value by thinking critically, finding solutions and connecting with others. No tool can ever replace human relations, so networking, collaboration, and leadership skills will play a crucial role in leveraging the results of digital tools. One person alone cannot do anything. The value comes from collaboration, sharing ideas, discussing, and solving problems. Employees need a community and an environment that inspires them, motivates them, and pushes them to innovate, teach others and learn from each other. And for all this, employees have to master soft skills.

### 9.1.6 An ideal set of actions to upskill and reskill the Slovenian workforce

The crucial step for upskilling and reskilling the Slovenian workforce has to be establishing a culture of continuous learning. With the rapid pace of technological advancement and scientific development, learning is a necessary part of the job for the individual and the company to be flexible and remain competitive in today's business environment. Since circumstances change so quickly, companies believe it is almost impossible to be proactive, and they would rather focus on reacting to changes quickly, effectively, and efficiently.

Companies offer a variety of learning opportunities but emphasise informal on-the-job learning in the form of mentoring, internal project teams, workshops and rotation programmes, which aligns with White and Rittie (2022), who found that companies tend to prefer informal learning because it is more effective and easier to adapt to the company's needs. Similar to the findings of Claesson and Issa (2021), employees learn the most by being exposed to the company's learning mindset, developing the skill through specific tasks within their working obligations, finding solutions and learning from their colleagues. For employees to have a positive attitude about training, they need to feel included, so companies should listen to their employees and empower them to propose change. The feeling of actively contributing to their learning process can be a source of additional motivation and pride.

In a world without constraints, one of the focus group participants would focus on creating personalised learning programmes for their employees. The other participant described a training centre combining well-being, stress management, and sports activities with acquiring professional and soft skills. Even though both ideas are, at the moment, impossible to implement due to constraints in time and money, companies must keep thinking about possible ways of improving the learning process and how they could leverage the new technologies and scientific advancements to bring these ideal scenarios, at least partly, into reality.

### 9.1.7 A brief overview of findings

Overall, Slovenian companies seem to be aware of the importance of upskilling and reskilling but lag behind in proactiveness. Most Slovenian companies included in this research are reacting to the changes and circumstances in the business environment, with the exception of IT & telecommunications companies, which are tackling the skill shortage proactively. This discrepancy can be attributed to a difference in industries. IT & telecommunications companies operate in an industry characterised by constant change, which pushes companies and their employees to learn constantly and drive innovation. The environment that IT companies are already used to has now spread across all other industries due to the megatrends affecting the macroeconomic environment, which is why Slovenian companies should now look at the practices of their IT & telecommunications counterparts and adapt them to the circumstances in their industry. Some examples of proactive practices can also be found in the chapter 'Best practices of reskilling and upskilling from abroad'.

Upskilling and reskilling are tools for enabling and encouraging lifelong learning among employees, and a culture of lifelong learning has to be a priority of every company. In a constantly changing business environment, knowledge is power. Therefore, upskilling and reskilling are also crucial for complementing the current educational system, which lags behind the rapid digital development. Formal education is not enough anymore, which is why upskilling and reskilling and a mindset of continuous learning are crucial for the workforce of the 21st century (Claesson & Issa, 2021). Offering learning opportunities also has significant economic implications. According to Li (2022), employee training increases productivity and employee satisfaction, consequently improving employee retention and decreasing unemployment rates. Additionally, continuous learning drives innovation since skilled workers are better equipped to handle new tools and cutting-edge technologies, improving the company's market competitiveness. WEF (2021) predicts investing in upskilling and reskilling could create 5.3 million new jobs by 2030. Such an accelerated investment could add $6.4 trillion to the global GDP and help develop more inclusive and sustainable economies worldwide.

## 9.2 Limitations and further research

This thesis provides valuable insights into the topic of skills, upskilling and reskilling and how Slovenian companies are approaching these topics to remain competitive. It includes three methodologies: one quantitative method and two qualitative methods. In connection with the methods used, there are several limitations which open up opportunities for further research.

Firstly, a survey was conducted to represent the general public's awareness of the crucial skills of the future and the importance of lifelong learning. While valuable insights were gained from the survey, the small sample size limits the generalisability of findings. Also, the sample appears biased since the demographic groups are not equally distributed, which could affect the reliability of the data. The survey was also conducted online, immediately excluding potential participants without internet access. Therefore, a larger and more diverse sample should be collected for further research to make the conclusions more generalisable. The sample collection should also include physical questionnaires to avoid excluding people without internet access.

Secondly, the scope of the qualitative research, including interviews and the focus group, was limited since it included only companies that were previously recognised for their efforts in human resource management. While this study can serve as an analysis of best practices, further research could include a more diverse sample of companies to make the findings generalisable. Another limitation which hinders the generalisability of results is the small number of participants in the focus group. While it was intended for more companies to join, the focus group only had two participants due to last-minute cancellations.

Thirdly, both qualitative methods may be subject to biases since the collected data is influenced by the participants' subjectivity, and the interpretation of data is reliant on the interpretation of

the researchers. Further research could support the qualitative methods with quantitative methods to minimise bias in the data collection and data interpretation processes. Furthermore, the interview process was carried out in August 2022. Due to a constantly changing business environment, this could mean the reported practices of the companies have changed in the last two years. Further research could include more recent interviews with Slovenian companies regarding their upskilling and reskilling practices.

Lastly, the research focuses on Slovenian companies and interprets data solely regarding the situation in Slovenia. Further research could be conducted in other countries, and the findings could then be compared with the findings of this research.

This thesis focuses on a topic which is subject to constant change. The study offers significant contributions to understanding the importance of upskilling and reskilling as an opportunity for Slovenian companies to remain competitive. However, considering the mentioned limitations, there are many opportunities for future research which could further contribute to this field.

### 9.3 Recommendations for Slovenian companies

In a constantly changing environment, companies are looking for ways to best prepare their workforce and maintain their competitive edge. To cope with change, companies must foster a mindset of flexibility, agility and innovation among their employees. This chapter summarises the key findings, supports them with existing literature and provides recommendations for Slovenian companies emphasising the values of lifelong learning, knowledge sharing and change management.

1. Foster a culture of lifelong learning. A learning culture should be one of the key responsibilities of every company. Learning has to be a company's value, a part of its vision and should gradually become a part of the company itself and a base for everything it does. According to Achoki (2023), quick reactions to new opportunities and challenges are crucial in a world of constant change. Companies agreed that one of the best ways to ensure quick reactions is through a company culture that encourages learning, curiosity, and knowledge sharing. If a company has a mindset of always looking to improve itself, its productivity, its efficiency and thinking about possible solutions and optimisations to the business processes, employees are exposed to this way of thinking and will gradually adopt this mindset as well. By investing in their employees, the companies not only contribute to individual development but also strengthen the overall skill set of the companies, which will benefit them in the long run. Additionally, Claesson and Issa (2021) emphasise that investment in training is proven to increase productivity, drive innovation and, consequently, ensure economic growth. Regarding the employees, the analysed companies agreed with Dondi and others (2021) that employees tend to be more fulfilled and satisfied with their jobs, leading to an improvement in employee engagement and retention.

A culture of learning brings flexibility and resilience. If employees are eager to learn and resourceful, it is much easier for them to handle change. Therefore, it is imperative for companies to actively establish a workplace culture where employees want to make an effort, develop their skills, and learn constantly. Additionally, the corporate environment has to empower employees to ask for help when they need it and offer help when they have knowledge they can share. The concept of lifelong learning is based on problem-solving, finding the information and coming up with solutions. And this concept should be at the centre of every company's culture.

2. Create an environment where employees can learn from each other. The knowledge of the company is the knowledge of its people. Therefore, companies should leverage this and create an environment where employees share their knowledge. Whether through mentoring, collaborating on internal projects or discussing certain topics with colleagues, this dynamic includes sharing knowledge and fosters a culture of mutual respect and collaboration. Companies reported that employees learn more effectively if they work in a collaborative environment, where they can learn from each other and ask questions without negative consequences, which aligns with the findings of Claesson and Issa (2021). For example, by organising events where employees can share their experiences, discuss how they have grown within the company, and explore solutions to various challenges, the company can strengthen the sense of community and contribute to a richer collective understanding.

3. Customise learning as much as possible. Each employee is different and has unique skills and unique skill gaps. Therefore, every employee should have a personalised development plan within the company. Since this is not always possible due to financial and time constraints, companies should try to make learning plans as customised as possible. Similarly to Valente (2022), companies begin creating a learning plan by assessing the employees' skills through performance reviews. When the skill gaps are identified, the company and the employee should devise a development plan together and choose the most appropriate training methods based on the learning objective. If possible, the plan should mainly consist of informal learning, e.g., joining specific projects, learning from colleagues, and mentoring, since these methods are usually the most effective as they can be tailored to the company's needs, which also aligns with White and Rittie's findings (2022).

The analysed companies agree with Ekuma (2023) and Valente (2022) that when organising formal or informal training, employees should have a say on what they want to learn. Training has to be relevant and customised to meet the specific needs of employees. Organising training on topics that bring no added value to employees could result in a lower willingness to learn among employees in the future. On the other hand, offering training that makes their job easier can significantly improve the corporate learning culture.

4. Do not forget about the soft skills. While technical skills are certainly important, companies are aware that they cannot neglect soft skills, as Cimatti (2016) has also stated in the existing literature. Soft skills are a crucial part of employees' overall growth and development and should be considered complementary to hard skills. Organisations have started to realise the importance of soft skills, such as collaboration, critical thinking, problem-solving, creativity, flexibility, agility and communication. These skills were recognised as key assets for the future by the companies included in this study and also by Balcar (2016).

Companies included in this research acknowledged the need for a comprehensive skill set for their employees, which aligns with the findings of Sandra and others (2023). A combination of hard and soft skills is needed to navigate the modern workplace. On the one hand, employees must possess intrapersonal skills, such as creativity, problem-solving skills, and analytical skills, to cope with change. On the other hand, they also need interpersonal skills. Nowadays, the work processes include working on projects, working in teams and having presentations. Therefore, a comprehensively skilled workforce is more capable of successfully facing present and future demands.

Strategic recruiting is a tactic for ensuring the company has employees with a well-rounded skill set. Looking at the skills that are already there in the company, the company can hire an employee who would fill the skill gap. It is always beneficial to have different people in a team that complement each other. This approach combines the company's current strengths with the acquired new competencies, which is crucial for companies to remain competitive. Also, aligning with Valente (2022), companies should adjust their recruitment process to consider candidates who might not have the needed technical skills at the moment but show initiative and motivation to learn these skills. Since soft skills tend to be more difficult to develop than hard skills, employees with already established values of lifelong learning and adaptability are more likely to add value to the company in the long run.

5. Educate team leaders. Team leaders know their team members best. Therefore, they should be trained to recognise when a team member needs additional training and which training method they would benefit most from. Additionally, the leader noticing their team member’s potential benefits not only this individual but also the company. The leaders are a connective element between the management and the employees, so it is crucial they are also well-trained in leadership and communication. Čirčova and Blštakova (2023) recognise the crucial role of team leaders as the leaders of organisational change. They are an important asset of the company not just for ensuring that the business processes run smoothly but also as a source of information about what is happening within the teams, what needs to be solved and what could be improved. Therefore, listening to them and quickly addressing the issues is beneficial not only to the team but also to the company as a whole.

6. Let your employees be visionaries. Since the business environment is changing rapidly and is very unpredictable, companies can struggle with planning the following steps and being proactive about the learning directions they want to take. Razzeti (2018) emphasises that companies should let go of the idea that it is only possible to succeed in a controlled environment. It is impossible to predict everything. Therefore, it could pay off to let the employees be visionaries. If a company fosters a learning culture, employees are empowered to come up with ideas on topics they could educate themselves on. It is on the company to let them explore this path. While it could seem risky, this approach could benefit the company in both outcomes. If the topic this employee learnt about becomes relevant in the future, the company now has the competitive edge of having a skilled employee on the team. If the topic does not turn out to be crucial in the future, the employee still feels empowered, has a positive experience with the company, and will perhaps come up with another proposal that will yield significant results in the future.

7. Consider change management when implementing changes. A positive attitude is vital for fostering a learning culture in the company. Several companies agreed that a way to maintain a positive attitude about mandatory learning is for a company to be open and transparent about any changes it wants to implement and the consequences this will have for the employees, which aligns with the findings of Gorski and others (2023). Employees have to be able to trust the company to provide the necessary tools to make the change more manageable and reduce stress. Therefore, the company's preparatory process should begin well before the change is communicated to the employees. The preparation should include clear instructions, the necessary learning materials and information on what employees can do if they encounter problems. In conclusion, when implementing changes, the company should consider change management as a crucial part of the process. This approach helps employees accept the changes and ensures that employees are well-prepared and can use the knowledge they have gained to manage the changes independently.

# 10 CONCLUSION

This Master's thesis provides valuable insights into understanding the importance of skills, upskilling and reskilling for the competitiveness of Slovenian companies in the constantly changing environment. Using three research methodologies exploring six research questions, the findings of this thesis can help companies better understand the crucial skills of the future, how upskilling and reskilling impact Slovenian companies, and how the companies included in this research are tackling constant change. Several conclusions can be drawn on the importance of various parts of this research.

Firstly, the literature review identifies several megatrends affecting the business environment in Slovenia and around the world (e.g., demographic shifts, digitalisation and the emergence of

new technologies, globalisation, geopolitical uncertainties and climate change). They are rapidly changing the environment, and understanding their impacts is crucial for acknowledging the importance of continuous updates in individuals' skill sets. The thesis also emphasises the significance of a balance between technical skills and people skills to ensure employees have a well-rounded skill set that would better prepare them for the future. To acquire these skills, companies and employees need to invest time and resources into learning, specifically with two approaches – upskilling and reskilling. While the attitudes of companies and employees towards skills development, most relevant training methods, and challenges they face when implementing training into their corporate strategies differ, there are numerous best practices of international companies available to prove that implementing upskilling and reskilling programmes pays off in the end.

Secondly, the insights from the survey into the skills which the Slovenian general population perceives as crucial future skills and to what extent the Slovenian general public is actively expanding its skill set can help companies better understand how their employees might understand the topics of future skills, upskilling and reskilling, and gives an insight into a moderate discrepancy of understanding on what the future will bring in terms of changes in the skill set requirements, compared to academic predictions.

Additionally, the interviews explored the perspective of companies. We analyse how focused Slovenian companies are on integrating reskilling and upskilling in their strategic and daily operations and which challenges they face when implementing a new skill set into the corporate strategy. Also, the focus group explored the skill set that would enable Slovenian employees to tackle emerging changes in the macroeconomic environment and propose an ideal set of actions to upskill and reskill the Slovenian workforce.

The practical recommendations derived from the qualitative part of this thesis come from Slovenian companies that have already realised the importance of upskilling and reskilling and are trying to adapt their methods of lifelong learning in a way that best fits their organisation and their employees. Therefore, this thesis can serve as a collection of best practices in Slovenia that other companies can implement as well, a guide for companies only at the start of this journey, or it can act as a convenient stop-shop for companies looking for some tips and tricks. By fostering a culture of lifelong learning and knowledge sharing, companies can identify and maximise opportunities and significantly reduce the effect of the volatility of the constantly changing business environment.

In conclusion, this research emphasises the importance of constant learning not just for the employees' personal development but also for the companies to become more resourceful, innovative, flexible and agile. The path forward involves continuous reflection and adaptation, ensuring the companies are well-equipped to meet the evolving demands of the future, adapt to changes and remain competitive. By promoting a culture of lifelong learning and investing in

the learning and development of its employees, companies must recognise that it is not the strongest or most intelligent who survive but those who are most adaptable to change. Nobody knows what the future will bring or how many and which challenges await the companies, but one thing is certain – the creation of an environment which encourages collaboration, knowledge sharing and leaving the comfort zone will surely help companies gain a competitive edge.

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# APPENDICES

## Appendix 1: Summary in Slovenian

Megatrendi, kot so tehnološki napredek (in s tem avtomatizacija, umetna inteligenca in možnost izgube delovnih mest), demografske spremembe, urbanizacija in mobilnost, globalizacija, geopolitične negotovosti ter podnebne spremembe in degradacija okolja, močno vplivajo na preoblikovanje delovnih mest in okolij. Tako podjetja kot tudi zaposleni se morajo zato, da ohranijo svojo konkurenčnost, hitro prilagajati spreminjajočemu se okolju in se osredotočati na razvoj primernih veščin. Uspeh na trgu dela je predvsem odvisen od dveh različnih vrst veščin: trdih – tistih, ki so tesno povezane z znanjem, saj vključujejo veščine za opravljanje določenih nalog in so odvisne od položaja ter se jih da pridobiti preko akademskega usposabljanja (na primer analiza podatkov, tehnične spretnosti, znanje oblikovanja, trženja in računalništva); ter mehkih, ki temeljijo na posameznikovih predispozicijah (navadah, stališčih, osebnostnih lastnostih) in jih je težko definirati, izmeriti ter se jih naučiti, saj gre za interdisciplinarne veščine, povezane s posameznikovim obvladovanjem samega sebe ter njegovimi interakcijami z drugimi (na primer vodenje, komunikacija, sodelovanje, upravljanje s časom). Meja med trdimi in mehkimi veščinami je težko določljiva, saj gre v večini primerov za preplet in hkratno medsebojno delovanje obojih, vendar literatura kaže, da čeprav je šolski sistem še vedno bolj naklonjen tehničnim veščinam, mehke postajajo vedno pomembnejše. Zadnje čase v središče pozornosti prihajajo tudi tako imenovane meta veščine, ki temeljijo na prirojenih psiholoških sposobnostih in omogočajo nenehno učenje, kreativno reševanje problemov ter posameznikom pomagajo razviti druge veščine. Ker povpraševanje po novih znanjih in kompetencah stalno narašča in bo v prihodnosti le še večje, morajo podjetja v iskanju odgovora na vprašanje o ključnih strateških veščinah prihodnosti za ohranitev konkurenčnosti, prednostno obravnavati dve glavni strategiji: prekvalifikacijo ter nadgradnjo znanj svoje obstoječe delovne sile. Medtem ko prva zaposlene pripravlja na povsem nova delovna mesta ali karierne poti, druga vključuje spodbujanje zaposlenih za pridobitev novih znanj za napredovanje na njihovih trenutnih delovnih mestih z oplemenitenjem njihovega znanja. Oba pristopa sta ključna, da bi podjetja kljub kompleksnosti in spremenljivosti poslovnega okolja uspevala in ohranjala svojo agilnost in konkurenčnost, ter nujno potrebna zaradi pomanjkanja usposobljene delovne sile, zlasti na specializiranih področjih.

Avtorice smo zanimanje za to temo dobile skozi delo na projektu Poslovne konference Portorož med magistrskim študijem na Ekonomski fakulteti v Ljubljani. Skozi poglobljeno analizo teoretičnih vidikov in preučevanja globalnih trendov, ki spreminjajo dinamiko trga dela, analize ključnih veščin danes in tistih v prihodnosti ter preiskovanjem pomena prekvalifikacije in nadgradnje znanj, je namen tega magistrskega dela pokazati, kako bodo spremembe morebiti vplivale na potrebna znanja za ohranjanje konkurenčnosti podjetij in podjetjem na slovenskih tleh ponuditi uspešne primere tujih praks ter priporočila za naslednje korake pri vključevanju prekvalifikacij in nadgradnje znanj v korporativne strategije za pridobitev konkurenčne prednosti preko preoblikovanja trenutnih veščin delovne sile.

Raziskava uporablja metodologijo, ki poleg pregleda literature primernih akademskih virov združuje eno kvantitativno in dve kvalitativni metodi. Kvantitativna metoda vključuje spletno anketo, ki preučuje razgledanost slovenske javnosti glede nabora veščin v prihodnosti in meri njihovo proaktivnost pri izobraževanju. Prva kvalitativna metoda v obliki intervjujev obsega poglobljeno študijo 28 polstrukturiranih intervjujev z vodji kadrovskih služb in preiskuje trenutne strateške veščine ter prakse prekvalifikacije in nadgradnje znanj v slovenskih podjetjih, druga pa vključuje fokusno skupino z dvema kadrovskima vodjema in se osredotoča na njuno dojemanje najpomembnejših veščin prihodnosti in programov prekvalifikacije in nadgradnje znanj.

Smer raziskovanja je vodilo šest glavnih raziskovalnih vprašanj: (1) Katere veščine slovenska populacija vidi kot ključne v prihodnosti?; (2) Ali širša slovenska javnost aktivno dela na širitvi svojih veščin?; (3) Kako osredotočena so slovenska podjetja na vključevanje prekvalifikacije in nadgradnje znanj v svoje strategije in vsakodnevno poslovanje?; (4) Kateri so glavni izzivi implementacije novega nabora veščin v korporativne strategije v slovenskih podjetjih?; (5) Katere veščine bi slovenskim zaposlenim omogočile spopadanje z nastajajočimi spremembami v makroekonomskem okolju?; (6) V svetu brez omejitev, kakšen bi bil idealen nabor ukrepov za prekvalifikacijo in nadgradnjo veščin slovenske delovne sile?

Magistrsko delo se začne z analizo uporabne literature o globalnih trendih, ki spreminjajo poslovno okolje, preučevanjem različnih vrst trenutnih in potencialnih znanj prihodnosti, ter prekvalifikacije in nadgradnje znanj ter izbranih dobrih praks le-teh v podjetjih v tujini. Sledi analiza ankete, ki preverja katere veščine se slovenski javnosti zdijo najpomembnejše v prihodnosti in ali se sami aktivno dodatno izobražujejo. Raziskava nato z namenom raziskovanja pomembnosti prekvalifikacije in nadgradnje znanj kot načinov za širitev potenciala zaposlenih in krepitev njihove agilnosti preiskuje trenutne strateške veščine in prakse nadgradnje znanj in prekvalifikacije, pridobljene s polstrukturiranimi intervjuji z vodji kadrovskih služb podjetij različnih velikosti in panog v Sloveniji. Kasneje so predstavljeni izsledki fokusne skupine s kadrovskima vodjema, ki raziskuje idealen strateški nabor veščin ter tehnike prekvalifikacije in nadgradnje znanj. Na koncu so z namenom predstavitve ključnih ugotovitev vsi izsledki teoretičnega in praktičnega dela tega magistrskega dela združeni in služijo kot orodje za podajanje priporočil slovenskim podjetjem, kako najbolje izkoristiti priložnosti pri širjenju nabora znanj zaposlenih v prihodnosti.

Brez dvoma bo v prihodnosti pozornost usmerjena na tehnološke spremembe. Naša raziskava kaže, da velika večina (90 odstotkov) anketirancev meni, da bosta avtomatizacija in digitalizacija spremenili način dela v panogi, kjer so trenutno zaposleni, in le 7 odstotkov vseh se boji, da bo njihovo delovno mesto postalo zastarelo in ga bo tako smiselno popolnoma avtomatizirati. Večina je mnenja, da so za prekvalifikacijo in nadgradnjo znanj zadolženi tako zaposlovalci kot tudi zaposleni. Ugotovile smo, da obstaja povezava med višjo izobrazbo in

večjo pripravljenostjo izobraževanja izven delovnega časa ter da se anketiranci v svojem prostem času poslužujejo predvsem branja knjig, delavnic in seminarjev na spletu in v živo, ter poslušanja podkastov. Izmed vseh udeležencev ankete jih 44 odstotkov pričakuje, da bodo tehnološke veščine igrale ključno vlogo na delovnem mestu v prihodnosti. Kot eno najpomembnejših veščin so opredelili digitalno pismenost. Več kot tretjina mladih jo je opredelila kot najpomembnejšo, medtem ko starejše generacije veliko pomembnost pripisujejo tudi kreativnemu razmišljanju, radovednosti in nenehnem učenju. Podjetja, na drugi strani, kot ključne strateške veščine prepoznavajo veščine upravljanja sprememb, tehnične veščine (predvsem tehnološke), vodstvene sposobnosti, agilnost, pripravljenost učenja, sposobnost učinkovitega komuniciranja, timsko delo in sodelovanje, odprtost za spremembe in prilagodljivost. Izsledki iz fokusne skupine kažejo predvsem na pomembnost ohranjanja in razvijanja človeškosti, medsebojnega povezovanja ter nenehnega vseživljenjskega učenja. Rezultati tako ankete kot tudi intervjujev in fokusne skupine so, kar zadeva trenutne ključne veščine in veščine prihodnosti, potrdili ugotovitve analize teoretičnega dela o vedno večji pomembnosti prizadevanja za razvoj posameznikov, ki z meta veščinami uspejo najbolje izkoristiti ravnovesje med mehkimi in trdimi veščinami.

Celovita analiza intervjujev s kadrovskimi vodji kaže, da se velika večina podjetij poslužuje strategij za prekvalifikacijo in nadgradnjo znanj, vendar velika večina zgolj reagira na potrebe, namesto da bi bili pri tem bolj proaktivni (kot se to kaže predvsem v informacijski in telekomunikacijski panogi). S pomočjo izrisov spretnosti, pregledov uspešnosti in novih profilov delovnih mest uspejo podjetja identificirati vrzeli v veščinah, ki jih nato zapolnijo z učenjem na delovnem mestu (z mentorstvom, izmenjevalnicami znanja ter projekti), razvojnimi načrti, uporabo internih in zunanjih platform za učenje, izobraževanji, seminarji, delavnicami in tehničnimi usposabljanji. Kljub temu, da se zavedajo pomembnosti sprememb in nadgradnje veščin, pa se soočajo s časovnimi in finančnimi omejitvami, nemotiviranostjo in celo odporom zaposlenih, težavnostjo pri izbiri pravega programa usposabljanja, prepoznavanja zaposlenih z visokim potencialom ter iskanja ravnotežja med operativnimi zahtevami in posvečanjem časa učenju in razvoju zaposlenih. V svetu brez omejitev bi si želeli, da bi imeli individualne načrte za razvoj posameznikov in njihovih veščin ter da bi uspeli ustvariti okolje, kjer so novo znanje in načini, kako proaktivno priti do le tega, dobrodošli.

Slovenska podjetja naj torej spodbujajo kulturo vseživljenjskega učenja z vlaganjem v razvoj zaposlenih, saj to krepi produktivnost in inovativnost. Razvoj zaposlenih naj bo prilagojen posameznikom glede na njihove želje, potrebe in vrzeli v znanju - začenši z vodji, ki so ključni pri prepoznavanju potreb po dodatnem usposabljanju. Povezovanje, sodelovanje in izmenjevanje znanja ne bodo izboljšali zgolj učinkovitosti, temveč bodo tudi oblikovali okolje, kjer se zaposleni učijo drug od drugega. Treba jim je namreč omogočiti, da raziskujejo nove ideje, sprejemajo tveganja in nenehno zapuščajo cono udobja, saj so navsezadnje najpomembnejši del vsakega podjetja – in del, v katerega se splača vlagati.

**Appendix 2: Survey questions**

Pozdravljeni!
Smo študentke Ekonomske fakultete v Ljubljani, kjer v sklopu magistrske naloge izvajamo raziskavo o veščinah in dodatnem izobraževanju zaposlenih v Sloveniji. Za sodelovanje v tej 5-minutni anketi prosimo vse, ki ste stari med 18 in 65 let. Vaši odgovori bodo ostali anonimni in nam bodo izredno pomagali pri naši raziskavi. Vnaprej se vam najlepše zahvaljujemo za sodelovanje!

1. Katere veščine na delovnem mestu bodo po vašem mnenju ključne v prihodnosti?

a) _____

b) Ne vem

2. Kako pomembne se vam zdijo navedene veščine za delo v prihodnosti?

*(Likert lestvica 1 do 7, možni odgovori se razvrstijo naključno)

1 = sploh ni pomembno, 7 = zelo pomembno

a) Analitično razmišljanje

b) Kreativno razmišljanje

c) Fleksibilnost in agilnost

d) Motiviranost in samozavedanje

e) Radovednost in vseživljenjsko učenje

f) Tehnološka pismenost

g) Zanesljivost in natančnost

h) Empatija in aktivno poslušanje

i) Vodstvene veščine in vpliv na družbo

j) Nadzor kakovosti

3. Katere tri (3) veščine bodo najbolj pomembne?

a) Analitično razmišljanje

b) Kreativno razmišljanje

c) Fleksibilnost in agilnost

d) Motiviranost in samozavedanje

e) Radovednost in vseživljenjsko učenje

f) Tehnološka pismenost

g) Zanesljivost in natančnost

h) Empatija in aktivno poslušanje

i) Vodstvene veščine in vpliv na družbo

j) Nadzor kakovosti

4. Menite, da se bo v naslednjih petih (5) letih vaše delo drastično spremenilo zaradi pojava novih tehnologij in avtomatizacije?

a) Da, zelo

b) Da, malo

c) Ne

d) Ne vem

5. Menite, da bo vaše delovno mesto v naslednjih desetih (10) letih izginilo oziroma bo povsem avtomatizirano?

a) Da

b) Ne

c) Ne vem

6. Ali se aktivno izobražujete ali usposabljate izven delovnega časa, da izboljšate/pridobite nove veščine?

a) Da

b) Ne

(če 'Da') Katere metode izobraževanja ali usposabljanja uporabljate?

Možnih je več odgovorov.

a) Delavnice in tečaji v živo

b) Spletni tečaji in delavnice

c) Izobraževanje na interni učni platformi podjetja (izven delovnega časa)

d) Izobraževanje na eksterni učni platformi (npr. Coursera, Udemy, LinkedIn)

e) Branje poučne literature

f) Poslušanje poučnih podkastov

g) Pridobivanje digitalnih značk

h) Drugo: _____

7. Ali ste na delovnem mestu udeleženi v programe izobraževanja ali usposabljanja?

a) Da

b) Ne

(če 'Da') Katere metode izobraževanja ali usposabljanja uporabljate na delovnem mestu?

Možnih je več odgovorov.

a) Coaching

b) Mentorstvo

c) Organizirane delavnice in tečaji v živo

d) Organizirane spletne delavnice in tečaji

e) Seminarji in konference

f) Izobraževanje na interni učni platformi podjetja

g) Izobraževanje na eksterni učni platformi (npr. Coursera, Udemy, LinkedIn)

h) Rotacija delovnih mest

i) "Knowledge sharing" (deljenje znanja med zaposlenimi)

j) Drugo: _____

8. Ali menite, da vaš delodajalec namenja dovolj pozornosti izobraževanju in usposabljanju zaposlenih?

a) Da

b) Ne

c) Ne vem

9. Čigava odgovornost je zagotavljati, da ima delavec na svojem delovnem mestu ustrezna znanja za uspešno opravljanje dela?

a) Izključno delodajalca

b) Pretežno delodajalca

c) Enaka obeh, delodajalca in delavca

d) Pretežno delavca

e) V celoti delavca

10. Če bi želeli še karkoli dodati o veščinah prihodnosti ali izobraževanju in usposabljanju na delovnem mestu, prosimo, napišite spodaj.

_____

11. Spol

a) Moški

b) Ženski

c) Drugo

12. Koliko ste stari?

a) Manj kot 18 let

b) Od 18 do 24 let

c) Od 25 do 34 let

d) Od 35 do 44 let

e) Od 45 do 54 let

f) Od 55 do 64 let

g) 65 let ali več

13. Katera je najvišja stopnja izobrazbe, ki ste jo pridobili?

a) Osnovnošolska izobrazba

b) Srednja strokovna /splošna izobrazba

c) Višja/visokošolska strokovna izobrazba

d) Univerzitetna izobrazba (dodiplomski, magistrski, doktorski študij)

14. Kateri tip dela najbolje opiše vase trenutno delo?

a) Operativno delo v proizvodnji/administraciji
b) Strokovno delo
c) Neposredno delo s strankami
d) Manager/vodja
e) Drugo: _____

15. V kateri panogi ste zaposleni?

f) Kmetijstvo in lov, gozdarstvo, ribištvo
g) Rudarstvo
h) Predelovalne dejavnosti, proizvodnja
i) Oskrba z električno energijo, plinom in paro
j) Oskrba z vodo, ravnanje z odplakami in odpadki, saniranje okolja
k) Gradbeništvo
l) Trgovina, vzdrževanje in popravila motornih vozil
m) Promet in skladiščenje
n) Gostinstvo
o) Informacijske in komunikacijske dejavnosti
p) Finančne in zavarovalniške dejavnosti
q) Poslovanje z nepremičninami
r) Strokovne, znanstvene in tehnične dejavnosti
s) Druge raznovrstne poslovne dejavnosti (administrativne in podporne službe)
t) Dejavnost javne uprave in obrambe, dejavnost obvezne socialne varnosti
u) Izobraževanje
v) Zdravstvo in socialno varstvo
w) Kulturne, razvedrilne in rekreacijske dejavnosti
x) Drugo: _____

Odgovorili ste na vsa vprašanja v tej anketi. Najlepša hvala za sodelovanje!

## Appendix 3: Statistical analysis in R Studio

### Imported libraries and used databases

```
library("readxl")
library("tidyr")
library("gplots")
```

```
##
## Attaching package: 'gplots'
```

```
## The following object is masked from 'package:stats':
##
##     lowess
```

```
my_data <- read_excel("C:/Users/zangu/Desktop/Enija_Mag. Izvoz ankete117124-2024-08-03.xlsx")
my_data_q16 <- read_excel("C:/Users/zangu/Desktop/Tabela Q16.xlsx")
my_data_q5 <- read_excel("C:/Users/zangu/Desktop/Tabela Q5.xlsx")
```

### Association between gender and importance of technological skills

```
Q1_test <- my_data[c('Q1a','XSpol')][-1,]

Q1_test <- data.frame(Q1_test)
Q1_test <- Q1_test[Q1_test$XSpol %in% c(1,2) & Q1_test$Q1a %in% c(0,1),]
Q1_test$XSpol <- sub(1,"male",Q1_test$XSpol)
Q1_test$XSpol <- sub(2,"female",Q1_test$XSpol)
Q1_test$Q1a <- sub(0,"no",Q1_test$Q1a)
Q1_test$Q1a <- sub(1,"yes",Q1_test$Q1a)

tbl <- table( Q1_test$XSpol , Q1_test$Q1a)
tbl
```

```
##
##          no yes
##   female 71  56
##   male   53  42
```

1

```r
chisq.test(tbl, correct = FALSE)
```

```
##
##  Pearson's Chi-squared test
##
## data:  tbl
## X-squared = 0.00029678, df = 1, p-value = 0.9863
```

### The ranking of digital literacy

```r
Q2_test <- my_data[c('Q2a','Q2b','Q2c','Q2d','Q2e','Q2f','Q2g','Q2h','Q2i','Q2j')][-1,]
Q2_test <- Q2_test[Q2_test$Q2a %in% c(1,2,3,4,5) &
                   Q2_test$Q2b %in% c(1,2,3,4,5) &
                   Q2_test$Q2c %in% c(1,2,3,4,5) &
                   Q2_test$Q2d %in% c(1,2,3,4,5) &
                   Q2_test$Q2e %in% c(1,2,3,4,5) &
                   Q2_test$Q2f %in% c(1,2,3,4,5) &
                   Q2_test$Q2g %in% c(1,2,3,4,5) &
                   Q2_test$Q2h %in% c(1,2,3,4,5) &
                   Q2_test$Q2i %in% c(1,2,3,4,5) &
                   Q2_test$Q2j %in% c(1,2,3,4,5), ]
Q2_test_p <- Q2_test %>% pivot_longer(everything(), names_to = "skill_cat", values_to = "importance")

kruskal.test(data = Q2_test_p, importance ~ skill_cat)
```

```
##
##  Kruskal-Wallis rank sum test
##
## data:  importance by skill_cat
## Kruskal-Wallis chi-squared = 96.264, df = 9, p-value < 2.2e-16
```

```r
names <- c('Q2a','Q2b','Q2c','Q2d','Q2e','Q2f','Q2g','Q2h','Q2i','Q2j')
name_pairs <- combn(names, 2)
```

#### All pairs (with sufficient significance)

```r
for (i in 1:(dim(name_pairs)[2])){
  t <- wilcox.test(as.numeric(Q2_test[[name_pairs[1,i]]]), as.numeric(Q2_test[[name_pairs[2,i]]]))
  if (t$p.value < 0.05){
    print(name_pairs[,i])
    print(t)
  }
}
```

```
## [1] "Q2a" "Q2b"
##
##  Wilcoxon rank sum test with continuity correction
##
```

```
## data:  as.numeric(Q2_test[[name_pairs[1, i]]]) and as.numeric(Q2_test[[name_pairs[2, i]]])
## W = 23562, p-value = 0.04152
## alternative hypothesis: true location shift is not equal to 0
##
## [1] "Q2a" "Q2c"
##
##  Wilcoxon rank sum test with continuity correction
##
## data:  as.numeric(Q2_test[[name_pairs[1, i]]]) and as.numeric(Q2_test[[name_pairs[2, i]]])
## W = 21669, p-value = 0.0004184
## alternative hypothesis: true location shift is not equal to 0
##
## [1] "Q2a" "Q2d"
##
##  Wilcoxon rank sum test with continuity correction
##
## data:  as.numeric(Q2_test[[name_pairs[1, i]]]) and as.numeric(Q2_test[[name_pairs[2, i]]])
## W = 23207, p-value = 0.02047
## alternative hypothesis: true location shift is not equal to 0
##
## [1] "Q2a" "Q2e"
##
##  Wilcoxon rank sum test with continuity correction
##
## data:  as.numeric(Q2_test[[name_pairs[1, i]]]) and as.numeric(Q2_test[[name_pairs[2, i]]])
## W = 21385, p-value = 0.0001733
## alternative hypothesis: true location shift is not equal to 0
##
## [1] "Q2a" "Q2f"
##
##  Wilcoxon rank sum test with continuity correction
##
## data:  as.numeric(Q2_test[[name_pairs[1, i]]]) and as.numeric(Q2_test[[name_pairs[2, i]]])
## W = 19618, p-value = 2.124e-07
## alternative hypothesis: true location shift is not equal to 0
##
## [1] "Q2a" "Q2i"
##
##  Wilcoxon rank sum test with continuity correction
##
## data:  as.numeric(Q2_test[[name_pairs[1, i]]]) and as.numeric(Q2_test[[name_pairs[2, i]]])
## W = 29104, p-value = 0.03
## alternative hypothesis: true location shift is not equal to 0
##
## [1] "Q2a" "Q2j"
##
##  Wilcoxon rank sum test with continuity correction
##
## data:  as.numeric(Q2_test[[name_pairs[1, i]]]) and as.numeric(Q2_test[[name_pairs[2, i]]])
## W = 28846, p-value = 0.04862
## alternative hypothesis: true location shift is not equal to 0
##
## [1] "Q2b" "Q2f"
##
```

```
##  Wilcoxon rank sum test with continuity correction
##
## data:  as.numeric(Q2_test[[name_pairs[1, i]]]) and as.numeric(Q2_test[[name_pairs[2, i]]])
## W = 22457, p-value = 0.002393
## alternative hypothesis: true location shift is not equal to 0
##
## [1] "Q2b" "Q2i"
##
##  Wilcoxon rank sum test with continuity correction
##
## data:  as.numeric(Q2_test[[name_pairs[1, i]]]) and as.numeric(Q2_test[[name_pairs[2, i]]])
## W = 31553, p-value = 5.44e-05
## alternative hypothesis: true location shift is not equal to 0
##
## [1] "Q2b" "Q2j"
##
##  Wilcoxon rank sum test with continuity correction
##
## data:  as.numeric(Q2_test[[name_pairs[1, i]]]) and as.numeric(Q2_test[[name_pairs[2, i]]])
## W = 31193, p-value = 0.0001663
## alternative hypothesis: true location shift is not equal to 0
##
## [1] "Q2c" "Q2g"
##
##  Wilcoxon rank sum test with continuity correction
##
## data:  as.numeric(Q2_test[[name_pairs[1, i]]]) and as.numeric(Q2_test[[name_pairs[2, i]]])
## W = 29262, p-value = 0.01712
## alternative hypothesis: true location shift is not equal to 0
##
## [1] "Q2c" "Q2i"
##
##  Wilcoxon rank sum test with continuity correction
##
## data:  as.numeric(Q2_test[[name_pairs[1, i]]]) and as.numeric(Q2_test[[name_pairs[2, i]]])
## W = 33358, p-value = 5.158e-08
## alternative hypothesis: true location shift is not equal to 0
##
## [1] "Q2c" "Q2j"
##
##  Wilcoxon rank sum test with continuity correction
##
## data:  as.numeric(Q2_test[[name_pairs[1, i]]]) and as.numeric(Q2_test[[name_pairs[2, i]]])
## W = 32927, p-value = 2.94e-07
## alternative hypothesis: true location shift is not equal to 0
##
## [1] "Q2d" "Q2f"
##
##  Wilcoxon rank sum test with continuity correction
##
## data:  as.numeric(Q2_test[[name_pairs[1, i]]]) and as.numeric(Q2_test[[name_pairs[2, i]]])
## W = 22438, p-value = 0.002297
## alternative hypothesis: true location shift is not equal to 0
##
```

```
## [1] "Q2d" "Q2i"
##
##  Wilcoxon rank sum test with continuity correction
##
## data:  as.numeric(Q2_test[[name_pairs[1, i]]]) and as.numeric(Q2_test[[name_pairs[2, i]]])
## W = 32037, p-value = 1.002e-05
## alternative hypothesis: true location shift is not equal to 0
##
## [1] "Q2d" "Q2j"
##
##  Wilcoxon rank sum test with continuity correction
##
## data:  as.numeric(Q2_test[[name_pairs[1, i]]]) and as.numeric(Q2_test[[name_pairs[2, i]]])
## W = 31629, p-value = 4.047e-05
## alternative hypothesis: true location shift is not equal to 0
##
## [1] "Q2e" "Q2g"
##
##  Wilcoxon rank sum test with continuity correction
##
## data:  as.numeric(Q2_test[[name_pairs[1, i]]]) and as.numeric(Q2_test[[name_pairs[2, i]]])
## W = 29519, p-value = 0.009592
## alternative hypothesis: true location shift is not equal to 0
##
## [1] "Q2e" "Q2h"
##
##  Wilcoxon rank sum test with continuity correction
##
## data:  as.numeric(Q2_test[[name_pairs[1, i]]]) and as.numeric(Q2_test[[name_pairs[2, i]]])
## W = 28760, p-value = 0.04458
## alternative hypothesis: true location shift is not equal to 0
##
## [1] "Q2e" "Q2i"
##
##  Wilcoxon rank sum test with continuity correction
##
## data:  as.numeric(Q2_test[[name_pairs[1, i]]]) and as.numeric(Q2_test[[name_pairs[2, i]]])
## W = 33632, p-value = 1.488e-08
## alternative hypothesis: true location shift is not equal to 0
##
## [1] "Q2e" "Q2j"
##
##  Wilcoxon rank sum test with continuity correction
##
## data:  as.numeric(Q2_test[[name_pairs[1, i]]]) and as.numeric(Q2_test[[name_pairs[2, i]]])
## W = 33171, p-value = 1.029e-07
## alternative hypothesis: true location shift is not equal to 0
##
## [1] "Q2f" "Q2g"
##
##  Wilcoxon rank sum test with continuity correction
##
## data:  as.numeric(Q2_test[[name_pairs[1, i]]]) and as.numeric(Q2_test[[name_pairs[2, i]]])
## W = 31232, p-value = 6.566e-05
```

```
## alternative hypothesis: true location shift is not equal to 0
##
## [1] "Q2f" "Q2h"
##
##  Wilcoxon rank sum test with continuity correction
##
## data:  as.numeric(Q2_test[[name_pairs[1, i]]]) and as.numeric(Q2_test[[name_pairs[2, i]]])
## W = 30415, p-value = 0.0007513
## alternative hypothesis: true location shift is not equal to 0
##
## [1] "Q2f" "Q2i"
##
##  Wilcoxon rank sum test with continuity correction
##
## data:  as.numeric(Q2_test[[name_pairs[1, i]]]) and as.numeric(Q2_test[[name_pairs[2, i]]])
## W = 35389, p-value = 1.522e-12
## alternative hypothesis: true location shift is not equal to 0
##
## [1] "Q2f" "Q2j"
##
##  Wilcoxon rank sum test with continuity correction
##
## data:  as.numeric(Q2_test[[name_pairs[1, i]]]) and as.numeric(Q2_test[[name_pairs[2, i]]])
## W = 34858, p-value = 2.354e-11
## alternative hypothesis: true location shift is not equal to 0
##
## [1] "Q2g" "Q2i"
##
##  Wilcoxon rank sum test with continuity correction
##
## data:  as.numeric(Q2_test[[name_pairs[1, i]]]) and as.numeric(Q2_test[[name_pairs[2, i]]])
## W = 30470, p-value = 0.001349
## alternative hypothesis: true location shift is not equal to 0
##
## [1] "Q2g" "Q2j"
##
##  Wilcoxon rank sum test with continuity correction
##
## data:  as.numeric(Q2_test[[name_pairs[1, i]]]) and as.numeric(Q2_test[[name_pairs[2, i]]])
## W = 30159, p-value = 0.002986
## alternative hypothesis: true location shift is not equal to 0
##
## [1] "Q2h" "Q2i"
##
##  Wilcoxon rank sum test with continuity correction
##
## data:  as.numeric(Q2_test[[name_pairs[1, i]]]) and as.numeric(Q2_test[[name_pairs[2, i]]])
## W = 31030, p-value = 0.0002797
## alternative hypothesis: true location shift is not equal to 0
##
## [1] "Q2h" "Q2j"
##
##  Wilcoxon rank sum test with continuity correction
##
```

```
## data:  as.numeric(Q2_test[[name_pairs[1, i]]]) and as.numeric(Q2_test[[name_pairs[2, i]]])
## W = 30677, p-value = 0.0007574
## alternative hypothesis: true location shift is not equal to 0
```

**Pairs compared with digital literacy (only the ones compared with digital literacy are written)**

```
for (i in 1:(length(names))){
  t <- wilcox.test(as.numeric(Q2_test[[names[i]]]), as.numeric(Q2_test[["Q2f"]]))

  print(names[i])
  print(t)

}
```

```
## [1] "Q2a"
##
##  Wilcoxon rank sum test with continuity correction
##
## data:  as.numeric(Q2_test[[names[i]]]) and as.numeric(Q2_test[["Q2f"]])
## W = 19618, p-value = 2.124e-07
## alternative hypothesis: true location shift is not equal to 0
##
## [1] "Q2b"
##
##  Wilcoxon rank sum test with continuity correction
##
## data:  as.numeric(Q2_test[[names[i]]]) and as.numeric(Q2_test[["Q2f"]])
## W = 22457, p-value = 0.002393
## alternative hypothesis: true location shift is not equal to 0
##
## [1] "Q2c"
##
##  Wilcoxon rank sum test with continuity correction
##
## data:  as.numeric(Q2_test[[names[i]]]) and as.numeric(Q2_test[["Q2f"]])
## W = 24369, p-value = 0.1264
## alternative hypothesis: true location shift is not equal to 0
##
## [1] "Q2d"
##
##  Wilcoxon rank sum test with continuity correction
##
## data:  as.numeric(Q2_test[[names[i]]]) and as.numeric(Q2_test[["Q2f"]])
## W = 22438, p-value = 0.002297
## alternative hypothesis: true location shift is not equal to 0
##
## [1] "Q2e"
##
##  Wilcoxon rank sum test with continuity correction
##
## data:  as.numeric(Q2_test[[names[i]]]) and as.numeric(Q2_test[["Q2f"]])
## W = 24593, p-value = 0.1779
```

```
## alternative hypothesis: true location shift is not equal to 0
##
## [1] "Q2f"
##
##  Wilcoxon rank sum test with continuity correction
##
## data:  as.numeric(Q2_test[[names[i]]]) and as.numeric(Q2_test[["Q2f"]])
## W = 26221, p-value = 1
## alternative hypothesis: true location shift is not equal to 0
##
## [1] "Q2g"
##
##  Wilcoxon rank sum test with continuity correction
##
## data:  as.numeric(Q2_test[[names[i]]]) and as.numeric(Q2_test[["Q2f"]])
## W = 21210, p-value = 6.566e-05
## alternative hypothesis: true location shift is not equal to 0
##
## [1] "Q2h"
##
##  Wilcoxon rank sum test with continuity correction
##
## data:  as.numeric(Q2_test[[names[i]]]) and as.numeric(Q2_test[["Q2f"]])
## W = 22026, p-value = 0.0007513
## alternative hypothesis: true location shift is not equal to 0
##
## [1] "Q2i"
##
##  Wilcoxon rank sum test with continuity correction
##
## data:  as.numeric(Q2_test[[names[i]]]) and as.numeric(Q2_test[["Q2f"]])
## W = 17053, p-value = 1.522e-12
## alternative hypothesis: true location shift is not equal to 0
##
## [1] "Q2j"
##
##  Wilcoxon rank sum test with continuity correction
##
## data:  as.numeric(Q2_test[[names[i]]]) and as.numeric(Q2_test[["Q2f"]])
## W = 17584, p-value = 2.354e-11
## alternative hypothesis: true location shift is not equal to 0
```

### Opinion of the youth and the elderly on the technological skills

```
Q3_test <- my_data[c('Q3a','Q3b','Q3c','Q3d','Q3e','Q3f','Q3g','Q3h','Q3i','Q3j','Q13')][-1,]

Q3_young <- Q3_test[Q3_test$Q13 %in% c(1,2),][c('Q3a','Q3b','Q3c','Q3d','Q3e','Q3f','Q3g','Q3h','Q3i','(

Q3_not_so_young <- Q3_test[Q3_test$Q13 %in% c(6,7),][c('Q3a','Q3b','Q3c','Q3d','Q3e','Q3f','Q3g','Q3h',

num_young <- dim(Q3_young)[1]
num_not_so_young <- dim(Q3_not_so_young)[1]
```

```r
young_sums <- data.frame(lapply(lapply(Q3_young, as.numeric),sum))
not_so_young_sums <- data.frame(lapply(lapply(Q3_not_so_young, as.numeric),sum))

binom.test(as.numeric(young_sums$Q3f), num_young, p=0.3, alternative = "two.sided")
```

```
##
##  Exact binomial test
##
## data:  as.numeric(young_sums$Q3f) and num_young
## number of successes = 22, number of trials = 38, p-value = 0.0005155
## alternative hypothesis: true probability of success is not equal to 0.3
## 95 percent confidence interval:
##  0.4082145 0.7369018
## sample estimates:
## probability of success
##              0.5789474
```

```r
binom.test(as.numeric(not_so_young_sums$Q3f), num_not_so_young, p=0.3, alternative = "two.sided")
```

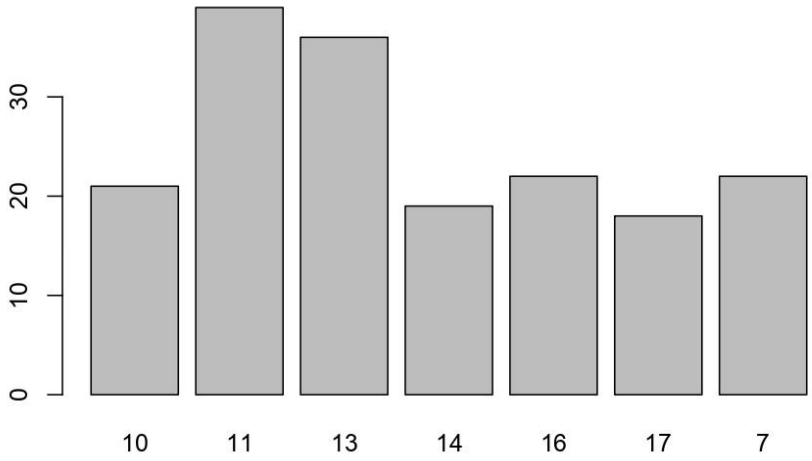
```
##
##  Exact binomial test
##
## data:  as.numeric(not_so_young_sums$Q3f) and num_not_so_young
## number of successes = 13, number of trials = 28, p-value = 0.06476
## alternative hypothesis: true probability of success is not equal to 0.3
## 95 percent confidence interval:
##  0.2751086 0.6613009
## sample estimates:
## probability of success
##              0.4642857
```

### Association between the industry type and the level of expected job change due to digitalisation and automation

```r
Q4_test <- my_data_q16[-1,]
Q4_test <- Q4_test[Q4_test$Q4 != 4,]
Q4_test <- Q4_test[Q4_test$Q16 %in% c(10,11,13,14,16,17,7),]
table(Q4_test$Q16)
```

```
##
## 10 11 13 14 16 17  7
## 21 39 36 19 22 18 22
```

```r
barplot(table(Q4_test$Q16))
```




```
tbl <- table(Q4_test$Q16 , Q4_test$Q4)
tbl
```

```
##
##       1  2  3
##   10 12  9  0
##   11 11 25  3
##   13  8 22  6
##   14 10  8  1
##   16  8 12  2
##   17  4  9  5
##   7   9  9  4
```

```
chisq.test(tbl, correct = FALSE)
```

```
## Warning in chisq.test(tbl, correct = FALSE): Chi-squared approximation may be
## incorrect
```

```
##
##  Pearson's Chi-squared test
##
## data:  tbl
## X-squared = 19.902, df = 12, p-value = 0.06896
```

**Association between the type of job and the belief that a job will be automated or will disappear completely**

```
Q5_test <- my_data_q5[-1,]

tbl <- table(Q5_test$Q15, Q5_test$Q5)
tbl
```

```
##
##      1  2  3
##   1  5 14  2
##   2  4 84 13
##   3  3 20  6
##   4  4 64  3
```

```
chisq.test(tbl, correct = FALSE)
```

```
## Warning in chisq.test(tbl, correct = FALSE): Chi-squared approximation may be
## incorrect
```

```
##
##  Pearson's Chi-squared test
##
## data:  tbl
## X-squared = 17.838, df = 6, p-value = 0.006651
```

**Association between the highest education level and learning outside of work**

```
Q6_test <- my_data[c('Q6','Q14')][-1,]


Q6_test <- Q6_test[Q6_test$Q6 %in% c(1,2) & Q6_test$Q14 %in% c(1,2,3,4,5),]

tbl <- table(Q6_test$Q14, Q6_test$Q6)
tbl
```

```
##
##       1   2
##   1   0   1
##   2  11  13
##   3  11  11
##   4 130  48
```

```
chisq.test(tbl, correct = FALSE)
```

```
## Warning in chisq.test(tbl, correct = FALSE): Chi-squared approximation may be
## incorrect
```

```
##
##  Pearson's Chi-squared test
##
## data:  tbl
## X-squared = 12.78, df = 3, p-value = 0.005138
```

**Appendix 4: List of industries according to the NACE classification**

A. Agriculture, forestry and fishing

B. Mining and quarrying

C. Manufacturing

D. Electricity, gas, steam and air conditioning supply

E. Water supply; sewerage; waste management and remediation activities

F. Construction

G. Wholesale and retail trade; repair of motor vehicles and motorcycles

H. Transporting and storage

I. Accommodation and food service activities

J. Information and communication

K. Financial and insurance activities

L. Real estate activities

M. Professional, scientific and technical activities

N. Administrative and support service activities

O. Public administration and defence; compulsory social security

P. Education

Q. Human health and social work activities

R. Arts, entertainment and recreation

**Appendix 5: Interview sample characteristics**

| Code | Industry | Size | Location | Ownership | Interviewee's Position(s) |
|---|---|---|---|---|---|
| Company 1 | Manufacturing | Large | Ljubljana | MNE subsidiary | HR Head of Development |
| Company 2 | Services | Large | Ljubljana | Domestic | Potential Management Director (HR, MKT) |
| Company 3 | Manufacturing | Large | Outside Ljubljana | MNE subsidiary | Regional HR Manager |
| Company 4 | Manufacturing | Large | Outside Ljubljana | MNE subsidiary | HR Director |
| Company 5 | IT & telecommunications | Large | Ljubljana | MNE subsidiary | Vice President, HRM |
| Company 6 | IT & telecommunications | SME | Ljubljana | Foreign-owned | People & Culture & Communication Officer |
| Company 7 | Services | SME | Ljubljana | Domestic family-owned | HR Development Manager |
| Company 8 | Services | Large | Outside Ljubljana | Domestic | Worker's Director |

(table continues)

**Appendix 5: Interview sample characteristics**

(continued)

| Code | Industry | Size | Location | Ownership | Interviewee's Position(s) |
|---|---|---|---|---|---|
| Company 9 | IT & telecommunications | SME | Ljubljana | Domestic family-owned | Head of People Development |
| Company 10 | Services | Large | Ljubljana | Domestic | Head of Training and Personal Development |
| Company 11 | Services | Large | Ljubljana | Foreign-owned | Board Member for Strategic HR Development |
| Company 12 | Services | Large | Ljubljana | Domestic | HR Manager |
| Company 13 | Manufacturing | Large | Outside Ljubljana | Domestic family-owned | HR Manager |
| Company 14 | Services | Large | Outside Ljubljana | Domestic | Head of HR |
| Company 15 | Manufacturing | SME | Outside Ljubljana | Domestic family-owned | Assistant to General Manager |
| Company 16 | Manufacturing | SME | Outside Ljubljana | MNE subsidiary | HR and Project Manager |

(table continues)

**Appendix 5: Interview sample characteristics**

(continued)

| Code | Industry | Size | Location | Ownership | Interviewee's Position(s) |
|---|---|---|---|---|---|
| Company 17 | IT & telecommunications | SME | Ljubljana | Domestic | Chief People Officer |
| Company 18 | Manufacturing | Large | Outside Ljubljana | Domestic | Director of HR |
| Company 19 | Manufacturing | Large | Outside Ljubljana | Domestic | Executive HR Director |
| Company 20 | Manufacturing | Large | Ljubljana | MNE subsidiary | Regional HR Director |
| Company 21 | IT & telecommunications | Large | Ljubljana | MNE subsidiary | Senior Director, People, Culture & Communication |
| Company 22 | IT & telecommunications | SME | Ljubljana | Foreign-owned | HR Manager |
| Company 23 | IT & telecommunications | Large | Ljubljana | Domestic | HR & General Affairs Manager |
| Company 24 | Services | Large | Ljubljana | MNE subsidiary | People & Culture Manager |

(table continues)

**Appendix 5: Interview sample characteristics**

(continued)

| Code | Industry | Size | Location | Ownership | Interviewee's Position(s) |
|---|---|---|---|---|---|
| Company 25 | IT & telecommunications | SME | Ljubljana | Domestic | Chief People and Performance Manager |
| Company 26 | Manufacturing | Large | Ljubljana | MNE subsidiary | Regional Head of HR |
| Company 27 | IT & telecommunications | SME | Ljubljana | Foreign-owned | HR Specialist |
| Company 28 | Services | Large | Ljubljana | Domestic | HR Manager |

*Source: Own work.*

**Appendix 6: Interview guide for in-depth interviews with HR managers**

In-depth interview questions should embrace the following topics (the relevant questions are listed below):

A. HRM in general

1. What do you consider the main HRM challenges in your company? To what extent is digitalisation or digital transformation part of your business strategy? Is this bringing on any additional HRM challenges?

2. How difficult is it for your company to acquire or develop competencies/skills that are needed to execute your business strategy? Do you rely more on recruiting new employees or on developing your current workforce? Why this particular strategy?

B. Understanding motives, challenges and barriers for reskilling and upskilling in the selected company

1. What do you consider as key strategic skills of your workforce? Do you have any formal strategic skills mapping (at the individual or group level)?

2. What is your assessment of the preparedness of your employees for working in a highly digitalised environment? Did you design any specific training programmes for your employees? Can you please describe them? What about planning the programmes for the future?

3. To what extent are upskilling and possible reskilling systematically included in the corporate strategy? Why yes/no? If yes, were the motives for reskilling/upskilling strategies mostly reactive (e.g., industry pressure) or proactive (e.g., a realisation that long-term competitive advantage will not be feasible otherwise)? To what extent are HR processes such as talent management and performance assessment aligned with upskilling efforts in your company?

4. Can you give examples of reskilling and upskilling in your company? Which training methods were the most effective (e.g., seminars/conferences, self-study, on-the-job training, online courses)?

5. Can you name specific positive or negative consequences (e.g., for your employees, the efficiency of your company, the competitiveness) of your past reskilling/upskilling practices?

6. How would you evaluate your enterprise-wide upskilling culture? How is the learning culture promoted in your company? How would you assess the employees' attitudes towards upskilling or reskilling? Do you believe your employees have already adopted the lifelong learning mindset (have made a habit of continuous learning)? Do you have any strategic plan for that as well?

7. What do you consider the main obstacles to upskilling and reskilling? Do they arise from individuals, companies or the government?

C. Reskilling and upskilling with regard to digital transformation

1. How do you assess the importance of reskilling and upskilling in today's world of digital transformation? What are the key employee competencies needed nowadays?

2. Do you think companies today understand the impact of future automation and digitalisation on skill requirements? Are they acting accordingly? How does this affect their upskilling and reskilling strategies? Are there any general obstacles that companies face when implementing these strategies?

D. Policy perspective regarding reskilling/upskilling

1. Are there any specific suggestions (for policymakers, the educational system) that you would like to mention relating to reskilling/upskilling the workforce in general?

2. To your knowledge, what are some of the best practices of upskilling or reskilling? Can you provide a specific example in your industry or in general?

**Appendix 7: Questions guide for the focus group**

1. Se vam zdi pomembno (in če da, zakaj), da se vaši zaposleni dodatno izobražujejo in usposabljajo (v in izven delovnega časa)?

2. Kaj za vas pomeni pojem 'nadgradnja veščin' (angl. upskilling/reskilling)?

3. Glede na tehnološke spremembe v zadnjem času morajo zaposleni poskrbeti, da imajo pravilne veščine za opravljanje svojega dela. Katere so tiste, za katere se vam zdi, da bodo v vaši panogi/podjetju v prihodnjih 5-10 letih najbolj pomembne?

4. Ali ste pri zaposlovanju pozorni na razmerje med mehkimi in trdimi veščinami (angl. soft and hard skills)? Kako pomembno je to razmerje pri napredovanju zaposlenih in kako se vam zdi, da se bo to razmerje v prihodnosti spremenilo?

5. Ste v vašem podjetju uvedli kakšne dodatne programe/izobraževanja za razvoj veščin (poleg začetnega uvajanja)?

- Če da, nam lahko poveste več o njih?
- Kako so se nanje odzvali zaposleni in kakšna je bila udeležba?
- Ali ste po uvedbi le teh opazili kakšne spremembe pri zaposlenih/njihovi produktivnosti?

6. Kakšni so vaši načrti glede nadgradnje veščin v prihodnosti? Ali v vašem podjetju spodbujate stalno učenje (angl. lifelong learning) zaposlenih?

7. Če pri uvajanju dodatnih programov usposabljanja ne bi bilo zunanjih ovir (finančnih, časovnih, kadrovskih, nepripravljenost zaposlenih), kako bi zastavili idealen program za nadgradnjo veščin?

**Appendix 8: Transcript of the focus group**

Participants: Nika Podpeskar, Meta Česnik, Enija Gulič Nosan, Manager 1 from Company A, Manager 2 from Company B

Meta: Lepo pozdravljeni, še enkrat bi se najlepše zahvalila za pripravljenost za sodelovanje v naši fokusni skupini. Tako kot smo se že predstavile v e-mailih, smo Nika, Meta in Enija in smo študentke magistrskega programa na Ekonomski fakulteti. Skupaj pišemo magistrsko nalogo. Namen naše magistrske naloge je razdeljen na tri dele. Prvi del je anketa slovenske splošne populacije, v kateri smo preverjale, če se ljudje, stari med 18 in 65 let, zavedajo, katere veščine bodo pomembne v prihodnosti in kako pomembno je vseživljenjsko učenje ter kaj v resnici pričakujejo od delodajalcev. To je bil prvi del. Drugi del so bili intervjuji z HR managerji v podjetjih, ki so se zgodili dve leti nazaj in so preverjali takrat trenutno stanje v podjetjih, kako izobražujejo svoje zaposlene in katere veščine so jim pomembne. Tretji del, oziroma del tretjega dela sta pa sedaj. Tretji del se bo fokusiral na veščine prihodnosti in kako v resnici podjetja nadaljujejo oziroma bodo nadaljevala dodatno usposabljanje in dodatno izobraževanje za svoje zaposlene in kakšne trende oziroma kaj sploh pričakujejo o prihodnosti. O tem se bomo pogovarjali danes. Okvirna vprašanja, ki se jih bomo verjetno dotaknili, če bo čas dovoljeval, smo vam poslali vnaprej. Drugače bo potek fokusne skupine izgledal nekako tako, oziroma mi si želimo, da je to takšna sproščena debata. Me bomo v resnici delovale bolj kot moderatorke, se pravi bomo usmerjale pogovor, ampak si pa želimo, da se navezujete na to, kar pove vaša sogovornica. Za besedo ni treba prositi. Ko ena konča, lahko druga nadaljuje. Me bomo samo usmerjale pogovor. Če slučajno se nam zdi kaj še posebej pomembno za razložiti, bomo seveda to vprašale, ampak drugače nas v resnici ni toliko veliko, da bi bilo to težko voditi, tako da bomo zmogle. Tako da jaz bi zdaj prosila vaju, da se predstavita samo na hitro, se pravi podjetje, ime, potem pa lahko po mojem začnemo s prvim vprašanjem. Tako da to bi bilo vse iz moje strani.

Manager 1: V redu, hvala Meta. Hvala lepa za povabilo. Moje ime je [Manager 1], head of HR za Adriatic Black Sea regijo, to pomeni Slovenija, Hrvaška, Bolgarija, Romunija, Srbija, za ta del. Mi imamo zaposlenih približno, če zdaj govorimo o Sloveniji, 600 ljudi, dve tovarni, v Ljubljani in v Kamniku. Jaz sem se [Company A] pridružila pred malo več kot dvema letoma, sicer sem začela kot HR manager za Slovenijo, tako da zdaj z majem sem prevzela še ostale države. Sem bila pa pred tem približno 10 do15 let v recruitingu, zadnje, mogoče 5 do 7 let pa v tehničnem headhuntingu, to pomeni, da preden sem se [Company A] priključila, sem pomagala [Company A] tudi kot zunanji headhunter, postaviti nekaj razvojnih oddelkov, tako da zelo dobro poznam inženirski trg, recimo od IT, electro-engineeringa, mechanical engineeringa, tako da to področje.

Manager 2: Živijo še z moje strani. Moje ime je [Manager 2], prihajam iz [Company B]. Jaz sem v bistvu že celo življenje oziroma celo svojo kariero, začela sem kot študentka, potem pa,

ko smo se leta 2011 združili s [Company B], sem pa tudi tam še kar obstala, tako da trenutno sem v bistvu v vlogi vodje teama za izobraževanje, razvoj kadrov pa recruitment, hkrati sem pa še HR business partner za komercialni steber. V bistvu kaj delamo, vključujem se na 100 projektov, trenutno pa bom rekla, je glavni fokus res digitalizacija HR-a, upskilling, reskilling, vpeljava umetne inteligence. Tako da ja, po mojem si bomo imele veliko za povedati. Zdaj pa ne vem, ali gremo kar po teh vprašanjih in se midve z [Manager 1] pogovarjava, oziroma odgovarjava na vprašanja, ali boste ve zastavljale vprašanje.

Enija: Lahko me vodimo. Ja, bomo kar me.

Manager 1: No, potem pa dajte.

Meta: Torej prvo vprašanje, ki nas zanima je, če se vam zdi pomembno, da se vaši zaposleni dodatno izobražujejo in usposabljajo in če ja, zakaj se vam to zdi tako pomembno?

Manager 1: Jaz bom pa dala nazaj, Meta, vprašanje: Kaj si predstavljate pod dodatno izobraževanje?

Meta: Se pravi, dodatno izobraževanje mi jemljemo kot izobraževanje izven delovnega časa ali pa recimo dodatne veščine tudi znotraj delovnega časa, da so se zaposleni pripravljeni učiti tudi znotraj delovnega časa, mogoče, da pokažemo neko proaktivnost, da jim ni težko tudi mogoče.

Manager 1: Investirati nekaj časa in energije v to zadevo, če prav razumem?

Enija: Mogoče tukaj samo disclaimer, tukaj nismo imeli v mislih tega izobraževanja v smislu uvajanja zaposlenih, se pravi onboarding programi in to osnovno izobraževanje, ampak predvsem tisto, kar je nekaj ekstra, kar je nekaj več od tega onboarding programa.

Manager 1: Zdaj tako, da mogoče malo o naši kulturi povem. Zdaj dejstvo je, da je danes nemogoče obstati, če se non-stop ne učiš. Ne, ni, te možnosti sploh ni. In to je en tisti odgovor, zakaj - ker ni možnosti obstati. Mi imamo recimo sistem v podjetju, kjer imamo 10, 20, 70 - imamo razdeljeno po procentih, tako rečeno nekaj je učenje na delovnem mestu, nekaj je mentorstva, nekaj je pa kar pošljemo mogoče ljudi izven našega podjetja. Zdaj, treba je vedeti, kot je mogoče tudi [Manager 2] izpostavila, s tehnološkim razvojem, z znanstvenim razvojem, z vsemi spremembami dela, načina dela, če hočeš biti konkurenčen danes, ne samo kot posameznik, kot tudi podjetje, je stalno učenje, ampak na delovnem mestu, potrebno. Pri nas je to nemogoče, pri nas ni sploh opcije, da se ne bi učili, tega ni. Mi imamo, lahko rečem, na mesečni ravni novitete, nove stvari. Pričakovanje našega matičnega podjetja je tako rečeno, da se vsako leto za toliko in toliko procentov dvigne produktivnost. To je non-stop vpeljevanje novih tehnologij, nove digitalizacije, novih rešitev, novih tools-ov, novih pristopov, konstantno. Zelo težko rečemo, da mi prav načrtno, v smislu: zdaj bomo pa to osebo to in to naučili, nekaj dodatno, ampak že s tem, ko je v tem okolju in je izpostavljen neki matrični organizaciji, ki jo imamo – s cross-functional projektom, s sodelovanjem s sodelavci iz Kitajske, Danske, Poljske,

kjerkoli, kjer so razni projekti, kjer smo stalno v smeri, da se izboljšujemo, da izboljšujemo našo produktivnost, ne samo v proizvodnji, ampak tudi na režijskem nivoju. Naš efficiency, in zmeraj iščemo neke rešitve, neke izboljšave, optimizacije, vpeljujemo nove tehnologije, nove orodja, nove pristope, sami razvijamo nove stvari, itd. Pri nas je miselnost taka - mindset, in seveda, vsako leto imamo drugače, tako rečeno, people review, pogledamo performance sodelavcev, določimo development goals - Jaz se opravičujem, ker ne morem čisto vsega prevajati, sploh ne znam niti vsega več prevajati. Se pravi development goals, performance goals, to pomeni, vsak posameznik ima neke cilje, ampak več ali manj razvojne cilje izpolnjuje znotraj podjetja, to pomeni, recimo, nekomu manjka tega in tega in rečeš, ok, ti se boš pa priključil neki projektni skupini iz tistega drugega oddelka in boste skupaj to pa to razvijali. Tako da pri nas je to ongoing, pri nas ni možnosti, da bi rekel, to pa ne gre, jaz se pa ne bom učil, tega ni. So posamezna področja, kjer definitivno lahko koga posebej napotimo na kakšno zadevo ali pa imamo kakšne vodstvene veščine za naše vodstvo, za naš vodstveni team ali pa kar koli tako na ta način, ampak s tem že z našo vizijo, da želimo biti tehnološko v samem vrhu, nas sili v to, da non stop vpeljujemo nove stvari, izboljšave in je to del nas.

Manager 2: Ok, jaz tukaj lahko rečem, da se z [Manager 1] strinjam, da je to nekaj, kar je povsem normalno. Naši zaposleni tudi, pri nas veliko temelji na izobraževanju pa usposabljanju v smislu, da smo zelo privlačni, sploh za kar se tiče tehničnega kadra, ki pride direktno s fakultet. Rečemo, da smo nek peskovnik za učenje, tako da pri nas mogoče se vsake toliko časa, odvisno od obdobja, znajdemo v temu, da pri nas vse poberejo, potem gredo še malo izven [Company B] pogledati, kakšen je svet, kakšna je »zemlja, travica«, še od drugih podjetjih. Imamo pa zadnje čase, kar veliko povratnikov nazaj, tako da vseeno potem pridejo nazaj. Tako da, ja, izobraževanje, usposabljanje, non-stop. To zelo spodbujamo, načrtno, hočemo res delati na tej kulturi, da zaposleni moramo vlagati vase, toliko, kolikor bodo naredili, toliko bodo lahko napredovali in se razvijali. Če ne bodo vlagali vase, ne bodo mogli obstati v [Company B]. Je pa mogoče od generacije do generacije, pa tudi od področja do področja odvisno, koliko so pripravljeni vlagati vase izven delovnega časa. Vseeno ugotavljamo, da veliko berejo, vedno več vlagajo tudi v te mehke veščine, kar nas vseeno kar preseneča, tudi v privat življenju. In kar bi mogoče dodala je to: raziskave kažejo, da tisti, ki danes vstopate v delovno okolje, boste zamenjali sedem področij dela ali pa še kaj več. In dejansko se ljudje želijo izobraževati na področjih, ki nimajo veze s tem, kar delajo danes. Mi probamo tudi to omogočiti, seveda v nekih normalah, ampak ja, na ta način jih potem tudi probamo zadržati pri nas, da jim omogočimo tudi taka izobraževanja in usposabljanja in jim tudi plačamo še kaj za zraven, ampak po drugi strani pa tudi veliko sami vlagajo. Veliko je tega.

Manager 1: No recimo, pri nas je pa ogromno tega, da znotraj razvijamo stvari. Imamo sicer globalno postavljene določene e-learning treninge, potem imamo pa tako, ravno ta ambicioznost podjetja, da hočemo biti vedno čim boljši, takoj ko zaznamo ali pa da vidimo, da nismo na nekem nivoju, se takoj soočimo s tem, kaj bomo naredili. Ampak ogromno stvari razvijamo

sami tukaj. Ali pa sodelavcem, ki so mogoče inženirji in nimajo nekih skillsov, da bi znali kaj predstaviti, kaj povedati ali pa vidimo, da je tukaj nek shortage ali karkoli, dobijo prav svoj razvojni program: »ok, zdaj boš pa ti za nek oddelek nekaj predstavil« in se potem preko dela tako razvijajo. Izpostavljamo jih določenim izzivom zato, da razvijajo tisto kompetenco, ki jim manjka. Imamo razne mentorske programe, ki so lahko na globalnem nivoju, regijskem nivoju, lokalnem nivoju. Iz tega vidika, to pomeni, da jih ne pošljemo ravno nekam ven, ampak ga tukaj izpostavljamo, da mogoče dela z neko ekipo in je potem tukaj izpostavljen določenim nalogam, da potem neke skillse razvije. Veliko delamo tudi na tem, tako kot je mogoče tudi [Manager 2] omenila, da ne rečemo, da tehnični profili razvijajo samo tehnične kompetence, ampak da mora biti to širše. Ker če v končni fazi gledamo, nekoč lahko da bo to vodja, lahko da bo mogoče šel v prodajo, karkoli, lahko, da ima nek drug potencial. Tako vidimo, v katero smer ga vleče, kje ima res ta potencial in potem ga izpostavljamo takim nalogam in mu delegiramo take naloge ter kreiramo določene projekte, katere lahko oni peljejo in tako naprej. Da vidimo primer, da je nekdo šibek na nekem projektnem vodenju, začne sodelovati in začne delati zraven z nekom, ki je projektni vodja in skupaj razvijata kakšne stvari. Tako da ta neka povezanost, vključenost, izpostavljenost, in potem razvijati njihove skillse. Zato sem pa rekla: okrog 10 % imamo tega, da gredo ven, 20 % je mentorstva, 70 % je pa res on- the-job, res na delovnem mestu, z raznimi vključenostmi v razno razne aktivnosti, ne samo službene, tudi od raznih projektov na temo družbene odgovornosti, vse, kar se da, internih dogodkov, itd. Pri nas pridejo kakšni, bom povedala čisto na primeru: Organiziramo kakšen interni event in pridejo fantje in rečejo: »Mi bi pa sodelovali zraven, dajmo skupaj narediti.« Zdaj delamo interno - pripravljamo se na hackathon. Z različnih oddelkov pridejo in tako razvijajo skillse, ko znotraj naredimo stvari – tako, na ta način.

Meta: Zdaj to drugo vprašanje se zelo navezuje na to, ampak se mi zdi, da pojem nadgradnja veščin po angleško, ker so tako ali tako vsi izrazi v tem paketu angleški: upskilling, reskilling, kaj za vas pomeni ta dva pojma? Se mi zdi, da smo se že zelo dotaknile, ampak mogoče samo par besed, kakšne asociacije so trenutno?

Manager 2: Upskilling bi jaz rekla, da je pač dodajanje nekih veščin ali pa znanj. Ko govorimo o reskillingu, bi pa rekla, da je nekaj, kar tudi mogoče nehaš delati, ali pa nehaš uporabljati kakšno veščino ali pa kakšno znanje v resnici ni več potrebno.

Meta: A pa se vama zdi, da je to čisto del delovnega procesa, ali so še kakšne težave pri implementaciji tega, da je to v bistvu del vsakdana?

Manager 1: To je del vsakdana. Dobiš nov tool in moraš.

Manager 2: Ni vprašanje, ali bi ali ne bi.

Manager 1: Soočen si s tem. Soočen si s tem, če ne, ni – ne da se. Mislim, tako bom rekla: Težko zelo sistematično planiraš te stvari, ampak si s samim razvojem in napredkom podjetja soočen

in direktno greš v to. Zdaj, upskilling bi jaz mogoče bolj tako videla - vertikalno, reskilling pa horizontalno na nek način. Upskilling bolj tako razumem, da imaš neko tehnično znanje na tem nivoju, ampak so prišle nove tehnologije, nove spoznanja, nove stvari in to nadgradiš. Ampak v neki vertikali. Reskilling pa mogoče, da imaš na nekem nivoju neko znanje, ampak zdaj ga pa shiftaš na nek drug nivo ali na neka druga področja.

Manager 2: Jaz dam lahko mogoče en primer iz mojega teama lansko leto, kako bi jaz to opisala. Mi smo implementirali en nov informacijski modul, enega smo popolnoma opustili oziroma prešli na drugega. V mojem teamu imam 10 deklet, ali pa 10 žensk vseh petih generacij, se pravi stare od 25 let, vmes in starejše od 60 let. In bom rekla, da so se vse morale temu prilagoditi. Sigurno je šlo mlajšim generacijam hitreje, bolj so bile radovedne, bolj agilne, bolj hitre. Ampak vse so se morale upskillati, da so to osvojile. Po drugi strani pa te mlajše niti niso imele toliko veščin uporabe prejšnjega informacijskega sistema, tako da so mogoče lahko lažje pozabile. Starejše, oziroma te, ki so 20 let ali pa 15 let uporabljale en drugi informacijski sistem so pa lahko pozabile, kako so ga uporabljale, zaradi tega, ker nima veze. In tako mogoče iz tega vidika reskilling. Dostikrat se v pogovorih vračamo nazaj na: »Včasih smo pa to tako delali.« Ja, včasih smo, danes pa več ne.

Manager 1: Ja. Ampak to zdaj recimo govorimo malo o toolsih, pa digitalizaciji, imamo pa tudi mogoče neke situacijske primere. Recimo, če je neka interna reorganizacija, če se mogoče neke funkcije reorganizirajo, pa ne samo na neki lokalni ravni, lahko na globalni ravni v končni fazi, pa moraš začeti sodelovati z nekimi drugimi stakeholderji in je tukaj zdaj zopet reorganizacija, vzameš in živiš s tem in se tekom dela nadgradiš. Mogoče prej ni bilo treba delati kakšnih stvari in nisi bil soočen z novimi izzivi, zdaj pa so novi izzivi, zato boš zdaj mogoče bolj tesno delal s tem businessom ali pa s tistim businessom, ali pa s temi stakeholderji, mogoče boš moral delati takšna in drugačna poročila - in to je konstantno, to je povezano s spremembami in z razvojem.

Nika: Treba se je prilagoditi na tehnološke spremembe in res je pomembno, da vsi, ne samo zaposleni, ampak vsi, konstantno spreminjamo svoje veščine in moramo poskrbeti, da imamo pravilne, zato da se potem lahko nekako soočamo z vsemi izzivi, ki nam pridejo nasproti. Katere veščine se vam zdijo, da bodo v vašem podjetju oziroma panogi najbolj pomembne v naslednjih, recimo, petih letih pa potem mogoče desetih? Vidite to razliko? Kako izgleda prihodnost, kar se tiče veščin?

Manager 1: Mogoče se bolj naslanjam na neko generacijo. Vprašanje generacij. To pomeni za mlajšo generacijo, če gledam zdaj svoje otroke, ki so digitalno zelo, zelo vešči, zelo, zelo spretni, ampak manj spretni pa v nekih odnosih, pogovorih, mreženju, sodelovanju. Vprašanje, o kateri generaciji zdaj govorimo. Zanimivo bo videti to mlajšo generacijo, ki so se res rodili s telefoni, jih pa vidiš, da jim pa manjka teh socialnih veščin. Tako da, definitivno, digitalni skillsi na tem področju, to je tisto, v katero smer bomo šli. Avtomatizacija, digitalizacija, to je to. Ampak to je to tehnično področje in definitivno ne bo in ni več izključno to samo stvar nekih inženirjev,

ampak je to zdaj že stvar tudi preproste administracije, da je potrebna neka večja spretnost. Da je treba že MS-Teams dosti bolj obvladati. Da je treba imeti neko drugo logiko zadaj, večjo spretnost v obvladovanju raznih orodij in tako naprej - digitalnih. Je pa sigurno, meni velik question mark, če nas bo na nek način, do neke mere umetna inteligenca malo zamenjala ali pa nam pomagala z nekimi orodji, kako bomo razvijali te people skills, kako bodo tukaj možnosti? Ali bo, ali ne bo, ker če mi zdaj samo sestavimo orodja vsa, vso digitalizacijo, vso avtomatizacijo, če zadaj ni ljudi, ki sodelujejo, ki imajo neko skupno vizijo, ki se pogovarjajo, ki soustvarjajo nek končni cilj, pa nam nič ne pomaga. Tako da kljub vsej digitalizaciji, vsem tem orodjem, vsej tej, bomo rekli, napredni tehnologiji, so people skills še vedno zelo, zelo pomembni - sposobnost kritičnega razmišljanja, iskanje rešitev, sodelovanje, povezovanje. Ker v končni fazi, podjetje smo ljudje in ustvarjamo neko kulturo, ustvarjamo neko dodano vrednost, ja, s pomočjo orodij, ne z orodji, ampak s pomočjo orodij. Smo pa mi tisti, ki smo še vedno intelektualna bitja in mi prinašamo in mi v končni fazi razvijamo ta orodja. In še vedno je na nas - podjetje smo ljudje. In tukaj nobeno orodje ne bo moglo nadomestiti človeških odnosov. In tukaj se moramo zelo zavedati in tukaj bomo mogli v prihodnosti, zelo, zelo paziti. ker je že tudi primer, tako kot sem rekla, da sem veliko delala na tehničnem recruitingu. Kakorkoli si je neko podjetje želelo močnega IT-ovca, programerja, da je res izkušen na področju. Ampak če se ta posameznik (saj vemo kakšni so programerji, z vsem spoštovanjem) ni znal pogovarjati, ni znal sodelovati, je bil tak, vsaj do neke mere. Saj zdaj ne pričakujemo, da bo to glavni govorec, ampak takoj imamo problem. In tudi tukaj imamo problem, pri nas, na [Company A], mislim problem v tem smislu: Ne bomo vzeli človeka in zaposlili nekoga, ki je samo tehnično zelo, zelo močan, ampak je treba vedeti, da te posamezniki delajo na različnih projektih, z različnimi sodelavci sodelujejo, ne samo lokalno, regijsko, globalno, povezujejo se, treba je znat prezentirati, treba je znati argumentirati, treba se je znati pogajati, treba je znati sodelovati, ne glede na to, kako ti kakšno orodje znaš ali pa ga ne znaš.

Nika: Torej potem tudi pri zaposlovanju gledate na ta balance med mehkimi in trdimi veščinami. Kako je pa pri tem, kar se tiče napredovanja, mogoče na višjih vodstvenih položajih, ali opažate, da se mogoče to razmerje potem nekako začne rebalansirati med mehkimi in trdimi veščinami?

Manager 1: Ne, mi zelo hitro vidimo in tudi posamezniki povejo, ko imajo vodje pogovore s svojim teamom in s posamezniki, kje se vidijo v prihodnosti in tudi sami izrazijo: »Ne, jaz želim pa ostati tukaj, kjer sem, ali pa želim delati bolj ozko usmerjeno, na svojem inženirskem področju, na svojem tehničnem področju, nimam želje po vodenju ljudi.« In tukaj je treba biti zelo previden, da res ne usmerjamo ljudi, ki so tehnično strokovno zelo močni, pa da jim damo ekipo osmih ljudi za voditi, če nimajo te želje. In če ima kdo to željo, pa da vidimo, da je nekdo, ki potegne za sabo ljudi, ki zna inspirirati, ki zna ekipo nekako animirati in vidimo, da ima malo teh skillsov, pa seveda, mu damo možnost: »Ali bi šel v tej smeri?« »Ja, bi šel« »Okej, potem pa glej boš vodil ta projekt, boš vodil ta projekt in potem tako v parih letih peljemo v tisto smer. Samo če vidimo in če sami izkažejo nek interes. Mislim, da je to tudi dober point, Nika. V

končni fazi jaz mislim, da je izredno pomembno v prihodnosti, ja, people skills, ampak tudi leadership skills. Če bomo imeli samo tehnično znanje, pa dobro tehnično znanje, pa dobra orodja… Ampak kdo nas bo pa inspiriral, kdo nas bo pa nagovoril, kdo nas bo pa potegnil naprej, kdo nas bo pa pomiril takrat, ko bo težko, kdo bo pa držal neko celoto skupaj nekega teama. Tako da res ne smemo pozabiti na te soft skillse, ob vsej tej poplavi digitalizacije. Challenge mogoče samo vam nazaj. Pogledamo trgovino, hitre blagajne, vse lahko sam narediš, ampak koliko nam pomeni, če je tista prodajalka tam zraven, pa nam pomaga tisto vrečko držati ali pa pride, pa pogleda, če je vse v redu. Človeški stik, to je še vedno. Zdaj bom pa jaz malo tiho, da bo gospa [Manager 2] lahko kaj povedala.

Manager 2: Mislim jaz se kar strinjam s tabo, tako da nimam kaj veliko za dodati. Tudi ta del, ki sem ga hotela dodati, si ga zdaj nagovorila. Meni se zdi, kar se tiče prihodnosti, izjemno pomembno krepiti veščine prilagajanja spremembam. To se mi izjemno pomembno, ker teh sprememb bo veliko.

Manager 1: Change management!

Manager 2: Znanje, ki ga imamo danes, ali strokovno ali tako, mogoče jutri več ne bo vredno nič. Na drugo mesto bi dala pa vodstvene veščine. Voditi ljudi - ker če imaš prave vodje, znajo in povezati in vzpostavljati zaupanje, in usmerjati in razvijati ljudi. Tako da, jaz bi mogoče te dve ključni kompetenci ali pa veščini izpostavila za naslednjih 5 do 10 let. Kar se pa tiče zaposlovanja, pri nas - absolutno nam je pomemben attitude, se pravi mehke veščine. Mi smo storitveno podjetje. Četrtina podjetja so prodajalci, takšni in drugačni, se pravi ali B2C strankam ali B2B strankam, vedno bolj kompleksni projekti so in imamo na drugi strani vedno neka pogajanja oziroma te pogajalske veščine. Tako da res verjamemo, da se lahko nauči teh znanj ali strokovnega, vsak, sploh če je hodil na fakulteto, ali če ima tak domet, jaz mislim, da se strokovnih stvari lahko naučiš, drugače pa lahko poiščeš, saj imamo zdaj tehnologijo in lahko pobrskaš. Z mehkimi veščinami pa si vzgojen, rojen, lahko se malo še 'upskillaš', ampak v resnici se ljudje zelo težko spreminjamo. Tako da temu področju dajemo vseeno zelo velik poudarek, v smislu kakšen potencial ima posameznik, kje je dober, tako da mi kar veliko testiramo zaposlene, preden jih zaposlimo. S tem da ne nekih klasičnih psiholoških testiranj (razen za top management), ampak mi ugotavljamo potencial bolj na tem nivoju, ali je nekdo pripravljen na spremembe, ali je odprt, komunikativen, ali je bolj posameznik, ki rad dela sam, ali bolj za računalnikom, v smislu: če bo nekaj rabil, ali bo dvignil telefon in poklical, ali bo napisal dolg e-mail. In to, kako je organiziran, koliko rabi strukture, ali je redoljuben, natančen in rabi vedeti vse v piko, ali je bolj na 'free'. To so te štiri stvari, ki so zelo pomembne, poleg tega koliko mu je pomemben team, koliko je individualist, tako da te stvari ob zaposlovanju preverjamo. Tako da je čisto odvisno, v katero vlogo gre, v kakšno okolje. V resnici je zelo odvisno od tega, kaj ti manjka v tistem teamu, v nekem momentu, ker je dobro imeti v teamu vse vrste ljudi. Potem pa je čisto odvisno, če imaš veliko ekstrovertirancev in nestrukturiranih

ljudi, iščeš malo bolj strukturirane, če pa je ravno obratno, pa obratno, tako da je zelo individualno.

Nika: To se mi zdi zelo všeč kar ste rekli – ker je v bistvu res, kajne? Tehnične, torej trše veščine so tiste, s katerimi načeloma pridemo do intervjuja in potem v samem intervjuju so potem 'people skills' tisti, ki se malo bolj izkažejo. Potem pa v vsakodnevnem življenju, v službi, ko delaš, te 'people skillsi' postanejo vedno pomembnejši in tudi raziskave, ki jih imamo vključene v naši magistrski nalogi, kažejo, da potem ko napreduješ po korporativni lestvici, mehke veščine postajajo vedno pomembnejše, tako da zelo zanimivo, kako tudi vidve to opazita v vašem vsakdanu.

Manager 2: Meni je prejšnji teden naš podpredsednik, ki je sicer zelo odprt in za ljudi, in kljub temu, da pokriva socialni steber, ne pokriva pa HR-ja, rekel – 'A veš [Manager 2], mi rabimo ljudi, ki imajo energijo' tako da v bistvu to je tisto, kar je res pomembno, ker ti imaš lahko vrhunskega strokovnjaka – če pa ne bo dal od sebe tiste energije, proaktivnosti, tistega mehkega. Lahko imaš par takih, ne pa vseh.

Manager 1: Pa tudi tako je, to, kar si prej rekla, Nika, – ja, 'people skills', pa mreženje in sodelovanje. En posameznik ne more ničesar narediti. Ničesar. In preden vstopiš v res velik svet, trg dela, ali pa neko podjetje, ko ti vidiš da kot posameznik ne moreš premikati gore in moč je ravno v tem sodelovanju, tukaj je ta dodana vrednost. Da nikoli v življenju; kot en posameznik ne moreš uspeti, če se ne povezuješ, ne pogovarjaš, ne učiš od drugih, če ne daješ in ne sprejemaš, če ne deliš. Impossible! In tega se mladi ljudje v izobraževalnem toku ne učijo, se ne učimo in je škoda. Ampak en posameznik ne bo nikoli v življenju uspel kot posameznik, vedno rabiš družbo. Ve ste tudi tri, a ne? Vedno rabiš družbo, da nekaj ustvariš. Rabiš ljudi, ki te inspirirajo, s katerimi sodeluješ, rabiš ljudi, s katerimi se posvetuješ, rabiš ljudi, ki jih ti potegneš za sabo. Vedno. In jaz mislim, da generalno za družbo, to, kar je tudi [Manager 2] rekla, bo pomembno, da se naučimo tega change managementa – da postane stopanje iz cone udobja nekaj normalnega. Zato sem na začetku vaše vprašanje težko razumela, ker mi smo nonstop iz cone udobja.

Enija: Mogoče tukaj da se navežem na to konstantno učenje, ki smo ga res poudarjali. Pa da se mogoče dotaknemo še malo nazaj upskillinga in reskillinga, ki ste ju prej omenili – imate mentorske programe, to je verjetno že del onboardinga, me pa zanima še konkretno - kakšne specifično aktivnosti delate kot del programov, ki smo jih na začetku razložili, se pravi kot del upskillinga in reskillinga – mogoče kar konkretno te 'on-the-job trainings', kako to poteka, omenjali ste tudi te e-learninge. Imate še kakšne druge konkretne primere? Pa zanima me tudi, kako se potem na drugi strani zaposleni odzovejo. Razumem, da so primorani se prilagoditi konstantnemu učenju, ampak kako ga dojemajo? Ga sprejmejo pozitivno, so se pripravljeni učiti?

Manager 2: Okej, mogoče jaz najprej. Mi poleg e-izobraževanj, raznih videoposnetkov in podobnega; bi mogoče izpostavila, da imamo pri nas uvedeno kroženje in sicer po različnih organizacijskih enotah. Najprej smo to začeli z našimi ključnimi in perspektivnimi kadri, potem je bilo to 'uau, ful dobro, zakaj je to samo za eno peščico ljudi?', tako da smo potem to uvedli za novo zaposlene, zdaj pa v bistvu damo na razpolago tudi ostalim zaposlenim, da si v okviru načrtovanja izobraževanj lahko to omogočijo. Kako to poteka? To je v bistvu ponavadi tako, da traja okrog osem tednov in v bistvu en do dva dni, odvisno kam gredo, so v drugi organizacijski enoti. Gredo npr. vsi zaposleni ven v [Company B] center, gredo v naše klicne centre, gredo s tehnikom na teren, pogledati naše razvojne programe. Skratka, tako nekako je naš program narejen. To je tako nekako naša posebnost oziroma specifičnost, ko se kdaj s kakšnimi drugimi podjetji pogovarjamo, kaj imamo kaj pri nas, drugače itak bolj kot ne počnemo podobne stvari po podjetjih – od mentorstva, uvajanja, udeležb na izobraževanjih (takšnih in drugačnih). Druga stvar, ki bi jo pa mogoče še omenila, kaj imamo pri nas, je pa, da imamo združene različne aktivnosti za krepitev proaktivnosti, inovativnosti, podajanja idej in podobnega. Klepete imamo vsak tretji teden v mesecu – vsak tretji petek v mesecu – online ali pa v živo, skratka tisti, ki je na lokaciji, lahko pride v živo, drugače imamo pa prek Teamsov prenašanje, pa se lahko zaposleni priključijo. Namen klepetov je, da zaposlenim predstavljamo produkte in storitve [Company B]. Ali so to komercialni izdelki, ki jih damo na trg, ali bomo me predstavile kakšen razvojni program, pa se ga lahko zaposleni udeležijo. To objavimo na našem intranet portalu in se lahko kdorkoli od zaposlenih prijavi in to se je v bistvu ful prijelo pri nas – tudi tako pošljejo predloge, katere vsebine bi poslušali – ne vem, zdaj uvajamo chat bote za delo s strankami, pa so v bistvu naši fantje predstavili, kako so jih razvili. Pa še, se pravi, če je ena vrsta klepet, so pa drugo live dogodki - to gremo pa po različnih lokacijah po Sloveniji, ker mi smo pač na vseh možnih lokacijah, ampak vedno pravijo “vse se dogaja samo v Ljubljani, ampak nikoli ne pridete k nam v Mursko soboto”, na primer, tako da ja, gremo po lokacijah in tam razpišemo neko temo, idejo in skupaj z njimi ustvarjamo, delamo 3 do 4 ure, da se počutijo vključene, da lahko prispevajo, nenazadnje pa da se kaj novega naučimo. Tako da mogoče bi jaz danes izpostavila te tri stvari, drugače bi lahko govorila še tri ure o tem, ampak mogoče kot posebnost pri nas.

Enija: Super. Pa [Manager 1], pri vas?

Manager 1: Zdaj pri nas je malo drugačna organizacijska struktura, a ne. Pri nas kot matrično organizirani lokalni HR niti nima te vloge, da bi skrbel ravno za posamezen razvoj določene skupine zaposlenih, ampak mora to bolj delati biznis. Ker mi imamo regionalni HR, potem imamo pa HR kot strateški HR in ta strateški HR je vezan na en biznis, ali na neko biznis divizijo. In potem oni razvijajo, kar je potrebno za tisti biznis. Je pa, bom rekla, zelo odvisno. Mi se na nek način čisto prilagajamo, kaj se trenutno dogaja, redke so neke stalnice, če lahko tako rečem. Ampak ogromno je nekih delavnic, projektov, ki so na osnovi potreb, ki jih imamo. Ne vem, vidimo, da gremo na nek trg, kjer so mogoče neke razmere malo drugačne, in vidimo,

da je treba mogoče neke dodatne skillse razviti. In začnemo delati na tem. Ampak to počnemo interno. To imamo prav določene izobraževalce notri, ki se potem s tem ukvarjajo. Ampak to gre bolj pod strateški HR. Ker če si tako predstavljamo matrično organizacijo, so posamezni segmenti pa divizije biznisa, mi smo pa tako čez. HR BP skrbijo za celotno divizijo, mi pa samo kar je lokalno. Drugače je pa tako, da so pri nas v resnici vodje odgovorni, tisti, ki morajo na nek način definirati, kaj posameznik potrebuje kar se tiče svojega razvoja. In potem ali to poišče znotraj firme, ali poišče mentorja, ali ga vključi v sodelovanje v projekt, ali je to izmenjava pa gredo npr. tudi naši delati določene projekte na Poljsko, pa imamo potem izmenjave. Kot rečeno, vodja je tisti, ki mora definirati, kakšne so te izobraževalne potrebe in dati predloge, ker pozna svoj biznis – kje v biznisu bi bilo potencialna možnost, da vključi svojega podrejenega, zato da lahko potegne ta znanja. Tako da se lokalno niti ne toliko vključujemo, razen ko so neki splošni skillsi, ali pa soft skillsi. Ali pa da jih podpiramo pri teh stvareh. Drugače pa pri nas je tako okolje, da kadarkoli čutimo, da nam nekaj manjka, ali pa da bi nekaj potrebovali, okej, skličemo projektni team in to naredimo. Ampak tako, zelo imamo določene vrednote, katerim sledimo, v katero smer moramo iti, kaj nam je pomembno, ampak če na lokalni ravni ugotovimo recimo, da imamo neke izzive, da se nam nekaj dogaja, okej, damo recimo iniciativo, skličemo projektni team in začnemo pač razvijati določeno rešitev.

Enija: Torej zelo reagirate na neko spremembo?

Manager 1: Tako, tako.

Enija: Sta mogoče pri zaposlenih opazili kakšno konkretno razliko po izobraževanju? Se je mogoče njihova produktivnost izboljšala? Kje vidita mogoče kakšne pozitivne spremembe pri zaposlenih oziroma kakšna je bila posledica tega, da ste uvajali te dodatne programe?

Manager 1: Zdaj tako, definitivno ko imamo neke izobraževalne programe, jaz bolj rečem, da dvigujemo awareness na nekem področju, v tem smislu, potem je definitivno tudi pričakovanje, da ste zdaj na nekem višjem nivoju, kar se tega tiče. Avtomatsko. To smo dali zdaj čez, ne zdaj prihajati z istimi problemi, ne se zdaj vračati. Mi smo zdaj to obdelali, move on, tako rečeno. In to vidimo – mi imamo zelo tako okolje; ali pa če nekdo pride do mene pa reče "joj, mi pa tega nimamo, pa to bi imeli", just do it! Povej, koga potrebuješ, kdo ima to znanje v firmi, dajmo, pa bomo to naredili. Tako da vse živo, mi se lotevamo česarkoli, kar vidimo, da nekaj ni, da nekaj manjka, da bi nekaj potrebovali, okej, kako bi mi to naredili, kako bi mi to zdaj izpolnili. Recimo, jaz sama naredim delavnice, imamo določene sodelavce, ki so malo šibki, kar se tiče zavedanja, kaj so njihove odgovornosti, kaj so odgovornosti vodje – pa smo začeli z določenimi delavnicami na temo, da se ne gremo finger pointinga, da ne kažemo, kdo je za kaj odgovoren, ampak da vsak prispeva po najboljši moči k skupnemu cilju. Delamo različne delavnice na ta način, vse živo se lotevamo, vse živo. Na primer – jaz sem ustanovila en tak leadership club, kjer združujemo vse naše vodje in se pogovarjamo o aktualnih temah, kje imamo kakšne težave, kaj je treba kaj rešiti in tako, ker jih je na lokaciji nekje 50, pa da jih vse skupaj povežem, pa da

jih slišim. In je ena od vodij takrat omenila: 'ja, mi pa zelo slabo razumemo to mlajšo generacijo, kako oni funkcionirajo, kakšne imajo vrednote'. In smo takoj formirali en employee resource group, kjer so se mladi do 30. leta povezali in z različnimi projekti tukaj pri nas soustvarjajo kulturo, ravno zato, da povezujemo ljudi. Tako da veliko delamo na takih stvareh, zelo na teh neformalnih stvareh. Ali pa pride do nas kakšen vodja in reče 'ja, s timsko dinamiko imam malo težave, joj, dajmo kaj narediti', pa jim naredimo kakšno delavnico in tako naprej. Ampak so zelo tako, tisto, kar je globalno določeno, regijsko določeno, to stoji. Lokalno se pa zelo odzivamo, vidimo, kaj se dogaja, kakšen je barometer, kje imajo težave ljudje, kaj težko sprejemajo, česa ne sprejemajo in tako. Zelo pa skrbimo, da karkoli novega vpeljujemo, da to ne pushnemo okoli, sam predstavimo in nas briga, kako bi to živeli, ampak en kup, to se pravi, ali so to neki članki, treningi, predstavitve, dan odprtih vrat, urice, kjer lahko pridejo vprašat. Tako da zelo delamo na tem, da preden pričakujemo, da bodo ljudje samostojni na nekem področju, da mi zelo veliko investiramo. Zelo veliko investiramo, da jih pripeljemo do neke točke, potem pa dvignemo roke, zdaj pa, imaš navodila, imaš članke, imaš to in to, bil si na treningu, it's time, use it. Tko da zelo se pa lokalno odzivamo, kar so trenutno neke potrebe ali pa kjer vidimo, da nam nekaj škripa.

Manager 2: Jaz mogoče bi tukaj dodala to, kar si, Enija, prej vprašala glede teh učinkov ali pa odzivov po izobraževanjih. Mi delamo zelo različne meritve, takšne in drugačne, po izobraževanjih ali pa vsakršnem koli dogodku pobiramo feedback ali pisno ali že ko delavnico zaključujemo, ali v končni fazi z Mentimetrom in podobno, ali pa merimo vitalnost kulture in podobno, in lahko rečem da pri nas je področje izobraževanj in usposabljanj zelo visoko ocenjeno in v bistvu ena bolj, oziroma, lahko rečem, top ocena. Skratka, zaposleni imajo občutek in priznavajo, da se res lahko veliko izobražujejo in usposabljajo in da imajo prostor, tako da glede tega bi rekla, da so zelo zadovoljni in da so feedbacki dobri. Tudi ko merimo različne kompetence in veščine, imajo občutek, da po nekem izobraževanju lahko delajo nekaj lažje ali bolje. Tako da absolutno stalno poskušamo komunicirati predvsem vodstvu – in seveda imajo posluh do tega, ampak ves čas je treba to imeti v intonaciji v smislu, da izobraževanja in usposabljanja niso strošek, ampak investicija in to poskušamo peljati naprej, tako da se tudi trudimo – tudi KPI število izobraževanj zaposlenega je eden naših ključnih KPI-jev, ki jih poročamo tudi našim lastnikom, tako da je to v ospredju.

Enija: Super. Ker se že zelo bližamo eni uri, pa da ostanemo v tem časovnemu okvirju, mogoče še zadnje vprašanje. Kaj so vajini plani v prihodnosti glede nadgradnje veščin oziroma programov nadgradnje veščin, ali pa če mogoče vprašam še malo drugače, pa da združim dve vprašanji – če ne bi bilo ovir, finančnih in časovnih, kaj bi bil vajin idealen program izobraževanja oziroma nadgradnje veščin zaposlenih v prihodnosti?

Manager 1: Moj bi bil definitivno, da bi lahko individualno, res individualno vsakemu naredili program, ker zdaj v tem trenutku ne moreš, fizično ne gre. Ampak res vsakemu posamezniku, res detajlno pripraviti program, kar bi bilo v nekem idealnem času, z idealnim budgetom (smeh).

Ki ga ni nikoli, vedno ga je premalo. Ampak to – da bi res lahko imeli idealni pristop do vsakega posameznika, to bi bilo zelo lepo.

Manager 2: Ja, to bi bilo zelo super. Jaz bi tukaj dodala še eno idejo, ki smo jo mi imeli pred sedmimi leti, ampak to je bilo res del brainstorminga – idealni svet leta 2050, tako da do takrat je še čas, da bomo to imeli, ampak tisto kar bi si jaz želela poleg tega, da bi imeli individualne plane, je, da bi mi imeli kot [Company B], nekje na Bledu, ful super truper ambient, ki bi mu rekli training center, ki bi združeval well-being na eni strani, se pravi od dobrega počutja, obvladovanja stresa, od športnih aktivnosti, hkrati bi pa pridobivali še strokovne in mehke veščine zraven; in da bi si lahko vsak od naših zaposlenih za tri tedne to privoščil in bi ga tja usmerili. To je pa tako, res idealno, ampak to je bilo res enkrat pred sedmimi leti, ko smo ravno na glavo postavljali kadrovsko strategijo, pa smo že takrat ven metali tiste futuristične ideje, ampak še vedno si želim, da bi to imeli.

Enija: No, saj to je taka sanjska ideja za na konec in res upam, da vam do leta 2050 to uspe.

Manager 1: No, ker jaz bi pa tukaj mogoče še dodala – jaz bi si pa želela, da imamo čim manj formalnega izobraževanja, ampak da razvijemo našo kulturo, da ljudje znajo poiskati tisto, kar potrebujejo in da znanje med sabo delijo. Da je čim manj tega formalnega – zdaj pa ti tega nekam pošlji, pa mu nekaj delegiraj; ker to je povezano z reševanjem problemov, a ne, iskanje rešitev – to pomeni, ko nečesa ne veš, in vedno nekaj bo, ker gre razvoj tako hitro, da znaš dvigniti roko, znaš poiskati človeka, da znaš vprašati, da znaš reči, da znaš sam deliti znanje, to – da se učimo čim bolj  kulture, da se učimo drug od drugega. Da znamo poiskati in se učiti drug od drugega. Ker to je potem tisti lifelong learning, a ne.

Enija: Ja, super, ne. Super odgovori, dali sta nam super insighte, tako da res najlepša hvala za vajino udeležbo, res smo hvaležne! Saj smo se že prej z [Manager 1] pogovarjale, da bomo naše analize po tem, ko napišemo magistrsko, vse delile, tako da boste tudi vi mogoče lahko izkoristili dobre rezultate, mogoče za sanjski svet 2050. Tako da ja, najlepša hvala za vajino sodelovanje, zdaj pa mogoče, ker je ura že toliko, da vaju spustimo in ne obremenjujemo več. Tako da še enkrat hvala, pa lep dan vama želim.

Manager 2: Ja, hvala enako, pa veliko uspeha pri zaključku naloge.

Manager 1: Ja, hvala vsem trem za povabilo, da ste prisluhnile, in vse, vse dobro tudi naprej. Tako da če boste še kaj potrebovale, se pa kar oglasite.

Manager 2: Tako je.

Enija, Nika, Meta: Najlepša hvala, adijo!

Manager 1: Srečno, čav čav!