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QUALITATIVE
ASSESSMENT
OF EMPLOYMENT
BARRIERS

2023

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INTRODUCTION

The main aim of the PAITool project is to develop and test new flexible opportunities for VET on Artificial Intelligence, which will support SME staff in adapting to and enacting digital transformation.

The motivation of PAITool is thus to strengthen the competitiveness of European SMEs, by facilitating the increased uptake and integration of AI systems and tools in business practices. This involves upskilling the European workforce with appropriate digital skills and competences in the field of AI to promote the digital transformation of European SMEs.

In line with this, PAITool is interested in assessing the challenges faced by unemployed people when seeking jobs, focusing on low-skilled or medium-skilled workers who need reskilling or upskilling to adapt to advancements in AI and automation, to assess why opportunities for upskilling are not being exploited.

This report will thus provide a background to the study on employment barriers in Slovakia and Malta. It will also summarise the results of the qualitative assessment carried out in Slovakia and Malta. The study was carried out by the Slovak Center for Digital Innovations (SCDI) and AcrossLimits, based in Slovakia and Malta respectively.

BACKGROUND TO THIS STUDY

As part of the Qualitative Assessment of Employment Barriers carried out in the PAITool project, desk research was carried out to better understand the situation in Slovakia and Malta. This focused on challenges faced by people who are seeking employment, as well as the skills needed to enter the labour market today.

CHALLENGES IDENTIFIED IN SLOVAKIA

The main challenge has been the lack of qualified workforce, rather than high unemployment. Unemployment in Slovakia fell to the lowest level of the year in October 2023. The indicator of unemployment reached 3.90% and fell in all regions. The number of vacancies in October 2023 was 81, 344 (83, 964 in September 2023). More information about this can be found on https://www.upsvr.gov.sk.

The second challenge, still persistent, is the "brain drain", i.e. the outflow of skilled and talented human capital to foreign labour markets. As one of the countries in Europe most affected by youth emigration, Slovakia has been haemorrhaging its best and brightest for decades - and the trend doesn't show any signs of slowing down. About 17% of students from Slovakia are enrolled in a university abroad, the highest rate after Luxembourg among OECD countries, where the average stands at less than 3%.

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Out of a population of almost 5.5 million, "the general consensus is that between 300,000 and 350,000 Slovak citizens currently live abroad, irrespective of the purpose, length or legal form of their stay", according to migration expert Boris Divinsky. More information about this can be found on <u>BRAIN DRAIN – BRAIN GAIN: SLOVAK STUDENTS AT CZECH UNIVERSITIES</u>.

In recent years, however, another challenge has come to the fore - **labour market disparities** arising from a mismatch between the supply of graduates leaving education in disciplines that are not in demand on the labour market and the demand of employers.

These result in unmet skills and educational requirements of future employees, as well as a negative impact on employment. This significantly limits the exploitation of the economic potential of the Slovak Republic, increases the costs for employers to train new workforces that could be used for further development and wage growth and ultimately causes distrust in the country's education system.

According to the Labour Market Development Forecast II of the Ministry of Labour and Social Affairs of the Slovak Republic of 2020, there is a mismatch between the expected knowledge, abilities, skills and educational attainment of future employees and the jobs on offer.

Main findings of the forecast:

- Up to 70% of job opportunities will be in secondary education positions, where labour shortages will also be greatest.
- Overall, the highest shortages of suitable labour in secondary education positions will be in sales, finance, engineering and social workers, assistants and carers.
- In these clusters of occupations and fields of education, the shortage of graduates entering the labour market is expected to exceed 10,000 in the period 2020-2025.
- Of the graduates, there will be shortages in the future, particularly in healthcare, accountancy and IT.
- Conversely, there will be a significant surplus of university graduates in hotel management, business economics and management, journalism, psychology, arts, culture and international relations.

The forecast shows the importance of aligning the lifelong learning system with labour market needs. It is also necessary to remove the barrier of lack of accommodation or rental housing, which often discourages job seekers from looking for work outside their region of residence.

In today's rapidly changing world, the lifelong learning system must reflect both current and future labour market needs. This link has long been dysfunctional in the Slovak Republic and the education system has thus often developed in isolation, without a link to developments on the labour market.

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CHALLENGES IDENTIFIED IN MALTA

The first challenge identified in Malta is the workforce shortage. According to the Central Bank of Malta, labour market slack hit a new low during the first quarter of 2023, and the unemployment rate stood at 2.7% according to the National Statistics Office (NSO).

The unemployment rate has stood well below 5% since July 2016. With a scarcity of domestic workforce, Malta has become increasingly dependent on immigration to fill in the workforce gap at an accelerated rate. In 2022 alone, the foreign workforce grew by 20,575, rising to a total of 96,970 according to JobsPlus. This in total represents a third of the workforce, which totalled 290,955 at the year in question.

The second challenge is linked to a skills gap when it comes to firms struggling to find specialists. Since 2014, the number of companies struggling to find ICT specialists in Malta doubled from 6% to roughly 12% in 2022 according to the European Foundation for the Improvement of Living and Working Conditions (Eurofound), the highest discrepancy in Europe.

Despite a high employment rate among graduates in Malta (92%), results from an ICT Skills Demand and Supply Monitor report revealed that the number of ICT students is not increasing proportionally to meet this demand.

Coupled with the rapid development of technology, it also observed a lag between the skills that are supplied by educational institutions compared to what is needed by industry.

The skills gap is widespread. According to the September 2023 Eurobarometer, 87% of surveyed Malta's SMEs indicated struggling to find applicants with the right skills.

The third challenge is that of a very high overall mismatch between workers' skills and their occupations. The national skills survey conducted in 2022 found that 83.7% of workers with post-secondary education experienced horizontal and/or vertical mismatch.

Vertical mismatch occurs when the level of education of the individual does not match their qualification. This type of mismatch is prevalent among 54.3% of Malta's postsecondary workforce. Overall, 35.1% indicated being over-qualified for their job, while 19.3% were under-qualified.

Meanwhile, horizontal mismatch occurs when there's a discrepancy between the person's current occupation and their field of education based on the highest level of education that they attained. Overall, 47.6% indicated being employed in a field different to the one they studied.

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The mismatch rate increased as the age of the demographic was assessed, and was also higher among tertiary-educated students.

The data indicates that not only is there a strong demand for workers, especially those skilled, but there is also underutilised potential with more than four in five workers being in some way mismatched with their current occupation.

SKILLS NEEDED TO ENTER THE LABOUR MARKET (SLOVAKIA)

Within the framework of the questionnaire survey called <u>Skills for the future of a competitive labour market</u> carried out by the Republican Union of Employers in 2021, a total of 552 respondents, mainly employers' representatives, determined the degree of importance of 19 skills in the conditions of the Slovak Republic in the present and future. The aim was to find out which key skills should be possessed by persons in the labour market in the future to be able to adapt effectively to constantly changing conditions under the influence of constantly evolving new technologies.

The survey was based on a study by Mckinsey & Company entitled 'Defining the skills citizens will need in the future world of work'.

The 19 skills were grouped into 5 areas: Cognitive, Digital, Interpersonal and Self-leadership.

Of these, respondents consider Digital Skills (81.1 out of 100 points) to be the most important by 2030. This is followed by Interpersonal Skills and Cognitive/Cognitive Skills.

Skill Area	Skill	Partial Skill
Digital	Digital skills	Virtual collaboration Digital ethics Digital learning Digital literacy
	Software usage and development	Computational and algorithmic thinking Data analysis and statistics Programming literacy
	Understanding digital systems	Cybersecurity literacy Data literacy Intelligent Systems Translation (presentation) of a technical solution into spoken language

Source: Skills for the Future Competitive Labour Market (2021)

When comparing the change in the importance of specific skills in the present and future, the highest increases were in **Environmental Literacy** (18.4% increase in need), **Foreign Language Proficiency** (17% increase in need), **Understanding Digital Systems** (16.1% increase in need), and **Digital Skills** (15.6% increase in need).

The authors conclude that the skills under study will be a huge challenge for the education sector. This is because it is this sector that is responsible for preparing the future skilled workforce to minimise disparity in the labour market. This effect will also be felt with a 5-year lag for students entering the first year of secondary or higher education.

In formal education, the authors argue that curriculum reform is needed. In the context of further education, it is necessary to develop a **scheme for effective financial support for corporate training at the employer level.** At the same time, it is necessary to adapt the **education of unemployed persons in cross-cutting skills/competencies** that will increase their flexibility and employability in the labour market. In this area, it will also be necessary to introduce a system for verifying the effectiveness and quality of the training provided.

The older study was the Employers' Experience with employing highly qualified, low-to medium-skilled graduates in the Slovak labour market from 2018 conducted by CELSI (Central European Labour Research Institute). The study was part of the project It Makes Sense as part of a broader evaluation of the education system in Slovakia and the link between education and labour market requirements.

The authors conducted 42 qualitative semi-structured interviews with representatives of employers and recruitment agencies, mainly specialists in HR and human resources, to find out the desired profile of employees/job seekers

According to more than 90% of the respondents, the following criteria are the most important (quite important to key) when selecting employees for highly qualified positions: **ability to learn** (95.9%), **communication skills** (95.2%), **motivation** (91.8%), **ease of working with computers** (90.4%) or **ability to work in a team** (90.4%).

According to company representatives, **professional knowledge** (87.6%), **the ability to adapt quickly to change** (86.3%), **analytical thinking** (79.5%) and **knowledge of world languages** (76%) are also very important. Interestingly, respondents rank **industry experience** (only 56.2% consider it very important), **formal education** (42.5%) or **professional certifications** (33.8%) among the aspects with lower priority in hiring.

When comparing the extent to which graduates meet employers' expectations in each criterion, the predominant response among respondents in terms of highly skilled positions is **partially met**.

More than 64% of respondents agree on this for the criteria and requirements they rate as important to key. Interestingly, for formal education, which is considered less

important by respondents, graduates meet expectations fully for up to 53% of respondents and 37.3% think they meet them partially. Similarly, graduates' expectations and evaluation meet for simple computer work, where 50.7% of respondents think that graduates meet them and up to 45.6% think that they meet them partially. Graduates meet one of the most important criteria, the ability to learn, according to only 35% of respondents and 60% of them think they partially meet it. More than half of the respondents consider work experience in the field to be important, but up to 51.2% say that graduates do not meet their expectations.

In the case of employers' requirements in terms of the formal education of applicants for highly skilled positions, the authors found from the data analysis that in the vast majority of cases, graduates meet the expectations of the organisations. However, employers commented that formal education is not a key criterion when selecting a new employee. Companies value relevant and longer-term work experience more than formal education. They are also willing to hire candidates with a high school diploma for highly skilled positions if they have interesting career experience. Although firms have not made explicit requirements for formal education, they consider graduates with a second degree to be the most interesting candidates for highly skilled positions. Most companies did not mention specific requirements in terms of certificates or certifications.

Several employers in the IT field require certificates or certifications in programming languages (JAVA Developers) or working with a specific type of database (SAP, SQL) or software, in case the candidate is a graduate and has no previous career experience.

In terms of the reasons for recruiting candidates with higher vocational education for positions where a lower level of education would suffice, the authors primarily focused on the data analysis on recruiting candidates with a second level of university education for positions where a first level would suffice. In most cases, firms do not hire applicants with a higher degree for positions where a lower degree would suffice. However, firms that indicated that they do recruit graduates with a second degree for positions where a first degree is sufficient to do so mainly because they consider graduates with a higher degree to be more personally mature, but also because there are enough graduates with a second degree applying for positions for a first degree and firms have a wide range of graduates to choose from.

The latest research presented focuses specifically on women as a reservoir of skilled labour and hidden potential, particularly in the ICT sector.

According to the report WOMEN IN ICT published in 2021 by Ženský algoritmus, o.z., despite the increase in the proportion of women employed in ICT, Slovakia remains below the EU average with 15.8%. However, women represent up to 45% of the Slovak workforce and most of them have a university degree. They are an abundant source of educated labour in the emerging ICT sector, which lacks specialists.

The report also includes a survey of a sample of 20 women in managerial positions in

ICT, who were asked anonymously about the obstacles they have had to overcome in their careers and the factors that have helped them. In doing so, they assumed that given the target group of women ICT managers who had reached a senior position, they would be unable to identify the obstacles in case they did not have to overcome them. The most common response was that they had no barriers in line with expectations.

The second and third most common responses were organisational barriers and barriers associated with the female gender.

They considered their personality characteristics and abilities to be the most important reasons for their success. Among the specific qualities that contributed to their success, **goal-orientedness**, **diligence**, and **responsibility** emerged most frequently.

Working in a supportive environment is an important determinant of having women in ICT corporate management in common. Low permeability and strong hierarchical boundaries are already identified barriers to entry for women in ICT managerial positions, or we can say for IT work in general.

SKILLS NEEDED TO ENTER THE LABOUR MARKET (MALTA)

Malta's ICT sector is expected to grow by 21.9% from 2020 to 2030 according to the European Centre for the Development of Vocational Training (Cedefop). Meanwhile, the share of people in Malta with basic computer skills stood at 77% in 2022, according to preliminary results from the Malta Skills Survey.

Taking a closer look at the age groups, it was revealed that only 7% of individuals aged 15-24 had no computer skills at all. However, this figure increased to 36% among 45-to 64-year-olds.

The 2021 ICT Skills Demand and Supply Monitor report is the result of a survey carried out by the eSkills Malta Foundation. It gathered responses from 182 individuals, with the goal of guiding and informing educational institutions in the development of ICT-related training as well as guiding new and existing ICT professionals on developing trends in order to stay relevant to the market.

The Foundation is made up of a number of Government entities and industry and education representatives.

The findings were spread into five main categories;
1. Demand & Supply
2. Education,
3. Training, skills and certification
4. Professional bodies and profession recognition
5. Technologies

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The report noted that the majority of Malta's current ICT workforce is composed of software developers, DevOps experts, technical specialists, service support professionals and system administrators, however, demand organisations (ICT companies, CIO offices, ICT departments and units) were finding it difficult to source staff.

Furthermore, advancements and increased adoption of emerging technologies have increased the demand for specialised professionals, and also a majority of respondents mentioned that University graduates needed additional training to meet the demands of the job.

Aside from requiring additional training, however, demand for ICT professionals is not sustainable when considering the local ICT student pipeline. Tertiary education providers even expressed concern that interest in ICT-related studies has been in decline.

In spite of potentially waning interest in tertiary education, the report noted an increased demand for skills and certifications for cloud technologies, artificial intelligence, machine learning, vendor-specific technologies and software development. Yet the lack of specialised resources on the job market has led organisations to key responsibilities to existing ICT staff, leading to a skills mismatch.

The report also noted that demand organisations had limited plans to expand their learning and development offerings for their ICT employees. However, a large number of organisations were planning to shift toward cloud and DevOps tech in the future.

The report also explored which roles were difficult to find suitable candidates for due to lack of skills, training or experience. In that regard, developers, test specialists, cybersecurity specialists, DevOps experts and scrum masters topped the list, with 14% of respondents finding difficulty for each of those roles.

The most adopted programming languages were Java and SQL (45%), followed by HTML/CSS and JavaScript (41%), whereas in terms of web frameworks, ASP.NET Core was the dominant technology used, being adopted by 27% of respondents.

As for servers, Microsoft SQL Server and MySQL were identified as the most highly adopted technology, being used by 41% of respondents. Furthermore, another 5% indicated making use of Microsoft SQL Server in the future.

When looking at the adoption of cloud and virtualisation technologies, the report clearly demonstrated that demand is strongest for Microsoft Azure. 47% of respondents reported making use of that technology, with another 5% anticipating making use of it in the future. Google Cloud came in second with 37%.

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Meanwhile, respondents identified artificial intelligence and machine learning, big data & analytics, blockchain and ledger technology, and also Internet of Things among the top emerging technologies in the next 1-3 years.

Looking closer at the requirements for demand organisations, they identified big data & analytics as the technology with the most interest (12%).

Demand organisations also addressed soft skills. 39% of respondents expressed that problem-solving skills were very important, followed by teamwork (38%), critical & analytical thinking (36%), and the ability to multitask, prioritise and manage tasks (36%) as the most important soft skills to have.

From these skills, the ability to multitask, prioritise and task manage was most absent from hires who were graduates (32%). The lack of ability in the other aforementioned skills was also absent in more than a quarter of new graduate hires. Meanwhile, the lack of these skills in the current workforce was to a lesser degree, ranging from 13% for teamwork, to 18% for problem-solving.

RESEARCH CARRIED OUT DURING THE PAITOOL PROJECT

Interview questions

The interviews centred around the following five questions:

(1) Can you recount some of your experiences working with individuals who are unemployed or employed in positions inadequate to their level of education? What barrier do you think they find most difficult to overcome when trying to find a job?

(2) What initiatives do you already have in place to help them overcome these barriers? What have been the results so far?

(3) Do you think that if they were to have a tailor-made workshop which focuses on the most needed skills for digitisation and AI, it would be helpful? Can you recommend any best practice of conducting upskilling IT workshops (in terms of format, structure, learning method, etc.)?

(4) What skills do you feel that individuals need to acquire first to find a better job? Why do you think so?

(5) Can you offer any general advice for individuals who are looking to upskill?

INTERVIEWS - SLOVAKIA

In June 2023, SCDI carried out a series of interviews with selected representatives of organisations from the public, private and not-for-profit sectors that fall under one of the following categories:

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- Works with job seekers
- Provides IT training
- Places suitable candidates in IT positions

The interviews aimed to identify barriers to employment in the labour market specifically in the IT field for people, especially those with higher education (HE). The responses of the respondents are recorded in the table below.

Question 1
Can you recount some of your experiences working with individuals who are unemployed or employed in positions inadequate to their level of education? What barrier do you think they find most difficult to overcome when trying to find a job?

Respondents' answers	
Office of Labour, Social Affairs and Family, Zvolen	- Expectation of high salary conditions - Reluctance to adapt to the labour market - Insistence on meeting all their conditions, and if even one is not met, they will refuse the job - Lost work habits
Synculario j.s.a. (personal agency in IT)	- Most often in IT it is the lack of project/work experience (juniority)
TITANS freelancers, s.r.o. (outsourcing of freelancers for the IT projects)	- When placing people in IT projects, especially in senior positions, they must already meet the requirement of experience in similar projects and also have a personality profile: be reliable, be able to communicate and appreciate the opportunity offered - Candidates for more junior positions tend to be hindered by their personal approach: interest primarily in their own comfort, lack of humility, poor market insight, lack of experience
Ženský algoritmus, o.z. (provision of IT training)	- Lack of experience - Lack of self-confidence - A poorly developed CV, not reflecting their professional ambitions - A small network of professional contacts - Absence of a LinkedIn profile - Discrimination at interview, inappropriate questions, unconscious prejudice - Few skills required by the current labour market - Low ability to present oneself and 'sell oneself'

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Question 2
What initiatives/programmes/projects do you already have in place to help them overcome these barriers? What have been the results so far?

Respondents' answers	
Office of Labour, Social Affairs and Family, Zvolen	- Advice for jobseekers - The opportunity to take retraining courses
Synculario j.s.a. (personal agency in IT)	- Internship for students within Synculario, but also 26HOUSE (several students received job offers from us after completing their internship, as well as offers from the market if they did not continue their studies)
TITANS freelancers, s.r.o. (outsourcing of freelancers for the IT projects)	- We can prepare candidates for IT projects - we give them recommendations, i.e. feedback on where they need to improve - The candidate goes through several rounds and eyes, we monitor every detail to get an overall picture of them (e.g. did they finish school or not; if not, why?)
Ženský algoritmus, o.z. (provision of IT training)	- Back In Business for mothers returning to work after maternity leave - 150 trained, 110 of whom have successfully returned to their original job or found a new job or started a business - Leanin.sk/back-in-business

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Question 3

Do you think that if they were to have a tailored workshop which focuses on the most needed skills for digitalisation and AI, it would be helpful? Can you recommend any best practice of conducting upskilling IT workshops (in terms of format, structure, learning method, etc.)?

Respondents' answers	
Office of Labour, Social Affairs and Family, Zvolen	- Depends on the attitude of the client and also on the trainer's ability to attract and gain their attention - Depends on the job offered, as not every job requires the same level of digitalisation
Synculario j.s.a. (personal agency in IT)	- Helped, but to what extent is hard to say. The problem with AI is that it's not currently very widespread and implemented yet, so it's not one of the skills that will determine adoption/non-adoption. However, any self-learning activity/proactivity helps them with their "image" as an applicant
TITANS freelancers, s.r.o. (outsourcing of freelancers for the IT projects)	- For senior positions, workshops/courses are not attractive, here practical experience from IT projects is required - For more junior positions (entry level positions), completing the course may help, but the overall profile of the candidate, their "track record", which is of interest to the employer, is essential. I.e. does he have "notches" around IT, has he already programmed something somewhere, has he been part of a startup, has he participated in a competition, etc.
Ženský algoritmus, o.z. (provision of IT training)	- Yes

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Question 4
What skills do you feel that individuals need to acquire first to find a better job? Why do you think so?

Respondents' answers	
Office of Labour, Social Affairs and Family, Zvolen	- Oral and written communication skills - Independence - Responsibility - Discipline - Reading comprehension - Basic computer skills - Why do we think so? Work experience
Synculario j.s.a. (personal agency in IT)	- Depends on the position. Hard skill / soft skill. - We recommend working mainly on soft skills, demonstrating a great deal of self-learning, a "growth mindset", and doing your own projects along the way, unless you're working somewhere, interning, etc.
TITANS freelancers, s.r.o. (outsourcing of freelancers for the IT projects)	- We have the Pareto rule: 20% of candidates meet the required profile (experience, personal approach) and 80% of candidates are rather younger people who have big eyes, little IT experience, little knowledge of the issues, want only a side job, have no loyalty, do not value the opportunity. -Therefore, the most important thing is the attitude of the individuals (see answer to the next question)
Ženský algoritmus, o.z. (provision of IT training)	- Skills for the 2025 labour market according to the World Economic Forum and it's a mix of hard and soft skills - Digital skills - Critical thinking and working with information - Communication - Collaboration

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Question 5

Can you offer any general advice for individuals who are looking to upskill?

Respondents' answers	
Office of Labour, Social Affairs and Family, Zvolen	- Initiative - They must have a clearly defined retraining objective and a predetermined occupation
Synculario j.s.a. (personal agency in IT)	- "Seek opportunities, educate yourself, network, ask a lot of questions of everyone around you, find a mentor and thus accelerate your growth". They will reach the goal they need faster
TITANS freelancers, s.r.o. (outsourcing of freelancers for the IT projects)	- To be active in the direction they want to pursue -To be part of a project -To code something on their own -To attend courses (or more) -To have other activities - including volunteer activities -Most importantly to have drive, to value the chance offered and to be reliable
Ženský algoritmus, o.z. (provision of IT training)	- Willingness to learn, curiosity - Purposefulness - Ability and willingness to invest time, resources and energy in self-development - Have strong reasons for retraining that will drive them not to give up in the middle - Find a mentor from the profession - Learn English

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INTERVIEWS - MALTA

In June 2023, AcrossLimits carried out a series of interviews with selected representatives of organisations from the public and private sectors that fall under one or more of the following categories:

- Works with job seekers
- Prepares young adults for the labour market
- Has a background in Human resources
- Works on educational programmes and/or applications to help transition to the labour market

The interviews aimed to identify barriers to employment in the labour market, particularly in the IT field.

The responses of the respondents are recorded in the table below.

Question 1
Can you recount some of your experiences working with individuals who are unemployed or employed in positions inadequate to their level of education? What barrier do you think they find most difficult to overcome when trying to find a job?

Respondents' answers	
University of Malta lecturer in Faculty of Economics, Human Resources Specialist	- From HR perspective, important to look at the potential of the person to grow, learn and develop based on their previous work experience - When someone is employed in positions inadequate to their level of education, they either start to lose confidence in themselves, or they try to impress, to compensate for their shortcomings - Most difficult barrier to overcome: required background or knowledge to use in that work position - How an HR manager can help: training with a defined objective and evaluation of training OR in-house job shadowing (coaching/mentoring) - With online working, harder to conduct mentoring - In general, one needs to adapt to the cultural change of working from home in certain jobs

Question 1 (continued)	
Woman Entrepreneur in educational applications	- Has spent 20 years working in and focusing on employment and employment issues, upskilling, mainly in South Africa, Botswana and the DRC. - Most difficult barriers to overcome: where to find the opportunity (online, in newspapers, job portals...); finance (socioeconomic issues in the country); what to actually study - Counselling services are available in South Africa, but not for free. Limited career counselling in schools
2 Jobsplus employees	- Clients who are graduates but who don't find the 'right' job for them ex. Not matching their salary expectations - Many clients prefer registering for jobs until they find their ideal job - Even when a job matches a degree, clients may not always agree with the working conditions - Some degrees/qualifications don't exactly fit in with current labour market needs, so people would take on administrative work instead - Some people prefer having a less taxing job because they have problems at home, or because they want a healthier work-life balance - Some clients have had very stressful jobs in the past and are now looking for a more relaxing job, even if it doesn't match their level of education - Some people go into a career without knowing what it entails, and end up opting for a different lower-level job because they cannot cope - Important to have more awareness of what your course/certificate can lead you to - need for guidance - Barriers/obstacles: lack of qualifications; being qualified but not liking your job; IT barrier (especially for older generations); not everyone likes change; being pushed by other people to find a job quickly; salary issues; less flexibility because of family commitments

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Question 2

What initiatives/programmes/projects do you already have in place to help them overcome these barriers? What have been the results so far?

Respondents' answers	
University of Malta lecturer in Faculty of Economics, Human Resources Specialist	- Introduced a system in one of the University courses which is a study unit called Work Placements/Work-Based Learning. Each student needs to find a workplace related to their studies and work free of charge for a no. of hours. Logistics and objectives to fulfil are agreed to by the student and the employer. At the end, reports of the experience are produced by the student and the employer. This initiative helps students prepare for worklife, and feedback is gathered from employers to keep in touch with the labour market. - With the Work-Based Learning initiative, students are often offered a job after their studies, making the transition from academia to the business world easier - The Work-Based Learning also involves writing a CV to the placement provider. - 2nd initiative: taking the students to Brussels every year to see what opportunities are out there - 3rd Initiative: Erasmus+ mobility opportunities, including the Blended Intensive Programme (lectures +presentations)
Woman Entrepreneur in educational applications	- AfricaX (my previous company) was initially designed as a B2B training and upskilling, tailoring those solutions for corporates as was needed before the pandemic - E4Me (to be launched soon) is an app which we've been developing. Individuals do a very quick questionnaire related to employment and/or entrepreneurship. It's available in African languages, since a lot of career counselling is usually just available in English. The app gives you your strengths and creates a tailored map, a plan for your next 6 months, with suggested courses. Certificates are issued according to the courses attended. The next step is the graduate and accelerate programme, with coaching, mentoring, job interviews, CV, and a jobs portal. - Full spectrum of the individual's strengths, with skills matched to opportunities.

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Question 2 (continued)	
2 Jobsplus employees	- Schemes at Jobsplus to help both our clients and the employer - Work Exposure Scheme: we pay for the first 6 weeks, and the client continues to receive benefits. Like a training period while they are still registering with us. Client and employer are testing to see if the job is suitable for them. After 6 weeks, the employer can employ the client if all is well. - A2E (Access to Employment) scheme: A job with an Engagement Form, funded by the EU. There are different nomenclature for eligible persons (ex. People with a disability, people over 50...) The employer pays the normal salary, and from the side of Jobsplus, they get half of the minimum wage for full-time employment/part-time employment. Incentive for employers to try older people out. - Training Pays Scheme: a person applies for a course, pays for it, and if they pass the course, Jobsplus pays them back 75% of the cost of the course - The Government offers the Get Qualified scheme which is more related to education and working people, but Jobsplus is not involved in this. - Jobsplus organises seminars for its clients, inviting different speakers and employers to motivate them and explain about the current labour market needs. - Guidance services, especially for youths (ex. Careers days; mock interviews; explaining about Jobsplus services) - Encouraging people such as women out of work to attend Lifelong Learning Courses (free for unemployed people; 36 Eur a year for employed people) - Mock interviews with clients, giving feedback. Training them for both face-to-face and online interviews. - Career tests - questions to respond, then a report is generated which suggests the types of jobs that are suitable for the person. Offered to the age of school leavers and above - We need to prepare for this shift towards AI to reduce the number of jobs lost. - Important to promote reskilling, even in companies - To help this shift, education also needs to work in such a way that youths are equipped with the skills to work. Education needs to work in parallel with the labour market. Technology subjects need to become compulsory.

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Question 3

Do you think that if they were to have a tailored workshop which focuses on the most needed skills for digitalisation and AI, it would be helpful? Can you recommend any best practice of conducting upskilling IT workshops (in terms of format, structure, learning method, etc.)?

Respondents' answers	
University of Malta lecturer in Faculty of Economics, Human Resources Specialist	- Yes, it would be helpful. However, it important to remember that these tools (AI, IT) are there to help us meet an objective - Can these tools be used to meet the objectives of the company? If not, then the problem remains - Best practices of conducting upskilling IT workshops: hands-on approach; discussions; role-playing - Important to include interviewing techniques - Important to include how to write a CV which is relevant to the job you're applying for
Woman Entrepreneur in educational applications	- I would go for an andragogical approach - collaborative, engaging, workshop-driven - Blended hybrid approach - allowing people to digital learn and read on their own - Giving material in advance to build up to the workshop, engaging with the participants beforehand with webinars - Possibly a meet and greet beforehand where they can map out their personal journey and expectations of the workshop - Consider which languages to use in the workshop, based on your audience - Try to integrate different learning styles (audio, visual, kinetic)
2 Jobsplus employees	- We need to prepare for this shift towards AI to reduce the number of jobs lost. - Important to promote reskilling, even in companies - To help this shift, education also needs to work in such a way that youths are equipped with the skills to work. Education needs to work in parallel with the labour market. Technology subjects need to become compulsory.

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Question 4

What skills do you feel that individuals need to acquire first to find a better job? Why do you think so?

Respondents' answers

University of Malta lecturer in Faculty of Economics, Human Resources Specialist	- Your degree can help you get interviews, but you also need to show what you can do. - Skills do not only refer to academic achievements, but other things you did outside of that (ex. Social work, hobbies, travelling) - Also important to think about how you can contribute to a company, an organisation - The importance of being flexible and adaptable - Taking initiative at work - Not expecting praise or validation for everything you do at the company
Woman Entrepreneur in educational applications	- Hard skills ex. Programming, Excel Spreadsheet familiarity… - Soft skills, both within the workplace, but also in the process of looking for a job (ex. CV writing and sharing; interview skills) - Micro learning through short courses
2 Jobsplus employees	- Something to take into account is the fact that before we teach skills related to AI, we need to teach youths to discover who they are and what they want from life. - In order to find a better job, upskilling related to AI and IT should be emphasised, especially since it's required by almost every sector. This might be need to be introduced even in secondary schools - Need to raise awareness about how the world is changing

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Question 5

Can you offer any general advice for individuals who are looking to upskill?

Respondents' answers	
University of Malta lecturer in Faculty of Economics, Human Resources Specialist	- Look around to see if there are any courses which you can attend, especially certified courses
Woman Entrepreneur in educational applications	- Think about your personal strengths and skills, and see how you can transfer those skills or reskill to get the job you want - All previous job experience brings skills with it which can be used to find a different job (ex. Sales experience) - Don't search blind
2 Jobsplus employees	- Don't limit yourself to the Maltese labour market, or the current labour market. - Think outside the box and don't give up - Combine market trends with what you like

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CONCLUSION

There is a shortage of up to <u>500,000 IT professionals</u> in the EU labour market. In Slovakia and Malta, too, demand far outweighs supply, and this problem will grow in the future.

On the other hand, upskilling and retraining can mitigate this trend, especially for university graduates in other fields that are not in such high demand (such as hotel management, business economics and management, journalism, psychology, arts, culture and international relations).

In one of the above-mentioned surveys, employers expressed that formal education is not a key criterion when selecting a new employee. They value relevant and longer-term work experience more than formal education.

Women represent up to 45% of the Slovak workforce and most of them have a university degree. Working in a supportive environment (including support for women mothers) is an important determinant of women's success in IT. Low permeability and strong hierarchical boundaries are already identified barriers.

The survey "<u>What IT professionals want</u>" regularly evaluates the needs of IT professionals in the workplace. According to the latest survey, an attractive salary, a good boss and flexibility motivate most IT professionals and more than 60% of IT professionals are demotivated by salary stagnation, improper project management and inappropriate team management.

On the other side of the curtain, the qualitative research conducted by SCDI and AcrossLimits indicates that many applicants for IT positions, in addition to the lack of experience, do not possess the necessary personal attitude: responsibility, active development of their IT skills, any self-development activities or the ability to communicate.

For entry-level (junior) positions, it would be sufficient to complete training courses to develop specific IT skills, but the obstacle is often the "personal attitude" of the job candidate.

Both Slovakia and Malta face some similar challenges. The labour market increasingly demands a workforce that is digitally skilled and able to learn new technologies. This applies not only to young people entering the workforce, but also to people who have been employed for several decades. They will also have to find ways to increase their ability to work with computers and information systems. This puts various forms of lifelong learning in a special position, including projects such as PAITool.

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HOW PAITOOL CAN CONTRIBUTE TO OVERCOMING THESE BARRIERS

The aim of the PAITool project is to provide SMEs with tools to become more competitive in an increasingly digitised and AI-dependent labour market.

These tools will also be useful for individuals who would like to find new employment but are struggling to do so because of their insufficient knowledge of AI. Therefore, a secondary aim of PAITool is to provide tools which can help individuals to overcome the various barriers faced when looking for employment.

The PAITool course, available for free on the PAITool website, focuses on the following 8 topics where Artificial Intelligence can be of use in labour market processes.

1. Artificial Intelligence in industrial production
2. Quality control in industrial production
3. Predictive maintenance
4. Energy management
5. Marketing and sales support
6. Online sales
7. User and customer support
8. Automation of non-manufacturing processes

The course is designed in such a way that individuals can go through the topics of their choice in any order they want. Therefore, it will not only be useful for SMEs who wish to introduce or increase the use of AI in their processes, but also for job trainers who want to expand their knowledge of the potential uses of AI.

Moreover, individuals who are interested in upskilling and reskilling in AI, irrespective of their previous career, can also freely access and go through the course. Thus, the course will be instrumental to increase their job prospects.

In November 2022, Open AI's Chat GPT was introduced to the world. In a short time, this tool has changed the views of a large proportion of the population on artificial intelligence. Our PAITool project was created before this wave of interest in artificial intelligence, and today there is no doubt that it was a step in the right direction.

Artificial intelligence is bringing about changes that will obviously be reflected in the disappearance of certain professions and job roles. In contrast to the changes brought about by conventional industrialization, for the first time the changes may also affect the so-called "white collar" industries on a larger scale.

From this perspective, the project's goal of training people on the deployment of AI in different sectors is extremely important. Not everyone will be a data scientist, analyst or programmer, but a large number of people have a good chance of encountering AI and machine learning models in their practice.

If, thanks to our project, they know what lies ahead and look to the future as an opportunity to do their jobs better using AI, our project will have achieved its goals.

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