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SKILLS and Innovation for Youth Employment PATHways

Baseline Assessment Report

Insights on labor market trends,
AI-driven skills assessment,
and employment support
for refugee and migrant NEET youth
in Germany, Greece, and Spain.



Social
Innovation 
Initiative



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Contents

1. Introduction to SkillsPath	5
2. Description of Research Methodology	6
2.1. Approach	6
2.2. Data Collection Methods	7
3. Youth Employment, “green” jobs, and AI-Support - Germany	7
3.1 . Barriers to equitable labor market participation for displaced persons and migrants	9
3.2 Growth sectors and green economy	11
3.2.1 Key Sectors Experiencing Growth and Workforce Shortages	11
3.2.2 Green employment in Bonn and NRW: sectoral demand, qualification requirements, and access pathways	13
3.3 Digital support in labor market integration Digital support in labor market integration	14
3.4 Stakeholder Perspectives on Labor Market Access and Emerging Trends	15
3.4.1 Challenges in Labor Market Integration for Young Refugees and Migrants	15
3.4.2 Occupational Fields of Growing Interest	16
3.4.3 The Role and Reception of AI in Career Development and Recruitment	17
3.5 Conclusion	18
4. Findings on Local Labor Market Trends & Emerging Occupations - Greece	19
4.1 Overview of Employment Landscape	19
4.1.1 Challenges for Refugee and Migrant Youth Access	20
4.2 Growth Sectors & Green Economy Opportunities	21
4.2.1 Key Growth Sectors	21
4.2.2 Green Economy & Sustainability Sectors	22
4.3 Stakeholder Perspectives on AI Integration in Employment Support	23
4.3.1 Employers & Training Providers	23
4.3.2 Youth & Community Organizations	25
4.3.3 Public Sector & Policy Insights	26
4.4 Key Recommendations for Localizing the AI Tool	27
4.4.1 Customization for Pilot Regions	27
4.4.2 Integration Strategies for Activation Measures	28
4.5 Conclusion	29
5. Findings on Local Labor Market Trends & Emerging Occupations in Spain	30
5.1 Overview of Employment Landscape in Spain	30

5.2 Growth Sectors & Green Economy Opportunities in Spain.....	32
5.3 Findings on Training Opportunities for Emerging Occupations in Spain/Andalucía	35
5.4 Stakeholder Perspectives on AI Integration in Employment Support	37
5.4.1 Employers & Training Providers	37
5.4.2 Youth & Community Organizations	39
5.4.3 Public Sector & Policy Insights.....	41
5.5 Conclusion	43
6. Comparative Analysis of Baseline Findings: Germany, Greece, and Spain	43
6.1 Common Barriers	43
6.2 National Contexts	44
6.3 Implications for the AI Tool.....	45
6.4 Recommendations	45
7. References	48

1. Introduction to SkillsPath

The SkillsPath project is a collaborative initiative aimed at enhancing employment opportunities for refugee and migrant NEET youth (aged 18–29) in Germany, Greece, and Spain. By leveraging an AI-driven skills assessment tool, and tailored employment support, the project seeks to bridge skill gaps, improve career readiness, and foster inclusive labor market integration.

The term NEET describes young people who are currently not engaged in employment, education, or training. This situation can stem from a range of factors, including personal circumstances, structural barriers, or short transitional periods. As a result, NEET status covers a wide spectrum of experiences, from young people who are more permanently disconnected from opportunities to those who are actively seeking work or preparing to return to education or training.

The AI powered tool allows users to assess previous professional, educational, or informal experiences and automatically identifies transferable skills, generates CVs and suggests suitable job or training pathways. Drawing on official and widely recognized taxonomies, such as the European ESCO-framework, the AI tool is designed to recognize skills gained through both formal and non-formal learning, including volunteering, care work or other unregistered experience. Within the SkillsPath project, the tool will be adapted to the specific labor market needs and trends of the three project locations.

The purpose of the baseline assessment is to provide a comprehensive analysis of the employment landscape, emerging opportunities, and stakeholder perspectives on AI-driven employment solutions, informing the adaptation and localization of the AI tool to effectively support young job seekers in the project's target regions. The assessment covers three pilot regions where the AI tool will be localized and tested: Bonn (Germany), Thessaloniki (Greece), and Seville/Andalusia (Spain), offering a transnational perspective on employment trends and AI integration in workforce development.

The research engaged key stakeholders such as employers, training providers, (potential) clients and employment services to ensure a well-rounded understanding of the current job market's challenges and opportunities. This approach ensures that findings reflect diverse perspectives across the labor market ecosystem.

Focusing on different local contexts, each setting presents its own institutional landscape, level of digitalization, and degree of readiness for AI-enabled career support, ranging from structured vocational systems to less formal or fragmented guidance environments. Rather than applying a one-size-fits-all perspective, the analysis acknowledges that labor market integration for refugee

and migrant youth takes different forms depending on local governance models, economic sectors and support ecosystems.

2. Description of Research Methodology

The baseline assessment is designed to provide a thorough understanding of labor market conditions, stakeholder perspectives, and the potential of AI-driven employment support tools to empower refugee and migrant youth to take the next step in their career journey. It applies a mixed-methods approach combining desk research, stakeholder consultation and insights gathered through engagement with refugee and migrant NEET youth across the three pilot countries.

The project aims to engage at least 50 stakeholders across pilot regions, including employment service providers, industry and private sector representatives, vocational education and training (VET) providers, public sector officials and policymakers, youth organizations, young NEETs and advocacy groups and career counselors.

2.1 Approach

The study takes a strategic approach, ensuring a broad yet in-depth understanding of regional and transnational employment challenges and opportunities for employment service providers to better serve refugee and migrant NEETs, all while setting the foundation for detailed data collection methods that will take place throughout the pilot project. The strategic approach is characterized by the following core elements:

- **Holistic and Client-Centered Analysis:** Provides an overarching framework for understanding employment trends by integrating multiple data sources.
- **Stakeholder-Centered:** Ensures engagement with key labor market actors to shape relevant employment policies and support mechanisms.
- **Ethical Framework:** The research follows ethical guidelines, ensuring informed consent, data privacy, and protection of participants' identities where necessary.
- **Comparative Perspective:** A transnational approach is used to compare labor market trends and AI tool integration in employment services across Germany, Greece, and Spain.

2.2 Data Collection Methods

The data collection phase employs a combination of qualitative and quantitative techniques to ensure a holistic understanding of the country and regional profiles and the specific challenges and opportunities in youth employment. The primary data collection methods include:

- **Desk Research:** A systematic review of reports, labor market policies, and statistical data to establish a foundational understanding of employment trends, skill gaps, and policy frameworks.
- **Key Informant Interviews (KIIs):** Conducting in-depth one-on-one interviews with experts such as policymakers, employment service providers, and industry representatives to gain deeper perspectives on youth employment trends and skill requirements and gaps.
- **Focus Group Discussions (FGDs):** Facilitating structured discussions among refugee and migrant NEET youth and key stakeholders, including employers, training providers, and youth organizations, to gather insights on employment challenges, opportunities, and potential interventions.

KIIs and FGDs were carried out in all three countries using a harmonized approach, with participants identified through partner networks and purposive sampling to ensure a diversity of perspectives among refugee and migrant NEET youth and key labor market stakeholders. Data collection took place between March and June 2025, following a common discussion guide. Qualitative findings were analyzed thematically and triangulated with desk research.

3. Youth Employment, “green” jobs, and AI-Support - Germany

To contextualize how labor market realities shape the applicability of AI-guided employment support tools across Europe, this section provides an overview of youth employment dynamics in Germany before examining barriers, growth sectors and digital support mechanisms.

In April 2025, the average unemployment rate in North Rhine-Westphalia was 7.8%, slightly above the national average (Bundesagentur für Arbeit, 2025a; Statistisches Bundesamt, 2025). As of June 2025, unemployment rates for Bonn and its surrounding Rhein-Sieg district (hereafter referred to as the “project region”) were similar to the broader regional rate. However, underemployment, referring to situations in which individuals are employed below their skill level or desired capacity, ranged from just under 7% to nearly 9% across Bonn and the North Rhine-Westphalia region (Bundesagentur für Arbeit, 2025b).

While this brief overview offers a preliminary insight into general labor market conditions, the present report also undertakes a closer analysis of the local vocational training market. Data from

June 2025 show that while many young people struggled or failed to secure training positions, many local positions remained unfilled (Bundesagentur für Arbeit, 2025c; Bundesagentur für Arbeit, 2025d). At the same time, most applicants registered with employment agencies in the project region appear to be well educated, the majority hold at least an intermediate secondary education certificate (Bundesagentur für Arbeit, 2025e; Bundesagentur für Arbeit, 2025f). This suggests that the challenge is not a lack of basic qualifications among young applicants, but rather a mismatch between their profiles or preferences and the requirements of available positions.

Despite historically declining NEET rates, recent data indicate a slight increase of young NEETs in Germany in 2022–2023, attributed partly to the COVID-19 pandemic (Schnelle and Wieland, 2024: pp. 3–4). In North Rhine-Westphalia, the NEET rate (age group: 15–24 years) stood at 7.7% in 2022 (Eurostat 2025). The barriers faced by young people with refugee or migration backgrounds in accessing the labor market – particularly in entering vocational training – are often especially high. Data from the Bundesagentur für Arbeit (Federal Employment Agency, covering autumn 2023 to autumn 2024) indicate that applicants without German citizenship are less likely to enter vocational training compared to their German peers, despite qualification profiles showing that only a very small proportion lack a completed lower secondary certificate (Bundesagentur für Arbeit, 2025g: p. 18).

Significant disparities already emerge when examining school-level education: while the percentage of young people leaving school without a qualification has remained relatively stable over time, it is clear that students with foreign citizenship are considerably less likely to complete schooling compared to their German peers (ibid.: p. 9). For many young people, the absence of a formal credential significantly limits their chances of securing a vocational training position. While alternative support programs may exist, actual transitions into training remain low (ibid.).

Although fewer young people with refugee or migration backgrounds pursue higher education, the proportion of university students with a migration background has increased somewhat in recent years (Sachverständigenrat für Integration und Migration, 2024: p. 9). It is important to differentiate whether the student was born in Germany, arrived as an adult, or came as a child and grew up within the German education system (ibid.). These factors already influence the likelihood of entering higher education – students born in Germany make up the largest share (ibid.). Nevertheless, this does not mean that their educational journey is free of obstacles. Notably, "Bildungsinländer*innen" (students who completed their schooling in Germany) face higher dropout rates and lower academic performance in some subjects, possibly linked to socioeconomic or linguistic barriers, as well as differences in earlier schooling systems (ibid.: pp. 10–11).

This overview illustrates that NEETs in Germany are not only a highly diverse group but that there are various reasons why young people with refugee or migration backgrounds are at greater risk of not successfully transitioning from school to vocational training or higher education. This report seeks to explore how the local labor market in the German project region is structured, how key challenges in labor market integration can be addressed, and what opportunities exist for young refugees and migrants. Within the project scope, particular focus is placed on green professions as well as digital and AI support for labor market integration. The findings, based on research and interviews with relevant stakeholders (e.g., employment agencies working with migrants and refugees, VET and service providers, refugee and migrant youth), are presented in the following chapters, beginning with the challenges faced by job-seeking migrants and refugees in Germany.

3.1. Barriers to equitable labor market participation for displaced persons and migrants

In general, studies indicate that the employment rate among refugees tends to increase with the duration of their residence in Germany. For example, a 2024 study by the Institut für Arbeitsmarkt- und Berufsforschung (IAB) found that more than 60% of refugees who arrived in Germany in 2015 were employed seven years later (Institut für Arbeitsmarkt- und Berufsforschung, 2024). While significant gender disparities persist (75% of employed refugees were men, only 31% were women), the vast majority of refugees employed held positions subject to social insurance contributions, and the study found that over time, employment conditions tended to improve, e.g. in terms of working hours and wages (ibid.).

Nonetheless, refugees and migrants face numerous challenges on their path to employment in Germany. These include, but are not limited to, residence restrictions, long stays in collective accommodations, and employment bans upon arrival (ibid.; Pro Asyl, 2023). Even when employment is permitted, factors such as prejudices and the resulting stigmatization of individuals based on specific residence statuses, as well as the lack of recognition or under recognition of qualifications acquired abroad, remain significant barriers to labor market access (Pro Asyl, 2023).

Table 1. Key Barriers and Challenges Faced by Refugees and Migrants

Barrier / Structural Factor	Impact on Labor Market Access
Residence restrictions and prolonged stays in collective accommodation	Limit mobility, delay access to local job markets

Employment bans or limited work permissions upon arrival	Prevent early labor market entry during initial integration phase
Prejudice and stigmatization based on residence or legal status	Reduces employer's willingness to hire or offer training
Lack of recognition or under-recognition of foreign qualifications	Leads to overqualification, deskilling, or exclusion from regulated professions
Limited access to fully qualifying, company-based apprenticeships despite comparable academic attainment	Structural bias and procedural hurdles hinder parity with native peers
Early entry into the workforce or diversion into transitional programs	Interrupts pathways into long-term, skilled employment
Disruption of support services during the COVID-19 pandemic (incl. digital-only formats)	Reduced access to guidance, training and placement opportunities
Underlying socio-economic constraints and insufficient support systems	Limits capacity to pursue training or withstand job insecurity

As stated before, data suggests that young refugees and migrants are significantly less likely to enter a fully qualifying, company-based apprenticeship than their non-migrant peers, although no objective reason, such as lower academic performance, can be identified (Granato and Christ, 2022: pp. 26, 29). It is assumed that factors such as socioeconomic background or the absence of support systems may not sufficiently explain this situation (ibid.).

Instead of transitioning into the (higher) education system, young people with a migration background are significantly more likely than their German peers to enter the workforce early, participate in transitional programs between school and employment, or experience periods of unemployment (ibid.: p. 29). While all of these developments were already observable prior to the onset of the COVID-19 pandemic, they were further intensified by it (ibid.: pp. 29-30).

Among the factors that exacerbated the situation during the pandemic were, for example, the collapse of many support services – or their shift to digital formats, which posed particular challenges for many refugees – as well as the loss or cancellation of employment opportunities, the latter of which also affected individuals without a migration or displacement background (ibid.: pp. 30-31). All of these trends have contributed to a more widespread sense of uncertainty and pessimism regarding professional futures among young people, particularly those with a refugee or migration background – concerns include difficulties in securing an apprenticeship position, not being retained after completing training, as well as worries about the quality of vocational education and the feasibility of previously envisioned career plans (ibid.: pp. 32-33).

It is assumed that increased individualized support – such as mentoring programs, more in-person services, and guided introductory initiatives like internships – could help young people with

refugee and migration backgrounds transition more successfully into standard vocational training pathways (ibid., pp. 34-36).

3.2 Growth Sectors and Green Economy

3.2.1 Key Sectors Experiencing Growth and Workforce Shortages

Germany is generally experiencing a shortage of skilled workers, especially in the fields of healthcare, education and social work, electrical and skilled trades, as filling positions in those sectors is often particularly challenging due to the specific qualification profiles required (Tiedemann, Kunath and Werner, 2024: pp. 1-3).

Table 2. Growth Sectors and Reported Labor Demand

Sector	Status / Trend
Healthcare and social care	High demand and persistent workforce shortages
Education and childcare	Ongoing recruitment needs
Electrical and skilled trades	Strong demand linked to green transition and technical maintenance
Logistics and transportation	Constant labor demand due to regional corporate activity
Retail and sales	High vacancy rates despite lower applicant interest

Nonetheless, to tackle this shortage, multiple approaches have been identified as effective. Recommended strategies include, for example, improved training pathways for young people – such as step-by-step qualification programs leading to skilled employment – as well as the enhancement of childcare infrastructure and the recruitment of skilled workers from abroad (ibid.: pp. 2-3). In recent years, the growing need to recruit skilled workers from abroad to address significant staffing shortages has been repeatedly highlighted by the German legislature, leading to the implementation of various measures designed to facilitate easier access to the German labor market for certain groups of professionally qualified individuals (Make it in Germany, without date (a)). Nevertheless, many of these regulations are tied to specific requirements, such as certain qualifications or language proficiency (ibid.).

An analysis of the local labor market reveals that the region hosts a highly diverse corporate landscape, with some of the largest employers operating in sectors such as telecommunications, logistics, healthcare, energy, IT services, international development, retail, and research (Stadt

Bonn, 2024). Occupations in high demand include transportation, elderly care, domestic and culinary work (Jobcenter Bonn, without date).

When it comes to the local vocational training market and applicants' job preferences, in summer 2025, both placed and unplaced candidates in Bonn show strong interest in training for office management, automotive mechatronics, and medical assistance (Bundesagentur für Arbeit, 2025h). For the surrounding region, a similar picture emerges, with some minor deviations (Bundesagentur für Arbeit, 2025i). In the project region under review as well as surrounding areas (Bonn and the Rhein-Sieg district), vocational training professions with 'green' potential have made it into the top five most popular occupations among both placed and unplaced applicants – namely, the plant mechanic for sanitary, heating, and air-conditioning systems, as well as the electronics technician for building systems (Bundesagentur für Arbeit, 2025h; Bundesagentur für Arbeit, 2025i). However, many available training positions, particularly in retail and sales professions, remain unfilled (Bundesagentur für Arbeit, 2025h; Bundesagentur für Arbeit, 2025i).

While it is possible to draw certain sociodemographic conclusions about applicants for vocational training positions in the project regions, Bonn and the Rhein-Sieg district, for example, as of July 2025, it can be inferred that approximately 30% to 44% of registered applicants hold a non-German citizenship, and information is also available regarding (registered) applicants' qualifications and age (Bundesagentur für Arbeit, 2025f; Bundesagentur für Arbeit, 2025e) – it remains relatively difficult to obtain reliable data on university attendees, particularly when focusing on individuals with a refugee background (beyond the information already presented). This is due, among other reasons, to the fact that the status of 'refugee' is not recorded separately; instead, data is typically collected on citizenship and the country in which school-leaving certificates were obtained (Hochschulkonferenz, 2019: p. 2).

Between 2018 and 2019, nearly 28,000 prospective refugee students in Germany received counseling, over 5,000 entered preparatory programs, and around 3,800 began university studies (ibid.: pp. 3-5). Within the region, it is relatively difficult to find data on students with refugee or migration backgrounds. However, for one of the major universities in the area, it can at least be noted that by the end of 2024, approximately 15% of students were classified as students 'from abroad' (cf. Universität Bonn, without date), likely encompassing a variety of educational backgrounds (ibid.). In 2024, 30% of newly enrolled students in Germany were classified as international students (DESTATIS, 2025).

3.2.2 Green employment in Bonn and NRW: sectoral demand, qualification requirements, and access pathways

Green employment in Bonn and NRW generally covers roles linked to a variety of sectors. A brief search for green vacancies reveals that many jobs being labelled green or sustainable are highly qualified roles and/or traditional office-based roles that typically require a more comprehensive education – often at the university level – and frequently also call for many years of professional experience: a brief online search yielded, among other things, results for jobs in the IT sector, advisory and auditing roles, expert and consultancy positions, as well as a smaller number of opportunities for entry-level candidates or in the skilled trades (Jobverde, 2025). However, green jobs span a wide range of sectors, including decarbonization, circular economy (e.g., recycling), and environmental protection (Iberdrola, without date). Potential employment areas include energy, agriculture, design and architecture, tourism, and transport/logistics (ibid.). The training requirements for roles in the sectors mentioned vary significantly depending on the specific occupation and sector (ibid.).

Germany's green sector offers a wide range of job opportunities, mainly in fields such as water and waste management, as well as sustainable technologies and clean energy deployment (Hofman, Feyerabend, and Bruckmayer, 2022: p. 2). While many green jobs require skilled profiles, this does not necessarily refer to university degrees: a study by the RAND think tank, examining green job advertisements in Berlin, Germany, found that many green vacancies, just as the “non-green” ones, highlighted relevant work experience, as well as additional soft skills such as language proficiency, digital literacy, and specific technical qualifications (ibid., pp. 3-5). A promising approach for making green jobs more accessible may be to embed green content into existing training or offer targeted upskilling programs, however, most programs reviewed by the study do not target individuals with limited (formal) education (ibid., pp. 5-7). At the same time, green sectors appear to be more accessible to various minority groups – for example, women are more frequently employed in the sustainable energy sector than in the conventional energy sector (Kern, 2023). Ultimately, it is recommended to offer targeted training programs – particularly for individuals with lower levels of formal qualification – that include a recognized credential (e.g., a completion certificate) to facilitate their entry into the green job market (Hofman, Feyerabend, and Bruckmayer, 2022: p. 8).

In addition to the occupational fields and training opportunities already mentioned, this section highlights an alternative particularly aimed at young people in the process of career exploration and orientation: the Voluntary Ecological Year (German: Freiwilliges Ökologisches Jahr, FÖJ). This program is aimed at young people aged 15 to 26 who are interested in nature and environmental protection and want to gain practical experience by volunteering for one year (Freiwilligendienste in der Diözese Rottenburg-Stuttgart gGmbH, without date (a)). While only a limited number of FÖJ placements are available in Bonn, they are offered by a diverse range of organizations, including forestry services, educational institutions, and youth or social work organizations

(Landschaftsverband Rheinland (LVR), without date). Since the FÖJ is a voluntary program, participants may receive benefits such as accommodation provided but will be paid a monthly allowance rather than a full salary which may not cover all living expenses (Freiwilligendienste in der Diözese Rottenburg-Stuttgart gGmbH, without date (b)) - therefore, additional financial planning would be necessary for taking on such role. Nevertheless, the FÖJ can serve as a valuable step toward vocational training or university studies (ibid.).

These dynamics are particularly relevant when designing activation strategies or mobilizing local stakeholders around green transition pathways.

3.3 Digital support in labor market integration

Given that the project within which this report is being prepared focuses largely on digital tools for career orientation, the following section presents a brief overview of well-known German online resources in this area. This list is by no means exhaustive but rather intended to serve as an initial point of reference.

- **BerufeNet (Bundesagentur für Arbeit):** An encyclopedia/overview of a wide range of professions. It not only offers a broad range of information (e.g., on form of training, requirements, and job profile) but also allows users to learn about jobs by navigating through occupational fields (e.g., agriculture, healthcare, social work), by sectors, or by fields of study (Bundesagentur für Arbeit, without date (a)).
- **mein NOW (Bundesagentur für Arbeit):** A portal that compiles educational offerings such as continuing education, retraining, course matching-quizzes, and much more (Bundesagentur für Arbeit, without date (c)).
- **Check-U (Bundesagentur für Arbeit):** A comprehensive career orientation test designed to help young people identify the right career path (university studies and/or vocational training) based on their interests, soft skills, and more (Bundesagentur für Arbeit, without date (b)).
- **Planet Beruf (Bundesagentur für Arbeit):** This website not only offers various tests to assess skills and interests but also provides information on the application process and much more (Bundesagentur für Arbeit, without date (d)).

In recent years, the use of digital tools has steadily increased and is now gradually being supplemented – and in some cases replaced – by AI-based solutions. However, these tools are not without criticism: concerns have been raised regarding data privacy, and there is speculation that recruiters may already be able to identify AI-generated content (Kununu, 2025).

These developments set the stage for a closer look at stakeholder insights from the German project site.

3.4 Stakeholder Perspectives on Labor Market Access and Emerging Trends

This chapter presents the perspectives of key stakeholders, including refugee and migrant youths, institutions supporting labor market integration, as well as career counselors, focusing on the use of AI in recruitment, challenges faced by young individuals with migration and refugee backgrounds in accessing the labor market, and emerging trends in job preferences and employer demand.

3.4.1 Challenges in Labor Market Integration for Young Refugees and Migrants

Stakeholders highlighted a range of recurring barriers that shape access to training and employment. These can be summarized as follows:

- **Language proficiency as a key barrier:** Language proficiency in German remains a key factor in accessing vocational training and employment – yet it often presents a significant barrier for refugee and migrant job seekers. According to local career counsellors, the structure of vocational training in Germany, which includes classroom instruction, written assignments, and exams, can be particularly challenging for those who must keep pace with native German-speaking peers. While many young refugees and migrants bring valuable soft skills such as motivation, empathy, and a strong willingness to learn, limited language proficiency can hinder both academic and vocational success.
- **Managing expectations and credential recognition challenges:** Stakeholders also highlighted the importance of managing expectations. As noted by employment advisors, highly qualified individuals – especially in regulated professions such as law, healthcare, or engineering – often face limited recognition of foreign credentials and may need support in considering alternative career paths or roles below their original qualification level.
- **Complexity of the vocational training system:** Further barriers include the complexity of the German vocational training system itself, such as distinctions between school-based and dual training models or entry requirements like prior internships. According to integration service providers surveyed, these structures can be difficult to navigate without intensive and ongoing guidance.
- **Multiple responsibilities and personal stressors:** In addition, many refugees and migrants face multiple responsibilities and stressors, including care duties, competing professional

obligations, and unstable housing situations. Social workers surveyed noted that these circumstances often limit participation in full-time programs or application processes.

- **Need for sustained and personalized support:** While some individuals manage to navigate these challenges independently, many require sustained, personalized support to progress in the labor market. Although regional support services offer essential guidance – such as skills assessments and help accessing education and employment – the high demand often results in limited capacity and long waiting times. According to both counsellors and beneficiaries, this gap in accessible support delays labor market participation.

3.4.2 Occupational Fields of Growing Interest

The occupational trends emerging from stakeholder interviews closely mirror the workforce gaps previously identified in the desk research on growth sectors and vocational training demand in Bonn and NRW.

- **Interest in security, office-based roles, IT and logistics:** Interviews conducted in the region revealed several occupational fields currently attracting job seekers, including security, office-based roles, IT and digital professions, and transportation and logistics. While administrative and clerical roles are expanding, access is often limited by language barriers. IT and digital fields are seen as particularly relevant for Ukrainian applicants, many of whom bring prior experience. Truck driving offers relatively quick entry for those with the appropriate licenses.
- **Workforce gaps in logistics, care, and hospitality:** From a labor market perspective, notable workforce gaps were identified in warehouse logistics, care and nursing, and other areas within the medical sector. **Hospitality roles were reported as less attractive** by job seekers despite available positions. Interviewees cited several reasons for job seekers' hesitancy toward hospitality roles, including pandemic-related job insecurity and working conditions that may not align with applicants' qualifications or personal circumstances. For example, airport jobs often require proof of long-term residence, which not all candidates can provide.
- **Growing demand in education and childcare:** There is also growing demand in education and childcare, particularly for teaching roles. However, these typically require recognized qualifications and advanced language skills. To support access, initiatives such as language courses for educators are being piloted in Bonn and surrounding areas, helping (former)

educators navigate the recognition process for foreign diplomas, gain practical experience, and improve employment prospects.

- **Retail preferences and sectoral appeal:** In retail, preferences vary while there is high demand for workers in grocery stores – especially at deli counters – interviewees noted that clients tend to favor positions in clothing or electronics stores. Overall, retail jobs appear less attractive to many job seekers, possibly due to the nature of the work or customer-facing language requirements.
- **High demand in public transportation and skilled trades:** Finally, interviews underscored strong demand in public transportation and skilled trades, particularly for plant mechanics, electricians, mechatronics technicians, and climate and sanitary specialists. Those with expertise in energy consulting are especially sought after, reflecting the sector’s diversity and growth potential.

3.4.3 The Role and Reception of AI in Career Development and Recruitment

In addition to general platforms, interviewees mentioned a range of specialized websites – some tailored to young people exploring training opportunities, others specifically designed to support refugees in their job search.

When it comes to AI tools, however, a more nuanced picture emerged. On one hand, stakeholders expressed a clear need for AI-supported systems to improve the efficiency of matching applicants with training and employment opportunities. While some providers already use databases for this purpose, there is growing interest in more advanced, automated solutions. It was also noted that many (young) refugees and migrants are already using tools like ChatGPT – not only for job searches but also for everyday tasks.

At the same time, concerns were raised about data privacy and the general lack of awareness around digital behavior. Stakeholders emphasized the need for targeted training to help users understand the implications of using AI tools. Additional challenges include the need for linguistic adaptation and low-threshold access to ensure inclusivity. Some interviewees also cautioned that overreliance on AI could hinder the development of users’ own skills. Finally, digital exclusion remains a barrier, as many individuals in the broader target group still lack access to devices or stable internet connections.

3.5 Conclusion

Young refugees and migrants in Germany are particularly at risk of not successfully transitioning into employment, vocational training, or higher education – and completing formal schooling does not necessarily mitigate this risk.

At the same time, the regional labor market offers a range of entry-level opportunities, though these do not always align with the preferences, aspirations, or needs of the young target group. As a result, training positions often remain vacant while applicants struggle to find suitable placements. Sectors such as healthcare, IT, retail, skilled trades, and logistics continue to seek workers, yet mismatches between job requirements and individual qualification profiles – or differing career goals – can hinder access.

Additional barriers include lengthy recognition procedures for foreign qualifications, high language proficiency requirements, limited system knowledge, and weak support networks. While green jobs are gaining relevance, public perception still tends to associate them primarily with highly qualified roles, despite the growing number of entry-level positions – particularly in the skilled trades – now considered part of the green economy.

Although AI tools have become increasingly common in job searches, there remains a lack of understanding about their use and implications.

In conclusion, the findings underscore the need for comprehensive and sustained support for young migrants and refugees seeking to enter the German labor market. This support must go beyond providing information about the education and training system – it should include practical assistance, such as help with preparing application documents. AI-based tools can play a valuable role in this process, benefiting both job seekers and professionals involved in career guidance. Expanding awareness of green jobs and integrating accessible entry-level programs can further contribute to opening the labor market and promoting long-term employment opportunities for this target group.

4. Findings on Local Labor Market Trends & Emerging Occupations - Greece

4.1 Overview of Employment Landscape

Over the past decade, Greece's labor market has undergone major changes, shaped by long-standing challenges and a slow recovery from the financial crisis. While the national unemployment rate has steadily decreased, it continues to rank among the highest in the European Union, disproportionately affecting young people, foreign nationals, and other vulnerable groups. (European Commission, 2024) These dynamics highlight the importance of

inclusive employment strategies that not only follow national trends but also address the specific needs of those who are most at risk of exclusion.

According to the Hellenic Statistical Authority (ELSTAT, 2024), Greece's unemployment rate dropped to 9.5% in the last quarter of 2024, however, major gaps remain across age, gender, education, and citizenship. Youth aged 15–19 and 20–24 face unemployment rates of 24.0% and 22.9% respectively, while women (12.1%) remain significantly more affected than men (7.5%). In Central Macedonia, unemployment reaches 12.4%, and individuals without primary education face a 24.4% rate. Foreign nationals, despite higher labor force participation, experience a 16.8% unemployment rate. Thessaloniki hosts around 16,000 refugees and third-country nationals, including asylum seekers and beneficiaries of international protection (Observatory of Refugees and Migrants, Region of Central Macedonia, 2025), yet although access to employment is legally permitted two months after asylum application, actual labor market integration remains limited (UNHCR Greece, 2023).

In 2023, the NEET (Not in Employment, Education, or Training) rate among young people aged 15–29 in Greece stood at 13.2%, placing the country among those with the highest NEET rates in the European Union (Eurostat, 2024). Research indicates that high NEET rates among young people in Greece are not only the result of limited job availability, but also of discouragement, long-term unemployment and care responsibilities. Many NEETs are considered inactive rather than unemployed, often due to barriers such as lack of childcare, family duties or perceived mismatch between available jobs and their qualifications (Lost Millennials Policy Brief – Greece, 2024). This figure points to ongoing difficulties in helping young people connect with the labor market and the education system. It also shows the need for focused and inclusive policies that support the social and economic participation of vulnerable youth, especially those who face additional challenges due to their background or legal status.

4.1.1 Challenges for Refugee and Migrant Youth Access

Despite the expansion of various economic sectors, refugee and migrant youth in Greece continue to face persistent and intersecting barriers to employment.

Recognition of Qualifications

A major barrier to stable employment for refugee and migrant youth in Greece is the lack of recognition of both formal qualifications (e.g., academic diplomas) and informal skills acquired through previous work experience. This significantly limits access to stable jobs, especially in regulated professions, and delays labor market entry (European Commission, 2025).

Vocational Guidance and Language Support

Access to vocational counseling and language support remains limited, particularly in rural or non-urban areas. Without culturally and linguistically appropriate career guidance, many young migrants struggle to navigate available opportunities or training pathways (Open Cultural Center, 2024).

Institutional and Legal Barriers

Young refugees often face delays in obtaining residence permits, tax identification numbers (AFM), or social security registration, which are prerequisites for legal employment. Bureaucratic inefficiencies and licensing restrictions prevent many from accessing regulated professions, especially those still undergoing asylum procedures (Refugee Support Aegean (RSA) and PRO ASYL, 2025).

Urban-Rural Divide

Emerging green sectors such as sustainable agriculture and renewable energy are primarily located in peripheral or rural regions. However, the lack of affordable housing, public transportation, and structured integration programs makes it difficult for refugee and migrant youth to access these jobs (Open Cultural Center, 2024).

Digital and Psychosocial Exclusion

Digital illiteracy and limited access to devices or stable internet connections hinder participation in modern training and employment systems. At the same time, unresolved trauma and ongoing uncertainty negatively affect the mental health and employability of many refugee youth (European Commission, 2025).

These intersecting challenges demonstrate the need for targeted, inclusive, and context-sensitive employment and training programs that respond to the specific realities faced by refugee and migrant youth. Without systemic reforms and coordinated support across sectors, labor market exclusion will likely persist.

4.2 Growth Sectors & Green Economy Opportunities

In recent years, Greece's economy has started to diversify beyond traditional sectors, with moderate growth observed in areas such as information and communication technologies (ICT) (SEPE-Deloitte, 2024), renewable energy (European Commission, 2024), and sustainable tourism (INSETE, 2023). These developments are supported by national recovery strategies and the European Union's green and digital transition agenda. While these sectors have created new

employment opportunities, access to them remains uneven, particularly for refugee and migrant youth, due to persistent barriers such as limited training, language skills, and geographic isolation from growth hubs. (Kapsalis et al., 2022) Despite expressed interest in these sectors, young people with migrant backgrounds often lack information about relevant career paths and available support mechanisms, especially outside Athens and Thessaloniki

4.2.1 Key Growth Sectors

Digital Economy & ICT: Although the sector is growing, refugee and migrant youth face disadvantages due to limited digital skills, internet access, and language barriers (Symplexis, 2020; ES Thinking Lab, 2020). With only 52.4% of the population having basic digital skills (European Commission, 2023), the gap is greater for vulnerable groups. Many rely solely on mobile phones, making it difficult to complete applications or access remote training (Symplexis, 2020).

Tourism & Hospitality: Although tourism is a major employer in Greece, refugee and migrant youth often access it only through informal, low-paid, and seasonal roles like cleaning or kitchen help, typically without contracts or prospects for advancement (Generation 2.0 RED & SolidarityNow, 2024). These precarious jobs heighten exploitation risks and hinder skills recognition.

Construction & Infrastructure: In response to rising labor demand from infrastructure projects, refugees and migrants form a key part of Greece's construction workforce, though mostly in informal roles (Generation 2.0 RED & SolidarityNow, 2024). The sector's urgent shortages present a strategic opportunity to support formal integration through apprenticeships, certification, and tailored employment schemes (European Migration Network, 2023).

4.2.2 Green Economy & Sustainability Sectors

Renewable Energy & Energy Efficiency: Greece's shift toward renewables is creating new job opportunities (Leidecker et al., 2023), yet data on refugee and migrant youth participation is lacking. As the European Commission (2024) notes, limited access to training and digital infrastructure in rural areas risks reinforcing existing inequalities. Although many young people show interest, low awareness and scarce local programs hinder meaningful access.

Circular Economy & Waste Management: Greece's circular economy has expanded jobs in waste management and recycling, mainly in urban areas (European Environment Agency, 2024, OECD, 2024). Refugees and migrants often occupy these roles under informal conditions, facing low pay,

health risks, and lack of protection (International Labour Organization, 2023). Despite their contribution, targeted training and regulatory safeguards remain largely absent.

Sustainable Agriculture: Although Greece's agricultural sector is expanding, especially in organic farming and agri-tech, it remains dependent on seasonal migrant labor for informal, low-protection jobs like fruit picking and greenhouse work (Papadopoulos and Fratsea, 2017, Dimitriadi, 2024). Refugees and asylum seekers often accept these roles out of necessity, facing harsh conditions, poor housing, and limited prospects for advancement.

In the region of Central Macedonia area, labor market dynamics reveal several sectors with consistent demand for low- and medium-skilled workers, which may serve as realistic entry points for NEET youth, including those from migrant and refugee backgrounds. Specifically:

Hospitality and Cleaning Services: Sustained demand for entry-level positions such as cleaning personnel, housekeeping staff, kitchen assistants, and waiters. These roles typically require basic Greek language skills and low-to-intermediate qualifications (DYPA, 2023).

Transport, Logistics and Port Activities: Thessaloniki's strategic role as a regional logistics hub creates demand for warehouse operators, freight handlers, and delivery drivers, especially within corridors connected to Southeastern Europe (Interreg Europe and Ministry of Infrastructure and Transport, 2021).

Light Manufacturing and Industrial Processing: Approximately 9.9% of total employment in the region is concentrated in manufacturing, with persistent demand for machine operators, assemblers, and general plant workers (Hellenic Statistical Authority (ELSTAT), 2025a).

Waste Management and Recycling: Regional investments in circular economy infrastructure and municipal waste processing facilities have increased demand for recycling plant operators, waste sorters, and environmental maintenance workers (OECD, 2024).

Basic Construction Work: There is also moderate growth in manual construction labour, largely driven by infrastructure development and EU-funded urban renewal projects (UNHCR Greece, 2023).

These occupational areas generally require low to medium levels of formal qualifications, making them more accessible to NEET youth and newcomers with limited work experience and language proficiency. Their prominence in the local economy, combined with the barriers faced by migrant NEETs, reinforces Thessaloniki's relevance as a pilot site for targeted employment interventions, particularly within the framework of the green and circular economy.

Conclusion: Greece's shift toward a greener and more digital economy offers meaningful employment prospects. With the right support, refugee and migrant youth can actively contribute

to these emerging sectors. To make this possible, policies must prioritize the formal recognition of foreign qualifications, access to culturally appropriate career counseling, and inclusive vocational education. Addressing barriers linked to legal status, regional inequality, and discrimination is also essential. Effective cooperation between public bodies, civil society, and the private sector can create lasting employment pathways. Finally, robust monitoring and evaluation systems are needed to ensure that training efforts truly benefit vulnerable youth and lead to sustainable outcomes.

4.3 Stakeholder Perspectives on AI Integration in Employment Support

4.3.1 Employers and Training Providers

Insights from employers and training providers point to persistent structural barriers hindering the labor market integration of refugee and migrant youth. Key challenges include mismatches between labor supply and demand, limited job readiness among candidates, and sector-specific constraints in areas such as logistics, hospitality, retail, and construction.

Employers report chronic shortages in entry-level staff, along with concerns about turnover, lack of reliability, and limited long-term engagement, factors often linked to socioeconomic precarity, inadequate career orientation, and seasonal mobility. Core deficits among jobseekers include low proficiency in Greek, underdeveloped soft skills, and minimal exposure to formal work environments. These are especially pronounced among individuals with disrupted educational pathways or precarious legal status. Training institutions also highlight widespread gaps in digital and media literacy, further restricting employability and access to training.

While certain industries require technical qualifications, stakeholders increasingly emphasize transferable attributes, such as adaptability, motivation, and cultural awareness, as critical for integration. Misalignment between employer expectations and candidate profiles is further exacerbated by vague job descriptions and insufficient pre-employment preparation.

The potential use of AI-driven tools for skills profiling and job matching was received with both interest and caution. Stakeholders recognized the potential for greater transparency and reduced bias but expressed concern that automation may disadvantage individuals with non-linear career employment paths or low digital literacy. The effectiveness of such tools depends on language accessibility, alignment with local labor market conditions, and adequate user training for both employers and service providers.

Key Insights and Recommendations

- Persistent labor shortages intersect with skill mismatches and low candidate preparedness.
- Language gaps, soft skill deficits, and digital illiteracy remain significant barriers.
- AI-based tools hold promise but require contextual adaptation and ethical safeguards.
- Implementation should emphasize accessibility, training, and human oversight to ensure inclusive outcomes.

4.3.2 Youth and Community Organizations

Community-based and youth-focused organizations serve as key intermediaries between refugee and migrant youth and formal employment systems. Data from focus groups and interviews highlight the complexity of barriers affecting this population, ranging from limited familiarity with formal employment structures to structural and psychosocial constraints.

A dominant pattern identified is the prioritization of short-term income over long-term career development, often shaped by displacement, disrupted education, or informal labor histories. This survival-oriented approach contributes to job-hopping and low engagement with training or support services.

Barriers to participation include transport costs, childcare responsibilities, housing insecurity, psychological distress, and widespread digital exclusion. Many youths lack devices, connectivity, or digital literacy, making even basic online tasks, such as form completion, challenging.

Trust emerged as a key factor in service engagement. Skepticism toward institutions, often shaped by previous negative or ineffective interactions, can hinder the uptake of formal support. In contrast, community-based organizations tend to build trust more effectively by adopting culturally sensitive methods and involving peers with shared experiences.

Soft skills, interpersonal communication, emotional regulation, and workplace behavior were noted as key deficits. Experiential learning models that integrate these skills into practical settings were viewed as more effective than classroom-based instruction.

Regarding AI integration, youth-serving actors expressed qualified support. They acknowledged potential benefits, such as CV support or skills identification, but raised concerns over usability, linguistic accessibility, and risk of exclusion for those with non-linear experiences or low digital

literacy. Crucially, AI tools were seen as complementary rather than substitutive, with blended models combining technology and human support considered most effective.

Key Insights and Recommendations

- Refugee and migrant youth often operate from a survivalist logic, limiting long-term engagement.
- Access is shaped by intersecting material and digital barriers.
- Trust-building and culturally competent outreach are essential for program uptake.
- AI tools should enhance, not replace, personalized, inclusive, and accessible support mechanisms.

4.3.3 Public Sector and Policy Insights

Stakeholders in public administration and policy roles highlight persistent institutional limitations in supporting the labor market integration of refugee and migrant youth. Despite isolated initiatives, systemic impact is constrained by fragmented service provision, bureaucratic barriers, and insufficient, short-term funding.

Public employment services are formally inclusive but struggle with linguistic accessibility, limited case management capacity, and rigid eligibility requirements. Legal status transitions, particularly during or after asylum, pose major obstacles, including delays in permits, unclear labor rights, and inconsistent recognition of foreign qualifications. These constraints are especially acute for young women, who face additional challenges linked to caregiving responsibilities, childcare access, and gender-based discrimination.

Interviewees also identified weak intersectoral coordination among ministries, municipalities, NGOs, and employers. The absence of shared data systems and long-term planning mechanisms hampers continuity, knowledge exchange, and evidence-based policy adaptation. Resource constraints, staff turnover, and lack of specialized training (e.g., trauma-informed care, digital facilitation) further undermine service quality.

Stakeholders expressed mixed views on the integration of AI. While its potential to improve efficiency and scalability was widely recognized, concerns were raised regarding ethical safeguards, data privacy, and the risk of excluding individuals with limited digital access. Effective implementation would depend on user-centered design, clear regulatory frameworks, and ongoing investment in staff training and capacity-building.

Importantly, public actors emphasized that AI should complement, not replace, relational forms of support, including legal counseling, psychosocial assistance, and personalized job mediation, particularly for vulnerable groups.

Key Insights and Recommendations

- Legal, procedural, and operational barriers limit equitable access to public employment services.
- Systemic coordination, data infrastructure, and sustainable funding are essential for scale and impact.
- AI tools must be ethically governed and integrated with local labor realities.
- Strengthening frontline capacity and ensuring gender and culturally-responsive services is critical.

4.4 Key Recommendations for Localizing the AI Tool

4.4.1 Customization for Pilot Regions

Localization of the AI tool must reflect the specific socioeconomic, linguistic, and institutional realities of urban centers such as Thessaloniki, where the majority of refugee and migrant youth reside. Several key trends emerged:

a. Multilingual and Culturally Sensitive Interface

Language emerged as a primary access barrier. Stakeholders emphasized the need for support in Arabic, Farsi, Urdu, French, and English, alongside simplified phrasing and culturally appropriate visual cues. Respectful representation of diverse user profiles, without assumptions regarding education or digital skills, is essential for engagement.

b. Digital Accessibility and User-Friendliness

Given limited digital literacy and widespread smartphone reliance, the tool should prioritize mobile-first design. Features such as guided onboarding, visual tutorials, and alternatives to conventional CV uploads (e.g., voice inputs or visual portfolios) were strongly preferred, supporting intuitive and inclusive interaction.

c. Local Labor Market Integration

To ensure practical utility, the tool must reflect current job market dynamics, particularly in sectors like logistics, hospitality, food service, caregiving, and seasonal tourism. Users favored

inclusion of real-time data on job openings, housing availability, and language prerequisites to inform decision-making.

d. Soft Skills Profiling and Motivation Mapping

Soft skills, including punctuality, teamwork, and workplace culture, were widely recognized as key hiring criteria. Participants valued the idea of integrated soft skills assessment and motivational mapping to guide personal development and improve readiness for entry-level employment.

4.4.2 Integration Strategies for Activation Measures

Effective deployment of the AI tool requires its integration into existing employment activation systems, ensuring it complements, rather than replaces, human-centered services. Key findings from qualitative data suggest five strategic priorities:

a. Use by Employment Service Providers

Stakeholders emphasized the tool's value in enhancing case management through automated job matching, identification of transferable skills, and reduction of administrative burden. However, concerns over transparency and impersonality suggest that AI-generated recommendations should be accompanied by clear explanations and optional human guidance (e.g., mentoring or help desks). Human-AI complementarity is essential for trust and adoption.

b. Partnerships with Employers

Employers expressed interest in AI-supported pre-screening, particularly for entry-level roles, and welcomed bias-reduction features such as anonymized applications. Involving employers in the tool's development, ensuring language and outputs align with actual hiring practices, was seen as crucial to practical uptake.

c. Integration into Training and Upskilling Pathways

Stakeholders advocated for direct links between profiling outcomes and accessible upskilling options (e.g., DYPA programs, NGO-led courses, microcredentials). While many users seek realistic pathways in caregiving, IT, or hospitality, several also expressed interest in broader career fields such as digital media or entrepreneurship. Diversifying occupational pathways within the tool can expand user aspiration and provider relevance.

d. Institutional Endorsement and Sustainability

Ensuring alignment with national initiatives, such as the Ministry of Labor and DYPA's digital job-matching strategies, would help reinforce the tool's credibility and support its broader uptake. The 2024 National AI Strategy offers a relevant policy framework, explicitly encouraging pilot projects that address the needs of vulnerable groups. Cross-sector coordination remains vital: national endorsement can facilitate access to resources, while local actors are essential for delivering personalized support on the ground. As stakeholders noted, AI is not a substitute for human-centered activation efforts, but it can play a complementary role when integrated into well-structured and adequately supported systems.

e. Feedback Loops and Iterative Development

Sustainable integration relies on ongoing adaptation and refinement. Recommended approaches include the use of built-in feedback mechanisms, periodic user surveys, and the establishment of youth advisory groups. Actively involving refugee and migrant youth in co-design processes is essential to ensure both the relevance of the tool and sustained user engagement over time.

4.5 Conclusion

Greece's evolving economic landscape, driven by digitalization, green transition, and sectoral diversification, offers new opportunities for employment, yet these remain largely out of reach for refugee and migrant youth, particularly those who are not in employment, education, or training (NEET). Structural barriers such as the non-recognition of prior qualifications, limited language proficiency, fragmented access to guidance services, and bureaucratic or legal constraints continue to hinder their full participation in the labor market.

While key sectors, including logistics, hospitality, construction, renewable energy, and circular economy industries, demonstrate growing demand for low- and medium-skilled workers, access for vulnerable youth is often obstructed by regional disparities, digital exclusion, and lack of tailored support. These challenges are further compounded by psychosocial stressors and the short-term nature of most integration initiatives.

In this context, AI-driven tools for skills profiling and job matching present a promising, though not standalone, avenue for enhancing employability. Their potential lies in complementing, not replacing, human-centered support systems. For these tools to be effective, they must be multilingual, mobile-friendly, and adapted to the lived realities of young refugees and migrants. This includes addressing low digital literacy, ensuring cultural sensitivity, and embedding clear feedback mechanisms.

Ultimately, sustainable labor market integration requires coordinated, long-term strategies that connect national policy frameworks with local implementation capacities. Partnerships across

public institutions, employers, training providers, and community organizations will be essential to closing access gaps and translating emerging job opportunities into inclusive and equitable employment pathways. Refugee and migrant youth bring valuable skills, resilience, and aspirations, unlocking their potential is not only a social imperative but an investment in Greece's inclusive economic future.

5. Findings on Local Labor Market Trends & Emerging Occupations in Spain

5.1 Overview of Employment Landscape in Spain

According to the national report on the labor market for foreign nationals elaborated by State Public Employment Service (SEPE)'s Occupations Observatory of the Spanish Ministry of Labor and Social Economy, as of 1 January 2024, Spain's population was 48.6 million, with 13.37% (6.5 million) of foreign nationals, of whom 9.83% (4.78 million) are Non-EU foreigners. The proportion of the foreign population has gradually increased over the last decade, rising from 9.5% in 2015 to 13.37% in 2024. In 2024, population growth was driven mainly by foreigners, with their numbers increasing by 412,663 (6.78%), compared to a 0.29% growth in the native population.

This growth is also evident in employment-related indicators. Foreigners represent 15.18% of the employed population and have an employment rate of 57.72%. Foreign affiliation to Social Security appears to be growing in importance each year, and its annual growth is the main contributor to the overall increase in Social Security affiliation. However, the Forum for the Social Integration of Immigrants of the Ministry of Inclusion, Social Security and Migration emphasizes that, despite the consistent increase in Social Security enrolment among the foreign population, challenges persist with regard to labor market inclusion, highlighting the persistence of obstacles and inequalities to labor market integration and emphasizing that the migrant population still faces structural and cyclical challenges in the Spanish labor market.

As stated in the annual monographic study on the Foreigners in the Andalusian Labor Market 2023 published by Argos Observatory of the Andalusian Employment Service of the Regional Ministry of Employment, Business and Self-Employment of the Regional Government of Andalusia, as of 1 January 2023, Andalusia is the autonomous community with the largest population, accounting for 17.8% of the total population of Spain with 8,577,627 people (4,357,289 women, 50.8%, and 4,220,338 men, 49.2%). The registered foreign population amounts to 810,737 people, representing 9.5% of the total population Andalusia. In 2022, people from Europe (EU-27 and the rest of Europe) represented 46.2% of this group, followed by Africa at 28.5% and America at 19.5%

As indicated by the Labor Force Survey, the foreign labor force in Andalusia (i.e. the number of foreigners aged 16 or over who are either employed or seeking employment) was 448,844 in 2023. Consequently, 10.84% of the working population in Andalusia are foreigners. In Andalusia, the majority of foreign workers (82.60%) are employed by others.

In Spain the majority of foreign workers were employed in the services sector, accounting for 73.28% of the total in December 2024. The next most important sectors were construction (9.62%), agriculture (9.38%) and industry (7.47%). Almost half of the foreign workers were concentrated in the hotel and catering sector (465,996 people, or 16.32%). The figure for wholesale and retail trade was also significant at 418,362 (14.65%), while construction contributed 274,642 (9.62%) and administrative and support service activities recorded 262,821 (9.2%).

Among the occupations with the highest number of foreign workers hired, agricultural workers (excluding orchards, greenhouses, nurseries and gardens) stand out, accounting for 13.39% of total hiring. This is followed by salaried waiters (9.83%) and manufacturing industry workers (7.74%). The occupations with the highest stability of employment are bricklayers (88.81%), domestic workers (88.15%) and building construction workers (85.40%). The unemployment rate for foreign citizens in Spain is 15.79%. Among them, the most in demand occupations are office and hotel cleaners (13,95 %), followed by workers in manufacturing industries (7,39 %) and salespersons in shops and warehouses (6,18 %).

Table 3. Top Sectors and Occupations Employing Foreign Workers — Spain vs Andalusia

Category	Spain	Andalusia
Top Sectors	Services (73.28%) Construction (9.62%) Agriculture (9.38%) Industry (7.47%)	Services (~70%) Commerce, Repairs & Hospitality (30.46%) Other Services (17.68%) Agriculture (15.72%)
Top Occupations	Agricultural Workers (13.39%) Salaried Waiters (9.83%) Manufacturing Workers (7.74%)	Unskilled Agricultural Workers (~50% of contracts) Cleaning, Kitchen & Service Staff (~67% combined)

In Andalucía, an analysis of the distribution of the foreign population by economic activity sector reveals that seven out of ten foreign workers in Andalusia are employed in the services sector. A more detailed analysis of the main activities within this sector shows that 30.46% of foreign workers in Andalusia are employed in commerce, repairs and hospitality. Other noteworthy categories are Other Services and Agriculture, with 17.68% and 15.72% of the foreign population

employed in Andalusia, respectively. In Andalusia, foreign nationals are mostly occupied as unskilled agricultural laborers, accounting for almost half of all contracts in this sector. Foreign workers constitute over 67% of those employed as waiter, office, hotel and other similar establishment cleaning staff, as well as farming laborers, kitchen assistants and skilled agricultural workers.

The gender gap is present in the affiliation of foreign workers. Out of a total of 2,855,563 foreign workers, 56.56% (1,614,974) are men and 43.44% (1,240,560) are women. According to the 2024 data, the employment rate of non-EU foreign men is considerably higher than that of women who are non-EU citizens, namely it is employment than women, namely 77.93% for men and 59.32% for women. In 2024 foreign male workers made up 14.49% of the general employed population in Spain, higher than that of women (12.34%).

In Andalucía, comparing the hiring of foreign nationals with the hiring of Spanish nationals by gender, in both cases there is a higher proportion of contracts for men, especially among foreign nationals (64.99% foreign men compared to 35.01% foreign women hired).

By age, foreign workers aged 25 to 44 are the most numerous, with 56.29% of the total, followed by those aged 45 and over with 35.93% and those under 25, who account for only 7.76% of the total.

Another challenge facing the Spanish labor market is the ageing of the working population. According to EPA (INE) data, 49.3% of employed people were aged 45 or over in the first quarter of 2022. This poses a significant challenge to generational replacement, particularly in certain occupations and sectors (e.g. construction, extractive fishing and agriculture), a problem that is partly mitigated by the hiring of foreign workers.

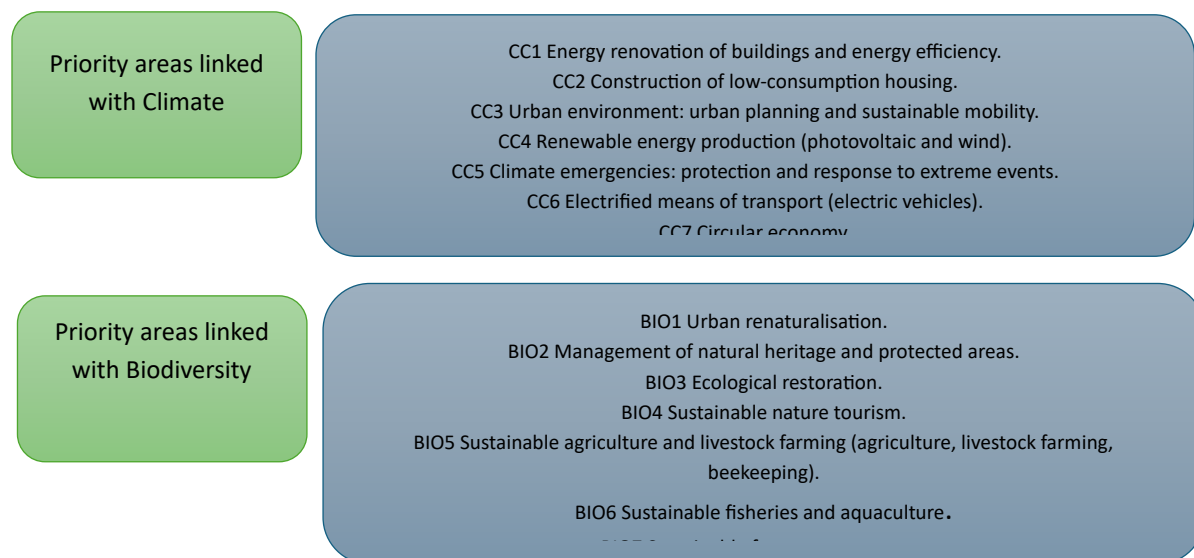
Nevertheless, youth unemployment remains a concern, exceeding the national average of 13.65%. The figures are 18.34% for 25-29 year olds, 26.75% for 20-24 year olds, and 46.43% for 16-19 year olds. In addition, in 2024, the total number of NEETs in Spain was 534,240. In Andalusia, the figure reached 114,714, of whom 48,593 are women and 66,120 are men. The activity rate of the foreign population aged 16 to 24 stands at 48.6%, compared to 82.1% for the population aged 25 to 54.

5.2 Growth Sectors & Green Economy Opportunities In Spain

According to key statistics that emerge from ILO's 2024 edition of the [Global Employment Trends for Youth report](#), the global youth unemployment rate in 2023 (13%) marks the lowest rate in 15 years and a decrease from the pre-pandemic times. However, 20% of young people in the world were NEET in 2023, and 2 in 3 young people NEETS globally are women. There are facing global

challenges such as lack of jobs or lack of decent jobs, demographic pressures, educational mismatch and youth anxiety levels for losing their job is rising. The report underlines that services are now the dominant sector for young workers and niche sectors such as green, digital and care still hold promise. Without a doubt, the triple transition (digitalization, environmental sustainability, and social responsibility) is already driving rapid changes in the scope of occupations that are available to a young person now compared to 20 years ago. It is important to recall, however, that “new” occupations, while growing, are still largely outliers, employing only small shares of young workers overall. That said, digitalization and green technology also triggers transformations in how people work within existing occupations, and results in a growing need for all workers (and prospective workers) to acquire digital, green and digital skills. This transformation is anticipated to create new 'green jobs', and for this reason, it is widely heralded as a solution to the youth employment crisis.

Facing these challenges, the Biodiversity Foundation (FB) and the Spanish Office for Climate Change (OECC) of the Ministry for Ecological Transition and the Demographic Challenge have promoted the development of a study to identify the employment opportunities, new professional skills, and technical and professional capacities that are necessary for the ecological transition process (Fundación Biodiversidad & Oficina Española de Cambio Climático, 2023). Fourteen priority axes have been considered within two priority areas. The first of these is linked to climate and comprises activities aimed at reducing net greenhouse gas emissions into the atmosphere, as well as preventing and limiting the potential impacts and risks derived from climate change. This axis also covers reducing vulnerability and exposure to climate change and increasing the resilience of societies and ecosystems. The second priority area is linked to biological aspects and comprises activities related to the conservation and responsible management of biodiversity, green infrastructure, ecological connectivity and restoration



In order to achieve the ecological transition, the relevant or strategic occupations have been identified for each transition axis (see graph above). The study also elaborated on the main skills and competences required for each occupation or related occupations and we find out their ESCO equivalence.

In addition to these main, growing occupations, which are key to implementing the green transition, there are also some cross-cutting professions linked to ICT, RDI, training (to upskill and reskill), occupational health and safety, waste management, and the circular economy. More detailed information is available for each occupation, specifying the current trend, the specific intersectoral training needs and requirements, and related soft skills, according to the information published by Fundación Biodiversidad.

The State Public Employment Service (SEPE) of the Spanish Ministry of Labor and Social Economy, through its Occupations Observatory, has been studying different sectors, with the aim of gaining in-depth knowledge of the economic activities and occupations that have the greatest possibilities of creating activity and employment in the short and medium term. To have a general overview, the main employment sectors for foreign workers are the following ones: agriculture, livestock, forestry and fishing, hospitality, construction, wholesale and retail trade, repair of motor vehicles and motorcycles, manufacturing industry. Furthermore, the main occupations that they are performing are elementary occupations, restaurant, personal and security workers and salespeople, craftsmen and skilled workers in manufacturing and construction and plant and machine operators and assemblers. In addition, the Renewable Energies sector has become a fundamental activity in the Spanish productive system, both for the job creation possibilities it generates and for the weight it has achieved in the Spanish and world economy. The document studies the Renewable Energies sector in order to find out which activities and occupations have the best employment prospects in the short and medium term, as a result of the transition to a more sustainable economic model. has been carrying out prospective studies of different sectors, with the aim of gaining in-depth knowledge of the economic activities and occupations that have the greatest possibilities of creating activity and employment in the short and medium term. To have a general overview, the main employment sectors for foreign workers are the following ones: agriculture, livestock, forestry and fishing, hospitality, construction, wholesale and retail trade, repair of motor vehicles and motorcycles, manufacturing industry. Furthermore, the main occupations that they are performing are elementary occupations, restaurant, personal and security workers and salespeople, craftsmen and skilled workers in manufacturing and construction and plant and machine operators and assemblers. In addition, The Renewable

Energies sector has become a fundamental activity in the Spanish productive system, both for the job creation possibilities it generates and for the weight it has achieved in the Spanish and world economy. The document studies the Renewable Energies sector in order to find out which activities and occupations have the best employment prospects in the short and medium term, as a result of the transition to a more sustainable economic model.

Green jobs in Spain are gaining momentum as the country intensifies its efforts to combat climate change and transition toward a sustainable economy. Sectors such as renewable energy, sustainable agriculture, energy efficiency, and environmental restoration are experiencing notable growth, creating new and dynamic employment opportunities. This expansion has led to the creation of over 150,000 new jobs in fields such as biomass, wind, and solar photovoltaic energy. However, these sectors face a talent shortage. For young people, green jobs offer not only a chance to engage in meaningful, future-oriented work but also a pathway to stable employment in emerging industries. With increasing public and private investment, favourable government policies, and a growing societal emphasis on environmental responsibility, green jobs are becoming more attractive career options. Furthermore, Spain's transition towards a green economy offers a pivotal opportunity to address the persistent challenges faced by NEET youth, especially those from migrant and refugee backgrounds. As of February 2025, the youth unemployment rate in Spain stands at 25.5%, with female youth unemployment at 27.6%. This demographic often encounters compounded barriers, including language obstacles, limited recognition of qualifications, and social exclusion, hindering their integration into the labor market. To bridge this gap, and equip NEET youth with relevant skills but also facilitate their integration into local relevant sector aligning green job initiatives with inclusive training and employment programs, new pathways and approach are needed to foster integration and economic participation for NEET youth, particularly those from migrant and refugee backgrounds not only to addresses labor shortages in the green sector but also fosters social cohesion and economic resilience.

5.3 Findings on Training Opportunities for Emerging Occupations in Spain/Andalucía

The Spanish ecological transition is leading to significant changes in production processes and, consequently, in the associated occupations. According to current expectations, most of the in-demand profiles are existing occupations that need to adapt to new requirements. The demand for these new, emerging or expanding skills must be met through the Spanish training system, comprising the Education System and Vocational Training for Employment (which caters for both employed and unemployed individuals).

Due to the importance of its natural heritage and all the activities associated with the management of its natural resources and the promotion of sustainability, Andalusia offers a wide range of opportunities for professionals working in environmental management and sustainable development. The growing number of environmental-related economic sectors offers a wide range of job opportunities that require the right qualifications.

Consequently, the ecological transition is changing the job market for green jobs, which are on the rise and require new knowledge and skills to perform them. The 2024 Training Needs Survey and Detection Report by the SEPE Occupations Observatory has identified gaps in workers' qualifications for accessing jobs in the green economy sector. These knowledge gaps range from technical and management skills to cross-cutting competencies such as digital and personal skills (SEPE, 2024).

All these qualifications are registered in the [National Catalogue of Professional Qualifications](#) (CNCP) is an instrument of the National System of Qualifications and Vocational Training (SNCFP). It organises professional qualifications that are eligible for recognition and accreditation. These qualifications are identified in the productive system based on competencies.

Vocational Training for Employment includes a set of training activities aimed at promoting and extending training among companies and employed and unemployed workers that contributes to improving the competitiveness and productivity of the business sector. It also aims to improve the employability of workers, especially those groups that have greater difficulties in accessing or remaining in the labour market. To this end, courses are offered in the specialities contained in the Andalusian Register of Training Specialities and taught by centres included in the Register of Vocational Training Centres and Entities for Employment in Andalusia. In Andalusia, there are opportunities to study for up to 197 different qualifications available in the [Training specialities file](#). At National level similar training can be found in the presential [Training Centres and Entities list](#) or [Online training centres and Entities list](#).

In addition to these formal trainings, other public and private entities offer specialized courses among them we can mention the [Andalusian Environmental Training Plan](#) is a specialised training programme aimed at promoting the training of social actors involved in the conservation and restoration of the natural environment and protected areas, both in terms of management and information and awareness-raising.

Furthermore, the State Public Employment Service (SEPE) under the Youth Guarantee¹ 's National system has published its [1st Green and Circular Economy training catalogue](#) in which information

¹ The Youth Guarantee National system is a European initiative that aims to facilitate access to the labor market for young people aged 16 to 30.

on how to train and access the new jobs that our society is demanding in its transition to a green and sustainable economy, through a wide range of online, face-to-face and hybrid courses, especially offered by Chambers of Commerce. Other interesting private initiatives such as [Empleo Verde](#) supported by a [hub](#) of private Spanish and international entities involved in green sector industry offer specialised courses on green skills.

From the civil society sector, the Employment and Social Inclusion Department of the Santa María la Real Foundation has launched the '[Impulsa Empleo Verde](#)' (Promote Green Employment) project in 2023, a free online training initiative that improves access to the labor market for unemployed people through practical workshops that enable them to acquire green skills and the skills most in demand in today's labor market.

5.4 Stakeholder Perspectives on AI Integration in Employment Support

5.4.1. Employers & Training Providers

Insights gathered from interviews with employers and training facilitators reflect a pragmatic yet inclusive outlook on youth employment, particularly when it comes to refugee and migrant populations. The employers interviewed operate across sectors such as agriculture, hospitality, recycling, and construction – industries characterized by high demand for manual labor and limited supply of qualified workers. Several noted that, while seasonal employment remains relevant (especially in agriculture), there is a growing trend toward more stable, year-round hiring due to the diversification of crops and logistical needs.

There was a shared concern regarding the shortage of candidates willing to work in traditional manual trades such as plumbing, electrical work, and warehouse operations. These sectors, although essential to the local economy, appear to be increasingly undervalued among younger generations, resulting in a significant recruitment gap that is often filled by migrant and refugee workers. These factors often prevent them from engaging fully in training programs or formal job placements. In addition, some mentioned cultural adjustments and behavioural differences that require time and guidance to overcome. Several employers reported working closely with NGOs and public programs to recruit staff and offer initial support but pointed out that this assistance is often insufficient for long-term integration and retention.

Training providers, particularly those embedded in community organizations, echoed these concerns. They noted that while vocational training is available, it often fails to meet the real need of migrant youth. Many courses are not adapted to their educational levels or are too rigid to accommodate precarious living conditions. Furthermore, structural issues such as unstable housing, poverty, and frequent changes in administrative status further complicate participation

in training and job placement processes. The lack of coordination between small employers and training entities was also mentioned as a missed opportunity, particularly for practical, hands-on training in high-demand sectors like logistics, tourism, and green energy.

Digital tools and AI-based solutions remain largely unknown among this group. None of the employers interviewed had previous experience with AI-powered skills assessment or job-matching platforms. While they showed interest in receiving training or allowing staff to explore such tools, most expressed scepticism or concern about their applicability. Some feared that AI systems might disregard critical human elements such as adaptability, personal motivation, or social fit-factors that are particularly important when hiring young people with non-linear life trajectories.

Nonetheless, the majority acknowledged that if AI tools were intuitive, mobile-friendly, and embedded within existing support systems, they could become valuable resources – particularly in helping to identify transferable skills or reduce administrative workload. Several employers suggested that the involvement of trusted intermediaries, such as NGOs or employment services, would be crucial to ensuring adoption and meaningful use.

Finally, participants offered a series of recommendations aimed at improving youth employment outcomes. These included providing tax incentives or subsidies for companies that hire or train vulnerable youth, aligning training offers more closely with real market needs, and creating “bridging programs” that combine basic language skills, workplace orientation, and technical training. They also called for clearer, more stable migration and employment policies, alongside enhanced public-private collaboration.

In sum, while employers and training providers recognize the potential of AI and digital innovation, they view human-centered support systems and coordinated efforts between stakeholders as the cornerstone for achieving lasting integration of refugee and migrant youth into the labor market.

5.4.2 Youth & Community Organizations

Youth stakeholders, both unemployed and employed, were interviewed and provided valuable insights into their perspective about AI integration in employment support services and about the opportunities and challenges it might withstand. Drawing from one combination of Focus Group Discussions (FGDs) and Key Informant Interviews (KIIs) conducted in Andalusia, it provided a general view of young refugees’ and migrants’ needs, perception and readiness to engage with AI-driven employment solutions. While most participants mention that they had no prior

experience with AI tools, it showed a significant openness to its use if properly adapted to the realities of refugee and migrant youth.

Focus Group Discussion (FGD) with Unemployed Youth

The FGD was held in Málaga with the collaboration of seven young participants (aged 18-29), all of whom were former unaccompanied minors now engaged in social programs promoting active job search and autonomy. Although they had limited work experience in Spain, many had held short-term jobs in their countries of origin (e.g., fishing, guiding, or electrical work). Their current employment status ranged from informal work attempts to full unemployment, and most participants were in the process of regularizing their documentation or improving language proficiency.

Rather than naming specific sector, participants conveyed cautious expectations regarding future employment. They aspired to find dignified, stable jobs that would allow them to live independently and contribute to society. Several highlighted an interest in vocational training to build a pathway toward employability – particularly in technical fields like mechanics, welding and logistics – but their aspirations were framed more by accessibility and opportunity than by any strong preference for industry.

Key barriers to accessing the labour market identified by the group included:

- Lack of documentation, which prevent formal hiring processes.
- Low proficiency in Spanish, impacting both job applications and training participation.
- Absence of local social networks, making it difficult to learn about opportunities or secure references.
- Limited or non-recognized educational background, as many lacked formal qualifications.

Participants acknowledged the usefulness of digital platforms like InfoJobs, with most responding basic familiarity with job search tools. When introduced to the idea of AI-based tools for employment matching, they expressed interest and even enthusiasm, citing the potential to highlight skills not reflected in traditional CVs or qualifications. Nonetheless, they also emphasized the need for clear explanations, training on usage, and human guidance alongside the deployment of any digital tool.

Key Informant Interviews (KIIs)

The five KIIs were conducted with young people currently employed in low-skilled sectors such as agriculture, hospitality, laundry services, and construction. Despite working full – or part-time, these individuals shared experiences that mirrored those of the unemployed group – particularly

in terms of barriers to stable employment and a lack of long-term professional development pathways.

Approximately 80% of interviewees stated they had found work through personal contacts or NGOs, rather than public employment services. While none had previously interacted with AI-based employment tools, all expressed openness to learning how to use them, provided the tools were adapted to their realities and supported by trusted organizations.

Participants identified several structural barriers:

- Limited job mobility due to low formal education.
- Frequent exposure to exploitative or undeclared employment, particularly in the agricultural sector.
- Persistent language gaps that affected workplace communication and training opportunities.
- Discrimination based on ethnicity or migratory status, which remained unaddressed in most hiring processes.

While interest in AI was evident, participants raised their own concerns about accessibility:

1. Will the tool be usable from a smartphone?
2. Will it understand and reflect my type of skills?
3. Will it require formal certifications or documentation I don't have?

Despite these concerns, participants believed AI tools could support their employment journeys by improving the visibility of their profiles and expanding job-matching possibilities. However, they strongly rejected any solution that might automate exclusion or make assumptions based on formal credentials alone.

Cross-cutting Observations

Across both the FGS and KIIs, young migrants expressed a blend of curiosity and caution regarding the integration of AI in employment services. Their feedback highlighted five key conditions for effective AI implementation:

- Accessibility: Tools must be mobile-friendly, linguistically adapted, and usable with minimal digital literacy.
- Contextualization: AI models should account for informal skills, legal status, and unique pathways of migrant youth.

- Trust: Integration via community organizations and social programs increases acceptance and engagement.
- Support: Digital tools must be embedded in ecosystems of guidance, not delivered in isolation.
- Equity safeguards: To prevent digital discrimination, tools must be transparent in how they match or filter candidates.

The interest in AI is real – but is conditional. Youth and community voices indicate that technology can support inclusion if it is human-centered, responsive to vulnerability, and focused on empowerment rather than profiling. Without those assurances, the tools risk replicating the same structural exclusions they aim to solve.

5.4.3 Public Sector & Policy Insights

The perspectives gathered from employers and employment service providers reveal a consistent call for more coherent, proactive, and inclusive public policies to support the labour market integration of refugee and migrant youth. While some respondents demonstrated limited awareness of specific policies or legal frameworks, other – particularly those engaged in social organizations – provided a nuanced understanding of the institutional gaps that complicate access to employment for this target group.

Across interviews, stakeholders identified legal and administrative barriers as some of the most significant obstacles to youth employability. These include delays and inconsistencies in the processing of work permits, residence documentation, and the recognition of foreign qualifications. Interviewees emphasized that bureaucratic instability – such as frequent changes in procedures or eligibility requirements for residency and employment – can derail otherwise promising integration trajectories. One respondent noted that *the constant changes in immigration paperwork* make it difficult for both youth and employers to plan long-term engagement.

Policy tools such as “arraigo social”, *contracting in origin programs*, and *the red card system* were mentioned as pathways to employment, but also as complex systems that require significant guidance. The need for simplification and transparency in these mechanisms was emphasized, especially in cases where young migrants may lack literacy in their native language, let alone the host country’s administrative language. Stakeholders also underscored the importance of creating clear legal pathways to work that do not penalize young people for gaps in their academic history or administrative irregularities inherited from childhood or adolescence.

From the perspective of service providers and intermediaries, public support for employment integration is often perceived as insufficient or misaligned with reality. While national and regional programs do exist – such as Andalucía Orienta, IMEFE, or initiatives managed by Cáritas, Cruz Roja o Fundación Don Bosco – these are often fragmented and under-resourced. There is a particular need for better coordination between public employment services and small and medium-sized enterprises (SMEs), which are more likely to offer entry-level job opportunities to migrant youth but often lack the administrative capacity to navigate complex subsidy or hiring schemes.

Respondents also highlighted economic and territorial inequalities, especially in rural or semi-urban areas, where opportunities for stable employment are limited and housing conditions are precarious. In such contexts, support from local authorities becomes critical – not only through direct employment programs but also by facilitating access to housing, transportation, and legal aid.

In terms of public investment, there was consensus on the need for incentives targeting companies that hire and train vulnerable youth, including financial subsidies, tax relief, or reduced social security contributions. Stakeholders also advocated for policies that promote ongoing workplace training and apprenticeships, especially for roles in high-demand but low-status sectors like agriculture, logistics and recycling.

Finally, the interviews reflected a broader concern about the lack of long-term strategic planning for youth employment that includes migrants and refugees as an integral part of national labour force development. While some frameworks exist, their implementation is often disconnected from ground-level realities. To address this, participants suggested more systematic dialogue between policymakers, employers, and civil society, as well as increased visibility and dissemination of programs that already function effectively.

In conclusion, while there is general openness to inclusive employment policies, the stakeholders interviewed called for a more responsive, simplified, and coordinated public policy environment – one that recognized structural vulnerabilities of migrant youth and builds bridges between institutions, employers, and communities.

5.5 Conclusion

Considering the local labour market trends in Andalucía (Spain) as well as the rise of the green transition and employment, the skills assessment and employment support for refugee and migrant NEET youth should mainly be focused toward the ECSO occupations included in the following categories: Elementary occupations, Skilled agricultural, forestry and fishery workers,

Plant and machine operators and assemblers, service and sales workers and craft and related trades worker. SkillsPath's AI-driven tool and tailored- career counselling assistance should emphasis on the knowledge, skills and competences considered relevant for these occupations so that refugees and migrant NEET youth can be provided guidance to boost their employability.

6. Comparative Analysis of Baseline Findings: Germany, Greece, and Spain

This chapter presents a comparison of the main findings from the three pilot countries of the SkillsPath project: Germany (Bonn and the Rhein-Sieg region), Greece (Central Macedonia), and Spain (Andalusia). The aim is to highlight common trends, note country-specific differences, and draw out implications for the development and adjustment of the AI-based skills assessment tool. Although the three countries differ in terms of policy, economic conditions, and support systems, several recurring challenges and opportunities can be identified.

6.1 Common Barriers

Refugee and migrant NEET youth in all three countries face a range of shared challenges that affect their ability to access work and training. These include:

- **Insufficient language skills**, which are consistently identified as the main barrier to accessing vocational education and employment.
- **Lack of recognition for prior qualifications and work experience**, especially in regulated sectors.
- **Limited digital access and skills**, particularly for those without stable internet or access to devices.
- **Inadequate support services**, which limits awareness of available opportunities and career pathways.
- **Difficult living conditions and social isolation**, which are often made worse by housing insecurity, family responsibilities, or trauma. These tend to impact young women more severely.

Overall, the findings suggest that exclusion from the labor market is not only the result of individual challenges but is strongly linked to broader systemic and institutional gaps.

6.2 National Contexts

Germany (North Rhine-Westphalia)

In Germany, national NEET rates are relatively low, but significantly higher among young people with refugee or migrant backgrounds. The structure of the dual vocational training system is complex and demanding, especially in terms of language. Although many support services are in place, there is still a mismatch between available apprenticeship positions and young people's preferences. Green jobs are available but often require higher qualifications. Interest in AI tools is growing, but concerns about privacy and transparency remain.

Greece (Central Macedonia)

Greece has some of the highest NEET rates in the EU. Refugee and migrant youth often work in informal, seasonal jobs in sectors like hospitality and agriculture. Many face legal and bureaucratic delays, lack access to structured language training, and are disconnected from public services. While some digital tools are in use, there is low awareness of AI and limited digital readiness overall. Most young refugees and migrants rely on informal networks or NGO support.

Spain (Andalusia)

In Andalusia, many young migrants are employed in low-paid, unstable jobs, particularly in agriculture and hospitality. Although Spain is investing in green economy sectors, access remains limited for NEET youth due to documentation issues and limited training availability. Most participants had no prior experience with AI tools, but showed interest if the tools are introduced through trusted providers.

6.3 Implications for the AI Tool

The cross-country findings suggest that the AI tool must be flexible and adapted to the realities of each country. Key design features include:

- **Multilingual access**, covering the main languages spoken by the target group (e.g. Arabic, Farsi, Urdu, Spanish, Greek, German, and simplified English).
- **Mobile-friendly interface**, accessible even for users with basic digital skills and limited data access.
- **Soft skills assessment**, including motivation, teamwork, and flexibility, particularly relevant for users with limited formal qualifications.
- **Alignment with local labor markets**, ensuring that suggested job matches are relevant and realistic.
- **Transparency and clear explanations**, to build trust and avoid misuse or misunderstanding of the tool.

6.4 Recommendations

Based on the findings, the following actions are recommended:

- **Integrate the AI tool into existing support services**, ensuring that it complements human guidance (e.g., job counselors, mentors).
- **Include young people in the development and testing process**, to make sure the tool reflects their needs and preferences.
- **Link the tool to real training and job opportunities**, particularly in sectors with high demand.
- **Build strong partnerships with local actors**, including employers, training providers, and civil society organizations.
- **Provide digital support**, especially for users who may lack devices or digital confidence.

In summary, the AI tool can play an important role in supporting refugee and migrant youth. However, its success depends on whether it is designed and implemented in a way that reflects the needs of users and the realities of each local context. It must be used as part of a broader approach that includes personal support, inclusive policies, and long-term commitment to integration.

Table 4. Comparative Highlights: Summary of Key Baseline Findings Across Germany, Greece, and Spain

Thematic Area	Germany	Spain	Greece
Unemployment/ NEETs	7.7 % in North Rhine-Westfalia	114,714 NEETs in Andalusia (2024)	Among the highest NEET rates in the EU
Labor Market Trends	Office jobs, medical assistants, automotive/mechanics, care, retail/ Apprenticeship mismatch: most wanted ≠ most available	Agriculture, hospitality, cleaning, unskilled labor / 70% of foreign workers in services; mainly low-skill jobs	Hospitality, tourism, logistics, construction, seasonal agriculture/ Jobs are mostly informal, seasonal, precarious, and low protection

Skills & Gaps	Low German language proficiency, understanding of labor market, digital reliance	Low Spanish language proficiency, limited or unrecognized education, absence of vocational pathways	Low Greek language proficiency, soft skills (communication, teamwork), job search process unclear
Barriers	Missing documents; qualifications not recognized, overregulated professions, low motivation for needed jobs	Lack of documentation, weak social networks, language barriers, fragmented public services	Bureaucracy (e.g., no tax number), unfamiliarity with job platforms, housing, childcare, mental health
AI	Use of ChatGPT, BerufeNet, etc., concerns about overdependence and data privacy awareness	AI tools should complement human services (NGOs, counsellors), need for cultural/language accessibility	AI seen as promising for job matching, risks include digital exclusion, low digital literacy, trust issues
Green Jobs	Mostly high-skill roles (engineering, IT), language needed, entry points via FÖJ, recycling, crafts training	high potential for green jobs in diverse sectors, interest exists, but access limited due to low training availability and weak awareness	Potential in renewable energy, eco-tourism, recycling, low awareness, fragmented outreach, jobs seen as difficult

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