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Empowering Mobility for
Apprentices in the Building Sector

Deliverable 2.1
INQUIRY INTO APPRENTICES' JOURNEY THROUGH INSTITUTIONAL AND STRUCTURAL CHALLENGES FOR MOBILITY IN THE BUILDING SECTOR



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Deliverable 2.1: Inquiry into Apprentices' journey through institutional and structural challenges for mobility in the building sector

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1. Executive Summary

Purpose of the report: The purpose of this report (Deliverable 2.1 of the MOBUILDING project) is to identify, analyze, and understand the multifaceted institutional, structural, personal, and systemic barriers that hinder apprentice mobility within the European building sector.

By mapping the apprentice journey across partner countries (Spain, Türkiye, Italy, Cyprus, Greece, Ireland, and North Macedonia), this document provides an evidence-based foundation to support the definition of an Action Plan (D2.2). Ultimately, the report seeks to foster high-quality mobility, recognizing mobility experiences as fundamental learning opportunities that provide a strong impulse and motivation in apprentices' careers, while also aligning vocational education and training (VET) with EU labor market needs and addressing the severe skills shortages currently jeopardizing the construction industry.

Methodology used: The report utilized a comprehensive, three-pronged methodological approach:

1. **Literature Review:** Extensive desktop research was conducted to explore national and EU-level policies, existing VET and apprenticeship frameworks, and relevant studies from institutions like CEDEFOP, focusing on mobility experiences and skill acquisition in the building sector.
2. **Qualitative Research: Direct field insights were gathered through one-on-one interviews and, in Cyprus (CARDET), focus group discussions involving key stakeholders—apprentices, VET trainers, employers, and policymakers. This included case studies tracking cohorts of apprentices to document their real-world challenges, successes, and interactions with mobility structures.**
3. **Documenting Institutional Practices:** The consortium observed and analyzed institutional practices within training centers and host companies, focusing on curriculum design, mentorship and support mechanisms, and the assessment and certification of skills.

Key mobility challenges identified: The research categorized the primary barriers into five main areas:

- **Legal & Structural:** National legislation creates distinct, systemic obstacles depending on the specific legal framework of each country. The most relevant legislative challenges identified include:
    - **Ireland:** The outdated 1967 Industrial Training Act strictly classifies apprentices as employees bound by employment contracts, which renders cross-border mobility legally complex.
    - **Türkiye**: Vocational Education Law No. 3308 enforces a rigid contractual framework that binds apprentices to a single employer for their entire 3- to 4-year training period, leaving little to no legal flexibility for temporary international transfers.
    - **Italy**: Legislative Decree 81/2015 classifies apprentices as permanent employees, meaning companies are legally obligated to continue paying their salaries even while they are abroad on a mobility placement, acting as a massive financial disincentive.
    - **Spain**: Legal uncertainty stems from the coexistence of multiple contract types within the dual VET system (e.g., work-based training, grants, internship agreements), which complicates the drafting of bilateral agreements with foreign companies. Furthermore, mechanisms for formally recognizing learning outcomes acquired abroad remain fragmented and inconsistent despite recent VET reforms.
    - **Cyprus**: A highly fragmented legal framework dictates that traineeships undertaken without remuneration are not classified as proper employment, leaving apprentices without adequate legal and social protection during international mobility
- **Employer/SME:** Employers are highly reluctant to participate due to limited capacity, tight project schedules, the operational cost of hosting or sending trainees, and the fear of "brain drain" where trained apprentices might not return to their home company.
- **Administrative:** Two distinct issues compound this barrier. First, VET staff face an intensive bureaucratic workload for partner matching, documentation, and reporting, often without dedicated internationalization support. Second, there is a critical gap in sector-specific safety tools tailored to the unique high-risk realities of construction sites (e.g., work at height, scaffolding, hazardous materials), as generic Erasmus+ tools do not adequately address these sector particularities.

- **Barriers Faced by Learners and Apprentices:** This barrier encompasses three distinct challenges: (1) Language barriers constitute both a deterrent and a direct safety-critical risk on active construction sites, where misunderstanding instructions can cause accidents; (2) financial strain from insufficient grant coverage in high-cost destination countries; and (3) low awareness of long-term career benefits combined with inadequate pre-departure preparation (technical, linguistic, and cultural).
- **Socio-Economic:** A pervasive cultural stigma positions VET as a "second-rate" choice compared to university pathways, which reduces the pool of motivated candidates willing to pursue cross-border mobility experiences. Furthermore, the construction sector remains heavily male-dominated, which limits diversity and inclusion specifically within mobility programs and reinforces gender-based exclusion from international opportunities.

Cross-country findings: Despite differing national VET architectures, common structural themes emerged across all partner countries. The construction industry universally faces severe labor shortages, an aging workforce, and an urgent need for workers trained in modern, sustainable, and digital building practices (e.g., green materials, energy efficiency, IoT applications).

Across the consortium, the heavy reliance on micro and small-to-medium enterprises (SMEs) creates a shared bottleneck: small companies simply lack the administrative capacity, supervisory time, and financial resilience to manage cross-border mobilities.

Main recommendations: To overcome these obstacles and foster a robust, inclusive mobility ecosystem, the report recommends the following targeted measures:

- **Develop Administrative and Financial Frameworks:** Simplify administrative procedures, improve mutual recognition of qualifications by national and EU authorities (e.g., via Europass), and introduce targeted financial incentives or tax benefits to compensate SMEs for the operational costs of participating in mobility schemes.
- **Create Sector-Specific Support Tools:** Develop ready-to-use, construction-specific mobility toolkits aimed at VET providers, SMEs, and apprentices, that include multi-language health and safety instructions, clear liability and insurance guidelines, and adaptable risk assessment templates.

- **Enhance Pre-Departure Preparation:** Mandate comprehensive pre-mobility training for apprentices, focusing not just on logistics, but on technical construction vocabulary, workplace culture, and safety expectations to ensure smoother integration.
- **Strengthen Capacity Building and Networks:** Establish intermediary support structures—such as regional mobility consortia, dedicated mobility coordinators, and the proposed MOBUILDING European Platform—to relieve VET providers and SMEs of heavy administrative burdens and facilitate reliable partner matching. It is worth noting that some VET providers, such as ENAIP in Italy, have already developed strong internal capacity for managing mobility, and such models should be documented and shared as good practices.

2. Introduction

2.1 Context: Apprenticeship Mobility in the Building Sector

Importance of the building sector in Europe: The building sector is a cornerstone of the European economy, providing approximately 18 million direct jobs and contributing to about 9% of the EU's Gross Domestic Product (GDP). It serves as a strategic pillar for economic development, infrastructure growth, and societal well-being across member states. Furthermore, the construction industry is absolutely central to achieving the targets set out in the European Green Deal; the transition to greener, sustainable building practices, energy-efficient renovations, and smart infrastructure is essential for meeting Europe's climate and innovation goals.

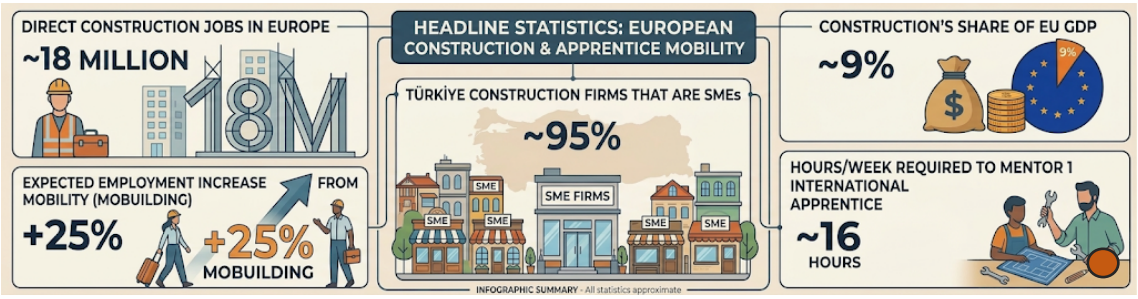


Figure 1: Key Statistics on the European Construction Sector and Apprenticeship Mobility

Skills shortages and workforce challenges: Despite its economic significance, the European construction sector is currently jeopardized by an unprecedented labor shortage that threatens growth across the continent. According to the EURES 2023 Report, construction experiences some of the most persistent and widespread labor shortages across the EU. This crisis is driven by several deep structural factors:

- **Demographic shifts:** The sector is characterized by an aging workforce with high retirement rates, shrinking the available talent pool.
- **Low attractiveness to youth:** Young people are increasingly reluctant to pursue careers in construction due to its traditional image, precarious working conditions, high physical demands, and the frequent use of subcontracting.
- **Skills mismatches:** The ongoing green and digital transitions demand new technical competencies (such as digital construction, renewable energy installations, and sustainable materials) that much of the current workforce does not yet possess, exacerbated by a low rate of participation in continuous training.
- **Lack of diversity:** The construction workforce remains heavily male-dominated, which severely limits its appeal to diverse talent pools, including women.

Importance of mobility for apprentices: Cross-border apprenticeship mobility is increasingly recognized as a vital strategic tool to mitigate these acute labor shortages and modernize the sector. Crucially, it is also a fundamental learning opportunity and an integral component of work-based learning (WBL) that provides strong impulse and motivation in apprentices' careers, accelerating their professional development in ways that classroom-based training alone cannot achieve.

- **Skill Acquisition and Employability:** Mobility allows apprentices to gain hands-on experience with new materials, digital tools (like BIM or 3D printing), and diverse construction techniques that may not be standard in their home countries. It exposes them to international safety standards and work environments, significantly boosting their professional readiness and employability.
- **Personal and Transversal Growth:** Beyond technical skills, apprentice mobilities foster intercultural awareness, independence, adaptability, and teamwork in multicultural settings, which are highly valued in the globalized labor market.
- **Sectoral Innovation:** Mobility acts as a conduit for knowledge transfer. Apprentices returning from abroad bring innovative perspectives and best

practices in sustainable construction back to their home institutions and local SMEs, contributing to the sector's overall modernization.

Recognizing this transformative value, European policy actively champions apprenticeship mobility. Initiatives aligned with the European Skills Agenda and the Osnabrück Declaration push for increased VET internationalization. Specifically, the Council Recommendation "Europe on the move" has set an ambitious target for at least 15% of vocational learners to benefit from learning mobility abroad by 2030. Cross-border long-term apprentice mobility (CBLTMA) is therefore positioned not just as an educational opportunity, but as a critical instrument to build a skilled, adaptable, and resilient European construction workforce

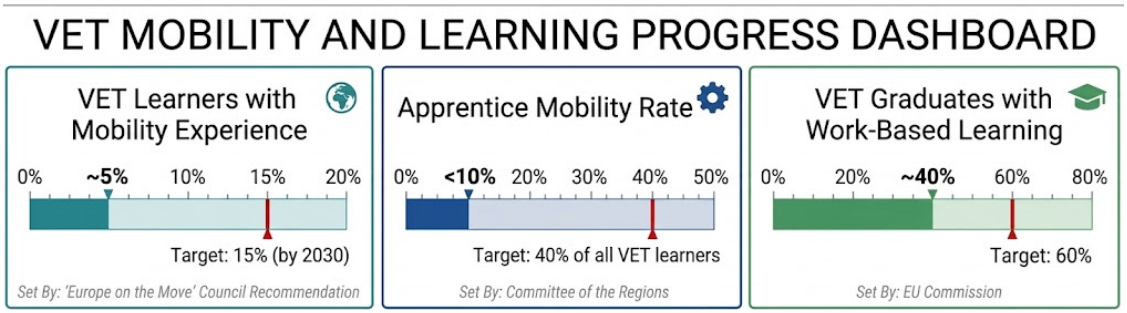


Figure 2: Current Status and 2030 Targets for VET Learner Mobility and Work-Based Learning in Europe

2.2 Objectives of the report

The overarching purpose of this report (Deliverable 2.1 of the MOBUILDING project) is to identify, analyze, and understand the multifaceted institutional, structural, personal, and systemic barriers that hinder cross-border apprentice mobility within the European building sector.

Specifically, the document aims to:

- **Identify barriers to apprentice mobility:** The report systematically maps the apprentice journey to uncover the complex logistical, financial, cultural, and personal obstacles that prevent vocational learners from undertaking apprentice mobilities. This includes analyzing specific vocational skills demands, recognizing unique mobility needs within the construction industry, and understanding the deterrents affecting both learners and hosting companies.

- **Analyse institutional and structural challenges:** The document delves into broader systemic roadblocks across partner countries. It explores highly regulated and rigid national apprenticeship frameworks, outdated labor legislation, administrative workloads placed on VET providers, and the fragmented mechanisms for formally recognizing and validating learning outcomes acquired abroad.
- **Examine experiences of apprentices and stakeholders:** To capture a comprehensive, 360-degree view of the mobility ecosystem, the report utilizes qualitative field research—including semi-structured interviews, focus group discussions (Cyprus), and case studies tracking cohorts of apprentices. This approach directly documents the real-world challenges, successes, and perceptions of four primary target groups: VET learners/apprentices, VET trainers and educators, SME employers, and policymakers.
- **Propose measures to improve mobility schemes:** By synthesizing the identified barriers and documenting existing institutional practices, the report seeks to define appropriate, actionable measures to overcome the obstacles hindering learning mobility abroad, whether within or outside of the Erasmus+ programme. Ultimately, the report provides an evidence-based foundation to support the creation of the project's strategic Action Plan (D2.2), aiming to foster high-quality mobility, align VET with EU labor market needs, and address the severe skills shortages jeopardizing the construction industry

2.3 Scope of the Report

Participating countries: This report encompasses the vocational education and training (VET) and construction sector landscapes of seven partner countries involved in the MOBUILDING consortium: Spain, Türkiye, Italy, Cyprus, Greece, Ireland, and North Macedonia. This geographic distribution captures a diverse mix of Northern, Southern, and Eastern European perspectives, providing a broad overview of the varying institutional and structural frameworks governing apprenticeships across the continent.

Target groups: To capture a comprehensive, 360-degree view of the apprentice mobility journey, the qualitative research (interviews and, for Cyprus, focus group discussions) and institutional observations were specifically designed to target four primary stakeholder groups**:**

1. **Apprentices and Learners**: VET students and young professionals who have either participated in, are currently undertaking, or are potential candidates for cross-border mobility in the building sector.
2. **VET Trainers and Educators**: Teachers, academic staff, and mobility coordinators within vocational schools and universities responsible for preparing, sending, and mentoring learners.
3. **Employers and SMEs**: Construction company owners, technical directors, HR managers, and on-site supervisors who host international learners or face the operational realities of sending their own apprentices abroad.
4. **Policymakers and Institutional Representatives**: Staff from public bodies, business confederations, and VET consortiums who manage the administrative, strategic, and regulatory levels of mobility programs.

3. Methodological Approach

3.1 Research Design

Overview of the mixed-method approach: To comprehensively map the apprentice journey and accurately identify the barriers to cross-border mobility in the building sector, the MOBUILDING project (Task T2.2) employed a robust, mixed-method research design. This approach triangulates secondary data with primary qualitative insights gathered directly from the field, allowing for a multifaceted examination of systemic, institutional, and personal factors hindering mobility. The research was structured around four core pillars:

1. Literature review: As a foundational step, participant partners conducted thorough national and international literature reviews. Each partner developed a comprehensive analysis exploring existing research on apprenticeships, vocational education frameworks, and building sector-specific trends. The literature review focused on identifying official definitions and structures of VET, the duration and typologies of mobilities (short-term vs. long-term), and documenting previously identified legal, cultural, and socio-economic barriers operating at both the institutional and structural levels.

2. Qualitative interviews: To gain direct, lived insights, partners carried out extensive qualitative research involving one-on-one interviews and, where applicable, focus group discussions. This primary data collection targeted a 360-degree view by involving four key stakeholder groups: apprentices, VET trainers/educators, employers (specifically SMEs), and policymakers. For apprentices, the interviews were designed around a chronological tracking model to capture evolving perceptions, utilizing a specific coding framework categorized into six dimensions: Motivation & Expectations, Institutional Barriers, Support Mechanisms, Learning Outcomes, Inclusion & Diversity, and Recognition & Impact. When possible, and where partners had access to apprentices across multiple stages, these were structured across three phases of the mobility lifecycle:

- Pre-departure: Exploring motivations, expectations, and perceived challenges.
- Mid-mobility: Capturing real-time insights into adaptation, workplace integration, and institutional support.
- Post-return: Assessing the perceived impact, skill acquisition, and formal recognition of achievements.

3. Case studies: Complementing the broader interviews, the research design incorporated targeted case studies. Where applicable, participant partners followed specific cohorts of apprentices from their respective countries over time. In some cases (e.g., ENAIP/Italy), a single post-mobility interview was used to retrospectively address pre-departure, mid-mobility, and post-return topics. The objective of these case studies was to document their specific challenges, successes, and day-to-day interactions with both sending and hosting institutions and structures. This longitudinal approach allowed researchers to understand the nuanced realities of long-term mobility and the long-term benefits for all parties involved.

4. Institutional observations: Finally, the consortium documented and analyzed the practical frameworks operating behind the scenes. Partners observed and recorded institutional practices within training centers, host workplaces, and intermediate organizations to evaluate how mobility is structurally managed. This involved analyzing specific artifacts and processes, such as:

- **Curriculum design**: Evaluating how curricula are structured and whether they address real-world, sector-specific challenges.
- **Mentorship and support**: Reviewing the support mechanisms in place, including host company induction processes, safety protocols, and the roles of industry mentors and academic supervisors.
- **Assessment and certification**: Documenting how skills acquired abroad are evaluated and formally recognized, looking at tools like Learning Agreements, Europass Mobility Documents, and institutional validation records.

3.2 Literature Review Methodology

Databases and sources used: The literature review for this report (Task T2.2.1) was conducted through extensive desktop research, utilizing a combination of national and international databases, policy documents, legislative frameworks, and institutional reports. Sources were specifically selected based on their direct relevance to the project's core themes—VET mobility architectures, apprenticeship dynamics, and building sector skills demands—with a strong preference for authoritative EU-level frameworks (e.g., CEDEFOP, European Commission, UNESCO, OECD) and up-to-date national legislative documents. The research prioritized official publications and comprehensive sectoral studies to ensure a high level of accuracy and relevance

At the **European and international level**, key sources and databases included:

- CEDEFOP (European Centre for the Development of Vocational Training), utilizing resources like the ReferNet database, the European database for apprenticeship schemes, and targeted studies such as "Cross-border long-term apprentice mobility" and "Financing apprenticeships in the EU".
- European Commission reports and policy frameworks, including the EURES Report on Labour Shortages, the Education and Training Monitor, the European Skills Agenda, and the Council Recommendation "Europe on the Move".
- UNESCO and OECD publications focusing on the transformation of technical and vocational education and future-ready VET systems.
- Documentation from EU-funded sectoral initiatives, such as the Construction Blueprint and Build Up Skills projects.

At the **national level**, partners analysed country-specific legal and institutional documents, including:

- National legislation defining VET and apprenticeships (e.g., Spain's Organic Law 3/2022 and Royal Decree 659/2023, Türkiye's Vocational Education Law No. 3308, Italy's Legislative Decree 81/2015, and Ireland's 1967 Industrial Training Act).
- Data from national statistical bodies (e.g., Eurostat, TUIK in Türkiye, Cyprus Statistical Service) and national VET authorities (e.g., SOLAS in Ireland, MoNE and İŞKUR in Türkiye, HRDA in Cyprus).
- Peer-reviewed academic research focusing on social and physical mobility in vocational contexts.

Themes analysed:

VET mobility: The review analysed the overarching architectures of VET systems across partner countries, examining how mobility fits into school-based, work-based, and post-secondary training routes. The analysis explored broader VET internationalization strategies, the impact of lifelong learning policies, and the integration of European quality assurance tools such as EQAVET and the European Qualifications Framework (EQF). Furthermore, it assessed systemic barriers hindering VET mobility, such as fragmented legal structures, the societal perception of VET compared to academic pathways, and the administrative burdens placed on educational institutions.

Apprenticeship mobility: A central theme of the review was the specific dynamics of apprenticeship mobility, particularly the distinction between short-term placements and cross-border long-term apprentice mobility (CBLTMA). The literature highlighted how the legal status of an apprentice (i.e., being bound by an employment contract versus holding student status) creates complex obstacles regarding salaries, taxation, and social security during mobility. The review deeply explored employer and SME perspectives, identifying fears of "brain drain," loss of productive capacity, and liability concerns as primary deterrents to participation. Additionally, it investigated the lack of standardized recognition mechanisms for learning outcomes acquired abroad.

Building sector skills: The literature review systematically targeted the acute workforce challenges and skills demands unique to the construction industry. It analysed the severe

labour shortages driven by an aging workforce, high physical demands, and the sector's historically poor image among youth. Crucially, the review linked these shortages to the urgent need for upskilling in response to the European Green Deal and digital transitions. It explored how apprenticeship mobility can be a strategic tool to train a new generation of workers in modern competencies—such as sustainable materials, energy-efficient retrofitting, Building Information Modelling (BIM), and international health and safety protocols—thereby bridging the skills gap and modernizing the European building sector.

3.3 Qualitative Research

3.3.1 Interviews

To gain direct, lived insights into the realities of cross-border mobility in the building sector, the MOBUILDING consortium conducted a series of semi-structured, one-on-one interviews. In Cyprus, CARDET additionally conducted focus group discussions with a mobility coordinator from MIEEK and two educators from Texniki Scholi A' Nicosia. This primary data collection was designed to capture a 360-degree view of the mobility ecosystem by targeting four key stakeholder groups across the partner countries.

Apprentices: Interviews with VET learners and apprentices provided critical insights into the personal and practical challenges of undertaking mobility. The research captured perspectives across different stages of the mobility lifecycle (pre-departure, mid-mobility, and post-return).

- **Motivations and Outcomes:** Apprentices who participated in mobilities frequently cited profound personal growth, increased independence, and improved cultural awareness. However, the perceived professional value varied; for instance, some Irish apprentices noted they struggle to see the practical benefit of mobility mid-apprenticeship, viewing it more as an academic exercise or a "trip for the sake of it," preferring to travel only after qualification.
- **Preparation and Support:** The level of pre-departure preparation varied significantly. Some students from Spain and Italy reported excellent support from their sending organizations, while apprentices from Greece reported receiving "zero to nothing" in terms of technical or linguistic briefings, leaving them unaware of their expected learning outcomes.

- **Challenges:** The most universally cited barriers among apprentices were safety-critical language barriers (e.g., the inability to understand instructions on a construction site) and financial/logistical strains, particularly regarding transportation and strict curfews in host countries.

Trainers: This group included VET teachers, academic staff, and mobility coordinators responsible for preparing, sending, and mentoring learners.

- **Administrative Workload:** Trainers and coordinators highlighted the intensive bureaucratic burden associated with partner matching, managing digital platforms, and fulfilling reporting requirements. The time required to organize these mobilities often falls on a few dedicated staff members.
- **Learner Readiness:** Trainers noted that many apprentices lack prior preparation and maturity. A mobility coordinator in Spain pointed out that learner irresponsibility, anxiety, and unrealistic expectations often lead to attendance or behavioral issues, especially during the critical first 15 days of the mobility.
- **Curriculum Integration:** Trainers emphasized the need for more hands-on practical training that aligns with real-world industry demands. In Ireland, trainers observed that mobility is currently "very peripheral" to the apprenticeship system and would require a massive structural shift to implement effectively.

Employers: Interviews and focus groups with employers primarily targeted small and medium-sized enterprises (SMEs) in the construction, civil engineering, and electrical sectors, as well as larger construction groups (e.g., Cyfield Group in Cyprus).

- **Operational and Capacity Constraints:** Employers overwhelmingly cited the lack of time and resources as the primary barrier. SMEs run tight schedules with small teams; hosting a foreign learner requires assigning a dedicated mentor for daily supervision (estimated at up to 16 hours a week), which represents a significant loss of operational productivity.
- **Liability and Safety:** The high-risk nature of construction sites makes employers highly reluctant to host international trainees. Employers expressed deep concerns regarding legal liability, workplace insurance, and the physical safety of foreign learners who may not understand site protocols due to language barriers.
- **Fear of "Brain Drain":** Employers invest heavily in training apprentices with the expectation that the apprentice will become a permanent, productive employee. Employers in Ireland explicitly stated they fear that sending an apprentice abroad,

or investing time in a foreign apprentice, yields no return on investment if the trainee does not stay with the company.

Policymakers: This group included institutional representatives, public body officials, and representatives from business confederations (e.g., TÜRKONFED in Türkiye, Regional VET Consortiums in Spain) who oversee the strategic and regulatory levels of mobility.

- **Systemic Bottlenecks:** Policymakers highlighted structural hurdles such as complex visa procedures for non-EU students, housing shortages in destination countries, and fragmented mechanisms for recognizing learning outcomes.
- **SME Engagement**: Institutional representatives acknowledged that SMEs face severe capacity constraints and lack awareness of the long-term benefits of mobility programs. They emphasized the need for intermediary support structures to handle the administrative and logistical burdens (like finding student accommodation) on behalf of companies.
- **Recommendations:** Policymakers recommended creating simplified, construction-specific mobility toolkits, providing financial incentives to offset SME costs, and strengthening cooperation between business organizations and VET providers

3.3.2 Case Studies

To understand the practical realities of mobility, the consortium tracked and documented the lived experiences (or anticipated journeys) of apprentices across the partner countries. These case studies reveal distinct national trends in how mobilities are structured, supported, and experienced.

- **Spain:** The Spanish VET journey frequently involves sending apprentices on medium-term mobilities (often 3 months) to countries such as Italy, Portugal, and Germany. For example, learners from the Cristo Rey Valladolid VET School participated in placements focused on electronic maintenance and mechanical manufacturing. While apprentices sometimes faced logistical hurdles, such as receiving their accommodation details only a week before departure, the outcomes were highly positive. One notable success story involved a Spanish apprentice sent to Italy who ultimately secured a permanent labor contract and a

promotion with the host company. These achievements are formally recognized upon return through the Europass mobility document.

- **Italy:** The Italian case studies heavily featured short-term (typically 3-week) Erasmus+ mobilities managed by large VET providers like ENAIP. Cohorts of apprentices in fields such as electrical installations, mechanics, and logistics were sent to destinations including Seville (Spain) and Ostrava (Czech Republic). A hallmark of the Italian journey is the strong institutional support model: apprentices are accompanied by a dedicated school tutor and supported by a local intermediary organization. Apprentices frequently stayed with host families or in shared apartments, which facilitated cultural integration. While learners faced initial hurdles—such as language barriers mitigated by tools like Google Translate, or being the only person of color in the host city—the primary reported gains were profound increases in personal autonomy, maturity, and independence.
- **Türkiye:** The documented mobility journeys from Türkiye leaned heavily toward higher education and academic VET pathways (such as architecture and interior design) rather than traditional, manual construction trades. Journeys included a 6-month Erasmus mobility in Napoli (Italy), a 2-month internship in Budapest (Hungary), and a research placement in Denmark. The primary barriers experienced during these journeys were financial and linguistic. For instance, Erasmus+ grants (e.g., €700) failed to cover basic living expenses in high-cost destination countries like Denmark, and learners struggled in regions where English was not widely spoken. Despite these hardships, the mobilities were described as academically and personally transformative.
- **Greece:** The Greek case studies uniquely captured an *incoming* mobility journey, focusing on a cohort of German apprentices hosted by Greek companies. Their journey highlighted critical systemic failures in mobility management. The apprentices reported receiving zero pre-departure preparation regarding their assigned companies, technical expectations, or learning outcomes. Upon arrival, they experienced severe professional culture shock, noting a slower pace of work, lower quality standards expected by customers, and what they described as "catastrophic" safety measurements on Greek worksites compared to Germany. Ultimately, the apprentices reported gaining no new technical skills, viewing the experience solely as an exercise in personal independence and cultural observation.

- **Cyprus:** The Cypriot experience showcased a balanced approach to both sending and hosting. Institutions like MIEEK sent learners to Crete (Greece) for 1-week hands-on placements. Conversely, major Cypriot construction firms, such as Cyfield Group and N. Psaras Construction, act as highly structured host organizations for learners arriving from Greece, Italy, and Spain for 2 to 8-week placements. The journey for incoming apprentices in Cyprus includes a formal Health & Safety induction, the assignment of a dedicated site mentor, and a "buddy system" to support social integration. Despite this strong structural support, host companies noted that language barriers regarding technical construction vocabulary remain a persistent challenge on active worksites.
- **Ireland:** The case studies in Ireland revealed a mobility journey that is currently non-existent in practice. This fundamental absence of a mobility culture in the Irish apprenticeship system must be explicitly addressed in the Action Plan (D2.2) through targeted awareness-raising and structural policy interventions. Interviewed apprentices from Munster Technological University (MTU) reported having zero personal experience with cross-border mobility, nor was it ever discussed as part of their training program. When asked to envision a mobility journey, the apprentices viewed it skeptically; they felt it would offer no practical benefit toward qualifying and viewed it as "almost a trip for the sake of it". Their preferred "journey" involves traveling exclusively after their apprenticeship is complete, heavily favoring English-speaking destinations like the UK or Australia for direct employment rather than mid-training educational exchanges

3.3 Data Limitations

Building on the limitations outlined in Section 2.3, the following additional methodological constraints specific to the qualitative research phase must be acknowledged:

- **Missing Data**: Important note: North Macedonia did not provide interview or focus group data for this report. Therefore, insights regarding North Macedonia rely entirely on secondary literature review rather than field research.
- **Speculative Data (Lack of Lived Experience)**: In the case of Ireland, none of the interviewed apprentices, VET trainers, or SME employers had any direct, lived experience with cross-border mobility within the construction apprenticeship

framework. Consequently, the Irish qualitative data reflects perceived, anticipated, or speculative barriers rather than documented operational hurdles.

- **Participant Non-Disclosure**: During the interview process, several participants (most notably within the Greek incoming mobility cohort) demonstrated a systematic reluctance to answer questions. Certain apprentices refused to provide answers regarding their learning outcomes, the difficulties they faced, or the feedback they had for host organizations. This non-disclosure limits the depth of the post-mobility impact analysis for those specific cases.
- **Academic vs. Traditional VET Skew**: The qualitative data collected from Türkiye focused predominantly on higher education learners (e.g., architecture students, PhD candidates, and visiting researchers) rather than apprentices engaged in traditional, manual construction trades (e.g., masonry, plumbing, electrical). This slightly skews the Turkish findings toward academic networking and away from the SME-based work-site realities prevalent in other partner countries.

4. Apprenticeship Mobility in the Building Sector: European Context

4.1 Skills Needs and Labour Market Trends

Labour shortages: The European construction sector is currently facing an unprecedented and persistent labour shortage that jeopardizes the industry's overall growth, productivity, and resilience across the continent. The severity of this issue is well-documented across both European and national policy reports, which emphasize that this crisis is driven by deep structural factors such as demographic ageing, low attractiveness to youth, and increasing skill mismatches rather than temporary market fluctuations

To highlight the scale of the issue at the national level, data from the Human Resource Development Authority in Cyprus reveals that construction firms report the highest labour shortages across all economic sectors.

Similarly, in Ireland, it is estimated that 15,000 skilled tradespersons are urgently required by the decade's end, with an additional 17,000 needed specifically for retrofitting just to meet national climate change objectives.

Furthermore, projects like Build Up Skills in Spain have drawn attention to acute skilled labour shortages in specialized areas like energy renovation and sustainable construction.

According to the European Labour Authority's EURES 2023 Report on Labour Shortages and Surpluses, construction experiences some of the most widespread labour gaps within the EU, particularly for manual, occupation-specific roles such as construction labourers, roofers, and plasterers

This crisis is driven by deep structural factors rather than temporary market fluctuations. **The industry's talent pool is rapidly shrinking due to an ageing workforce with high retirement rates, coupled with a strong reluctance among young people to pursue careers in construction**. The sector's low attractiveness to youth is heavily influenced by its traditional image, high physical demands, precarious working conditions, and the frequent use of subcontracting. Furthermore, the construction workforce remains overwhelmingly male-dominated, which severely limits the sector's ability to draw from diverse and broader talent pools.

Green transition in construction Compounding the sheer lack of available workers is a critical skills mismatch driven by the ongoing green transition. To meet the ambitious climate targets set by the European Green Deal, the building sector must rapidly modernize its practices. This creates an urgent demand for a new set of technical competencies that much of the current workforce does not yet possess. Evidence of this urgency is highlighted by the European Construction Blueprint project, which developed a sectoral roadmap explicitly adapting VET to the challenges of the European Green Deal. Additionally, institutions like CEDEFOP and UNESCO strongly advocate for the "greening" of VET curricula to equip apprentices with the specific skills relevant to the new green economy. At the national level, initiatives such as Greece's BUILD UP Skills roadmap emphasize the need for new certification and training schemes for energy

efficiency and renewable energy installations mandated by EU directives, while Cyprus is utilizing projects like 'Bricks of Skills' to revolutionize clean energy training within the sector. The modern construction industry now requires a workforce highly skilled in energy-efficient retrofitting, the use of sustainable and green materials, and renewable energy source (RES) installations.

Digital transition: in construction Parallel to the green shift, a critical skills mismatch is also being driven by the ongoing digital transition. To meet the innovation goals of the Digital Education Action Plan, the construction sector must urgently adopt new technological practices. This shift creates a demand for a different set of technical competencies that the existing workforce frequently lacks. The industry increasingly relies on workers trained in smart infrastructure and advanced digital construction tools, such as Building Information Modelling (BIM), along with the cross-cutting skills needed to operate in modern, high-tech environments

The modern construction industry requires a workforce highly skilled in **energy-efficient retrofitting, the use of sustainable and green materials, renewable energy source (RES) installations, smart infrastructure, and digital construction tools like Building Information Modelling (BIM)**. To highlight the scale of this demand, Ireland alone estimates it will require an additional 17,000 workers specifically dedicated to retrofitting by the end of the decade just to meet national climate change objectives.
Despite this immense need for upskilling, the construction sector is currently hindered by low participation rates in continuous training. To resolve this, institutions such as CEDEFOP and UNESCO strongly advocate for the "greening" of Vocational Education and Training (VET). It is crucial that VET curricula are systematically updated to embed environmental sustainability and digital methodologies, ensuring that the next generation of apprentices is future-ready and fully equipped to drive Europe's transition to a green and digital economy

4.2 Policy Framework for VET Mobility

Erasmus+ The Erasmus+ programme serves as the European Union's flagship initiative and primary financial engine for supporting education, training, youth, and sport, including vital mobility and cooperation opportunities across the Vocational Education

and Training (VET) sector. Over the past two decades, the EU has placed a significant focus on structuring apprenticeship mobility schemes through this programme. A critical component of this effort is **ErasmusPro**, a specific strand of Erasmus+ dedicated to the long-term learning mobility of VET learners, which supports placements abroad lasting from 3 to 12 months. To address historical barriers and expand opportunities for cross-border apprentice mobility, the European Commission reinforced the Erasmus+ programme for the 2021–2027 period with increased funding and a stronger emphasis on long-term placements. Despite these investments, long-term cross-country mobility remains somewhat of a niche phenomenon, and uptake is often limited by a lack of institutional capacity and SME engagement.

EU mobility targets To drive the internationalization of VET and ensure the European workforce remains adaptable and competitive, EU institutions have established ambitious, quantifiable targets for learning mobility and work-based learning (WBL). Key targets and policy frameworks include:

- **"Europe on the Move" Council Recommendation:** This initiative aims to significantly boost mobility across all educational pathways. It sets a formal target that **at least 15% of VET learners** should benefit from a learning mobility experience abroad by 2030, an increase from the previous target of 8% set for 2025.
- **Committee of the Regions:** Pushing for even greater integration, the Committee of the Regions advocates for specific targets to raise the mobility of apprentices to 40% of all VET learners.
- **EU Commission WBL Target:** The Commission has established that at least 60% of recent VET graduates should have experienced work-based learning as a core part of their VET programme by 2025.
- **Broader Policy Alignment:** These targets are heavily supported by the **Osnabrück Declaration**, which emphasizes VET internationalization and the creation of common quality criteria for mobility, and the **European Skills Agenda** (specifically Action 4), which sets objectives to enhance the availability of work-based learning and the employability of vocational graduates.

Recognition frameworks For cross-border mobility to be effective and attractive to apprentices, the learning outcomes acquired abroad must be formally recognized and validated in their home countries. The EU has developed several overarching tools to facilitate this interoperability:

- **European Qualifications Framework (EQF):** Partner countries align their National Qualifications Frameworks (e.g., Türkiye's TQF) to the EQF, which theoretically ensures that skills and training levels (such as EQF Levels 3 and 4 for standard apprenticeships) are mutually understood across Europe.
- **Europass and ECVET:** Tools such as the Europass Mobility Document and ECVET (European Credit System for Vocational Education and Training) are explicitly designed to standardize qualifications, formally document skills acquired during apprentice mobilities, and enable the transfer of educational credits across member states.
- **Learning Agreements:** Formal Learning Agreements for Traineeships are utilized to define specific learning outcomes prior to departure, attempting to ensure that the time spent abroad aligns with the apprentice's official curriculum.

Despite the existence of these robust European frameworks, practical implementation remains a significant hurdle. Interoperability is often weak; many VET curricula are determined at the regional level, meaning that clear mechanisms for the automatic recognition of work experience periods completed abroad are frequently lacking. Consequently, mobility is sometimes treated as an extracurricular or social activity rather than an integrated, credit-bearing component of the formal apprenticeship pathway.

4.3 Benefits of Apprentice Mobility

Skills development: Cross-border mobility offers apprentices a dynamic environment to acquire a comprehensive set of both technical and transversal skills. From a technical standpoint, mobility allows learners to gain hands-on experience with new materials, advanced digital tools (such as Building Information Modelling or 3D printing), and diverse construction techniques that may not be standard practice in their home countries. They are exposed to international safety protocols and sustainable, green construction practices, which are increasingly vital for the modern building sector.

Equally important is the development of transversal, or "soft," skills. International placements foster intercultural awareness, independence, adaptability, and teamwork in multicultural settings. Apprentices also frequently improve their language skills and build confidence by navigating new cultural and professional environments.

Employability: The combination of advanced technical knowledge and strengthened soft skills significantly boosts the professional readiness and overall employability of apprentices. By aligning their training more closely with real-world industry needs, apprentices become better prepared for the globalized labor market and cross-border labor mobility.

The tangible impact on career prospects is substantial. For example, the MOBUILDING project's own Key Performance Indicators (KPIs) target a 25% (MOBUILDING Project Proposal, KPI Matrix) increase in employment rates among participating apprentices in the medium-term following the project's completion. Furthermore, qualitative field research documented success stories where mobility directly resulted in immediate employment, such as a Spanish apprentice who secured a permanent labor contract and a promotion with their host company after completing their placement. Providing these high-quality international opportunities also helps to improve the overall image of the construction sector, making it a more attractive career pathway for young talent.

Sector innovation: Apprentice and staff mobility acts as a powerful catalyst for industry-wide innovation through direct knowledge transfer. When learners and educators return to their home institutions or local SMEs, they bring back fresh perspectives, technical insights, and European best practices in areas like energy-efficient building and digital construction methodologies.

For instance, an educational staff mobility focused on sustainable timber construction at a research institute in Slovenia directly led to the enrichment of teaching modules and the updating of curricula with green techniques back in Cyprus. This cross-border exchange of knowledge helps bridge regional disparities and allows companies—especially SMEs—to modernize their operations. Ultimately, engaging in mobility schemes provides employers with a pipeline of highly skilled, adaptable workers, ensuring long-term competitiveness and a greater capacity for innovation across the European construction industry

5. Challenges to Apprentice Mobility

5.1 Institutional Barriers

Institutional barriers represent the structural and administrative bottlenecks within Vocational Education and Training (VET) systems, training centres, and government bodies that prevent the seamless execution of cross-border mobility. Across the partner countries, institutions struggle to integrate apprentice mobilities into highly regulated, traditional apprenticeship frameworks.

Curriculum incompatibility A major hurdle to apprenticeship mobility is the lack of alignment between national VET curricula and the practical realities of cross-border learning. Because apprenticeship structures differ vastly across the EU, recognizing and validating the skills an apprentice acquires abroad remains highly complex.

- In **Italy**, VET curricula are defined and regulated at the regional level and do not include mandatory requirements for apprentice mobility. Because these mobilities are not built directly into the official curriculum, time spent abroad is frequently viewed as an extracurricular activity rather than an integral, credit-bearing training component.
- In **Ireland**, the apprenticeship system is highly structured, typically following a rigid 7-phase model alternating between on-the-job and off-the-job training. Educational institutions have limited curriculum flexibility, making it exceptionally difficult to substitute a domestic training phase with a mobility placement abroad.
- In Türkiye, there is a distinct curricular mismatch regarding modern industry demands; while European VET systems increasingly prioritize green building, digital construction, and sustainable materials, many Turkish vocational programs continue to emphasize outdated construction techniques, complicating the transfer of relevant skills during apprentice mobilities.
- In **Spain**, despite the recent Organic Law 3/2022 on vocational training, there are still no clear mechanisms for the automatic recognition of work experience periods completed abroad. While tools like the Learning Agreement exist, their application is not uniform across autonomous communities or educational institutions.

Limited mobility infrastructure Many partner countries lack the foundational infrastructure—such as dedicated national strategies, specialized internationalization departments, or centralized funding mechanisms—to effectively support VET mobility in the building sector.

- In **Cyprus**, the absence of a unified national strategy for apprenticeship mobility results in fragmented efforts. Coordination among key stakeholders, such as the Ministry of Education and training institutions, is limited, leading to inefficiencies in program implementation and support structures.
- In **Spain**, vocational training centres (most of which are publicly owned) generally lack consolidated structures for managing mobility projects. There is a notable absence of staff specialized in internationalization, restricting the mobility opportunities available to learners.
- In **Ireland**, long-term mobility in apprenticeships is simply not seen as a priority within the education and training policy agenda. National strategies for cross-border long-term mobility do not exist, and mobility remains entirely peripheral to the Irish apprenticeship system.

Lack of institutional support and administrative workload Organizing international mobility requires immense logistical planning, from partner matching and learning agreement design to risk assessments and insurance documentation. VET institutions frequently lack the resources and support necessary to manage this burden.

- In **Cyprus**, the heavy administrative workload linked to mobility projects falls on a small number of coordinators and teachers who already have intensive teaching and assessment duties. The complexity of procedures and the need to simultaneously comply with Erasmus+ rules, national regulations, and internal protocols create a significant layer of stress, discouraging institutions from expanding into new trades or piloting longer mobility schemes.
- In **Greece**, VET institutions face profound challenges in coordinating mobility arrangements and ensuring the comparability of learning experiences. There is a severe lack of resources and expertise to support mobility, particularly for navigating complex administrative procedures for long-term placements.
- In **Spain**, institutions report limited capacity to manage international partnerships and mobility logistics, frequently citing complex recognition procedures and bureaucracy as major deterrents. Trainers and directors note that having specialized staff dedicated exclusively to managing these grants and mobilities is a critical unmet need.

5.2 Structural and Policy Barriers

Structural and policy barriers operate at the systemic level, often stemming from outdated national legislation, complex administrative requirements, and a lack of harmonization across European borders. These overarching obstacles dictate the rules of engagement for VET institutions, employers, and learners.

Legal status of apprentices abroad: The legal definition of an apprentice varies significantly across partner countries, frequently tying learners to rigid employment contracts that severely complicate cross-border mobility.

- In **Ireland**, the apprenticeship system is governed by the outdated 1967 Industrial Training Act, under which apprentices are strictly considered employees bound by employment contracts, rendering international mobility legally complex.
- Similarly, in **Italy**, under Legislative Decree 81/2015, Type 1 apprenticeships constitute permanent employment contracts. Consequently, companies are legally obligated to continue paying their apprentices' salaries even while they are undertaking mobility placements abroad, acting as a major disincentive for employers.
- In Türkiye, Vocational Education Law No. 3308 enforces a rigid contractual framework that generally binds apprentices to a single employer for the entire 3 to 4-year duration of their training, offering very little flexibility for temporary external or apprentice mobilities.
- In **Cyprus**, the legal framework is highly fragmented; for example, traineeships undertaken without remuneration are not classified as proper employment and therefore lack adequate legal and social protection during international mobility.

Recognition of qualifications: Despite the existence of overarching European tools like the European Qualifications Framework (EQF) and Europass, practical interoperability and the automatic recognition of learning outcomes acquired abroad remain critically weak.

- In **Spain**, despite the recent VET reform under Organic Law 3/2022, there are still no clear, uniform mechanisms for the automatic recognition of work experience periods completed in foreign countries. The application of tools like the Learning Agreement varies widely across autonomous communities and educational institutions.

- In **Türkiye**, although the National Qualifications Framework (TQF) formally aligns with the EQF, practical recognition of Turkish vocational qualifications in EU countries remains inconsistent. Turkish apprentices frequently find themselves needing to undergo re-certification to access equivalent work in EU member states.
- In **Ireland**, limited curriculum flexibility within training institutions, combined with vastly different training standards between countries, makes the Recognition of Prior Learning (RPL) for international mobilities highly complex to implement.

Administrative complexity: The sheer bureaucratic workload required to organize apprentice mobilities acts as a major structural deterrent for both educational institutions and Small and Medium-sized Enterprises (SMEs).

- In **Cyprus**, the lack of a unified national strategy for apprenticeship mobility results in fragmented efforts and poor coordination among stakeholders like the Ministry of Education and training institutions. This places a heavy administrative burden on a small number of coordinators who must simultaneously navigate Erasmus+ rules, national regulations, and internal protocols, discouraging the piloting of longer mobility schemes.
- In Spain, the regulatory framework of dual VET has undergone continuous reforms, and several analyses highlight areas for improvement and administrative complexity within the system. However, the literature does not attribute this complexity to legal uncertainty caused by multiple coexisting contract types, nor does it identify specific obstacles related to the establishment of bilateral agreements with foreign host companies. Instead, recent reforms aim to harmonize and streamline the dual VET model, reinforcing its governance and implementation.
- **Visa and movement restrictions** present significant administrative bottlenecks. Non-EU VET students in **Italy** and third-country nationals in **Cyprus** face immense hurdles obtaining visas or insurance for stays exceeding 90 days, severely restricting their participation in long-term mobility schemes. Extreme visa delays and procedural opacity were also highlighted as major, frustrating structural obstacles for mobility participants from **Türkiye**.
- **Non-EU Status and IPA Funding Constraints:** An additional structural dimension is the systemic disadvantage faced by Türkiye as a non-EU country participating in the MOBUILDING consortium. Turkish partner institutions operate

under IPA (Instrument for Pre-Accession Assistance) funding frameworks, which differ substantially from standard Erasmus+ VET mobility grant mechanisms in terms of administrative procedures, reporting requirements, eligible expenditure categories, and overall funding ceilings. This creates an uneven playing field within the consortium, where Turkish partners must navigate distinct bureaucratic pathways compared to EU-based partners, often with less institutional support available at the national level.

5.3 Economic and Financial Barriers

Economic constraints and a lack of dedicated funding mechanisms act as primary deterrents for cross-border mobility. These financial barriers disproportionately affect the two most vulnerable groups in the apprenticeship ecosystem: the individual learners and the small-to-medium enterprises (SMEs) that form the backbone of the construction sector.

Mobility costs: The direct and indirect costs of living abroad present a severe barrier to participation, particularly because many VET learners come from lower socio-economic backgrounds.

- **Insufficient Grant Coverage:** While EU funding such as Erasmus+ exists, the grants often fail to cover the real cost of living in destination countries. For example, a learner from **Türkiye** undertaking a mobility in Denmark reported that their €700 grant only covered accommodation, leaving them struggling to manage the high local prices for basic survival. Similarly, apprentices from **Spain** noted that VET mobility grants do not cover the entire cost of the trip, heavily advising future participants to save personal funds beforehand.
- **Disproportionate Cost-of-Living Gap for Turkish Participants:** While insufficient grant coverage is a challenge across all partner countries, this barrier is disproportionately severe for apprentices from Türkiye. The cost-of-living differential between Türkiye and high-cost destination countries within the consortium is substantially larger than the gap between any two EU member states. Standard Erasmus+ individual support rates, which are calculated on a flat country-band basis, do not adequately account for this disparity. In practice, Turkish apprentices face a gap between their grant and their actual living costs that is two to three times greater than their EU-based counterparts, acting as a

significant structural deterrent particularly for individuals from lower socio-economic backgrounds.

- **Housing Bottlenecks:** The logistical cost and availability of accommodation is a critical issue. High housing costs and severe rental shortages in cities like Dublin (**Ireland**) were explicitly cited as major deterrents for hosting foreign apprentices.
- **Budgetary Limitations:** Across multiple interviews, including feedback from **Greece**, participants repeatedly cited a "bigger budget" or "more money" as the single most necessary improvement for organizing mobilities, as transportation and work placements are prohibitively expensive.

Limited support for SMEs SMEs make up the vast majority of the construction sector (e.g., approximately 95% of firms in **Türkiye**). These companies generally operate with small teams and tight project schedules, meaning they have very little financial or operational slack to support mobility programs.

- **Productivity and Mentoring Costs:** Hosting an international apprentice is not free labor; it is a significant drain on operational productivity. Employers in **Italy** estimated that hosting a trainee properly requires setting aside at least 16 hours a week for mentoring, meaning an internal supervisor must be diverted from active production for at least 2 hours a day. SMEs simply cannot absorb this cost without financial support.
- **Lack of Financial Incentives:** There is a widespread lack of national policy or funding incentives designed to compensate SMEs for the burden of hosting or sending apprentices. Employers in **Ireland** pointed out that taking on an international apprentice who requires extra "hand-holding" (due to language barriers or unfamiliarity with local standards) represents a net financial loss for the company unless heavily subsidized by external bodies. In **Italy**, the financial burden is even more direct: because apprentices are legally considered permanent employees, companies must continue to pay their salaries while they are away on mobility, acting as a massive disincentive.
- **Fear of "Brain Drain" and Lost ROI:** Employers view training an apprentice as a financial investment with the expectation that the individual will become a productive, long-term employee. Employers in **Ireland** and **Türkiye** expressed a strong reluctance to participate in mobility because they fear no Return on Investment (ROI). Training a foreign apprentice who will return to their home country, or sending a local apprentice abroad who might be poached by foreign

competitors, means the SME absorbs all the training costs but receives none of the long-term benefits.

5.4 Cultural and Social Barriers

Cultural and social barriers operate at both the individual and societal levels, significantly deterring participation in cross-border mobility. These challenges range from communication hurdles to deep-rooted societal perceptions of vocational education.

Language as a Safety-Critical Barrier Limited proficiency in foreign languages is universally cited as one of the most severe and immediate barriers to mobility across all partner countries. In the building sector, language is not merely a social hurdle but a **safety-critical issue**; misunderstanding technical instructions, machinery operation guidelines, or health and safety protocols on an active worksite poses a direct physical risk to the learner and others.

- **Operational impact:** Employers worry that language difficulties will slow down productivity, as foreign apprentices require constant, one-to-one supervision. As a result, learners with poor language skills are sometimes relegated to low-complexity or purely observational tasks, severely reducing the pedagogical value of their placement.
- **Learner anxiety:** Apprentices frequently cited language as their primary pre-departure fear. During placements, many apprentices are forced to rely heavily on translation apps (like Google Translate) or gestures to communicate with their host employers.

Lack of Mobility Culture and the Stigma of VET Across many partner countries, there is a distinct lack of an ingrained "mobility culture" within vocational education compared to university pathways.

- **The "Second-Rate" Stigma:** In countries like Spain, Cyprus, and Ireland, VET often suffers from a cultural stigma, perceived by society and families as a "second-rate" or non-academic choice. This stigma affects how apprentices view their own educational journey.
- **Pragmatic Focus:** Because apprenticeships are viewed as a direct, non-academic route to the workforce, apprentices are often highly focused on securing immediate, local employment rather than exploring international horizons. For example, interviewed apprentices in Ireland reported seeing little

practical value in undertaking mobility *during* their training, viewing it as an academic distraction or "almost a trip for the sake of it," preferring instead to travel only after they are fully qualified.

Family Constraints, Immaturity, and Comfort Zones An apprentice's readiness to undertake cross-border mobility is heavily dictated by their age, maturity, and personal circumstances.

- **Obligations of Older Apprentices:** Many apprentices are older adults who are constrained by pre-existing social, economic, or family responsibilities. These obligations make it financially and personally unfeasible to leave their home country for long-term mobility placements.
- **Anxiety and Homesickness:** Conversely, younger VET learners often face profound anxiety, homesickness, and a reluctance to step out of their comfort zones or leave their family support systems. Trainers in Italy observed that separation from the family environment is a primary cause of insecurity. In some extreme cases, young learners have abandoned their placements prematurely due to an inability to adapt to new routines or because their expectations were misaligned (e.g., returning home early due to a lack of good Wi-Fi in their accommodation).

Diversity and Gender Imbalance The construction sector remains heavily male-dominated, which culturally limits the diversity of participants in mobility programs. This gender disparity perpetuates entrenched cultural patterns that hinder balanced participation. Furthermore, minority students can face unique social challenges; for instance, a Black Italian apprentice reported feeling heavily scrutinized and having to navigate discriminatory micro-aggressions while undertaking a mobility placement in the Czech Republic

5.5 Sector-Specific Barriers in Construction

The construction sector possesses unique operational realities that amplify the general barriers to mobility. Unlike office-based or academic exchanges, construction sites are high-risk, tightly scheduled, and physically demanding, creating distinct hurdles for both the apprentices and the companies that host them.

Workplace safety regulations Construction sites are inherently dangerous environments, making health and safety compliance an absolute priority—and a major barrier to introducing international apprentices.

- **Lack of sector-specific safety tools:** Generic European mobility tools often fail to address the high-risk realities of the building sector, such as working at heights, scaffolding protocols, or handling hazardous materials.
- **Diverging national standards:** Safety regulations and their enforcement vary significantly across Europe. For example, German apprentices undertaking a mobility placement in Greece reported experiencing severe professional shock, describing the local safety measurements as "catastrophic" compared to the standards they were trained in at home.
- **Linguistic and legal safety hurdles:** In **Italy**, strict legal requirements mandate that apprentices complete specific safety training courses (e.g., 4 hours of General Training and 8 hours of Specific Training tailored to the company's risk level) before they are allowed on site. Delivering this essential, safety-critical training in a language the foreign trainee fully understands creates immense logistical hurdles.
- **Liability concerns:** Employers express deep concern over legal and financial liability. There is widespread fear regarding the legal consequences should an accident occur involving a young, foreign trainee who might not have fully understood site rules due to a language barrier.

Skill certification differences Because apprenticeship structures and building techniques differ vastly across the EU, recognizing and validating the specific skills an apprentice acquires on a foreign construction site remains highly complex.

- **Weak practical interoperability:** Although overarching frameworks like the European Qualifications Framework (EQF) exist, practical application is often inconsistent. For example, while **Türkiye's** National Qualifications Framework formally aligns with the EQF, Turkish construction apprentices frequently find that they must undergo re-certification to access equivalent work in EU member states.
- **Fragmented recognition mechanisms:** In **Spain**, despite recent comprehensive VET reforms, there are still no clear, uniform mechanisms for the automatic recognition of work experience periods completed abroad. Tools like the Learning Agreement exist, but their application varies widely across autonomous regions and individual educational institutions.

- **Mismatched curricula:** Sending a student abroad can disrupt their technical progression if the host country uses different techniques. For instance, while European policy increasingly prioritizes green building, sustainable materials, and digital construction (like BIM), many national VET programs (such as in **Türkiye**) continue to emphasize traditional, outdated construction methods, complicating the transfer and recognition of relevant skills.

Employer reluctance: The construction industry across partner countries is overwhelmingly dominated by micro and small-to-medium enterprises (SMEs)—for example, making up approximately 95% of construction firms in **Türkiye**. These SMEs face severe capacity constraints that make them highly reluctant to participate in mobility schemes.

- **Operational and Productivity Loss:** SMEs operate with small teams and tight project deadlines. Hosting a foreign learner is not seen as acquiring free labor, but rather as a significant drain on operational productivity. Employers in **Italy** noted that hosting a trainee properly requires setting aside at least 16 hours a week for mentoring, diverting an internal supervisor from active production for over 2 hours a day.
- **Fear of "Brain Drain":** Employers view training an apprentice as a heavy financial and operational investment. Employers in **Ireland** and **Türkiye** expressed strong reluctance to support outgoing mobility because they fear losing their investment; trained apprentices might choose to stay abroad or be recruited by foreign competitors.
- **Lack of direct benefit (ROI):** From an SME perspective, the short-term hosting of a foreign apprentice who will inevitably return to their home country yields no practical return on investment. The employer absorbs all the costs of administration, safety training, and mentoring, but does not acquire a future, permanent employee to boost their own company's capacity.

6. Findings from Qualitative Research

6.1 Insights from Apprentices

Motivations Apprentices are driven to participate in cross-border mobility by a mix of personal aspirations and professional curiosity.

- **Personal growth and cultural exploration:** A primary motivation across several countries is the desire to step out of comfort zones, achieve independence, and experience living alone away from family. Many apprentices view mobility as a unique opportunity to travel, discover new cultures, and meet new people from different backgrounds.
- **Professional curiosity:** From a technical standpoint, apprentices are highly motivated by the chance to observe how their specific trades are practiced in other countries. They hope to learn different techniques, immerse themselves in foreign work environments, enrich their CVs, and ultimately increase their job opportunities.
- **Contrasting views (The pragmatic approach):** In contrast to the enthusiasm seen in other countries, interviewed apprentices in Ireland expressed skepticism regarding the motivation to undertake mobility *during* their training. They are primarily motivated by gaining hands-on skills and securing immediate, local employment, viewing mid-training mobility as "a trip for the sake of it" that offers no practical benefit toward qualifying. They prefer the idea of travelling for employment only after they are fully qualified.

Fears Before departing, apprentices consistently identified a specific set of anxieties and perceived challenges regarding their placements:

- **Language and communication (Safety and Integration):** The language barrier is universally cited as the most significant fear. Apprentices worry about their inability to understand complex technical instructions on worksites, fearing that miscommunication will lead to mistakes, make them look foolish, or compromise their ability to integrate with their "work besties" or colleagues.
- **Social integration and isolation:** Many younger learners fear the emotional challenge of leaving their family and support networks. They worry about integrating with unknown roommates or host families, and navigating the anxiety of their first independent trip. In one instance, an apprentice also cited the fear of facing discrimination or intense scrutiny as a minority in a foreign city.
- **Accommodation logistics:** Finding suitable and affordable accommodation is viewed as a highly complicated challenge, particularly for those who must organise parts of their stay independently.

- **Workplace adaptation:** Apprentices worry about adapting to different workplace cultures, safety standards, and building regulations that may differ vastly from their home countries.

Perceived benefits The outcomes reported by apprentices who completed their mobility highlight a strong divide between profound personal growth and mixed professional gains:

- **Profound personal development:** The most universally reported benefit of mobility is a massive increase in personal confidence, maturity, and independence. Apprentices reported learning to manage their own time and money, overcoming fears (such as the fear of flying or travelling alone), and returning as more responsible, open-minded, and decisive individuals.
- **Technical and professional skills:** Many apprentices reported tangible professional benefits, such as learning to work with greater precision, gaining autonomy in their daily tasks, and familiarizing themselves with new materials or digital tools like AutoCAD.
- **Mixed professional outcomes:** However, professional benefits were not universal. For example, a cohort of German apprentices hosted in Greece reported gaining "not much" in terms of new technical skills, noting that they already possessed the necessary competencies and that the workplace safety measurements were "catastrophic" compared to their home country. For these learners, the benefits were almost entirely limited to personal independence and basic language acquisition

6.2 Insights from Employers

Willingness to host apprentices Employer willingness to host international apprentices varies significantly, largely depending on the size of the company and their underlying philosophy regarding vocational training.

- **Openness and long-term investment:** Several employers view hosting as a fundamental mission and a strategic investment. For instance, Italian companies like 5social and Di&Go reported being highly satisfied with their experiences, citing the spirit of welcoming young people, the opportunity for cultural exchange, and the drive to internationalize their company's atmosphere as primary motivators. Similarly, in Cyprus, representatives from N. Psaras Construction

emphasized that apprenticeships should be viewed as a "long-term investment in people, not short-term labor support," valuing the diversity and new perspectives international learners bring to their teams.

- **Reluctance and the need for ROI:** Conversely, many Small and Medium-sized Enterprises (SMEs) are highly reluctant to participate. Irish employers from AOE Construction and Wiser Energy expressed strong reservations, noting that training an apprentice requires a massive investment of time and energy. Their willingness to train is entirely predicated on the "future pay-off" of that apprentice becoming a permanent, productive employee. Because an international apprentice is likely to return to their home country after the mobility, these employers see no practical benefit or return on investment (ROI), viewing the placement as a net operational loss unless heavily subsidized or financially rewarded. Similarly, in Spain, trainers noted that companies are generally unwilling to take on interns due to a general lack of knowledge about the programs and an absence of dedicated infrastructure to support them.

Perceived risks Employers identified several severe risks that deter them from engaging in cross-border mobility schemes:

- **Safety and Legal Liability:** The most critical concern across the construction sector is workplace safety. Construction sites are high-risk environments, and Cypriot employers (e.g., Cyfield Group and N. Psaras) highlighted that ensuring health and safety compliance is paramount. Employers fear the legal and financial liabilities associated with potential accidents, particularly involving young, foreign trainees who may not be familiar with national regulations.
- **Language Barriers as a Safety Hazard:** The liability risk is heavily compounded by language barriers. Employers worry that if an apprentice cannot clearly understand technical instructions or safety protocols on a loud, active worksite, they pose a danger to themselves and others. Irish employers noted that taking on an apprentice with poor English who requires extra "hand-holding" would make getting the work done "10 times harder".
- **"Brain Drain" and Lost Investment:** As noted above, employers fear that the time and money invested in training an apprentice will be lost if the apprentice emigrates or returns to their home country.
- **Bureaucratic Complexity:** Employers frequently cited the heavy administrative workload, complicated documentation, and complex insurance requirements as major risks that could bog down their operations.

Training capacity The operational realities of the construction sector mean that most companies simply lack the surplus capacity to effectively mentor international apprentices.

- **Time and Resource Constraints:** Mentoring a foreign apprentice is a significant drain on operational productivity. An Italian employer estimated that hosting an intern properly requires dedicating at least 16 hours a week to mentoring, meaning an internal supervisor must be diverted from their daily tasks for at least 2 hours every day.
- **The SME Bottleneck:** Because the construction sector is overwhelmingly dominated by micro and small enterprises, teams are usually small and work under tight project deadlines. These SMEs do not have the operational slack to absorb the reduced productivity that comes with hosting a learner. As one Irish employer pointed out, taking on international apprentices who need extra supervision would require the company to "nearly have to hire another person who could look after them".
- **Structured vs. Unstructured Environments:** While large companies (like the Cyfield Group in Cyprus) have the capacity to assign dedicated site mentors, conduct formal Health & Safety inductions, and manage HR logistics, the vast majority of SMEs lack this structured mentoring culture. Many small companies do not have anyone officially responsible for hosting programs and lack the infrastructure to support foreign students logistically

6.3 Insights from VET Providers

Administrative workload Interviews with VET trainers, mobility coordinators, and institutional representatives across the consortium revealed that the sheer volume of bureaucracy is one of the most debilitating barriers to organizing apprenticeship mobilities.

- **Concentrated Burden:** In many institutions, the immense administrative workload associated with mobility projects falls on a small number of dedicated coordinators and teachers who must manage these duties on top of their already intensive teaching and assessment schedules.

- **Complex Documentation:** The full mobility cycle requires handling applications, partner searches, learning agreement design, risk assessments, insurance documentation, financial management, and post-mobility reporting. Trainers in **Spain** repeatedly cited the urgent need for "less bureaucracy," "less paperwork," and a reduction in "document handling" to make mobilities viable.
- **Regulatory Compliance:** Navigating the intersection of Erasmus+ rules, national labor laws, and internal institutional protocols creates a significant layer of stress. In **Cyprus**, staff underlined that even experienced coordinators must invest substantial time to track changing guidelines and ensure flawless documentation to avoid financial corrections or audit findings.
- **Lack of Dedicated Staff:** A recurring recommendation from VET providers is the need to hire specialized administrative staff dedicated exclusively to managing international mobility grants and procedures, relieving educators of this logistical burden. In **Greece**, institutions noted a severe lack of internal resources and expertise required to navigate these complex administrative procedures, particularly for long-term placements.

Coordination challenges Beyond paperwork, VET providers face profound logistical and relational challenges when coordinating cross-border mobilities.

- **Partner Matching and Networking:** Finding reliable host companies—especially SMEs willing to take on foreign apprentices—is highly challenging and time-consuming. Because engaging new companies is difficult, VET institutions often end up relying on a few long-standing partners, which restricts the diversity of experiences available to learners. VET trainers in **Spain** suggested that maintaining a centralized portfolio or database of companies willing to host students is a critical unmet need.
- **Logistical Hurdles (Accommodation):** Managing student accommodation is a primary coordination headache. A mobility coordinator in **Spain** noted that due to high prices and the difficulty of securing housing without a local employment contract, institutions are increasingly forced to rely on paid intermediaries to manage accommodation for large groups. However, the reliability of these intermediaries varies significantly by country.
- **Multi-Institutional Strain:** Coordinating multi-country or blended mobility programs requires a high level of academic, logistical, and administrative effort that places considerable pressure on institutional structures that are not always sufficiently resourced.

- **Visa and Travel Bottlenecks:** For non-EU participants, coordinating travel is frequently disrupted by opaque and slow visa procedures. A VET representative from **Türkiye** reported that extreme visa delays and confusing requirements forced them to completely abandon mobilities to certain countries and scramble to coordinate placements in non-visa-required countries instead. They emphasized the need for a much more organized pre-departure support system regarding visa timelines.
- **Structural Disconnect:** In countries like **Ireland**, VET lecturers pointed out that international mobility is currently so peripheral to the highly-structured national apprenticeship system that coordinating it would require a "huge sea change" and massive structural shifts involving all stakeholders (universities, state agencies, and employers) to successfully implement

6.4 Insights from Policymakers

Regulatory challenges Interviews with policymakers, institutional representatives, and business confederation officials reveal that outdated and rigid national legislation presents a foundational barrier to apprenticeship mobility.

- **Rigid Employment Classifications:** A primary regulatory hurdle is the legal status of apprentices. In **Ireland**, the apprenticeship system is regulated by the outdated 1967 Industrial Training Act, under which apprentices are strictly considered employees bound by employment contracts, making cross-border mobility legally complex. Similarly, in **Italy**, Legislative Decree 81/2015 classifies apprentices as permanent employees; as a result, companies are legally required to continue paying their salaries even when the apprentice is abroad on a mobility placement. In **Türkiye**, Law No. 3308 enforces a rigid contractual framework that generally binds apprentices to a single employer for their entire 3 to 4-year training period, leaving little to no legal flexibility for temporary international transfers.
- **Legal Uncertainty and Fragmented Frameworks:** In **Spain**, legal uncertainty stems from the coexistence of multiple contract types within the dual VET system (e.g., work-based training, grants, internship agreements), which complicates the drafting and signing of bilateral agreements with foreign host companies. In **Cyprus**, the legal framework is highly fragmented; traineeships undertaken

without remuneration are not classified as proper employment and therefore lack adequate legal and social protection during international mobility.

- **Visas and Insurance:** Representatives highlighted that strict visa requirements and movement restrictions create massive regulatory bottlenecks. Non-EU students in **Italy** and third-country nationals in **Cyprus** face immense hurdles obtaining visas for stays exceeding 90 days. Institutional coordinators in **Türkiye** noted that visa procedures are extremely slow, opaque, and confusing, frequently forcing institutions to abandon planned mobilities and pivot to non-visa-required countries at the last minute. Furthermore, securing appropriate workplace insurance for a high-risk sector across different legal jurisdictions remains a complex regulatory challenge.

Policy gaps Policymakers identified several systemic gaps where current national and European policies fail to adequately support the realities of apprenticeship mobility in the building sector.

- **Absence of National Strategies:** There is a distinct lack of unified national strategies prioritizing cross-border long-term apprentice mobility (CBLTMA). In **Ireland**, long-term mobility is simply not seen as a priority within the national education and training policy agenda, and no national strategy for it exists. Similarly, in **Cyprus**, the absence of a coordinated national strategy leads to fragmented efforts and inefficiencies between ministries, employers, and training institutions.
- **Lack of SME Financial Incentives:** Policymakers acknowledge that because the construction sector is overwhelmingly dominated by SMEs, these companies cannot absorb the costs of mobility alone. However, there is a critical policy gap regarding financial support. There are virtually no national policy or funding incentives (such as targeted tax benefits or wage subsidies) designed to compensate SMEs for the operational loss, mentoring time, and administrative burden of hosting or sending apprentices.
- **Weak Recognition Mechanisms:** Despite overarching tools like the European Qualifications Framework (EQF), practical policy mechanisms for the automatic recognition and validation of learning outcomes acquired abroad remain weak and fragmented. In countries like **Spain** and **Italy**, VET curricula are often determined at the regional level, meaning there is no uniform policy to formally integrate international work-based learning into the apprentice's official curriculum, often relegating mobility to an "extracurricular" status.

- **Disconnection Between Stakeholders:** Representatives from business confederations (such as TÜRKONFED in Türkiye) pointed out a gap in systemic collaboration. They recommend that policies must focus on strengthening the direct cooperation between business organizations and VET providers, creating more flexible mobility formats adapted to the specific operational realities of SMEs, rather than relying solely on academic or school-driven mobility models.

7. Cross-Country Analysis of Mobility Challenges

7.1 Comparative Overview

The following table provides a comprehensive summary of the primary barriers and challenges to apprenticeship mobility in the building sector across the MOBUILDING project's partner countries. Drawing on extensive qualitative field research—including interviews with apprentices, VET trainers, employers, and policymakers—as well as national literature reviews, this table categorizes the identified obstacles into key thematic areas. By mapping these specific hurdles to their respective national contexts, this synthesis highlights the systemic, institutional, and personal factors hindering mobility, serving as the foundational evidence base for developing targeted solutions in the upcoming Action Plan (D2.2).

Challenge Category	Specific Challenge	Countries Affected
Legal & Structural	The European landscape for VET is diverse and fragmented with varying degrees of mobility integration across member states.	Spain, Italy, Türkiye, Cyprus, Ireland, Greece, North Macedonia
Legal & Structural	Lack of sufficient cross-border mobility opportunities for apprenticeships due to legal and structural barriers.	Spain, Italy, Türkiye, Cyprus, Ireland, Greece, North Macedonia
Administrative	Organising cross-border apprenticeships requires navigating a complex labyrinth of different national regulations and administrative tasks.	Spain, Italy, Türkiye, Cyprus, Ireland, Greece, North Macedonia

Administrative	Significant administrative workload including paperwork, securing approvals, and ensuring compliance with diverse legal requirements.	Spain, Italy, Türkiye, Cyprus, Ireland, Greece, North Macedonia
Legal & Structural	Apprenticeships are work contracts with training objectives, making the choice of legal status in the host country difficult during mobility.	Spain, Italy, Türkiye, Cyprus, Ireland, Greece, North Macedonia
Educational	Alignment of qualifications in VET is not advanced, making it difficult to recognise and validate knowledge acquired abroad through long-term mobility.	Spain, Italy, Türkiye, Cyprus, Ireland, Greece, North Macedonia
Administrative	VET providers and SMEs often lack the resources, expertise, and knowledge to effectively manage cross-border apprenticeship mobility.	Spain, Italy, Türkiye, Cyprus, Ireland, Greece, North Macedonia
Socio-Economic & Cultural	There is a lack of information and outreach, leaving many apprentices and employers unaware of existing mobility programs and their benefits.	Spain, Italy, Türkiye, Cyprus, Ireland, Greece, North Macedonia
Employer/SME	Employers, particularly SMEs, are reluctant to send apprentices abroad because costs often appear higher than the perceived benefits.	Spain, Italy, Türkiye, Cyprus, Ireland, Greece, North Macedonia
Socio-Economic & Cultural	The building sector faces a shortage of talent due to an ageing workforce and a reluctance of young people to pursue careers in construction.	Spain, Italy, Türkiye, Cyprus, Ireland, Greece, North Macedonia
Socio-Economic & Cultural	The building sector struggles with a traditional image and perceived unattractiveness, making it hard to replace retiring workers.	Spain, Italy, Türkiye, Cyprus, Ireland, Greece, North Macedonia
Administrative	Italian legislation and operative manuals do not explicitly address mobility in apprenticeships, creating regulatory uncertainty.	Italy

Legal & Structural	Non-EU students in Italian VET programs face significant visa barriers and restrictions on free movement for long-term mobility.	Italy
Administrative	Meeting diverse workplace safety and insurance requirements across different legal frameworks is challenging for construction sector placements.	Italy
Employer/SME	Companies are reluctant to host mobility as they must pay apprentice salaries while the worker is unavailable during the placement abroad.	Italy
Educational	Mobility is often seen as an extracurricular activity rather than an integral component, leading to a lack of recognition in regional VET curricula.	Italy
Socio-Economic & Cultural	Limited engagement in learning foreign languages among building sector students hinders their ability to integrate during mobility programs.	Italy
Employer/SME	Many micro-enterprises in the building sector have low degrees of internationalisation, limiting their capacity for cross-border collaboration.	Italy
Socio-Economic & Cultural	Entrenched gender disparity and a heavily male-dominated industry restrict diversity and balance within mobility participation.	Italy
Administrative	The coordination of multi-institutional and multi-country programmes requires high administrative and logistical effort, placing pressure on institutional structures.	Tükiye
Legal & Structural	The rigid contractual framework under Law No. 3308 limits flexibility, as apprentices are generally bound to a single employer throughout their training.	Tükiye

Socio-Economic & Cultural	Vocational Training (VET) often suffers from a lower social status compared to academic pathways, discouraging students from pursuing apprenticeships.	Cyprus, Greece, Ireland, Spain
Employer/SME	SMEs fear that apprentices will not return after mobility or will be recruited by foreign companies, leading to a loss of productive labor and investment.	Tükiye, Ireland, Cyprus, Greece
Learner-Related	Language proficiency is a critical barrier, especially for on-site safety procedures where misunderstanding instructions can lead to accidents.	Spain, Italy, Cyprus, Greece, Ireland
Legal & Structural	Limited recognition of vocational qualifications across EU countries remains weak, often requiring re-certification for apprentices to work abroad.	Tükiye, Cyprus, Greece
Administrative	Organizing international mobility involves complex issues such as taxation, social security, and occupational safety regulations which differ across countries.	Cyprus, Greece, Ireland, Spain
Socio-Economic & Cultural	High physical demands and precarious working conditions in the construction sector limit its appeal to younger and more diverse talent pools.	Tükiye, Italy, Cyprus, Greece
Employer/SME	Small and micro-enterprises often rely on apprentices as essential manpower for daily production, making temporary absence a loss of revenue.	Tükiye, Greece, Cyprus, Ireland
Socio-Economic & Cultural	Lack of financial resources for learners is a significant hurdle, as Erasmus+ grants do not always cover the full cost of travel and living expenses.	Spain, Cyprus, Greece
Administrative	The absence of ready-made, sector-specific guidelines for mobility in construction forces each institution to design their own safety and risk procedures.	Cyprus

Learner-Related	Many apprentices prefer immediate practical routes to work and do not see international mobility as factor for their career goals, seeing it as more academic.	Ireland
Legal & Structural	High housing and accommodation costs in major cities deter both incoming foreign apprentices and outgoing national apprentices with limited budgets.	Ireland, Cyprus, Spain
Legal & Structural	Outdated National Legislation like the 1967 Industrial Training Act creates a foundation that is not suited for modern mobility.	Ireland
Legal & Structural	Rigid Contractual Frameworks, such as Law No. 3308, bind apprentices for long periods (3-4 years), making mobility difficult.	Türkiye
Legal & Structural	Financial Liability for Salaries requires that apprentices, as permanent employees, must be paid while they are abroad.	Italy
Legal & Structural	Complex Recognition & Validation issues occur due to a lack of automatic mechanisms for validating learning outcomes.	Spain, Türkiye, Cyprus
Legal & Structural	Visa & Movement Restrictions create hurdles for non-EU students or those seeking stays longer than 90 days.	Italy, Türkiye
Administrative	Heavy Staff Workload involves an intensive burden of partner matching and reporting for teachers and coordinators.	Spain, Cyprus, Italy, Türkiye
Administrative	Lack of Sector-Specific Safety Tools as generic tools often ignore high-risk site needs like scaffolding.	Cyprus

Administrative	Inadequate Pre-Departure Preparation where learners depart with zero technical or linguistic briefing.	Greece, Spain
Administrative	Logistics & Housing Shortages involving high prices and a lack of student accommodation bottlenecks.	Spain, Ireland, Italy
Employer/SME	Limited Capacity & Tight Schedules mean small teams cannot risk project delays to host learners.	Cyprus, Ireland, Türkiye, Italy
Employer/SME	Fear of 'Brain Drain' where employers worry trained apprentices will stay abroad or be recruited by rivals.	Ireland, Türkiye, Italy
Employer/SME	Productivity & Operational Loss as hosting trainees is seen as a distraction requiring excessive 'hand-holding'.	Spain, Türkiye, Ireland
Employer/SME	Liability & Safety Concerns regarding legal responsibility if a foreign trainee has an accident on a high-risk site.	Cyprus, Ireland, Greece
Learner-Related	Safety-Critical Language Barriers where misunderstanding on-site instructions poses immediate physical risk.	Greece, Türkiye, Ireland, Cyprus, Albania, Italy
Learner-Related	Financial Strain as Erasmus grants fail to cover living costs in high-cost destination countries like Denmark.	Türkiye, Greece, Spain, Albania
Learner-Related	Low Awareness of Benefits where apprentices are unaware of mobility opportunities or long-term career value.	Cyprus, Ireland, Spain

Learner-Related	Immaturity & Lack of Responsibility leading to attendance or behavior issues because mobility is not assessable.	Spain
Socio-Economic & Cultural	Stigma of Vocational Education where VET is perceived as a 'second-rate' choice compared to university.	Spain, Cyprus, Ireland
Socio-Economic & Cultural	Gender Imbalance as the construction sector remains male-dominated, limiting diversity and female participation.	Italy, Ireland
Socio-Economic & Cultural	Racial Discrimination or isolation perceived by minority learners in certain host regions.	Italy

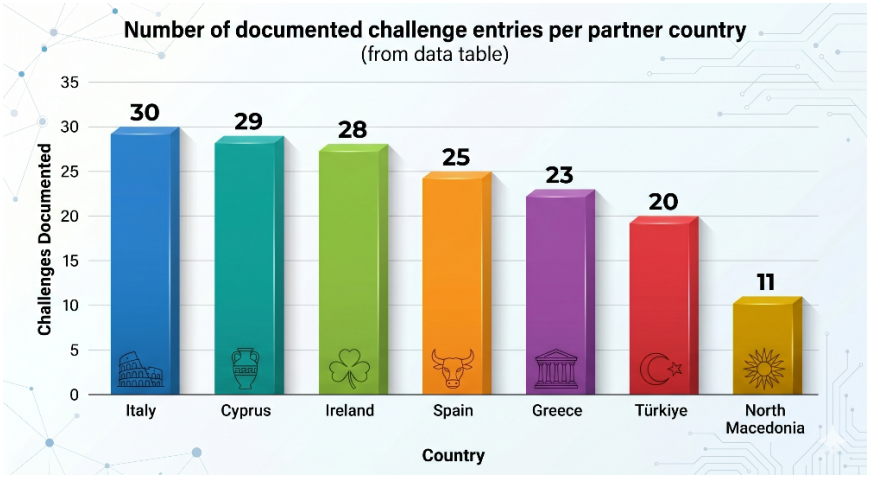


Figure 3: Total Number of Documented Barriers per Partner Country

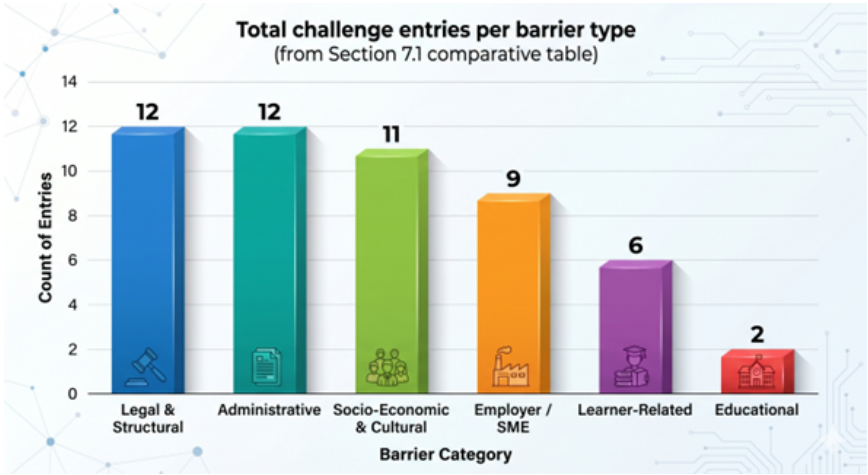


Figure 4: Total Number of Documented Barriers per Partner Country

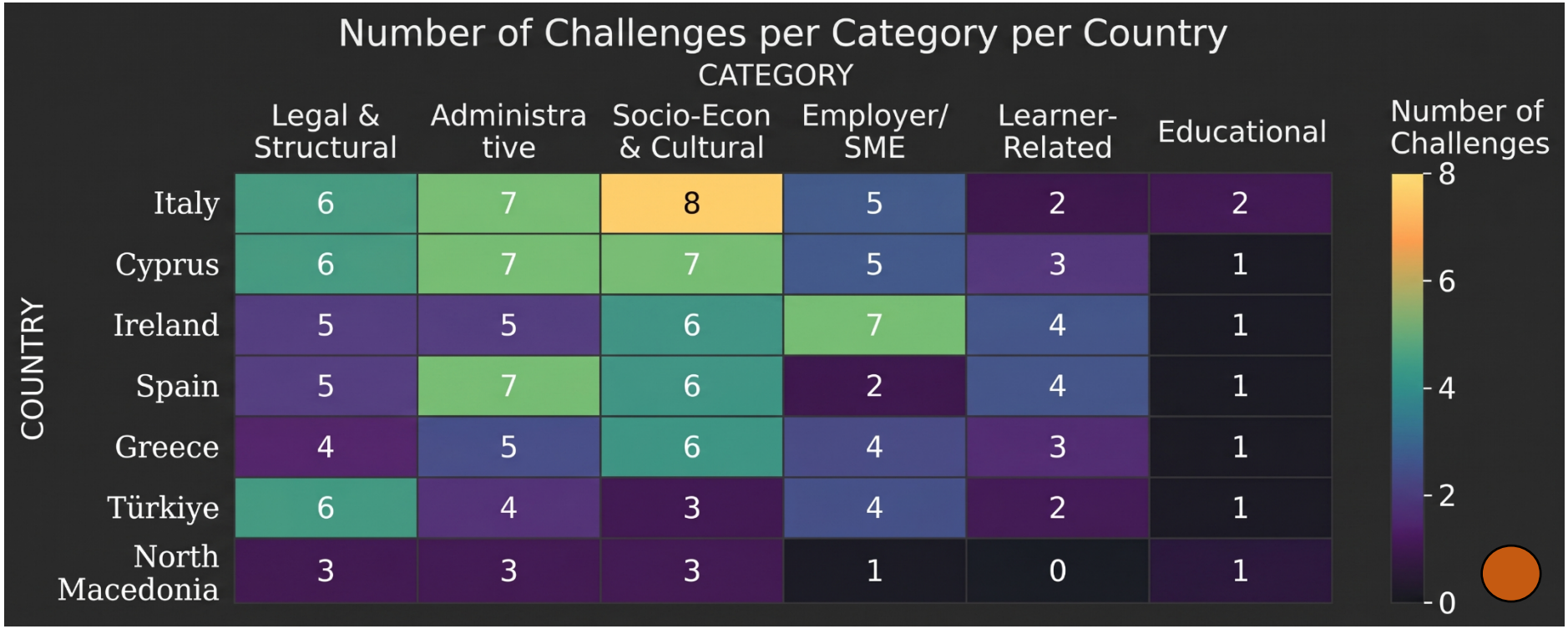


Figure 5: Distribution of Documented Barriers by Category and Partner Country

7.2 Common Challenges Across Countries

Despite the distinct legal and educational frameworks governing Vocational Education and Training (VET) in each partner country, several structural, operational, and cultural barriers are universally shared across the consortium.

Administrative Workload and Institutional Capacity Constraints: A universal bottleneck across all partner countries is the heavy administrative burden associated with organizing apprentice mobilities. VET staff face an intensive workload encompassing partner matching, learning agreement design, insurance documentation, and financial reporting, often without the support of dedicated internationalization departments. This burden is severely amplified for employers, as the construction sector is overwhelmingly dominated by micro and small-to-medium enterprises (SMEs). These SMEs operate with small teams and tight project schedules, meaning they completely lack the administrative capacity, financial resilience, and supervisory time required to host or send apprentices without risking project delays.

Language Barriers as a Safety-Critical Risk: While language is a standard challenge in any mobility, stakeholders across all nations highlighted that in the construction sector, it is a uniquely critical safety hazard. Misunderstanding technical instructions, machinery operation guidelines, or health and safety protocols on an active, high-risk worksite poses an immediate physical danger to the learner and their colleagues. Consequently, employers worry that language difficulties will slow down productivity, requiring constant one-to-one supervision and increasing liability risks.

Employer Reluctance and Fear of "Brain Drain": Across the board, employers view training an apprentice as a heavy financial and operational investment predicated on acquiring a long-term, productive employee. There is a widespread, shared fear of "brain drain"; employers are highly reluctant to support outgoing mobility because they fear their trained apprentices will stay abroad or be recruited by foreign competitors. Conversely, hosting an incoming foreign apprentice for a short period is viewed as a net operational loss (due to the mentoring hours required) that yields no practical return on investment (ROI) once the apprentice returns to their home country.

Financial Strains and Logistical Bottlenecks: The direct and indirect costs of mobility present a severe barrier, particularly as many VET learners come from lower socio-economic backgrounds. Participants universally noted that existing grants, such as Erasmus+, often fail to cover the true cost of living in destination countries. Additionally,

securing affordable and suitable accommodation for short-term stays is a major logistical hurdle and a primary source of anxiety for learners across multiple countries.

Cultural Stigma and Gender Imbalance: A pervasive cultural stigma positions VET as a "second-rate" or non-academic choice compared to university pathways across Europe, which negatively impacts the perceived value of apprenticeship mobility. Furthermore, the construction workforce remains heavily male-dominated across all partner countries, perpetuating entrenched cultural patterns that severely limit diversity and gender inclusion in mobility programs.

7.3 Country-Specific Challenges

While common themes exist, the exact legal, structural, and institutional hurdles vary significantly depending on national legislation and local VET architectures.

Spain

- **Legal Uncertainty:** The coexistence of multiple contract types within the Spanish dual VET system (e.g., work-based training, grants, internship agreements) complicates the drafting of bilateral agreements with foreign host companies.
- **Fragmented Recognition:** Despite the recent Organic Law 3/2022 on vocational training, the application of recognition tools like the Learning Agreement varies widely across autonomous communities, meaning automatic recognition of foreign work experience is not uniform.
- **Accommodation via Intermediaries:** Due to high rental prices and the difficulty of securing housing without a local employment contract, Spanish institutions are increasingly forced to rely on paid intermediaries to manage student accommodation, whose reliability varies significantly.

Türkiye

- **Rigid Contractual Frameworks:** Under Vocational Education Law No. 3308, apprentices are bound to a single employer for their entire 3 to 4-year training period, offering virtually no legal flexibility for temporary international transfers.
- **Lack of Institutional Coordination (İŞKUR):** There is a critical absence of coordination between İŞKUR (Turkish Employment Agency), which oversees employment and vocational training schemes at the national level, and VET institutions involved in international mobility. Currently, İŞKUR has no dedicated mechanism to financially support or administratively facilitate outbound

international apprenticeship placements, leaving this responsibility entirely to individual institutions without systematic backing.

- **MYK Qualification Recognition Gap:** Turkey's national qualification framework is managed by the Mesleki Yeterlilik Kurumu (MYK – Vocational Qualifications Authority). Despite the TQF's formal alignment with the EQF, MYK certificates are not formally recognized in most EU member states, and no bilateral recognition agreement is currently in place. This creates a critical asymmetry: Turkish apprentices completing mobility abroad cannot formally transfer and validate the skills gained into their national qualification records upon return, undermining the long-term value of the mobility experience.
- **Informality in the Turkish Construction Sector:** A significant proportion of Turkey's construction workforce, particularly within SMEs, operates outside formal employment structures. This widespread informality makes it structurally difficult to identify eligible apprenticeship host companies, establish compliant bilateral agreements, and ensure adequate social protection for apprentices during international placements.
- **Mismatched Curricula:** While European systems heavily prioritize green building and digital construction (like BIM), many Turkish vocational programs still emphasize traditional construction techniques, complicating the transferability of skills.
- **Severe Visa Bottlenecks:** Non-EU mobility participants from Türkiye face extreme visa delays, opaque procedures, and high rejection rates, frequently forcing institutions to abandon planned mobilities at the last minute.

Italy

- **Financial Liability for Salaries:** Under Legislative Decree 81/2015, Type 1 apprenticeships constitute permanent employment contracts. Companies are therefore legally obligated to continue paying their apprentices' salaries even while they are abroad on mobility, creating a massive financial disincentive for employers.
- **Extracurricular Status:** VET curricula are defined at the regional level and do not mandate mobility. Consequently, time spent abroad is often viewed as an extracurricular activity rather than a credit-bearing training component.
- **Strict Safety Training Mandates:** Italian law requires apprentices to complete specific, mandatory safety training courses (General and Specific) before

entering a worksite. Delivering this legally required training in a language a foreign trainee fully understands creates immense logistical hurdles.

Cyprus

- **Fragmented Legal Status:** The legal framework for trainees is highly fragmented. For example, traineeships undertaken without remuneration are not classified as proper employment and therefore lack adequate legal and social protection during international mobility.
- **Third-Country National Restrictions:** The Cypriot construction sector relies heavily on third-country nationals, who face complex visa and insurance hurdles that severely restrict their ability to participate in cross-border mobility.

Ireland

- **Outdated Legislation:** The Irish apprenticeship system is governed by the 1967 Industrial Training Act, under which apprentices are strictly employees bound by employment contracts, rendering international mobility legally complex.
- **Curriculum Rigidity:** The national system utilizes a rigid 7-phase model alternating between on-the-job and off-the-job training. VET institutions have almost no curriculum flexibility to substitute a domestic phase with a mobility placement abroad.
- **Pragmatic Mobility Culture:** International mobility is entirely peripheral to the Irish system. Apprentices view mid-training mobility as an academic distraction; they overwhelmingly prefer to travel only *after* they are fully qualified, heavily favoring English-speaking destinations (like the UK or Australia) for direct employment.

Greece

- **Severe Institutional Failures in Preparation:** Greek case studies involving incoming European apprentices revealed profound institutional failures. Learners reported receiving "zero to nothing" in terms of pre-departure preparation, technical briefing, or cultural orientation regarding their assigned companies.
- **Professional Culture Shock and Safety:** Incoming apprentices experienced severe culture shock, specifically describing the local safety measurements on Greek worksites as "catastrophic" compared to the standards in their home countries.
- **Lack of Formal Validation:** Following their mobility, apprentices hosted in Greece reported receiving no formal documentation, Europass certificates, or credits, stripping the placement of its formal educational value.

North Macedonia

- **Alignment with EU Standards:** Based on desk analysis, the primary challenge for North Macedonia is the structural need to align its national vocational training and qualification frameworks with broader EU standards to successfully integrate into European apprenticeship mobility pathways in the future

8. Institutional Practices in Training Centres and Workplaces

8.1 Curriculum Design and Mobility Integration

The integration of mobility into formal vocational curricula varies drastically across partner countries, often highlighting a tension between rigid national frameworks and the need for flexible, internationalized learning.

- **Curriculum Rigidity vs. Flexibility:** In **Ireland**, the apprenticeship model is strictly defined by a 7-phase system alternating between on-the-job and off-the-job training. This limited curriculum flexibility makes it exceptionally difficult to substitute a domestic training phase with a mobility placement abroad. Similarly, in **Italy**, VET curricula are determined at the regional level and do not include mandatory requirements for mobility. As a result, time spent abroad is often viewed as an "extracurricular" activity rather than a credit-bearing component of the official training.
- **Curriculum Renewal through Staff Mobility:** Conversely, institutions in **Cyprus** use staff mobility to directly drive curriculum design. For example, educators participating in training on sustainable timber building in Slovenia brought advanced techniques back to their home institution, actively updating local training modules to bridge the gap between local practices and evolving EU green standards.
- **Competency-Based Modular Design:** In **Spain**, recent reforms (Organic Law 3/2022) are pushing the VET system toward a more modular, competency-based structure that incorporates core transversal modules like digitalization, sustainability, and professional English, which theoretically better aligns with European mobility objectives

8.2 Mentorship and Support Systems

Effective mentorship and robust support mechanisms are critical for the success and safety of apprentices abroad, particularly in the high-risk construction sector. Institutional approaches to support range from highly structured to virtually non-existent.

- **Holistic On-Site Mentoring:** Large host companies in **Cyprus** (e.g., Cyfield Group) employ a highly structured approach. Apprentices are assigned a dedicated site mentor, undergo formal Health & Safety inductions, and receive structured weekly task planning. Furthermore, companies utilize a "Chief Happiness Officer" to facilitate a "buddy system," ensuring not just technical supervision but also psychological safety and social integration for the foreign learner.
- **Accompanying Tutors:** In **Italy**, sending institutions frequently dispatch a dedicated school tutor alongside groups of younger apprentices. This tutor acts as a vital bridge, managing bureaucratic procedures with the host company, conducting daily check-ins, organizing group activities to combat homesickness, and providing emotional support during the critical initial adaptation phase.
- **Systemic Support Failures:** In stark contrast, case studies of incoming European apprentices in **Greece** revealed a severe lack of institutional support. Learners reported receiving zero active help, mentoring, or problem-solving assistance from either their sending school or the host company, leaving them to navigate workplace challenges entirely on their own.

8.3 Assessment and Certification

Formally validating the skills acquired during mobility is essential for ensuring the experience translates into tangible career benefits. However, institutional practices regarding assessment are highly uneven.

- **Standardized Tools:** The primary tools utilized for assessment include the **Europass Mobility Document**, standard **Learning Agreements** (which define expected competencies prior to departure), and attendance records.
- **Company-Level Evaluation:** In structured hosting environments like those in **Italy** and **Cyprus**, the assessment process involves timesheets, daily progress meetings, and a formal evaluation report completed by the internal company tutor

at the end of the placement, which measures the achieved skills against the initial learning agreement.

- **Lack of Validation:** A major institutional failure occurs when these tools are not utilized. For example, apprentices completing placements in **Greece** reported receiving no formal documentation, credits, or Europass certificates upon returning home. This lack of validation strips the mobility of its formal educational value, reducing it to a mere personal experience.

8.4 Good Practices Identified

Throughout the report, several highly effective institutional practices were identified that significantly mitigate mobility barriers and enhance learning outcomes:

- **Pre-Mobility Site Visits (Cyprus):** Sending staff and coordinators to the host organization 3 to 4 days prior to the mobility to verify workplace safety, cultural suitability, and curriculum alignment. This establishes transparency, builds trust with the host company, and preemptively resolves logistical or safety obstacles.
- **The Accompanying Tutor Model (Italy):** Providing a dedicated group leader/tutor to travel with young apprentices on short-term mobilities. This peer and tutor support network is a crucial success factor in overcoming initial fears, anxiety, and language barriers.
- **Blended Intensive Programmes (Türkiye):** For academic and higher-level VET, combining online preparatory seminars with intensive, physical face-to-face workshops (such as architectural design-build projects). This ensures participants develop a shared conceptual foundation before engaging in collaborative on-site work.
- **TURKONFED Employer Network as a Liaison Model (Türkiye):** TURKONFED's established networks of employer confederations and sectoral working groups represent a replicable good practice for industry-VET coordination. These structures provide a ready-made channel for reaching SMEs in the construction sector, disseminating mobility opportunities, and securing employer buy-in without requiring individual institutions to build outreach capacity from scratch. This model could be formally integrated into the MOBUILDING platform as a template for sector-level employer engagement in other partner countries.

- **Istanbul Province (GOI) Municipal VET Coordination (Türkiye):** Istanbul Province (GOI) has accumulated substantial experience in coordinating large-scale vocational training initiatives within the construction and skilled trades sectors at the municipal level. This institutional experience represents a scalable model for local government involvement in apprenticeship mobility programs, with GOI's role demonstrating how municipal authorities can actively bridge VET institutions and industry partners to facilitate structured mobility.
- **Targeted Language Integration (Italy):** Implementing specific language preparation directly tied to workplace needs. For instance, introducing a 30-hour language course aimed at bringing non-native speakers to a level of comprehension sufficient to understand crucial workplace safety instructions prior to entering a construction site

9. Measures to Overcome Mobility Barriers

9.1 Policy Recommendations

To systematically overcome the barriers to cross-border apprenticeship mobility, comprehensive interventions are required at the policy level:

- **Harmonize Legal Frameworks:** National legislation must be updated and clarified to properly define the status, rights, and responsibilities of apprentices during international mobility, ensuring consistency with EU frameworks. This includes reforming rigid contractual structures (such as Türkiye's Law No. 3308 or Italy's Type 1 apprenticeships) that currently bind apprentices to a single employer without flexibility for international transfers.
- **Establish Automatic Recognition Systems:** Policymakers must work toward the mutual and fast-track recognition of learning outcomes and qualifications acquired during mobility periods across EU member states. Frameworks should be designed to formally integrate long-term mobilities as credit-bearing, integral parts of official VET curricula rather than treating them as extracurricular activities.

- **Provide Financial and Tax Incentives:** Governments should introduce targeted financial mechanisms, such as tax benefits, wage subsidies, or direct funding, to incentivize and compensate SMEs for the operational costs, mentoring time, and productivity losses associated with hosting or sending apprentices.
- **Simplify Visa Procedures:** For non-EU participants and third-country nationals, visa processes must be streamlined and accelerated. Authorities need to provide clear, realistic timelines and document requirements to prevent mobility cancellations.
- **Enhance Policy Coordination:** Establish a coherent national strategy for VET and mobility by strengthening inter-agency collaboration (e.g., between Ministries of Education, Labor, and employer organizations) to avoid fragmented efforts and ensure alignment with labor market needs

9.2 Institutional Improvements

Vocational training centers and educational institutions must strengthen their internal capacities to better facilitate and manage mobility experiences:

- **Establish Dedicated Internationalization Units:** VET centers must be provided with specialized staff dedicated exclusively to designing, managing, and coordinating mobility projects and grants, thereby relieving teachers of this heavy administrative burden.
- **Streamline Administrative Workflows:** Accelerate the digitalization of administrative processes by using online forms, digital checklists, and standardized reporting templates to minimize repetitive paperwork and improve transparency for both sending and hosting organizations.
- **Strengthen Pre-Departure Preparation:** Institutions must implement robust pre-departure training that goes beyond logistics. This should include basic language training emphasizing construction-specific vocabulary, intercultural competence modules, and realistic expectation-setting for the critical first 15 days of the mobility.
- **Implement Pre-Mobility Site Visits:** A highly effective practice is sending VET coordinators to conduct pre-visits to host organizations 3-4 days prior to the mobility. This allows institutions to verify workplace safety, cultural suitability, and curriculum alignment, proactively resolving logistical obstacles.

Curriculum Updating via Staff Mobility: Institutions should leverage staff mobility to train educators in advanced, modern techniques (like sustainable timber construction) so they can return and update institutional curricula to meet evolving EU green and digital standards.

9.3 Support for SMEs and Employers

Because SMEs form the backbone of the construction sector and often lack the capacity to engage in mobility, targeted support mechanisms are essential:

- **Develop Construction-Specific Mobility Toolkits:** Create and distribute ready-to-use, sector-specific guides tailored for cross-border construction mobility. These must address health and safety standards for specific trades (e.g., masonry, scaffolding), insurance requirements, model risk assessments, and sample task lists.
- **Reduce Liability and Administrative Complexity:** SMEs require clear legal and insurance guidelines, simplified administrative templates, and risk-sharing mechanisms to alleviate their fears of legal liability in case of on-site accidents involving foreign trainees. Utilizing intermediary organizations (like regional VET consortiums) to manage the bureaucratic workload and accommodation logistics on behalf of the companies is highly recommended.
- **Enhance Onboarding and Mentoring Support:** Provide companies with structured onboarding templates, communication guidelines to overcome language barriers on active sites, and specific training for site supervisors to effectively mentor international apprentices.
- **Promote Recognition and Awareness:** Supply simple, visually accessible materials (flyers, short videos) that clearly explain the long-term workforce benefits of hosting apprentices. Furthermore, introduce formal recognition for participating SMEs, such as "mobility-friendly employer" badges or ratings, to improve their sectoral profile.

9.4 Enhancing Long-Term Mobility

Expanding Cross-Border Long-Term Apprentice Mobility (CBLTMA) requires specific strategic and financial adjustments to make extended stays viable:

- **Increase Budgetary Support:** Existing grants often fail to cover the true costs of living, housing, and transport over an extended period. Funding must be increased specifically for long-term placements to make them economically feasible for apprentices from all socio-economic backgrounds.
- **Use Short-Term Mobility as a Stepping Stone:** Because there is currently little appetite or structural readiness for long-term mobility, policy should utilize highly successful short-term mobilities as a foundational stepping stone. This helps build demand, trust, and confidence among apprentices and employers before scaling up to 6-to-12-month placements.
- **Create Regional Consortia and Partner Databases:** To sustain long-term mobility, establish regional mobility consortia that pool resources for smaller VET centers. Additionally, work with sector bodies to build and maintain a centralized national database of reliable, vetted host companies with a proven track record in providing safe, high-value, long-term learner placements

10. Implications for the MOBUILDING Action Plan (D2.2)

The qualitative and structural findings gathered during this report into the apprentices' journey (D2.1) serve as the foundational evidence base for the upcoming **Action Plan to foster Apprenticeship Mobility in the Building Sector in Europe (D2.2)**. By identifying the precise systemic, institutional, and personal bottlenecks hindering mobility, these findings directly inform the strategic design of the project's core outputs.
Mobility support structures The research highlights that administrative burdens, language barriers, strict safety regulations, and severe capacity constraints among SMEs are the primary obstacles to mobility. To address this, the findings will inform the creation of robust, targeted support structures, specifically:

- **Targeted Training and Capacity Building:** The findings underscore the need for better pre-departure preparation and SME mentoring support. This directly informs the design of the Training Programme on Effective Management of Apprenticeship Mobility for the Building Sector (D3.2), which will equip VET

providers and SME staff with the skills needed to effectively manage cross-border mobilities, navigate legal requirements, and ensure training quality.

- **Networking and Intermediary Support:** Because SMEs lack the networks and time to organize mobilities independently, the findings validate the need to establish the **Building Apprenticeship Mobility Network (T4.2)**. This network will connect industry partners, VET providers, and regional authorities, fostering collaborative efforts, pooling resources, and acting as an intermediary support structure to handle the logistical heavy lifting on behalf of smaller companies.
- **Sector-Specific Toolkits:** The data reveals that generic Erasmus+ guidelines fail to address the high-risk nature of the building sector. Consequently, the support structures will include the development of construction-specific mobility manuals, health and safety packages, and standardized risk assessments tailored for active worksites.

Policy toolbox The identification of deep-rooted systemic barriers—such as rigid national apprenticeship contracts that do not allow for international transfers, lack of financial incentives for SMEs, and fragmented mechanisms for recognizing learning outcomes—will directly feed into the **Policy Toolbox for Apprenticeship Mobility in the Building Sector in Europe (D4.2)**.

- **Evidence-Based Advocacy:** The findings will provide policymakers with concrete evidence to design interventions that harmonize legal frameworks, simplify visa procedures for non-EU students, and integrate long-term mobility into official VET curricula rather than treating it as an extracurricular activity.
- **Incentivizing Stakeholders:** The toolbox will compile methods, approaches, and options for decision-makers to implement targeted financial mechanisms (like wage subsidies or tax benefits) that compensate SMEs for the operational losses and mentoring time required to host international apprentices.

European mobility platform The logistical difficulties of finding reliable partners, managing complex paperwork, and formally validating skills acquired abroad strongly dictate the architecture of the **MOBUILDING European Platform for Apprenticeship Mobility in Building (D3.1)**. The findings will inform the platform's four integrated digital spaces:

- **Partnership and Networking Lounge:** Addressing the challenge of finding willing and vetted host companies, this space will facilitate the building of trustworthy transnational partnerships and consortia within the building sector.

- **Capacity Building Space:** To combat insufficient learner preparation and lack of SME mentoring skills, this section will host the training programme modules, offering cultural sensitivity training, language learning resources, and management tools for organizations.
- **Apprenticeship Mobility Management Tool:** Directly addressing the overwhelming administrative workload reported by VET trainers, this tool will digitalize and streamline the management of mobility flows across all three stages (initiation, implementation, and integration), providing step-by-step guidance and reducing repetitive paperwork.

Accreditation, Validation and Recognition Centre: To solve the issue of apprentices returning home without formal recognition for their new skills, this centre will provide integrated support for utilizing European tools like Europass, assisting institutions in validating outcomes and standardizing qualifications across borders.

11. Conclusions

Major barriers identified: The report reveals that apprenticeship mobility in the building sector is hindered by a complex intersection of structural, operational, and cultural barriers. At the systemic level, **outdated national legislation, rigid employment contracts, and complex visa requirements for non-EU learners act as foundational roadblocks**, often preventing mobility before it can even be planned. Administratively, VET institutions are overwhelmed by the heavy bureaucratic workload of organizing placements, lacking dedicated staff for internationalization.

For employers—particularly the SMEs that make up the vast majority of the construction sector—**tight project schedules, strict health and safety liability concerns, and the fear of "brain drain" make hosting or sending apprentices an operational risk** rather than a strategic investment. Meanwhile, learners face severe, safety-critical language barriers on active worksites, financial strains due to grants failing to cover the high cost of living abroad, and personal anxieties related to leaving their support networks.

Potential solutions Overcoming these challenges requires coordinated, multi-level interventions that address the specific needs of the building sector:

- **Policy interventions:** Policymakers must focus on harmonizing legal frameworks, streamlining visa procedures, and establishing fast-track, automatic recognition systems for learning outcomes acquired abroad. To secure the vital participation of SMEs, governments should introduce **targeted financial incentives—such as wage subsidies or tax benefits—to offset the productivity losses and mentoring costs** associated with mobility.
- **SME support tools:** The development of **construction-specific mobility toolkits** is crucial to alleviating employer fears. These toolkits must include standardized risk assessments, health and safety induction modules, template agreements, and clear legal and insurance guidelines tailored to high-risk worksites.
- **Institutional capacity building:** VET providers must be supported with dedicated internationalization staff and digitalized administrative workflows to reduce the bureaucratic burden. Furthermore, institutions must implement **robust pre-departure preparation programs** that emphasize technical construction vocabulary, safety protocols, and intercultural readiness to ensure learners are prepared for the realities of foreign worksites.

Importance of structured mobility systems Ultimately, the establishment of structured, well-supported mobility systems is not merely an educational ideal, but an economic necessity. The European construction sector is facing unprecedented labor shortages, an aging workforce, and a critical skills mismatch driven by the urgent demands of the green and digital transitions.

Transitioning apprenticeship mobility from an ad-hoc, extracurricular activity into an **integrated, credit-bearing component of formal VET pathways** is essential. By building robust mobility networks, standardizing quality assurance, and fostering transnational collaboration, the sector can drastically **enhance its attractiveness to young talent, equip the future workforce with modern, sustainable competencies, and ensure long-term competitiveness and resilience** across the European building industry.

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