



## Activity 3 – WP2: Comparative Analysis of National Training Frameworks in Transport and Logistics

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## Table of contents

1. Introduction	3
2. National Training Frameworks	4
2.1 Spain	4
2.2 France	4
2.3 Ireland	5
2.4 Portugal	5
2.5 Germany	6
3. Comparative inventory of T&L Training Frameworks	7
4. Common barriers across countries	8
5. Effective inclusion practices	10
6. Conclusions	12

## 1. Introduction

The transport and logistics (T&L) sector constitutes a fundamental pillar of European economies, demanding a qualified workforce across areas such as professional driving, warehouse management, supply chain operations, and customer service. Ensuring equitable access to training and employment in these occupations is essential for promoting both economic competitiveness and social inclusion.

This report presents a comparative synthesis of national training frameworks in Spain, France, Ireland, Portugal, and Germany, developed within the framework of the DiTL - Disability in Transport and Logistics project. It examines how each country structures its formal training pathways, professional certification systems, and inclusion mechanisms, with a particular focus on accessibility for learners with disabilities.

The analysis aims to provide a comprehensive overview of existing training systems across the five participating countries, identify structural gaps and opportunities, and highlight effective inclusion strategies that can inform future European policy and practice. It draws upon official curricula, qualification frameworks, professional regulations, and qualitative insights from trainers and sectoral stakeholders.

Through this synthesis, the report seeks to contribute to the development of a more inclusive European T&L training ecosystem, one that aligns with competence-based principles, supports reasonable accommodation, and facilitates the participation of all learners in transport and logistics professions.

## 2. National Training Frameworks

The analysis of national frameworks reveals significant convergence across Spain, France, Ireland, Portugal and Germany in terms of competence-based curricula, structured qualification pathways, and alignment with the European Qualifications Framework (EQF). Despite these shared foundations, the organisation of vocational education, certification systems, and inclusion measures varies notably between countries.

### 2.1 Spain

In Spain, vocational education in the transport and logistics sector is organised through a system that integrates Formación Profesional (VET programmes) and Certificados de Profesionalidad (Professional Certificates). Both are nationally recognised and aligned with EQF levels. The VET system operates at intermediate (EQF4) and higher (EQF5) levels, combining classroom instruction with compulsory workplace training modules. This structure ensures that learners acquire both theoretical and practical competences.

Training pathways in professional driving include the Certificado de Aptitud Profesional (CAP), ADR certification for the transport of dangerous goods, and the relevant driving licences (C, C+E, and D). In logistics and warehouse operations, qualifications cover areas such as stock management, goods handling, and distribution processes. In addition, Spain offers adapted VET programmes - such as Itinerarios Formativos Específicos (IFE) - for learners with intellectual disabilities.

Inclusive training is promoted through curriculum adaptations, assistive technologies, and the involvement of multidisciplinary support teams (Equipos de Apoyo Psicopedagógico<sup>1</sup>). These initiatives are complemented by growing collaboration with companies to ensure that workplace learning environments are accessible and inclusive.

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<sup>1</sup> EAPs are teams that provide psycho-educational advice and guidance, supporting teachers and schools in responding to student diversity and in relation to students with special educational needs, as well as their families.

## 2.2 France

France maintains a well-structured national vocational system characterised by a strong dual component that integrates academic instruction and in-company training (apprentissage). The main qualifications include the Certificat d'Aptitude Professionnelle (CAP), the Baccalauréat Professionnel (Bac Pro), and Certificats de Qualification Professionnelle (CQP), each corresponding to specific occupational levels and competences recognised by professional branches.

Training pathways in professional driving encompass the heavy vehicle and passenger transport licences, ADR certification, and CAP programmes focused on road transport operations. In warehouse and logistics occupations, learners may pursue Bac Pro qualifications or CQPs specialising in goods handling, inventory control, and supply chain coordination.

Inclusion is embedded within the national framework through mechanisms such as adapted apprenticeships, personalised training support, and ergonomic adjustments. Specialised trainers and social partners collaborate to facilitate the integration of learners with disabilities, supported by the AGEFIPH and similar institutions. The emphasis on progressive learning and in-company adaptation ensures continuity between training and sustainable employment.

## 2.3 Ireland

In Ireland, transport and logistics training is delivered primarily through the Further Education and Training (FET) system and governed by Quality and Qualifications Ireland (QQI). The national framework includes modular programmes, apprenticeships, and specific certifications that respond to industry needs while offering flexible learning pathways.

Professional driving qualifications include the Driver Certificate of Professional Competence (Driver CPC), ADR training, and the acquisition of commercial driving licences for heavy goods and passenger vehicles. Warehouse and logistics training is provided through QQI Level 5 and Level 6 courses in logistics, supply chain management, and materials handling, often incorporating workplace placements and simulated learning environments.

The Irish FET system demonstrates strong commitment to inclusion. Learners with disabilities benefit from assessment accommodations, flexible scheduling, adapted equipment, and mentorship schemes. Collaboration with disability support services and community

organisations strengthens the capacity of training centres to provide both pedagogical and environmental accessibility.

## 2.4 Portugal

Portugal's vocational training system operates through a combination of formal and dual learning programmes, including Cursos de Educação e Formação de Adultos (EFA), Cursos Profissionais, and Certificados de Qualificações Profissionais. These programmes integrate classroom-based learning with compulsory internships or work-based modules, and all are aligned with the EQF.

Professional driving training covers the national professional driver licence, the CAP, and ADR certification. Within logistics and warehouse management, learners can pursue recognised qualifications in inventory management, forklift operation, and supply chain coordination.

Inclusion measures are supported by legislation promoting accessibility and reasonable accommodation in education and training. Institutions are encouraged to adapt curricula, provide ergonomic and technological aids, and establish partnerships with NGOs and social entities to assist learners during the transition to employment. The competence-based evaluation model allows for flexibility in assessing learners with disabilities, ensuring fair participation and certification opportunities.

## 2.5 Germany

Germany's vocational education and training (VET) system in the transport and logistics sector is characterised by its well-established dual structure, which combines classroom-based instruction with extensive in-company training. Programmes are regulated at national level and closely aligned with labour market requirements, ensuring that learners acquire occupation-specific competences through practical experience. Qualifications are referenced to the European Qualifications Framework (EQF) and are developed in cooperation with industry stakeholders, particularly through chambers of commerce and professional associations.

Training pathways in professional driving are structured around recognised occupations such as Berufskraftfahrer/in (professional driver), which integrates theoretical training with supervised driving practice and operational tasks. Learners must obtain the relevant driving licences (categories C, C+E, and D), as well as the Certificate of Professional Competence (CPC) and, where applicable, ADR certification for the transport of dangerous goods. The training process emphasises safety regulations, route planning, vehicle maintenance, and customer interaction, reflecting the operational realities of the sector.

In the field of logistics and warehouse operations, Germany offers a range of recognised qualifications, including Fachkraft für Lagerlogistik (warehouse logistics specialist) and Fachlagerist/in (warehouse operative). These programmes cover stock management, goods handling, order picking, and supply chain coordination, combining theoretical modules with hands-on training in real working environments. The strong integration of companies in the training process facilitates the acquisition of practical skills and supports a smooth transition into employment.

Inclusion within the German VET system is supported through a combination of legislative frameworks and institutional practices aimed at promoting equal access to training. Learners with disabilities may benefit from adapted training pathways, individualised support measures, and the involvement of specialised institutions and services. Workplace-based training environments offer opportunities for tailored adjustments, including ergonomic adaptations, flexible learning arrangements, and mentoring support. While inclusion measures are present, their implementation often depends on cooperation between training providers, companies, and support services, reflecting a system where accessibility is facilitated through coordinated stakeholder engagement rather than uniformly embedded in curricular design.

### 3. Comparative inventory of T&L Training Frameworks

The following comparative inventory summarises the main characteristics of transport and logistics training systems in Spain, France, Ireland, Portugal and Germany. It consolidates the information presented in the previous section to provide a cross-country overview of the principal qualification pathways, certification mechanisms, and educational structures.

The table highlights the coexistence of formal vocational programmes and professional certificates across all five countries, as well as complementary training options such as sectoral or private courses. It also emphasises the role of **dual training or internships**, which serve as a bridge between theoretical instruction and professional practice. Together, these elements reflect the diverse yet convergent approaches that underpin vocational education in the European transport and logistics sector.

Country	Vocational Pathways	Professional Certificates	University Degrees	Private or sectoral training	Dual training or internships
Spain	VET (EQF4) & (EQF5) IFE programmes	<i>Certificados de Profesionalidad</i> (Levels 1–3)	Master in Logistics	Forklift licences Sectoral courses	Dual training
France	CAP Bac Pro	CQP Specialised modules	Licence Master in Logistics	Forklift licences Sectoral courses	Apprenticeship Dual training
Ireland	FET Courses Apprenticeships	QQI Level 5–6 Certificates	Bachelor Master in Logistics	Forklift licences Handling perishable goods	Work placement Modular training
Portugal	EFA Courses VET	<i>Certificados de Qualificações</i> <i>Profissionais</i>	Bachelor Master in Logistics	Forklift licences Sectoral courses	Dual programmes Internships
Germany	Dual VET <i>Berufskraftfahrer/in</i>	Chamber-based certifications CPC (Driver qualification)	Bachelor Master in Logistics	Forklift licences Sectoral courses	Dual system Work-based learning

## 4. Common barriers across countries

The comparative review of national training frameworks in Spain, France, Ireland, Portugal, and Germany highlights several recurring barriers that affect the accessibility and inclusion of learners with disabilities within transport and logistics education. These challenges are primarily concentrated in two curricular domains: professional driving and warehouse and logistics operations. While all five national systems demonstrate alignment with the European Qualifications Framework (EQF) and adopt competence-based approaches, their implementation continues to reveal structural constraints that limit equitable participation in training.

### Professional Driving

Within professional driving curricula, regulatory and pedagogical barriers remain the most persistent across all countries. National and European directives governing medical fitness and safety requirements for professional licences significantly restrict access for learners with visual, auditory, neurological, or cardiovascular conditions. As these requirements are embedded within qualification frameworks - particularly those linked to CPC certification, ADR training, and professional driving licences - they effectively determine eligibility prior to entry into training programmes.

Even when access is granted, the structure of training programmes can reinforce exclusionary patterns. Modules that emphasise prolonged driving practice, psychotechnical assessments, and safety simulations often assume full physical and cognitive functionality. While some countries have introduced adapted vehicles, simulators, or flexible training arrangements, these solutions are not systematically embedded across all systems. Learners with cognitive or psychological difficulties may also encounter challenges in theoretical components requiring sustained concentration, procedural accuracy, and high-stakes assessment, for which formal adaptation mechanisms remain limited.

### Warehouse and Logistics Operations

In warehouse and logistics training, the main barriers arise from the physical and cognitive demands embedded in curricular outcomes. Across all countries analysed, competence units frequently prioritise manual handling, forklift operation, spatial coordination, and interaction with digital inventory systems. While these requirements correspond to labour market needs, they

may limit participation for learners with motor, sensory, or neurodiverse profiles unless specific adaptations are introduced.

Training environments often replicate real working conditions, including time pressure, operational complexity, and exposure to variable physical conditions such as noise or temperature changes. These factors can create additional accessibility challenges both in simulated training settings and during workplace-based learning. Although assistive technologies and ergonomic adaptations are increasingly available, their use is not consistently formalised within national curricula.

## 5. Effective inclusion practices

Although persistent structural and curricular barriers remain, the analysis of national frameworks in Spain, France, Ireland, Portugal, and Germany reveals an increasing institutional awareness of inclusion within transport and logistics training. Across the five systems, a range of measures has emerged to support equitable participation, particularly through flexible curricula, the use of assistive technologies, and collaborative support mechanisms.

In all countries examined, competence-based education provides a shared foundation for more inclusive design. The modular structure of qualifications enables differentiated learning pathways and the recognition of partial competences, which can accommodate diverse learner needs. Spain and France exemplify this flexibility through programmes such as Itinerarios Formativos Específicos (IFE) and Certificats de Qualification Professionnelle (CQP), while Ireland's QQI framework and Portugal's Cursos de Educação e Formação de Adultos (EFA) also facilitate progressive certification and individualised pacing. Germany's dual vocational education and training system similarly supports progressive skill acquisition through structured apprenticeships that combine formal instruction with workplace learning, allowing for adaptation in training pathways.

Pedagogical adaptation at the institutional level frequently includes the use of simplified language, stepwise task progression, multimodal explanations, and the extension of learning periods. In Spain, multidisciplinary support teams provide guidance on adapting learning processes, while in France and Ireland, personalised support and mentoring schemes are commonly integrated into training provision. Portugal complements these approaches through flexible evaluation models within adult education and training programmes, and Germany incorporates support mechanisms through cooperation between training providers, companies, and specialised services. Despite these examples, such practices remain largely dependent on institutional initiative rather than being systematically embedded within national curricula.

Technological and digital supports are becoming more visible in training environments. The integration of screen readers, captioning systems, adapted machinery, and digital tracking tools has expanded accessibility, particularly in Ireland and Portugal, where digital learning environments are widely used. In Spain and France, assistive technologies are increasingly introduced in both classroom and workplace settings, while Germany's strong workplace-based

training model allows for the incorporation of adapted equipment and technologies directly within company environments. Nevertheless, these tools are often treated as complementary resources rather than as core components of curriculum design.

Organisational flexibility within training delivery further contributes to inclusion. Dual training schemes in Spain and France, modular learning formats in Ireland, and the blended structures of Portugal's EFA programmes provide diverse entry and progression routes. Germany reinforces this approach through its well-established dual system, in which learners alternate between training centres and companies, enabling tasks and responsibilities to be progressively adapted. These frameworks allow learners to combine classroom learning with workplace experience in ways that can accommodate physical or cognitive needs, although their effectiveness depends on the level of support provided at local level.

Collaboration between training institutions, social partners, and disability support services represents another essential dimension of inclusive practice. Spain's multidisciplinary support teams and France's cooperation with specialised employment and inclusion bodies provide structured channels for guidance and adaptation. In Ireland and Portugal, partnerships with community organisations and NGOs support learner retention and transition to employment. Germany similarly relies on coordinated action between training providers, chambers of commerce, and support services to facilitate inclusion within both training and workplace contexts. Such collaborations help bridge the gap between educational provision and labour market integration, even though they are not always formally embedded in qualification standards.

Overall, current inclusion practices across the five national frameworks can be characterised as promising but fragmented. Competence-based design, modular organisation, and growing institutional awareness create favourable conditions for accessibility, yet implementation remains largely dependent on local resources and interpretation. Inclusion is thus supported in practice but not fully embedded in the official curricular architecture.

## 6. Conclusions

The comparative analysis conducted within this work package highlights significant convergence among the national training frameworks of Spain, France, Ireland, Portugal, and Germany. All five systems share a competence-based orientation, structured qualification pathways, and alignment with the European Qualifications Framework (EQF). Within the transport and logistics sector, this has resulted in coherent approaches to professional certification, work-based learning, and skills development. At the same time, when examined through the lens of inclusion, important differences emerge in how these systems translate policy intentions into practice.

In the domain of professional driving, the principal barriers to inclusion are consistently linked to medical and regulatory requirements embedded within qualification frameworks. In Spain and France, these requirements are tightly integrated into formal vocational pathways, limiting flexibility once learners enter training. Ireland and Portugal similarly maintain certification systems where access is determined by strict compliance with safety and eligibility criteria. Germany's highly regulated and standardised training model reinforces this pattern, with strong alignment between training and occupational requirements, but limited scope for adapting entry conditions. Across all countries, these constraints highlight the tension between safety regulations and inclusive access to training.

By contrast, warehouse and logistics programmes offer greater potential for adaptation, although significant challenges remain. In Spain and Portugal, the combination of classroom learning and workplace placements creates opportunities for gradual skill development, but also exposes learners to demanding operational environments. France and Germany, through their strong dual training models, provide structured pathways into employment, yet these systems rely heavily on company-level capacity to adapt tasks and learning conditions. Ireland's modular and flexible training structures offer additional opportunities for individualised progression, although implementation varies across providers. Across all systems, the emphasis on physical tasks, operational efficiency, and real working conditions continues to limit accessibility for some learner profiles.

The analysis also demonstrates that many effective inclusion practices are implemented at institutional rather than systemic level. In Spain, multidisciplinary support teams contribute to adapting learning processes, while France integrates personalised support within apprenticeship frameworks. Ireland and Portugal rely on flexible programme structures and collaboration with community organisations to support learners, and Germany’s dual system enables workplace-based adaptations through cooperation between training providers and companies. These examples illustrate that inclusion is actively addressed in practice, but often through local initiative rather than through formally embedded curricular requirements.

Overall, the findings indicate that competence-based and modular training systems provide a strong foundation for inclusive education, but inclusion remains only partially integrated into their structural design. Across the five countries, accessibility is frequently dependent on institutional capacity, stakeholder collaboration, and the availability of resources, leading to uneven implementation. The absence of systematically embedded inclusive criteria within curricula, assessment frameworks, and qualification standards represents a common challenge.

Moving forward, strengthening inclusion in transport and logistics training will require a more explicit integration of inclusive principles into the design of vocational education systems. This includes the development of adaptable curricula, diversified assessment methods, and clearer guidelines for the use of assistive technologies and workplace adjustments. Greater alignment between education providers, employers, and policy frameworks will also be essential to ensure that inclusion is not only supported in practice but structurally embedded within training systems.

Future phases of the DiTL project, particularly WP2A4: Consolidated Recommendations on the Inclusion of Disabled People in Transport and Logistics Training, will build on these findings. The insights gathered through this comparative analysis will inform dialogue with training providers, policymakers, social partners, and disability organisations, with the aim of developing actionable strategies to enhance accessibility, equity, and participation across European transport and logistics training systems.