ICT-INEX Project

Deliverable 2.1
Guidelines for the integration of simulator-based training with other PD candidate training methods

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Abstract: This document contains the results of the research activities taken in scope of Intellectual Output 2. It aims to present the guidelines for the integration of simulator-based training with other methods used for professional driver candidate training in Partner countries and the EU.

Disclaimer

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Executive Summary

As basis for the **further proceeding** within the Erasmus+ project **ICT-INEX**, groundwork is provided with the 'Guidelines for the integration of simulator-based training with other PD candidate training methods' as the main product of the project´s Intellectual Output 2. The Guidelines were mainly developed on the basis of national surveys in the partner countries using methods of desk research and expert interviews. Also, studies discussing professional driving (PD) and operating on EU-level were consulted to deepen the surveys´ results.

The results at hand refer to a wide spectrum of topics: Regarding **pathways of accessing PD training** in a national context, four main approaches were identified which integrate both national traditions and the implementation of Directive 2003/59/EC of the European Commission: free forms as well as mandatory forms of training concluding with a CPC test, apprenticeship programmes and vocational school programmes. All of these forms are regulated by specific sets national legal acts which are in detail represented in this report. This results in a colourful compilation of access pathways. For this reason, the Guidelines recommend national policy plans to be developed for future working steps of the project so that national peculiarities can be considered in a fruitful and meaningful way.

A second set of results relates to the implementation of **ICT-based methods in PD** training: E-learning as well as simulator-based training (SBT) is state of the art in many member states – however to a very different extent. In contrast, innovative methods such as virtual and augmented reality or gamification are barely used at the moment. A problem is the existing gap between scientific research and the development of training modules. Training providers are hesitant to invest into these technologies. For this reason, the Guidelines recommend to gain incentives for training providers and employers to support these more innovative learning tools also in regular training modules. For this reason, the efficiency and effectiveness of these methods have to be highlighted.

Towards the **specific target groups** of ICT-INEX (young (up to the age of 29 years) 'NEETs', older unemployed (age of 50 plus) and migrants from outside of the EU), a rich set of data was collected for the Guidelines. It shows for example rather diverse situations for the two target groups of young NEETs and migrants: So for example, while in Poland drivers from outside of the EU (especially from Ukraine) are highly relevant, Austria mainly recruits from inside of the EU (especially Eastern European countries). The Guidelines present specific recommendations for the project´s target groups, e.g.: For initiatives targeting NEETs, it is crucial to consider the initial education and training systems of single member states. For migrants, approaches of validating already acquired qualifications have to be improved and sharpened in order to ease their access to the PD labour market. The target group of older unemployed seems to be the most vulnerable of the selected groups: The question of their future chances within the PD sector have to be clarified before implementing new further steps towards this target group.

1.Introduction

It is the project ICT-INEX´s major goal to increase the accessibility and effectiveness of PD training with the use of ICT-based tools. This goal will specifically be oriented towards peculiar disadvantaged target groups on the labour market such as young unemployed (up to the age of 29 years) described under the term 'NEET', older unemployed (age of 50 plus) especially when facing periods of long-term unemployment and migrants stemming from outside of the EU. Also, a special focus is put on innovative training methods, so for example virtual learning or the application of augmented reality and gamification. During the project, a coherent model of training for professional drivers will be developed taking, among others, into account legal and social-economic requirements raised in the partner countries and on EU level.

This report serves as a fundament of upcoming steps of the project by taking results of a research process conducted by the project partners and transferring them into manageable recommendations to be considered during future project steps. Also, first contacts and dissemination activities could be established as expert interviews and informative exchange with industry representatives was one of the suggested methods to be used in the course of the research process. In this context, the guide at hand presents an overview of the current status of ICT-based learning in PD and of the targeted socials groups as well as recommendations on how to frame these parameters for future project steps. Each chapter presents the results of the survey by referring to the national and European level and highlighting major key findings. A concluding sub-chapter then tries to summarise these results from an analytical point of view and to pinpoint consequences and – where possible – recommendations for upcoming working steps. The entire catalogue of survey-results provided by the partners is attached in the annex.

In terms of contents the guide explores a broad field of topics important for the integration of specific target groups into PD by applying innovative methods of training. By this, it for example refers to legal regulations of migration and the socio-economic status of the target groups but also to innovative ICT-learning approaches in driving and their actual progress of national implementation. One main source for the presented results was the expertise of the project partners based – among others – on experiences made in prior project work (e.g. in the project ICT Driver). Beyond that, partners applied methods of desk research and expert interviews with relevant stakeholders such as employers and their interest groups, training providers or ministries responsible for the regulation of driving or the access to the domestic labour market. Also, representatives of the national PES were approached. The partners received guidelines and support by the IO leader.

2. Getting into professional driving

In this first section, the ground has to be set for overall direction of this survey: Although this project will mainly explore PD training for specific target groups, in a first step the general background of PD in the respective countries is presented.

2.1 Pathways of accessing PD training

Current pathways into professional driving and related training activities in the project countries show two different and sometimes contradictory backgrounds, namely the national history of PD initial training on the one hand the influence of *European* unification efforts on the other. The latter is certainly dominated by Directive 2003/59/EC of the European Parliament and of the Council on the initial qualification and periodic training of drivers. Although being an attempt to harmonise standards in PD, the EU-Directive already stresses "the differences between current systems in certain Member States" (article 8) and therefore allows different options of how to acquire the certificate of professional competence (CPC). Mainly, these options concern the requirement of either mandatorily attending a course or only completing a test in order to acquire the certificate.

In the countries explored by this survey, the current pathways of accessing PD training – each based on both the national history of PD and the influence of European policy – include:

- Free forms of training concluding with a CPC test
- Mandatory forms of training concluding with a CPC test
- Apprenticeship programmes
- Vocational school programmes

Free forms of training can for example be found in *Austria* where there are no actual training programmes that people are obliged to attend. Instead, applicants have to study independently. Training providers however offer initial CPC classes on a voluntary basis. This pathway is the most prominent one for Austrian PD training. However, it has to be mentioned that around 80% of Austrian drivers show migrant background and not few of them are hired in Eastern European countries via sometimes dubious contract constructions.

Finland, in contrast, shows **mandatory forms of training**, however including great variety: While some courses are offered to unemployed in the context of active labour market policy being mainly financed by the state under the name 'Vocational labour market training', others are actually offered on the free market which also means that they are fully financed by the participants or their employers. As these courses are rather costly (from 3,000 to 8,000 Euro) this route mainly chosen by persons

whose employer is willing to pay for it (rather than by individuals who have not entered PD labour market yet).

Also in *Poland*, compulsory training is implemented for professional drivers, hereby referred to as initial (or accelerated initial), complemented initial (or accelerated complemented initial) or periodic CPC training (it depends on the term of obtaining a driving license). Framework programmes include information about scope and duration of the course. Training providers offer classes (with different fees) ended with theoretical exam (test). Training in Poland is from 140 to 280 hours long and is compulsory for all C and D category drivers. In Poland, the costs for PD training vary from 10 % of driver's monthly wage (periodic training) up to several dozen % (initial qualification training). Same as in Finland, a recognizable share of the courses is offered as a part of professional activation programmes, led by the driving centres and based on the order of national and regional institutions or even EU-funded projects.

Apprenticeship pathways into professional driving are established in *Austria* and *Finland* with both countries showing a decade- or even century-long tradition of their apprenticeship system. The two countries however differ in the importance that the apprenticeship system has for entering PD: While in *Finland* the apprenticeship system is the preferred pathway into PD, in *Austria* it is only chosen by less than 100 persons a year. In *Finland*, the Finnish National Board of Education decides on the national qualification requirement for each vocational qualification, determining the composition of studies and objectives, core contents and assessment criteria for study modules. It also includes provisions on student assessment, student counselling, on-the-job learning, special education and training, educational arrangements for immigrants and apprenticeship training.

Finally, *Finland* features a **school-based offer** at Vocational schools. It includes a three-years training for vocational upper secondary qualification in Logistics. The core age group for this offer is 16 to 19 years.

In *Poland*, the ordinance of the Minister of Education restored the possibility to educate the youth to become a 'professional driver & mechanic' and introduced a framework targeted at vocational schools willing to participate in pilot recruitment since 2015. So far, a total of 45 schools in the whole country have been conducting recruitment and lessons for the young people willing to start their career in road haulage. Still, the school-based offer lacks a certain level of structuring, especially regarding the provision of apprenticeship, obtaining the PD certificates and logistics-related education.

Beyond national regulations of access to PD, also an international (EU) approach is definitely needed: "EU initiatives in the field of training of drivers could be justified if, due to a large share of international transport, in EU countries many drivers from

other EU-countries are active on national roads. In such a situation, a country may be hesitant to take national initiatives in the field of mandatory training for its drivers." (Panteia (2014), p. 25)

2.2 Legal regulation of PD

On the European level the already mentioned **Directive 2003/59/EC** can be mentioned as most important legal basis for PD training. Its intention is to "enable drivers to meet the new demands arising from the development of the road transport market" (article 3) and thus "to improve road safety and the safety of the driver" (article 5). An evaluation of the Directive states that "prior to the enactment of Directive 2003/59/EC, only very few professional drivers were subjected to training requirements under Regulation 3820/85. It is estimated that only 5% to 10% of professional drivers in EU Member States received a specialized training" (Panteia (2014), p. 24).

Member States implemented this Directive within their relevant legal acts on driving, professional driving and transport. For this context, the following references were reported as most important legal sources. Due to diverse legal traditions in the partner countries, also PD and the beforementioned European Directive had to be implemented into legal acts which refer to a number of (sometimes rather diverse) policy fields.

In *Austria*, the following legal acts are relevant:

- Act on motorist driving: Bundesgesetz vom 23. Juni 1967 über das Kraftfahrwesen (Kraftfahrgesetz 1967 - KFG. 1967), StF: BGBl. Nr. 267/1967 (current version 18 January 2017)
- Act on commercial freight transport: Bundesgesetz über die gewerbsmäßige Beförderung von Gütern mit Kraftfahrzeugen (Güterbeförderungsgesetz 1995 - GütbefG), StF: BGBl. Nr. 593/1995 (current version 18 January 2017)
- Act on Occasional Traffic: Bundesgesetz über die nichtlinienmäßige gewerbsmäßige Beförderung von Personen mit Kraftfahrzeugen (Gelegenheitsverkehrs-Gesetz 1996 - GelverkG), StF: BGBl. Nr. 112/1996 (WV) (current version 18 January 2017)
- Act on driving lines: Bundesgesetz über die linienmäßige Beförderung von Personen mit Kraftfahrzeugen (Kraftfahrliniengesetz - KflG), StF: BGBl. I Nr. 203/1999 (current version 18 January 2017)
- Regulation on initial and periodic training for professional drivers: Verordnung des Bundesministers für Verkehr, Innovation und Technologie über die Grundqualifikation und Weiterbildung der Fahrer bestimmter Fahrzeuge für den Güter- oder Personenkraftverkehr (Grundqualifikations- und Weiterbildungsverordnung – Berufskraftfahrer - GWB), StF: BGBl. II Nr. 139/2008(current version 18 January 2017)

- Regulation for Professional Drivers Apprenticeship Trade: Verordnung des Bundesministers für Wirtschaft und Arbeit über die Berufsausbildung im Lehrberuf Berufskraftfahrer/Berufskraftfahrerin (Berufskraftfahrer/Berufskraftfahrerin - Ausbildungsordnung)
- Decree of Federal Ministry for Traffic, Innovation and Technology: Erlass des österreichischen Bundesministeriums für Verkehr, Innovation und Technologie vom 27.04.2010 geregelt (GZ: BMVIT-167.533/0025-II/ST5/2010)

In general, driving is regulated by the Austrian act on motorist driving. For professional drivers transport of goods is regulated by the Act on commercial freight transport, while the transportation of persons is regulated by the Act on Occasional Traffic and the Act on driving lines. Based on these laws, regulations have been implemented for professional drivers training: in general, the Regulation on initial and periodic training for professional drivers which answers the EU Directive; and for the apprenticeship trade the Regulation for Professional Drivers Apprenticeship Trade.

For *Finland*, the following main legal regulations are reported:

- Law of driving licences
- Law of professional qualification
- Law of road transport
- Health and driving ability
- Law on adult education-, vocational education and training

The first two laws named above are introduced as being direct legal answers to the EU legislation, namely the law of driving licences as contribution to EU-Directive 2006/126 and the law of professional qualification as contribution to EU-Directive 2003/59. The law of road transport gains relevance by regulating in detail the driving license classes for each vehicle type. Finally, the law on adult education-, vocational education and training gives the legal framework for PD training as a part of vocational education.

The most important legal acts in *Poland* are:

- Act on road transport: Ustawa z dnia 6 września 2001 r. o transporcie drogowym (Dz.U. 2001 nr 125 poz. 1371)
- Traffic Law: Ustawa z dnia 20 czerwca 1997 r. - Prawo o ruchu drogowym (Dz.U. 1997 nr 98 poz. 602)
- Regulation of the Minister of Infrastructure on the training of drivers involved in road transport: Rozporządzenie Ministra Infrastruktury z dnia 1 kwietnia 2010 r. w sprawie szkolenia kierowców wykonujących przewóz drogowy (Dz.U. 2010 Nr 53 poz. 314)

Additionally, also the following laws have to be highlighted:

- Act amending the act on road transport: Ustawa z dnia 4 listopada 2016 r. o zmianie ustawy o transporcie drogowym (Dz.U. 2016 poz. 1935)
- Act on driver's working time: Ustawa z dnia 16 kwietnia 2004 r. o czasie pracy kierowców (Dz.U. 2004 nr 92 poz. 879)
- Transport Law: Ustawa z dnia 15 listopada 1984 r. Prawo przewozowe (Dz.U. 1984 nr 53 poz. 272)
- Act on vehicle drivers: Ustawa z dnia 5 stycznia 2011 r. o kierujących pojazdami (Dz.U. 2011 Nr 30 poz. 151)
- Regulation of the Minister of Transport, Construction and Maritime Economy on obtaining certificates of professional competence in road: Rozporządzenie Ministra Transportu, Budownictwa i Gospodarki Morskiej z dnia 10 stycznia 2012 r. w sprawie uzyskiwania certyfikatów kompetencji zawodowych w transporcie drogowym (Dz.U. 2012 poz. 96)
- Regulation of the Minister of Transport, Construction and Maritime Economy on the conduct of courses in the field of transport of dangerous goods: Rozporządzenie Ministra Transportu, Budownictwa i Gospodarki Morskiej z dnia 29 maja 2012 r. w sprawie prowadzenia kursów z zakresu przewozu towarów niebezpiecznych.

The aforementioned documents include mutual references which also describe the target groups of trainings, its range and respective programmes: Driving in general is regulated by the Traffic Law and the Act on vehicle drivers. For professional drivers, the Act on road transport and the Transport Law is most important. Based on these two laws, regulations have been implemented for professional drivers training, namely the Regulation on the training of drivers involved in road transport and the Regulation on obtaining certificates of professional competence in road transport.

2.3 Consequences and recommendations

In respect of the current situation, it is highly relevant to analyse the access pathways into PD all over Europe: "The image of the road transport sector has been declining over the last few years, which has led to a difficulty in recruiting drivers and particularly young drivers. Together with the figures on the age distribution of drivers, which indicates that large number of drivers will retire in the near future, and a mismatch between the competences required by companies and those offered by the labour force, this may lead to a shortage of drivers and might create a severe handicap to the sector and to the economy as a whole. Estimates of the expected shortage of drivers in 2018 range from around 106,000 to 129,000, depending on the scenario for economic growth (Panteia (2014), p. 36f).

The project countries show different approaches when it comes to training for professional drivers. For further consideration in the project this is not only a formal argument but also a very practical one: Implementing innovative methods of PD training might show very different **national requirements** in terms of stakeholders to be considered and bureaucracy to go through: Austria shows a rather liberal market concerning PD training providers. They are free to introduce e.g. simulator-based methods of training – but only as long as the learner is physically present. E-learning of training modules has however to be accredited by the responsible ministry. In Finland or Poland where training courses are much more pre-defined the implementation of innovative methods might require more structural changes and adjustments with the legislator. A specific attention has to be given to **Poland** where PD market show very special challenges: Since 2004 the intensity of vehicle stock usage in Poland has risen by 12-15% while the rise of driver work intensity has risen by 20%. According to recent (Oct 2016) PwC "Driver job market in Poland" report there has been a deficit of 100-110.000 professional drivers in 2015. This number is likely to increase even more due to a fast increase of carriages which exceeds the increases in fleet and employment. The lack of workforce includes bus companies as well, especially in urban areas. In order to meet the transport performance needs, the number of the professional drivers on the market needs to be exceeded by the additional 20%.

Innovations in **apprenticeship systems** often require consultations, e.g. with national social partners. For example in Finland, where the apprenticeship approach is rather prominent, national qualification requirements are drawn up in co-operation with employers' organisations, trade unions, the Trade Union of Education and student unions. National Education and Training Committees, local tripartite bodies as well as other representatives of working life take part in the curriculum work as advisers and consultants. All in all, apprenticeships require a higher effort and handling time for the implementation of innovative elements.

For implementing innovative ICT-based training methods it is recommended to sketch an individual **national policy plan** which includes detailed milestones on the consultation of national stakeholders and policy makers as well as the consideration of legal arguments. If needed, further research on the respective policy background in a country will be part of the plan.

3.Applying ICT in training

ICT-INEX focuses on innovative methods of ICT-based tools in PD training. For this it is extremely relevant to look at the already established and applied ICT-methods as they represent the legal, organisational and cultural basis for future approaches.

3.1 Status of ICT in PD training

The most common forms of ICT-based training towards PD exist in the form of e-learning or computer-based learning (**CBT**) and simulator-based learning (**SBT**). Some variation of these learning approaches is established in all project countries and also in many other member states (see the results of Work Package 2 of the ICT Driver project). In contrast, **newer and more innovative techniques** such as augmented reality, virtual reality or gamification have not become relevant yet or are just at a very early stage of development.

Referring to already existing forms, the concrete implementation differs however between countries: In *Austria*, e-learning is allowed only for subjects referring to Annex I of Directive 2003/59/EC that require no practical exercises. Most driving schools offer some form of **e-learning** which mostly refers to interactive training modules to be trained online. Very recently (mid 2017), a virtual reality approach will be implemented for initial driving students at a testing area run by one of Austria´s main automobile clubs.[1] There are also e-learning programmes available for professional drivers, although they are not offered systematically. Only very few of them are accredited, for example, "Easy Drivers Experts" which offers e-learning modules without additional costs.[2] For e-learning approaches several system adjustments are required – so for exemple the identity of the user has to be detected via webcam. SBT is applied only by single companies, e.g. the freight company TirLog started to use SBT for the training for their drivers in 2010. More innovative methods (augmented reality, virtual reality, gamification) are not used in PD training at all.

The following table shows whether or not e-learning is allowed in the Member States during initial qualification and during periodic training.

[1] See http://www.noen.at/niederoesterreich/wirtschaft/oeamtc-sicher-im-strassenverkehr-dank-virtual-reality/34.225.201

[2] See http://www.easydriversexperts.at/de/e-learning-vorteile.html

Table 1: Overview of the use of e-learning in training

Country	AT	BE	BG	CY	CZ	DE	DK	EE	ES	FI	FR	GR	HU	IE	IT	LT	LU	LV	MT	NL	PL	PT	RO	SE	SI	SK	UK
Initial qualification	to	to	n	to	n	n	n	y	n	n	n	to	y	to	n	n	n	to	to	to	n	to	to	n	n	n	to
Periodic training	y	na	na	na	n	n	n	y	n	n	n	n	y	n	n	na	na	na	n	y	na	na	na	y	n	n	n

Source: Panteia (2014), p. 73

The following table shows whether or not driving simulators are allowed in the Member States during initial qualification and during periodic training

Table 2: Overview of the use of driving simulators

Country	AT	BE	BG	CY	CZ	DE	DK	EE	ES	FI	FR	GR	HU	IE	IT	LT	LU	LV	MT	NL	PL	PT	RO	SE	SI	SK	UK
Initial qualification	to	to	n	to	n	n	n	y	n	n	n	to	y	to	n	n	n	to	to	to	n	to	to	n	n	n	to
Periodic training	y	na	na	na	n	n	n	y	n	n	n	n	y	n	n	na	na	na	n	y	na	na	na	y	n	n	n

Source: Panteia (2014), p. 75

In *Finland*, **SBT** is more common than in Austria. It takes the form of a combination of pre-planned exercises and help and advice by an instructor. The main actors in this respect are driving schools and training institutes. In practice, SBT is conducted as combination of pre-planned exercises:

- Basic driving (6 to 15 hours)
- Rationalized use of a vehicle (1 to 2 hours)
- Safety (1 to 10 hours)
- Eco-driving (1 to 2 hours)

With its student-focused approach SBT seems to be very cost-effective. 20% of the total time of a training program are allocated to driving. More trainees can be trained per day with SBT than in physical training.

Computer based learning (training) covers topics such as Road Traffic Law; Law of work- and driving hours; Language skills; C and CE license driver training; traffic education, transportation, loading, proactive driving, problem-and hazardous substances, driving conditions, handling the heavy vehicles. CBT is realised by

training institutes as combining theoretical material, applied exercises and videos/multimedia.

In *Poland*, there is a significant gap in terms of implementation of driving simulators and e-learning and other ICT training tools into everyday training praxis. Driving simulators **(SBT) and e-learning** were widely accepted by the driver training industry due to their financial efficiency which is perceived as a key factor on Polish driver training market (there is a strong market competition due to a high number of professional driver training centres in Poland). Training programmes (taking into the account also the training tools) are developed by the driver training centres or companies specialized in creating e-learning themselves which may result to some extent in lack of the training efficiency. There is a limited cooperation between the driver training centres and the scientific organizations such as universities, institutes etc. In practice, e-learning method is used in driver training and preliminary and interim qualification for drivers. Training can be carried out under the supervision of the instructor, allowing discussion on the subject of the lesson as well as remotely via a computer or a mobile device. Access to the system is only possible through the identification of the trainee and personalisation of training is guaranteed.

3.1.1 Legal regulation of ICT in PD training

In a comparative perspective as represented by (Panteia (2014)), e-learning is allowed during initial qualification in Estonia and Hungary. During periodic training e-learning is allowed in Austria, Estonia, Hungary, the Netherlands and Sweden: In Estonia e-learning is allowed in the optional subject of working environment and traffic safety. In the Netherlands e-learning is allowed, but not more than 4.5 hours per training day.

According to the same source, driving simulators are not allowed during initial qualification in Poland, Sweden and Slovenia but are allowed in all other countries which provide mandatory initial training. During periodic training driving simulators are allowed in all countries, except Malta.Some Member States place restrictions on the maximum duration of simulators,i.e. eight hours in Spain and four hours in France for initial qualification.

The legal situation corresponds to the actual application of ICT-based learning methods. Therefore, in *Finland* SBT is regulated as an integrative part of PD training. And also CBT (referring to distance learning and blended learning) is already implemented in the before-mentioned laws on PD training. This regulation however binds CBT to **mandatory support** of a qualified instructor. The law defines certain requirements for the simulator: screens or equivalent and also vehicle controls which have to be realistic enough. It also defines the number of hours that can be used for simulator training per student. In driving license training 20 % of driving lessons can be fulfilled with simulator and 80 % with a real vehicle. Other new and different

training methods are mostly applied with pilot trainings and thus also regulated within specific limits e.g. a permission from Ministry of Transport.

In *Austria*, legal regulations on ICT in PD training are set on the level of **provinces**. As also in many other policy fields, this results in a number of 9 (because of the 9 provinces) incoherent approaches. The province of Tyrol is currently the only provincial government that has regulated the acceptance of e-learning for drivers (although drivers from all over Austria can participate in e-learning modules). The requirements for e-learning in Directive 2003/59/EC have been regulated by a decree issued by the Ministry of Transport, Innovation and Technology (GZ: BMVIT-167.533/0025-II/ST5/2010). It says that e-learning can only be used as a teaching method if the identity of the professional driver to be trained can be assessed and if it can be ensured that the driver to be trained fulfils the whole number of hours of the module as otherwise the quality of the implementation of periodic training cannot be assured. It further recommends a combination of e-learning with blended (classroom) learning.

In *Poland*, training is provided for the number of hours specified in Regulation of the Minister of Infrastructure on the training of drivers involved in road transport: Rozporządzenie Ministra Infrastruktury z dnia 1 kwietnia 2010 r. w sprawie szkolenia kierowców wykonujących przewóz drogowy (Dz.U. 2010 Nr 53 poz. 314). The regulation specifies a required number of theoretical training hours which are held under the supervision of the instructor – 260 hours for initial qualification and 130 hours for accelerated initial qualification. Also, the required hours of practical training are defined – 20 hours and 10 hours for initial qualification and accelerated initial qualification. 20% of the driving lessons (so-called 'training in special conditions') can be taken in form of SBT. It is also required by law that the instructor supervises the trainee during the training. The trainee has to confirm the completion of the programme via detailed documentation.

3.2 Scientific context of ICT in PD training

All countries generally report an active discussion about the future of PD training. Although there seems to be plenty of research work available on both ICT-training methods and the future of PD they do **not** seem to be **well connected with** the actual **design of training modules** or of the practical work of training providers.

Concrete literature is provided for *Austria* which shows serious efforts in exploring different topics of PD – among them the future of transport and logistics under the light of 'industrie 4.0' or research on innovative ICT-based technologies as such and in the field of mobility, but also future working conditions in transport and logistics (for references see Austrian questionnaire in Annex). Mostly, research on e-learning approaches is considered – especially under the perspective of proofing the personal presence of the learner when doing e-learning modules. Other, more innovative

research results are neither adapted nor supported by training providers or logistics companies as this is supposed to be too costly for them.

SBT and CBT training has been hardly discussed in the scientific context in *Poland*. The vast majority of papers and elaborations published in Poland aims specifically at driving simulator-based research, taking into account the evaluation of driver distraction and interaction with other objects located on and in the vicinity of the road. The modest number of publications which include the training-related context is rather focused at specialized applications of driving simulators, such as e.g. disabled drivers or the operators of the municipal services' vehicles (fire trucks, police cars, ambulances etc.). Still, they tend to have a rather review-like character and do not introduce/examine/criticize any novel solutions into scientific discussion, but rather describe the current State-of-the-Art. The same situation goes with the e-learning and blended-learning related references. The scientific discussion in Poland seems to lack the analysis and research in the field of educational efficiency regarding these aspects. One of the few known researches on e-learning in Poland were carried out in years 2007-2010. They focused at examining the motivation in e-learning-based training and assessing and comparing the efficiency of traditional, complementary and electronic forms of education. More information on Polish research on e-learning can be found in the national template in the annex.

3.3 General perception of ICT in PD training

As the resources for this paper did not allow to start national surveys on the perception of different stakeholders towards ICT in PD training, the analysis is based on secondary literature and already existing material. This broad range of sources is also reflected in a broad range of topics and references presented for each national context. Thus, results can only be analysed in respect of specific national factors. All stakeholders (i.e. learners, employers, training providers) in all countries assess ICT-methods in relation to the use they can make of. Use is expressed in terms of costs of learning, efficiency of learning and expectable outcomes (e.g. better trained employees, higher salary).

An EU-wide survey on PD driving provided the following results: "The initiative of e-learning received a support from the respondents; 60% considered it as a useful contribution to the training, while 35% disagreed. Positive elements ofe-learning mentioned in the public consultation are that the system would facilitate the delivery of highly theoretical content, and do so with a greater level of flexibility than classroom based learning (for example allowing candidates to incorporate their mandatory hours into a personal package that suits them and their work schedule), while reducing training costs. Most respondents admit, nonetheless, that e-learning should not replace in-house trainings altogether. A large number of respondents also stress that e-learning should only be used as a complementary tool, and not as a full

replacement of class-room teaching." (Panteia (2014), p. 74) In respect of SBT, the use of top-of-the-range simulators during training was seen as useful and therefore should be made mandatory by only 27% of respondents while 65% responded negatively. (Panteia (2014), p. 75)

For *Austria*, feedback from different stakeholders in the field is available: According to a number of interviews conducted for different EU projects in the field of PD, trainees and learners appreciate the **flexible approach** of e-learning (e.g. via the possibility to learn during waiting and resting periods). For trainers and instructors, computer based learning is a fast and "painless" and "cheap" method as e.g. drivers to don´t have the need to take holidays. Validation bodies report serious discussions on e-learning tools during the first initiation of these tools. For example, competitors claimed e-learning tools to be illegal, even when accreditations by the Federal Ministry for Transport, Innovation and Technology were available. Today, the perception of provincial governments has improved as the safety (webcams) and sustainability (learning success) could be proved in praxis. Also, employers are in favour of the flexibility of e-learning as learning take place at any given time and place.

Possible scepticism towards ICT-based training was also addressed: It is mostly based on (both, the trainees´ and the instructors´) fear that trainees do not bring in the **needed ICT-skills** in order to follow the learning process. The Ministry of Transport, Innovation and Technology faced scepticism towards e-learning by implementing a regulation on e-learning that recommends combining e-learning and blended learning. E-learning programmes have to be conducted while using a web cam. Scepticism on the employers´ side is mostly based on doubts in terms of **high costs** in relation to the efficiency of learning.

Finland reports a public discussion of ICT-based training in PD which assesses is widely estimated to be most important part of training process in the future. Not all forms of training are expected to change into ICT-based approaches. For some elements of PD training it is stated as relevant to still conduct it also on a face-to-face basis (for example for ICT-supported on-the-job learning).

Also, *Polish* stakeholders refer to the flexibility and technical opportunities that ICT-based methods of PD offer. Not least, they appreciate they option to repeat tasks and exams as often as needed.

3.4 Maximizing the efficiency of ICT methods

As the application of ICT-related tools in PD training is still limited, no major approaches of maximising their efficiency can be reported. Nevertheless, Finland and Austria refer to a specific grade of flexibility when it comes to choosing between ICT-based and traditional methods. Their approaches are based on a **modularised system** which enables learners to switch between these two types of learning. In the Finnish context, all modules have to be finished by passing an exam in order to be allowed to proceed to the next one.

Some examples are given for innovative approaches that were developed in partner countries:

- Professional Easy Driver (certified e-learning approach for 3 modules of PD training) – AT
- (Tirlog) PD simulator – AT
- e-learning EC@ARGO - driver training and driver qualifications – PL
- CARGO GROUP - mobile driving simulator in special conditions by truck and bus – PL

For the Finnish context, good practice examples in terms of methodological approaches are available:

- Combination of simulator based training and training by real vehicle: e.g.
    - Vehicle manoeuver exercises by simulator at the beginning of the training (time- and cost-saving)
    - Defensive driving exercises in simulator and economical driving lessons with the real vehicle.
- Combination of computer based learning and practical exercises: e.g. studying bus lines by computer before conducting practical driving lessons
- Combination of computer based learning and simulator training: computer program (Moodle, Context LMS etc) introduces the theoretical part of studies (e.g. vehicle maneuvering, vehicle controls, basics of defensive driving) which is then tested by practical exercises in the simulator.

3.5 Consequences and recommendations

The above presented results on the current status of, the legal and scientific context of and the general perception towards ICT-based training in PD imply some rather clear recommendations for future efforts: When implementing new learning methods, the most important argument for their acceptance is the **effectivity** and **efficiency** they might have for all parties concerned. The currencies in which they are expressed are time and money. Positive consequences on that level have to be highlighted when convincing stakeholders of innovative training methods. In this context, employers and training providers are rather hesitant to implement more innovate methods such as virtual or augmented reality. They rather rely on already established and tested methods like e-learning. For this reason, specific **incentives** have to be set even **for more innovative methods**.

One argument that can work in favour of ICT-based learning methods is the one of **flexibility**. On the one hand, ICT-methods are flexible themselves as they enable learners to choose time, speed and sequence of their learning progressions. On the other hand, ICT-based learning methods work best when they are flexibly combined with each other and with other non-ICT-based learning methods. Only a well-adjusted compilation of learning methods is assessed as fruitful by all stakeholders. However, flexibility might be threatened by legal peculiarities which have to be taken into account.

Last but not least analysis shows that the connection between PD training, its main actors and scientific research on ICT-based learning methods is overall weak. Although research on virtual reality in learning, e-learning or gamification approaches is widespread all over Europe, the implementation of PD training modules widely ignores them. Also, scientific research towards the future of transports and logistics is not very driver- and learner-centred and rather focuses on the companies´ or the customers´ perspective. Therefore, it is recommended to establish **bridges between training providers** or employers **and science** in the field of learning.

4. Addressing new target groups

ICT-INEX looks at very specific target: The first group is described by a rather low age, namely up to 29 years, together with a precarious labour market status as being not in employment, education or training. The second group is also defined by age, however with being 50 years or older. Among them, those are of specific interest which show a longer history of unemployment periods. As third group migrants from outside the EU are focused. All three groups are specifically relevant for PD in the project´s partner countries, although their relevance might differ from one country to the other.

4.1 Young NEETs

In terms of key indicators for young people´s situation on the labour market developments in project countries differ quiet a lot in recent years:

With 10.8% (September 2015) *Austria* has one of the **lowest unemployment rates** of young people (in this case of 20- to 24-year-olds) in the EU. In the age group of the up to 19-year-olds, employment has declined in recent years. This has demographic reasons, but there are also fewer apprenticeship places available and a continuously increasing number of young people attend school education for a longer period. Although unemployment is generally rising, the unemployment rate in this age group is only 5.5%, which is significantly below the average. This is also due to **a training guarantee** given to all young people up to the age of 18 years. In comparison, the unemployment rate among young adults aged 20 to 24 is significantly higher. For many of them labour market entry is difficult, especially if they have not completed any training.

A research report of the Johannes Kepler University Linz deals with the NEET rate. This means the proportion of young people who are neither in employment or education nor in training. The rate for Austria's provinces between 2006 and 2013 averaged between 5.9% in Salzburg and 10.9% in Vienna. Expressed in absolute figures an annual average of 75,100 young people was in a NEET situation.

It is common sense in Austria that education is the best way to prevent unemployment and social exclusion. For example, having accomplished an apprenticeship reduces the risk of unemployment already by two thirds in comparison to people with a lower educational level. Starting in 2016/2017, it will be mandatory for every young person up to the age of 18 to continue or complete some kind of education or training. This education duty can be fulfilled at a general or vocational school or college, the completion of a dual education or visiting a recognised labour market policy measure. Accompanying measures, such as youth coaching, production

schools, training guarantees or the coaching of apprentices and companies offering apprenticeships, will support the measure. However, PD training is not in a specific focus of the initiative (as any other specific sector).

In *Finland*, the **number of unemployed** persons **increased** in recent years. This was specifically true for age group of those aged 18 to 24. From 2012 to 2013, the number of unemployed among this age group grew by over 6,700, which is an increase of around 15 per cent. This development is even stronger among women of this age group, where 2013 there were nearly 19 per cent more unemployed persons than the year before.

According to Eurostat, share of NEETs in *Poland* reached 15.5% in 2014 and was slightly higher than the average in EU-28 (15.4%). It is estimated that 1.27 million young Poles can be described as NEETs. According to certain age groups the share is as following:

- 15-19 years – 3.8% (EU-28 average – 6.5%)
- 20-24 years - 18.8% (EU-28 average - 18.0%)
- 25-29 years – 21.2% (EU-28 average – 20.4%)

Taking into account the fact that Poland has a high level of higher education scholarization, it can be stated that the actual **share of NEETs is fairly high**. In comparison, the share of unemployed among the university graduates is also significantly high. According to studies, around 7.5% of Polish NEETs are actively engaged in the search for job while 8.0% are professionally passive; 11.5% feel ready to re-enter the labour market, in EU-28 this value is only 10.9%. The situation of Polish NEETs is largely dependent on the region. The highest share is observed in Podkarpackie, Lubuskie and Warmińsko-Mazurskie voivodeships, mostly due to their overall underdevelopment and high unemployment rate (see more in national questionnaire in annex).

4.1.1 Target group specific programmes in PD

In respect of any specific programmes or approaches available for the respective target group within PD training two sorts of programmes were named: First programmes of active labour market policy that generally target the specific vulnerable target group and could – among other options – lead into PD; second programmes within PD that are explicitly tailored for vulnerable target groups. For *Finland*, two approaches of a more general shape are presented: On the one hand, it refers to a **work- and study-guarantee** for all unemployed persons younger than 29 years who have registered as unemployed. The guarantee means that within three months from the registration the employment office will offer some service which will improve employability (e.g. work, training, on the job learning etc). As already

mentioned, *Austria* offers such a similar training guarantee. Here, especially the dual apprenticeship system built up capacities to collect these young people through a supra-company apprenticeship. However, both programmes do not explicitly and solely target PD. Also of more general shape are training programmes in Finland aiming at young adults (18 – 29 years of age) that don't have accomplished any vocational upper secondary qualification.

For *Austria*, also a more driver-specific offer (however, not explicitly on professional driving) is reported: One driving school offers trainings for persons with learning disabilities. Thus, this offer might also be relevant for young unemployed persons with a low level of education.

In *Poland*, a number of campaigns encouraging young individuals to enter PD are introduced. As a matter of fact, most of these campaigns have a limited range and recognition. The most comprehensive campaign introduced so far is called 'Gotowi do jazdy' ('Ready To Drive'). The main aim of the campaign is to attract young people by showing the advantages of the occupation (e.g. independence in working). The campaign is run by Truckers Life Foundation (organization aiming at improving PDs' working conditions) and Trans.eu (a web portal dedicated to cooperation of haulage companies). However, it has not yet reached the targeted response among the target group. Beyond this approach, a number of occupational development programmes (predominantly on regional level) provided funds for projects which resulted in schooling of candidates for professional drivers. The projects were mostly run by driver training centres.

4.1.2 Consequences and recommendations

Looking at specific social groups as potential target groups for PD training always requires a broader view: The general shape of national employment developments or of the PD market´s structure can include barriers for all social groups named in this survey and thus strongly influence their chances to access this sector of the labour market. In this respect, it is recommended to never assess a specific group self-contained but always in relation to its **socio-economic environment.**

Taking young people into the focus, this target group shows unemployment rates below average in Austria, but above average in Finland and Poland. When relating that fact to some context information it could be taken as an indicator for how far they can be attracted to PD: For example, only Poland which shows high demands and respective a lack of sufficient workforce supply (see chapter 2) features PD-specific offers for young people. The other countries only implemented general programmes to tackle unemployment among this age group.

For this target group, two relevant recommendations can be given: First, it is inevitable to search the **link to the education system** and to offers of initial vocational education in a country. VET recently faces severe changes throughout whole Europe and they have to be taken into account (see ongoing Cedefop project 'The changing role and nature of VET in Europe'). Second, it was stated in all here represented national contexts that specifically younger people might be in a better position to **adapt ICT-methods** than other age groups. In this respect, younger people might have a crucial advantage in adapting to even more innovative forms of PD training.

4.2 50+ and long-term unemployed

The age distribution of professional drivers shows that the workforce is ageing: "The share of employees of 50 years or older increased from around 25% in 2002 to 32-33% in 201248. This observation holds both for the western part of the EU as well as the eastern part, but is somewhat more pronounced in Western Europe. In contrast, the share of young and of middle aged employees is declining. The share of young drivers (aged below 25 years) is slightly higher in Western Europe than in Eastern Europe." (Panteia 2014, p. 35)

All project countries show older workers as one of the most vulnerable groups on the labour market: For *Finland*, small chances are stated for long-term unemployed persons at the age of 50+ to re-enter the labour market. PD (especially bus driving) is however named as one of the few branches where there are possibilities to find work based on re-training.

At the beginning of 2016, around 359,300 persons were registered as unemployed with the *Austrian* PES (Public Employment Service). Of these, 13.3% were long-term unemployed according to the PES´ definition, that is being unemployed for more than a year and without any longer interruption (not even through training). According to the alternative concept of long-term unemployment, which treats training periods as unemployment and disregards interruptions of up to two-month (e.g. employments that were solved during the probationary period), 31.6% had already been unemployed for more than a year. According to the EUROSTAT definition, 27% of the unemployed can be regarded as long-term – a comparably low figure (EU28-average: 50%). In particular, older workers were affected. The proportion of long-term unemployed persons was above the average among unemployed persons over 45 years (39.9% according to the PES´ definition).

Demographic processes in *Polish* society show that it is likely to become one of the oldest nations in the EU by 2050. It is estimated that by 2050 33% of the country's population (11.1 million people) will reach 65+ years, compared to current 15% (5.7 million). A total of 53% of 50-64 years old group has an occupation. The situation is

worse for the 55-64 years old group in which the employment rate is significantly lower at 43.8%. By the end of 2015 people 50+ comprised 27.5% of the whole registered unemployed (429.8 thousand people). This percentage has been steadily growing since 2005 due to demographic changes. In spite of that, a slow (slower than in other age groups) but systematic growth of professional activity among the 50+ age group can be observed. During the 4th quarter of 2015 the total number of individuals employed in this group grew by 143 thousand (equivalent of 3.2%) while the overall employment rate grew from 32.4% to 33.4%. Still, statistics show that the average period of job search is significantly longer among this group, reaching 11 months for 50-55 age group and up to 40 months for 55-64 age group.

30.9% of the 50+ people unemployed in Poland have professional experience of 20-30 years. What is yet really concerning is that 4.6% individuals in this group has no experience on the job market and 7.9% has the experience of up to 1 year.

4.2.1 Target group specific programmes in PD

In *Austria*, there is a number of funding and support programmes in place trying to bring older and long-term unemployed back into the labour market, both on regional (province, 'Bundesland') and on federal level (e.g. PES´ subsidies for employers´ wage and non-wage labour costs for new employees aged 50+). However, there are **no programmes** in place specifically aiming to bring this target group **into professional driving**. This might be due to high wage costs for this age group as well as to the general orientation of the Austrian transport industry towards cheaper workforce mostly stemming from Eastern European countries. Also, a specific driving test is required by law for professional drivers from the age of 50. However, one driving school offers general driving courses for older drivers.[3]

In *Finland*, public authorities are reported to systematically invest money into training services for this particular age group. Also, PD is targeted by these services. However, ICT-based training in these courses is mostly related to simulator- and distance-learning based drivers´ training.

In *Poland*, no specific programmes or approaches are applied for this target group within the PD training. In spite of this, the driving simulators and e-learning are popular among the training taken in scope of **professional activation projects**. The main reason behind this approach is however the cost efficiency. In more general terms, the needs of 50+ age group were strongly highlighted in the Act on promoting employment and institutions on the job market (Dz. U. 2004 nr 99 poz. 1001). This act introduces a number of mechanisms which enable taking actions targeted specifically at the professional activation of these individuals, such as e.g.

[3] See http://www.fairdrive.at/fairdrive-spezial/50plus/

individualisation of the activities taken towards the unemployed. This takes into account e.g. the support in taking vocational courses. Additionally, when deciding to employ a person from that age group the employer is entitled to get a subsidy for first 12 months (taking into account individuals of up to 60 years old) or 24 months (for individuals above 60 years old). The main condition to get the subsidy is to hire the unemployed for at least 6 months (for people up to 60 years of age) or 12 months (for people above 60) after the end of funding. A number of professional activation-targeted courses for PD candidates has been introduced in scope of numerous regional EU-funded programmes since the beginning of Poland's presence. Yet, all of these projects had a limited, regional level and were targeted to a rather small number of people. No national campaigns were introduced in this matter.

4.2.2 Consequences and recommendations

Although showing rather diverse unemployment rates, workforce at the age of 50+ seems to be one of the most vulnerable groups on all presented national labour markets. They are addressed by different measures of active labour market policy but in general they are still highly affected by long-term unemployment. Also, there are no hints that PD training would particularly address this group in one of these national contexts. This is due to different reasons which are again strongly related to the national context. There are a few **crucial questions** which have to be investigated before targeting ICT-driven PD training methods to the target groups of older long-term unemployed: How well can innovative training methods be adjusted to the needs of this age group and which grade of responsiveness can be expected from them? For which segment of PD should this target group be recruited bearing in mind that PD is generally a physically demanding profession?

4.3 Migrants from outside of the EU

Migrants are in all project countries important target groups when it comes to PD. However, the background of migrants in terms of education level and labour experience as well as status on the labour market has to be strongly differentiated.

In *Finland*, PD is one of the **most popular sectors** among migrants from outside of EU. The largest groups of these migrants originally stem from Arabic countries, Russia and also from the Northern parts of the African continent. For each migrant, Finland provides offers of language training as well as cultural courses giving information about societal routines of the country. Also, vocational training is offered however not for the whole population of migrants.

Access to the *Austrian* labour market for people stemming from outside the EU is basically regulated by the Red White Red Card (see below). In 2015, 1,181 persons moved to Austria with a red-white-red-card. Only 182 were skilled workers in

shortage occupations. By this, this instrument lags behind the expectations. A different and recently very important pathway into Austrian labour market from outside of the EU is gaining the **status of asylum** (or a similar status). This status was granted to around 19,000 persons in 2015. There are approaches to guide these persons into sectors where additional labour force is required (e.g. the Chamber of Commerces´ initiative to place apprentices in regions and occupations with such demands – however, professional driving is not listed on regional basis as one of the most required occupations).

There are two ways to enter *Polish* labour market by the migrants from outside of the EU. The most obvious way for the individuals having a temporary or a permanent residence is to obtain a work permit. Having this document, the foreigner is able to work for a certain time period for which the permit applies (no longer than 3 years). In most cases, the length of the permit is strictly related to the length of the obtained contract of employment. However, there is also a **simplified way** of entering the job market for the individuals coming from the **following countries**: Armenia, Belarus, Georgia, Moldova, Russia and Ukraine – they are entitled to work for up to 6 months during the subsequent 12 months based on a document issued by the employer. A so-called 'Statement of intention to entrust work to a foreigner' needs to be submitted to a relevant county ('powiat' – second-level unit of local administration) Labour Office. The statement provides a basis for getting a resident working visa (given in the Polish outpost abroad) or a temporary residence (if the individual is already located in Poland). Even though, it is not equal to a contract of employment and only proves the right to be employed in a certain company. If the company is interested in employing an individual from the aforementioned countries for a period longer than 6 months, it needs to submit an application after 3 months of his/her work.

Since a few last years, a steady growth in foreigner employment has been observed in Poland. It can be directly linked to the unstable political situation and military conflict in eastern Ukraine. Year 2016 was a record in that matter – ca. 123 thousand work permits were issued and more than 1.3 million Statements of intention to entrust work to a foreigner submitted. This corresponds to a 90% (work permits) and 65% (company-based statements) growth year-over-year. A dominant majority in both of these categories is represented by Ukrainians (82,8% and 97% respectively). Other nationalities comprise mainly Belarussians, Moldavians, Georgians, Armenians, Russians, Indians and Chinese. Migration to Poland as a whole has rather short-term and circulation character – an average Ukrainian migrant worked here 9 times, with an average stay of 5 months.

Transport in general (including both carriage of goods and passengers) has been one of the economy sectors with the largest number of permits issued (14.06% of the total number). A growing trend can be observed in this area – the share has been

steadily growing, starting from 7.87% in 2012. No statistical data regarding the economy sectors is available for the company-based statements, but truck driver is listed as one of the most popular occupations.

The most frequently chosen region by the foreigners is Mazowieckie voivodeship (including Warsaw) with 33.23% share of statements issued in 1st half of 2016 (no data for work permits is available). However, this percentage has been on decline since 2012 due to a growing number of job offers in other regions, especially in Dolnośląskie (9.1%) and GWielkopolskie(9.08%) voivodeships.

Migrants working as professional drivers is a widely-discussed topic in Poland, especially due to a gap of even 100 thousand workers in this area (according to the information from PwC report, mentioned in section 2.3). Even though, no specific campaigns and social programs were carried out inside or outside Poland to encourage them. The possible reason may be the fact that the number of migrants working in this area has been constantly rising and is possible to rise even more. PwC in its report notes however that this tendency may stop in a few years due to poor demographics in the countries of origin of the migrant majority (primarily Ukraine and Belarus). This may result in a need to obtain more workforce from more distant countries, such as e.g. Kazakhstan.

4.3.1 Legal options to access the domestic labour market

Austria has introduced a flexible immigration scheme: the Red-White-Red Card. It aims to facilitate the immigration of qualified third-country workers and their families with a view to permanent settlement in Austria, based on **personal and labour-market related** criteria. From this point of view the most interesting element is a list of shortage occupations which are eligible for applying for the card. This list is annually compiled by the Federal Ministry of Labour, Social Affairs and Consumer Protection, the Federal Ministry of Economy, Family and Youth and a board of the social partnership (currently valid is the Act for Skilled Workforce 2017, "Fachkräfteverordnung 2017"). The definition of a shortage occupation is given as that for a reported open job not more than 1,5 unemployed persons should be listed ("figure of job congestion"). The current list does however not entail professional drivers.

The Red-White-Red card shows high resemblances to the EU Blue Card which is the *European* approach for granting highly skilled workforce from non-EU-countries access to the European labour market.

Finland points to EU-legislation when it comes to national migration regulations. Basically, work permit and permit of residence are linked to each other.

The *Polish* legal framework which is in line with already mentioned EU Directives entails a number of complex procedures which need to be carried out separately in order to hire a driver from outside EU (including both the activities taken by the driver-to-be and the employer). They include:

- procedures connected with the legalization of stay,
- procedures connected with the legalization of work,
- taking psychological and medical tests (all exams need to be taken in Polish languages),
- finishing initial qualification & periodic training,
- applying for a driver attestation certificate
- replacement of the driver's original driving license with a Polish license with a community code 95 added

The biggest barrier in scope of that framework derives directly from its **complexity**. It also lacks a desired consistency, since all of the procedures, applications etc. need be to taken and issued separately and through different state institutions.

4.3.2 Validating acquired qualifications

For working as a PD in *Finland*, also all migrants are obliged to have EU Initial or Accelerated Initial Qualification training finished as well as the periodic training. Bus drivers need driving licence class D or DE and truck and lorry drivers need a licence class C or CE. Their professional qualifications can be recognized and validated only regarding the driving license or driving license and professional qualification card. For working in PD, Finland accepts EU driving licences. On contrast, driving licenses acquired in countries outside of the EU require additional training, e.g. a higher level than 'driving licence than B'.

There are no uniform rules in *Austria* for formal recognition of qualifications from abroad. In most cases, applicants are asked to provide German translations of professional credentials and degree certificates that have been prepared by certified public translators. There may be costs associated with this recognition process. Professional drivers from outside the EU can have recognised their qualification at the office of the province government. It happens on an **individual basis.** It can be taken for granted, that qualifications to be recognised have to accord to the regulations for initial and period training of professional drivers as already described. The recognition of partial qualifications as it is practiced in Germany has not yet been implemented in Austria. However, a feasibility study made for the province of lower Austria uses the example of professional drivers. In Austria, a **strategy** for the

validation of non-formal and informal learning is in place. The overall objective is to validate and recognise non-formally and informally acquired skills to render them visible and usable for education and employment. In late 2015, a consultation paper for this strategy was launched which is currently being refined based on feedback from the main actors in the field.

According to *Polish* law, all foreigners applying for work as professional drivers are obliged to have EU Initial or Accelerated Initial Qualification training finished, as well as the periodic training. Their professional qualifications can be recognized and validated only regarding the **driving license**.

4.3.3 Target group specific programmes in PD

Finland provides different kind of funding schemes and support measures for migrants' professional training. Although these programmes are restricted to the target group of migrants, the actual methods applied are very similar to the ones of **regular PD training**. One difference is the additional language training. This training is usually implemented with ICT-based tools, so e.g. computer based programs and language sensitive driving simulators which can also explain details literally for the student.

For *Austria***,** one driving school provides courses for persons with language difficulties.

According to the data aforementioned in the *Polish* statistics, driving schools foresee an **increasing market potential** in customizing their training services for the needs of individuals willing to work temporary or permanent as professional drivers in Poland. E-learning has been found especially useful in schooling foreign PD candidates. Since the vast majority of them are Ukrainian- or Russian-speakers, ICT-training provides the ability to teach them more efficiently than the Polish-speaking trainers in classes. It also gives them the ability to start the course even before coming to Poland and shorten the overall period of preparation to work as a professional driver. For example, the e-c@rgo e-learning platform enables to cover the whole training in Russian language which is well known by the vast majority of the immigrants coming from Eastern Europe.

4.3.4 Consequences and recommendations

Among the target groups addressed by ICT-INEX, migrants from in- and outside of the EU are the most relevant and most regularly approached entity. Originally, this might have also been due to low salary levels and demanding working conditions in the field which opened up PD for weaker groups on the labour market. Directive 2003/59/EC by the European Commission can be seen attempt to raise standards in PD and thus improving working conditions and quality levels.

Generally, European member states show different practice with migrants in PD – also due to their **geographical location**: Austria interacted mostly with workforce from neighbouring countries which show significantly lower salary levels by either recruiting from those countries or even entirely outsourcing transport handlings to providers located in these countries. Geographically more exposed Finland implemented a range of training programmes also targeting participants from outside of the EU. Finally, Poland with its specific labour market situation characterised by a high and even growing demand towards professional drivers opened up more simple pathways into the labour market for specific occupations. Being situated at the Eastern boarders of European Union, migrants entering Poland naturally come from outside of the EU, namely from countries like Armenia, Belarus, Georgia, Moldova, Russia and Ukraine.

As already indicated in chapter 3, it will be essential for implementing innovative PD training methods to consider these diverse starting points. Employers and training providers will only adapt those methods if they can recognise the rationale behind it and thus their own advantages. It will also be needed to further develop pathways of **recognising and validating prior learning**. Although recognition processes are still not running smoothly also in other sectors and different policy levels, they cannot be left out when it comes to recruiting workforce from outside of the EU. However, training under Directive 2003/59 is barely integrated into the formal VET system. In general Member States seem generally reluctant to assign the CPC to a national qualification framework (NQF) and hence, also to the EQF (Panteia (2014), p. 94)

5. Resume

ICT-INEX presents a very innovative approach towards the application of ICT-based methods in PD training. It goes without saying that innovativeness always faces barriers and problems that have their roots in existing structures and – in connection with that – decade-long customs. It was therefore the aim of this survey to uncover such barriers and problems by looking at the project´s main subject and its target groups from different angles. Also, it made sense to not only put light on hard facts (e.g. legal regulations on PD, statistical data describing the target groups) but to also include "softer" forms of information (e.g. perception towards PD, integration efforts towards the target groups into the labour market) into the analysis.

Drawing a conclusion is therefore as manifold as the survey-approach that was chosen. As stressed several times in the report above, national peculiarities have always to be taken into account. Besides of legal regulations, also the educational tradition and the way education integrates PD has to be considered in detail. Also, the structure of the labour market is an important factor to be analysed. Parameters for recruiting professional drivers turn out to be very diverse – both in terms of recruiting pathways and of demands standing behind it. For example, Poland with its high demands and recruiting pathways exceeding the boarders of EU shows a very different situation to Austria for which the transport and logistics sector is very much interrelated with the labour market in its Eastern (EU) neighbour-countries. The report at hand should serve as good starting point for further investigations in this respect. But there are also many commonalities between the analysed project countries (and assumably also to many other member states): Innovative methods of PD training have not yet been established comprehensively. The advantages of such methods have not been recognised in a way that would make their application to an option that has undeniably to be chosen. Also, the status of the social groups targeted by ICT-INEX is similar. While migrants are an important target group for PD, elderly workers are not preferably treated by this field. Beyond that, this group seems to be one of the most vulnerable in all described labour markets.

From the many recommendations given in the chapters of this report, two have to be highlighted: First, employers and training providers (as their clients) have to see **their personal advantages** of implementing innovative methods of PD training in their area of influence. And second, all (new) forms of training have to be **adaptable to the existing structures of education and training** in a country. For both recommendations it will be needed to establish national policy plans – that means plans of how to contact, include and exchange with main national and European stakeholders and players in the field!

6. References

As the study is based on national survey results also the references are presented in their national context:

European

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Poland

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4Truks.pl – Mobilny symulator Cargo

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7.Annexes

7.1 IO2 questionnaire filled in for Austria

ICT-INEX Project

Questionnaire

O2 –Analysis of the legal, organizational and technological context of PD candidate training

Prepared by: 3s research laboratory (IO-leader)

Country:	**Austria**
Filled-in by:	**Viktor Fleischer**
Date of delivery:	**20.02.2017**

By implementing this survey, ICT-INEX intends to collect material for a **guide dedicated to industry members** which will indicate the current state of PD candidate training in Europe, taking into account the ICT context and the situation of the end-users on this part of job market. This guide will provide a basis for the further tasks in the project.

Please fill in this questionnaire by referring to your **national**, but as far as possible also to the **European** context. As sources of information and methods of research you are – besides your **own expertise** – invited to use **desk research** and brief **expert interviews**, the latter e.g. with employers(´ representatives), training providers or ministries´/PES´ representatives. The final decision upon the concrete mix of research methods will be made by the responsible national partners – according to their specific demands and prerequisites. As additional source, the final report of WP2 of the project ICT Driver is attached. You will find further remarks and hints in the questionnaire. With your answers, please try to stay brief and to get to the point.

Please return the filled-in questionnaire by **February 26th, 2017** to 3s research, laboratory, Viktor Fleischer (**fleischer@3s.co.at**). You can also refer to this address in case of any questions and unclarities in regard of this questionnaire.

A. Context of professional driving and professional drivers´ training

Question A.1

How can PD training be accessed?	
Brief list of access pathways (bullet points) Please underline the most important ones.	• Driving license + initial CPC • Dual apprenticeship trade
Short description of access pathways and their relation to each other (text, max. 300 words) Please give short descriptions of these pathways, e.g. what prerequisites are in place; who are the main target groups, etc. Make us understand their relation to each other and their relation to the education and training landscape. What possible (financial) barriers do exist to access PD training? If available, give dimensions in terms of annual take-up.	Since the EU Directive for initial and periodic training (CPC) of professional drivers regulates both the freight and passenger transport sector, the following remarks of its implementation into Austrian law applies to both sectors. Following the EU Directive 2003/59/EC, Austria chose the "test-only option" for the initial CPC training for professional drivers (freight and passenger sector) which means that there are no actual training programmes that people have to attend but the participants have to study by themselves. But training providers offer initial CPC classes on a voluntary basis (fees differ quite a lot). Besides of the initial CPC exam, every five years, professional drivers have to participate in a 35 hour training course that does not include an obligatory examination. Only those professional drivers who got their driving licence after Sept. 2009 (lorry drivers) or Sept. 2008 (bus drivers) have to do the initial CPC test, but all drivers must participate in the periodic CPC training (the first deadline for lorry drivers was Sept. 2014, for bus drivers Sept. 2013). After that the periodic CPC training hast to be done every five years periodically. Since 1987, a three-year dual apprenticeship enables adolescents to become professional truck drivers. In the dual VET system apprentices receive company-based training within an enterprise as well as school-based training in VET schools. Drivers with an apprenticeship certificate "professional driver – freight or passenger transport" receive the CPC qualification automatically if

	their practical driving test took 90 minutes instead of the usual 45 minutes. According to an expert from the Federal Chamber of Labour, the educational backgrounds of professional drivers in the freight or passenger transport sector are not very high but there are no statistical numbers available. He also estimated that about 80% of all lorry drivers have a migrant background while many young professional drivers seem to be second generation migrants with better language skills than their parents. It is estimated that from about 120,000 lorry drivers in Austria so far only 25% completed the compulsory periodic CPC training while already 80% of the bus drivers (altogether between 10,000 and 15,000) did their "D95" code training. Not more than 2.000 – 4.000 drivers have already participated in some kind of web-based training (based on estimation by ÖAMTC – Austrian Automobile Club). It has to be stressed that Austrian companies increasingly recruit their drivers in Eastern EU countries because, first, of the lack of domestic drivers and second because of personnel cost reasons (occasionally with via complex and dubious hiring structures). In Salzburg, an initiative was launched motivating professional soldier drivers to transfer their military driving licenses into civil ones in order to acquire them to different forms of professional driving.

Possible sources: own elaboration; updated information and checked interview results from prior projects (see Question B6)

Question A.2

What is the legal context of PD training?	
Brief list of relevant acts (bullet points) Please underline the most important ones.	• Act on motorist driving: Bundesgesetz vom 23. Juni 1967 über das Kraftfahrwesen (Kraftfahrgesetz 1967 - KFG. 1967), StF: BGBl. Nr. 267/1967 (current version 18 January 2017) • Act on commercial freight transport: Bundesgesetz über die gewerbsmäßige Beförderung von Gütern mit Kraftfahrzeugen (Güterbeförderungsgesetz 1995 - GütbefG), StF: BGBl. Nr. 593/1995 (current version 18 January 2017) • Act on Occasional Traffic: Bundesgesetz über die nichtlinienmäßige gewerbsmäßige Beförderung von Personen mit Kraftfahrzeugen (Gelegenheitsverkehrs-Gesetz 1996 - GelverkG), StF: BGBl. Nr. 112/1996 (WV) (current version 18 January 2017) • Act on driving lines: Bundesgesetz über die linienmäßige Beförderung von Personen mit Kraftfahrzeugen (Kraftfahrliniengesetz - KflG), StF: BGBl. I Nr. 203/1999 (current version 18 January 2017) • Regulation on initial and periodic training for professional drivers: Verordnung des Bundesministers für Verkehr, Innovation und Technologie über die Grundqualifikation und Weiterbildung der Fahrer bestimmter Fahrzeuge für den Güter- oder Personenkraftverkehr (Grundqualifikations- und Weiterbildungsverordnung – Berufskraftfahrer - GWB), StF: BGBl. II Nr. 139/2008(current version 18 January 2017) • Regulation for Professional Drivers Apprenticeship Trade: Verordnung des Bundesministers für Wirtschaft und Arbeit über die Berufsausbildung im Lehrberuf Berufskraftfahrer/Berufskraftfahrerin (Berufskraftfahrer/Berufskraftfahrerin - Ausbildungsordnung) • Decree of Federal Ministry for Traffic, Innovation and Technology: Erlass des österreichischen Bundesministeriums für Verkehr, Innovation und Technologie vom

	27.04.2010 geregelt (GZ: BMVIT-167.533/0025-II/ST5/2010)
Short description of relevant legal acts and their relation to each other (text, max. 300 words) Please give short descriptions of these legal frameworks, e.g. what exactly do they regulate; to which policy field do they belong (education, labour law, social law); are they on federal or regional level; are there other (e.g. sectoral) regulations complementing them; Make us understand their relation to each other and the restrictions and demands stemming from there.	In general, driving is regulated by the Act on motorist driving. For professional drivers transport of goods is regulated by the Act on commercial freight transport, while the transportation of persons is regulated by the Act on Occasional Traffic and the Act on driving lines. Based on these laws, regulations have been implemented for professional drivers training: in general, the Regulation on initial and periodic training for professional drivers; and for the apprenticeship trade the Regulation for Professional Drivers Apprenticeship Trade.

Sources: own elaboration and research; legal acts; Chambers of Commerce

Question A.3

What is the scientific context of using ICT training tools, including the innovative solutions?	
Short description of scientific discussion and references available in your country (text, max. 300 words) Please give short descriptions of the discussion around and the usage of scientific results on ICT training tools in PD. Put a focus on innovative approaches such as augmented reality, virtual reality, gamification.	In Austria, many fields of research are covered that relate to the questionnaires topic such as e-learning, other ICT-related learning methods, gamification, augmented reality, the future of transport and logistics, the working conditions of professional driving in Austria, the impact of new legal regulation of PD training in the follow-up of directive 2003/59/EC, etc. (examples see below); However, no research on the application of ICT-based training methods, specifically very innovative approaches like augmented reality, virtual training and gamification are known.
What scientific references reflected on EU level are known and used in your country? (text, max. 150 words)	
Brief list of references (bullet points) Please underline the most important ones.	NATIONAL STUDIES - EXAMPLES Future of transport and logistics: • BM für Verkehr, Innovation und Technologie (2016) IND4LOG4- Industrie 4.0 und ihre Auswirkungen auf die Transportwirtschaft und Logistik. Wien. Online: https://www.bmvit.gv.at/innovation/publikationen/verkehrstechnologie/downloads/ind4log.pdf Innovative ICT-based technologies • Schmiedl Grischa, Blumenstein Kerstin, Seidl Markus (2011) Usability Testing for Mobile Scenarios of Fragmented Attention, In: Proceedings of the chi sparcs conference 2011, chi sparcs 2011, Arnhem, The Netherlands, 2011. • Wagner Markus, Blumenstein Kerstin, Rind Alexander, Seidl Markus, Schmiedl Grischa, Lammarsch Tim, Aigner Wolfgang, et al. (2016) Native Cross-platform Visualization: A Proof of Concept Based on the Unity3D Game Engine; In: Proceedings of International Conference on Information Visualisation (IV16), Lisbon, Portugal, IEEE Computer Society Press

	Innovative ICT-based technologies • New technologies in mobility: Claus Seibt, Wolfgang Loibl, Gudrun Maierbrugger (AIT – Austrian Institute of Technology) (2011) mobility_techtrends, Schlüsseltechnologien für die Mobilität 2030. Working conditions in transport and logistics: • FORBA und AK Wien (2016) Grenzenlose Mobilität - Grenzenlose Ausbeutung. Arbeitsbedingungen in Europas Transportwirtschaft. Wien. Online: https://www.fairtransporteurope.de/files/mobi/content/Dokumente/FairTransport_20160511_Freigabe.pdf

Possible sources: own elaboration; scientific papers, industry reports, training providers

B. ICT-based training methods and tools in professional driving

Question B.4

What forms of ICT-based training are used for PD?	
Short description of application of ICT-based training methods in your country (text, max. 300 words) Please give short descriptions of the application of such methods, e.g. which methods are used (with a focus on innovative methods such as augmented reality, virtual reality, gamification); who are the main actors/organisations applying them; what role do they play within PD training in your country.	Most driving schools offer some form of e-learning which mostly refers to interactive training modules which can be trained online. "Fahrschulecheck" is an e-Learning training system to practice the theory questions for the driving license in Austria. It is necessary to create a free account to access at www.Fahrschulecheck.at. There are also e-learning programmes available for professional drivers, although they are not offered systematically and mostly are not accredited. The only provider for e-learning programmes partly accredited for drivers is Easy Drivers Experts (www.easydriversexperts.at), which offers 3 of the 5 modules in periodic training for drivers (directive 2003/59/EC) in an e-learning application. The modules that can be acquired via e-learning are: __Vehicle technology ("Fahrzeugtechnik") __Social Provisions ("Sozialvorschriften") __Working Environment ("Arbeitsumfeld"). There are no differences in the price, if a module is conducted via class room training or e-learning. For the e-learning several system requirements are necessary, the identity of the user is detected via webcam. Another example is freight company TirLog which started to use SBT for the training for their drivers in 2010 renting a simulator from DEKRA Academy in Germany. It can simulate typical traffic situations and rapidly changing security situations – snow, ice and surprising obstacles. More innovative methods (augmented reality, virtual reality, gamification) are not used in PD training in Austria.

How is the *application of ICT-based training methods legally regulated*? (text, max. 150 words)	Since the directive is relatively vague in this regard, there are no strict guidelines on e-, virtual, etc. learning for professional drivers. In Austria, each province ("Bundesland") can choose, if the use of e-learning is accepted or not. The "Land" of Tyrol is currently the only provincial government that has regulated the acceptance of e-learning for drivers although drivers from all over Austria can choose to participate in the three modules that can be acquired through e-learning). In Austria, the requirements for e-learning in the frame of directive 2003/59/EC have been regulated by GZ: BMVIT-167.533/0025-II/ST5/2010 issued by the Ministry of Transport, Innovation and Technology. It says that: E-learning can only be used as a teaching method; if the identity of the professional driver to be trained can be assessed and if it can be ensured that the driver to be trained is doing the whole amount of hours of the module as otherwise the quality of the implementation of periodic training cannot be assured. It further recommends a combination of e-learning with blended (classroom) learning.

Source: ICT-DRV (WP2 report) - verified

Question B.5

How are ICT-based training methods combined to maximize the educational efficiency?	
Please give a short introduction into successful and innovative training settings, i.e. the combination of ICT-based methods. (text, max. 150 words)	According to an interview with a high school professor in learning methods of virtual learning, gamification, augmented reality who had acted as lecturer at Austria´s Driving School Conference 2016, the above mentioned offer of Easy Driver (certified e-learning modules in PD training) and Tirlog are the most sophisticated approach available in Austria.
Brief list of good practice examples for ICT-based training settings (see above) (bullet points) Please underline the most important ones.	• Professional Easy Driver (certified e-learning appraoch for 3 modules of PD training) • (Tirlog) PD simulator
Brief list of references to evaluation studies available for these training efforts (bullet points)	As it is an offer by a private driving school, no evaluation studies or alike are available. Also, no information on the certification process is publicly available.

Sources: own elaboration; expert interview learning expert on ICT-based methods

Expert Interview Partner:

FH-Prof. Dipl.-Ing. Dr. Grischa Schmiedl
Lecturer at the University of Applied Science St. Pölten
Deputy Head of Program Digital Media Technologies (MA)
Department Media and Digital Technologies
M: +43/676/847 228 613, E: grischa.schmiedl@fhstp.ac.at

Question B.6

How are ICT-based training methods assessed by relevant players such as employers and training providers?	
Please give a short review of dominant opinions and discussions around the application of ICT-based methods in professional driving. (text, max. 150 words)	General feedback: Trainees/learners like that e-learning is a very flexible instrument and that they also can learn during waiting/resting periods. Furthermore, if they are tired they can stop and continue any other time. For trainers/instructors, computer based learning is a fast and "painless" method there is no need for drivers to take holidays etc. It can also be seen as a "cheap method" for training". What regards the elearning programme for drivers; there are no trainers in place, although a supervisor can be asked when problems occur. In respect of competent bodies, in the beginning there were many problems in conducting the e-learning: Competitors argued that the e-learning is illegal, although Easy Driver Experts are officially accredited by the Federal Ministry for Transport, Innovation and Technology. Nowadays the perception has changed and most of the provincial governments see that the system works in a controlled way (webcams) and very sustainable as it is possible for the trainee to repeat contents or work interactively. Some even state that it is more effective and sustainable than classroom training, as they have to be actively involved in the elearning programme. For employers the advantage is that it is a very flexible instrument and that their drivers do not have to participate in the classroom, thus training can be done whenever and wherever. Scepticism: Trainees/learners have some doubts because of the complexity of CBT, feeling of not being capable to follow the technical instructions. Trainers/instructors show similar doubts that drivers were not a sufficiently computer skilled group of workers. The Ministry of Transport, Innovation and Technology faced scepticism towards e-learning by implementing a

	regulation on e-learning that recommends combining e-learning and blended learning. E-learning programmes have to be conducted while using a web cam. Competitors argued that E-learning is not conform with the regulations issued with the directive, no control on participation, etc. Employers show doubts in terms of high costs and the question of efficiency.
If available: Brief list of references for the public perception of ICT-based training methods (e.g. articles in newspapers, websites) (bullet points)	3s conducted interviews with the above mentioned target groups in different PD-related projects which also covered their feedback on ICT-based training methods • ICT Driver (526967-LLP-1-2012-1-DE-LEONARDO-LMP) • ProfDRV (Professional driving – more than just driving! Qualification Requirements and Vocational Training for Professional Drivers in Europe: 510074-LLP-1-2010-1-DE-LEONARDO-LMP) • mroad (527279-LLP-1-2012-1--ES-LEONARDO-LMP) • Metalog (Metaframeworks for Logistics: DE/13/LLP-LdV/TOI/147618) • Etc.
Do these discussions differ from the ones on EU level? How do EU policies influence discussions in your country? (text, max. 150 words)	

Source: verified information and interview results from prior PD projects (see above)

C. Target group-specific information

Question C.7

What is the situation of young (up to 29 years of age) unemployed people, specifically when labelled as NEET (not in employment, education and training) in your country?	
Please give a short overview of relevant statistical material (unemployment figures among this age group; share of NEETs among this age group) and refer to recent developments. Are there any campaigns on national/regional level and/or social programs encouraging the NEETs to enter PD training? (text, max. 300 words)	With 10.8% (September 2015) Austria has one of the lowest unemployment rates of young people (in this case of 20- to 24-year-olds) in the EU. In the age group of the up to 19-year-olds, employment has declined in recent years. This has demographic reasons, but there are also fewer apprenticeship places available and a continuously increasing number of young people attend school education for a longer period. Although unemployment is generally rising, the unemployment rate in this age group is only 5.5%, which is significantly below the average. This is also due to a training guarantee given to all young people up to the age of 18 years. In comparison, the unemployment rate among young adults aged 20 to 24 is significantly higher. For many of them labour market entry is difficult, especially if they have not completed any training. A research report of the Johannes Kepler University Linz deals with the NEET rate. This means the proportion of young people who are neither in employment or education nor in training. The rate for Austria's provinces between 2006 and 2013 averaged between 5.9% in Salzburg and 10.9% in Vienna. Expressed in absolute figures an annual average of 75,100 young people was in a NEET situation. It is common sense in Austria that education is the best way to prevent unemployment and social exclusion. For example, having accomplished an apprenticeship reduces the risk of unemployment already by two thirds in comparison to people with a lower educational level. Starting in 2016/2017, it will be mandatory for every young person up to the age of 18 to continue or complete some kind of education or training. This education duty can be fulfilled at a general or vocational school or college, the completion of a dual education or visiting a recognised labour market policy measure. Accompanying measures, such as youth coaching, production schools, training guarantees or the coaching of apprentices and companies offering apprenticeships,

	will support the measure. However, PD training is not in a specific focus of the initiative (as any other specific sector).
Brief list of references for the statistical material and its interpretation (bullet points)	• PES´labour market data: http://iambweb.ams.or.at/ambweb/ • Statistic Austria´s labour market data: https://www.statistik.at/web_de/statistiken/menschen_und_gesellschaft/arbeitsmarkt/arbeitslose_arbeitssuchende/index.html • University´s NEET-study: JKU Linz (2015), Jugendliche weder in Beschäftigung, Ausbildung noch in Training: Ein Bundesländervergleich in Österreich, Forschungsbericht, Linz: JKU, http://www.jku.at/soz/content/e94921/e95831/e96904/e272914/NEET-BerichtVersion3_ger.pdf.
Are there any specific programmes or approaches available for this target group within PD training? (text, max. 150 words)	Not for professional driving. There is a driving school called 'Fair Drive' that offers trainings for specific target groups, among them persons with learning disabilities which might be a background phenomenon for a lack of success on the labour market (http://www.fairdrive.at/fairdrive-spezial/lernschwaeche/).
Please give a short review of feedback and discussions from/by this target group around the application of ICT-based methods in professional driving. Are there methods to overcome their possible scepticism? (text, max. 150 words)	This target is not specifically addressed by acquisition approaches to PD. Also, labour market measures for this target group do not explicitly target PD. Therefore, no concrete feedback can be given on that question.

Sources: own elaboration; desk research (see above)

Question C.8

What is the situation of unemployed people showing a long-term absence (without a job for 12 months or more) from labour market , specifically when are aged 50 years or older?	
Please give a short overview of relevant statistical material (unemployment figures – with long-term duration and among this age group;) and refer to recent developments. Are there any campaigns on national/regional level and/or social programs encouraging this social group to enter PD training? (text, max. 300 words)	At the beginning of 2016, around 359,300 persons were registered as unemployed with the Austrian PES. Of these, 13.3% were long-term unemployed according to the PES´ definition, that is being unemployed for more than a year and without any longer interruption (not even through training). According to the alternative concept of long-term unemployment, which treats training periods as unemployment and disregards interruptions of up to two-month (e.g. employments that were solved during the probationary period), 31.6% had already been unemployed for more than a year. According to the EUROSTAT definition, 27% of the unemployed can be regarded as long-term – a comparably low figure (EU28-average: 50%) In particular, older workers were affected. The proportion of long-term unemployed persons was above the average among unemployed persons over 45 years (39.9% according to the PES´ definition). Generally, there is a number of funding and support programmes in place trying to bring older and long-term unemployed back into the labour market, both on regional (province, 'Bundesland') and on federal level (e.g. PES´ subsidies for employers´ wage and non-wage labour costs for new employees aged 50+). However, there are no programmes in place specifically aiming to bring this target group into professional driving. This might be due to high wage costs for this age group as well as to the general orientation of the Austrian transport industry (see question A1). The driving test is required by law for professional drivers from the age of 50.
Brief list of references for the statistical material and its interpretation (bullet points)	• PES´labour market data: http://iambweb.ams.or.at/ambweb/ • Statistic Austria´s labour market data: https://www.statistik.at/web_de/statistiken/menschen_und_gesellschaft/arbeitsmarkt/arbeitslose_arbeitssuchende/index.html • PES´ subsidies: http://www.ams.at/wien/service-unternehmen/foerderungen/eingliederungsbei

	hilfen-des-ams-wien-zuschuesse-zu-lohn-lohnnebenkosten-ihr-unternehmen
Are there any specific programmes or approaches available for this target group within PD training? Please specify the role of ICT-training within these approaches. (text, max. 150 words)	Not for professional driving. There is a driving school called 'Fair Drive' that offers trainings for specific target groups, among them persons at the age of 50plus (http://www.fairdrive.at/fairdrive-spezial/50plus/).
Please give a short review of feedback and discussions from/by this target group around the application of ICT-based methods in professional driving. Are there methods to overcome their possible scepticism? (text, max. 150 words)	This target is not specifically addressed by acquisition approaches to PD. Also, labour market measures for this target group do not explicitly target PD. Therefore, no concrete feedback can be given on that question.

Sources: own elaboration; data (see above)

Question C.9

What is the situation of migrants from outside of the EU migrating to your country?	
Please give a short overview of relevant statistical material (migration figures; integration on the labour market) and refer to recent developments. What general pathways do exist for this target group to enter the domestic labour market? (text, max. 300 words)	Access to the Austrian labour market for people stemming from outside the EU is basically regulated by the Red White Red Card (see question A2). In 2015, 1,181 persons moved to Austria with a red-white-red-card. Only 182 were skilled workers in shortage occupations. By this, this instrument lags behind the expectations. A different and recently very important pathway into Austrian labour market from outside of the EU is gaining the status of having the right for asylum (or a similar status). This status was granted to around 19,000 persons in 2015. There are approaches to guide these persons into sectors where additional labour force is required (e.g. the Chamber of Commerces´ initiative to place apprentices in regions and occupations with such demands – however, professional driving is not listed on regional basis as one of the most required occupations).
Brief list of references for the statistical material and its interpretation (bullet points)	• Statistics on Asylum by the Federal Ministry of the Interior: http://www.bmi.gv.at/cms/bmi_asylwesen/statistik/start.aspx • Information on red white red card: http://www.migration.gv.at/en/types-of-immigration/permanent-immigration-red-white-red-card.html
Which legal framework is available for labour market access for people stemming from outside the EU? (text, max. 150 words) How is this legal framework related to EU-law? What does it mean for the actual acquisition of PD in your country? Are there any barriers which hinder working as a PD identified in scope of this framework?	Austria has introduced a flexible immigration scheme: the Red-White-Red Card. It aims to facilitate the immigration of qualified third-country workers and their families with a view to permanent settlement in Austria, based on personal and labour-market related criteria. From this point of view the most interesting element is a list of shortage occupations which are eligible for applying for the card. This list is annually compiled by the Federal Ministry of Labour, Social Affairs and Consumer Protection, the Federal Ministry of Economy, Family and Youth and a board of the social partnership (currently valid is the Act for Skilled Workforce 2017, “Fachkräfteverordnung 2017”). The definition of a shortage occupation is given as that for a reported open job not more than 1,5 unemployed persons should be

	listed ("figure of job congestion"). The current list does however not entail professional drivers.
What legal options do exist for migrants from outside of the EU for the recognition and validation of their qualifications? What methods are used? Are there any campaigns on national/regional level and/or social programs encouraging the qualified migrants to work as PDs? (text, max. 150 words)	There are no uniform rules in Austria for formal recognition of qualifications from abroad. In most cases, applicants are asked to provide German translations of professional credentials and degree certificates that have been prepared by certified public translators. There may be costs associated with this recognition process. Professional drivers from outside the EU can have recognised their qualification at the office of the province government. It happens on an individual basis. It can be taken for granted, that qualifications to be recognised have to accord to the regulations for initial and period training of professional drivers (see question A1). That this is an open issue is shown by a feasibility study made for the province of lower Austria which describes the recognition of partial qualifications as it is practiced in Germany with the example of professional drivers. In Austria, a strategy for the validation of non-formal and informal learning is in place. The overall objective is to validate and recognise non-formally and informally acquired skills to render them visible and usable for education and employment. In late 2015, a consultation paper for this strategy was launched which is currently (April 2016) being refined based on feedback from the main actors in the field.
Brief list of methods of recognition and validation of qualifications for this target group (bullet points)	• 'Recognition ABC': http://www.integrationsfonds.at/themen/publikationen/anerkennungs-abc/
Are there any specific programmes or approaches available for this target group within PD training? Please specify the role of ICT-training within these approaches. (text, max. 150 words)	Not for professional driving. There is a driving school called 'Fair Drive' that offers trainings for specific target groups, among them persons with language problems (http://www.fairdrive.at/fairdrive-spezial/sprachhelferpruefung/).
Please give a short review of feedback and discussions from/by this target group around the application of ICT-based methods in professional driving. Are there methods to overcome their possible scepticism?	This target is not specifically addressed by acquisition approaches to PD. Also, labour market measures for this target group do not explicitly target PD. Therefore, no concrete feedback can be given on that question.

Possible sources: own elaboration; desk research

7.2 IO2 questionnaire filled in for Poland

ICT-INEX Project

Questionnaire

O2 –Analysis of the legal, organizational and technological context of PD candidate training

Prepared by: 3s research laboratory (IO-leader)

Country:	
Filled-in by:	
Date of delivery:	

By implementing this survey, ICT-INEX intends to collect material for a **guide dedicated to industry members** which will indicate the current state of PD candidate training in Europe, taking into account the ICT context and the situation of the end-users on this part of job market. This guide will provide a basis for the further tasks in the project.

Please fill in this questionnaire by referring to your **national**, but as far as possible also to the **European** context. As sources of information and methods of research you are – besides your **own expertise** – invited to use **desk research** and brief **expert interviews**, the latter e.g. with employers(´ representatives), training providers or ministries´/PES´ representatives. The final decision upon the concrete mix of research methods will be made by the responsible national partners – according to their specific demands and prerequisites. As additional source, the final report of WP2 of the project ICT Driver is attached. You will find further remarks and hints in the questionnaire. With your answers, please try to stay brief and to get to the point.

Please return the filled-in questionnaire by **March 3rd, 2017** to 3s research laboratory, Viktor Fleischer (**fleischer@3s.co.at**). You can also refer to this address in case of any questions and unclarities in regard of this questionnaire.

A. Context of professional driving and professional drivers´ training

Question A.1

How can PD training be accessed?	
Brief list of access pathways (bullet points) Please underline the most important ones.	• Driving license • Initial qualification training • Periodic training
Short description of access pathways and their relation to each other (text, max. 300 words) Please give short descriptions of these pathways, e.g. what prerequisites are in place; who are the main target groups, etc. Make us understand their relation to each other and their relation to the education and training landscape. What possible *(financial) barriers* do exist to access PD training? If available, give dimensions in terms of annual take-up.	Professional drivers involved in road transport are required to complete the initial (or accelerated initial), complemented initial (or accelerated complemented initial) or periodic CPC training (it depends on the term of obtaining a driving license). The initial and periodic training programmes for professional drivers (freight and passenger sector) are in accordance with the applicable national and EU regulations (Regulation on the training of drivers involved in road transport and 2003/59/EC Directive). Framework programmes include information about scope and duration of the course. Training providers offer classes (with different fees) ended with theoretical exam (test). Training in Poland is from 140 to 280 hours long and is compulsory for all C and D category drivers, except those professional drivers who got their driving licence after 10 Sept. 2009 (lorry drivers) or 10 Sept. 2008 (bus drivers) have to do the initial CPC training. Those who got it till 10 Sept. 2009 (lorry drivers) or 10 Sept. 2008 (bus drivers) must participate in the periodic CPC training only (the first deadline for lorry drivers was 10 Sept. 2010, for bus drivers 10 Sept. 2009). After that the 35 hours-long periodic CPC training has to be taken every five years periodically. Cost of the PD training varies from 10 % of driver's monthly wage (periodic training) up to several dozen % (initial qualification training).

Possible sources: own elaboration; legal acts; training providers; freight carriers associations

Question A.2

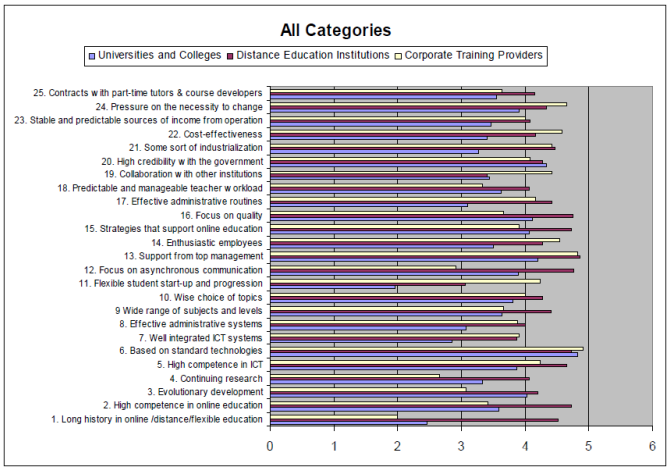
What is the legal context of PD training?	
Brief list of relevant acts (bullet points) Please underline the most important ones.	• Act on road transport: Ustawa z dnia 6 września 2001 r. o transporcie drogowym (Dz.U. 2001 nr 125 poz. 1371) • Act amending the act on road transport: Ustawa z dnia 4 listopada 2016 r. o zmianie ustawy o transporcie drogowym (Dz.U. 2016 poz. 1935) • Traffic Law: Ustawa z dnia 20 czerwca 1997 r. - Prawo o ruchu drogowym (Dz.U. 1997 nr 98 poz. 602) • Act on driver's working time: Ustawa z dnia 16 kwietnia 2004 r. o czasie pracy kierowców (Dz.U. 2004 nr 92 poz. 879) • Transport Law: Ustawa z dnia 15 listopada 1984 r. Prawo przewozowe (Dz.U. 1984 nr 53 poz. 272) • Act on vehicle drivers: Ustawa z dnia 5 stycznia 2011 r. o kierujących pojazdami (Dz.U. 2011 Nr 30 poz. 151) • Regulation of the Minister of Infrastructure on the training of drivers involved in road transport: Rozporządzenie Ministra Infrastruktury z dnia 1 kwietnia 2010 r. w sprawie szkolenia kierowców wykonujących przewóz drogowy (Dz.U. 2010 Nr 53 poz. 314) • Regulation of the Minister of Transport, Construction and Maritime Economy on obtaining certificates of professional competence in road: Rozporządzenie Ministra Transportu, Budownictwa i Gospodarki Morskiej z dnia 10 stycznia 2012 r. w sprawie uzyskiwania certyfikatów kompetencji zawodowych w transporcie drogowym (Dz.U. 2012 poz. 96) • Regulation of the Minister of Transport, Construction and Maritime Economy on the conduct of courses in the field of transport of dangerous goods: Rozporządzenie Ministra Transportu, Budownictwa i Gospodarki Morskiej z dnia 29 maja 2012 r. w sprawie prowadzenia

	kursów z zakresu przewozu towarów niebezpiecznych.
Short description of relevant legal acts and their relation to each other (text, max. 300 words) Please give short descriptions of these legal frameworks, e.g. what exactly do they regulate; to which policy field do they belong (education, labour law, social law); are they on federal or regional level; are there other (e.g. sectoral) regulations complementing them; Make us understand their relation to each other and the restrictions and demands stemming from there.	In general, driving is regulated by the Traffic Law and the Act on vehicle drivers. For professional drivers transport is regulated by the Act on road transport and the Transport Law. Based on these laws, regulations have been implemented for professional drivers training: in general, the Regulation on the training of drivers involved in road transport and the Regulation on obtaining certificates of professional competence in road. The aforementioned documents include mutual references which describe the individuals who should take the training. They also specify the training range and programme.

Possible sources: own elaboration; legal acts; ministries´ papers

Question A.3

What is the scientific context of using ICT training tools, including the innovative solutions?	
Short description of scientific discussion and references available in your country (text, max. 300 words) Please give short descriptions of the discussion around and the usage of scientific results on ICT training tools in PD. Put a focus on innovative approaches such as augmented reality, virtual reality, gamification.	There is a significant gap in terms of implementation of driving simulators and e-learning and other ICT training tools into everyday training praxis. Driving simulators and e-learning were widely accepted by the driver training industry due to their financial efficiency which is perceived as a key factor on Polish driver training market (there is a strong market competition due to more than ... professional driver training centres in Poland). Despite that, SBT and CBT training has been hardly discussed in the scientific context in Poland. The vast majority of papers and elaborations published in Poland aims specifically at driving simulator-based research, taking into account the evaluation of driver distraction and interaction with other objects located on and in the vicinity of the road. The modest number of publications which include the training-related context is rather focused at specialized applications of driving simulators, such as e.g. disabled drivers or the operators of the municipal services' vehicles (fire trucks, police cars, ambulances etc.). Still, they tend to have a rather review-like character and do not introduce/examine/criticize any novel solutions into scientific discussion, but rather describe the current State-of-the-Art. The same situation goes with the e-learning and blended-learning related references. The scientific discussion in Poland seems to lack the analysis and research in the field of educational efficiency regarding these aspects. One of the few known researchs on e-learning in Poland were carried out in years 2007-2010. They focused at examining the motivation in e-learning-based training and assessing and comparing the efficiency of

	traditional, complementary and electronic forms of education. It is worth noting that very limited cooperation between the driver training centres and the scientific organizations such as universities, institutes and etc. has been established. Training programmes (taking into the account also the training tools) are developed by the driver training centres themselves which may result to some extent in lack of the training efficiency.
What scientific references reflected on EU level are known and used in your country? (text, max. 150 words)	Since 2003, European Commission in a joint cooperation with National Agencies has been carrying out a number of activities aiming at exchange of knowledge and experiences between the involved countries. A significant number of e-learning-targeted projects were funded from this source and monitored by the EC and its representatives, taking into account especially the biggest European institutions which include e-learning into their daily praxis. Based on the collected data a total of 25 e-learning development key factors were identified and can be seen on the chart below.  Easy access to various information and educational resources as well as establishing professional contacts resulting from sharing and sharing the online materials were presented as the main advantages of e-learning.

Brief list of references (bullet points) Please underline the most important ones.	• *'Badania na temat motywacji w szkoleniach e-learningowych'*, report by Jagiellonian University and Dom Szkoleń i Doradztwa company, Dec 2010 (available online: http://www.domszkolen.com/uploads/Badanie%20motywacji%20w%20elearningu.pdf) • *'Badania europejskie nt. e-learningu – kluczowe czynniki rozwoju'*, Zając M., Biuletyn Programu Leonardo da Vinci, 2009, vol. I, pp. 12-16 (available online: http://czytelnia.frse.org.pl/media/biulet_e-le.pdf) • Proceedings of ONLINE EDUCA 2010 Conference

Possible sources: own elaboration; scientific papers, industry reports, training providers

B. ICT-based training methods and tools in professional driving

Question B.4

What forms of ICT-based training are used for PD?	
Short description of application of ICT-based training methods in your country (text, max. 300 words) Please give short descriptions of the application of such methods, e.g. which methods are used (with a focus on innovative methods such as augmented reality, virtual reality, gamification); who are the main actors/organisations applying them; what role do they play within PD training in your country.	The e-learning method is used in driver training and preliminary and interim qualification for drivers. On the website www.e-cargo.edu.pl there is an author's program covering the above trainings. Available training modules are complied with national regulations as well as Directive 2003/59/WE of the European Parliament and of the Council of 15 July 2003. The training is carried out under the supervision of the instructor, allowing discussion on the subject of the lesson. Access to the system is possible after logging in, which allows you to identify the trainee and personalize the training. Training on a driving simulator allows you to simulate typical and extreme traffic situations, change external conditions, eg from summer to winter and drive in different geographical conditions.
How is the *application of ICT-based training methods legally regulated*? (text, max. 150 words)	Training is provided for the number of hours specified in the applicable regulations. Each person attending the training should meet the required number of theoretical training hours under the supervision of the instructor and the required hours of practical training. During the training, the instructor keeps an eye out for mistakes and corrects the behavior of the trainee. The trainee confirms the completion of the program in the documentation.

Possible sources: own elaboration; legal acts; training providers; freight carriers associations

Question B.5

How are ICT-based training methods combined to maximize the educational efficiency?	
Please give a short introduction into successful and innovative training settings, i.e. the combination of ICT-based methods. (text, max. 150 words)	The method of e-learning training in theory and the use of a driving simulator is currently the most innovative driver training method.
Brief list of good practice examples for ICT-based training settings (see above) (bullet points) Please underline the most important ones.	• e-learning EC@ARGO - driver training and driver qualifications • CARGO GROUP - mobile driving simulator in special conditions by truck and bus
Brief list of references to evaluation studies available for these training efforts (bullet points)	• Internal evaluation questionnaire showing the desired directions of development of training methods

Possible sources: own elaboration; employers´ (associations); training providers;

Question B.6

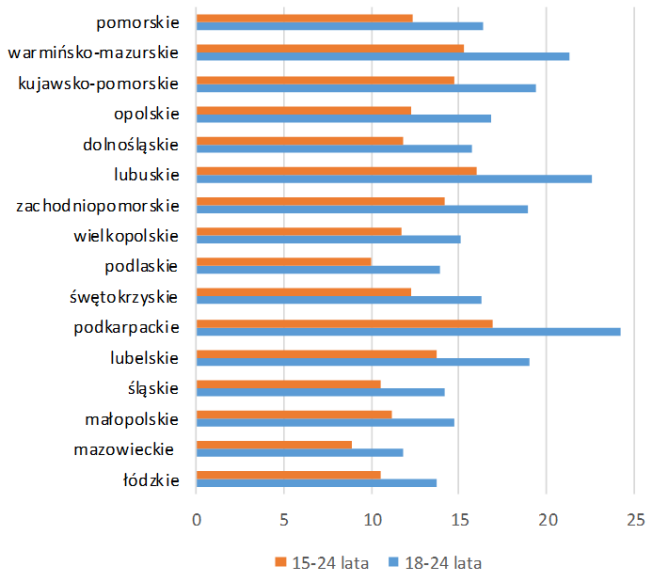
How are ICT-based training methods assessed by relevant players such as employers and training providers?	
Please give a short review of dominant opinions and discussions around the application of ICT-based methods in professional driving. (text, max. 150 words)	Feedback: e-learning is a teaching tool that allows flexible individual to choose the time and intensity of teaching. It is also possible to select the content of the driver's duties. The simulator allows you to teach safe behavior in simulated extremely difficult road conditions. You can repeat difficult simulations until you get a positive result.
If available: Brief list of references for the public perception of ICT-based training methods (e.g. articles in newspapers, websites) (bullet points)	• 4Truks.pl – Mobilny symulator Cargo • info.elblag.pl - Pierwszy w Polsce mobilny symulator jazdy odwiedził elbląski WORD • polskitraker.pl - Symulator Cargo 6D • etransport.pl - MOBILNE SYMULATORY CEZ CARGO • riskfocus.pl/6-stopni-swobody-innowacyjne-systemy-szkolenia-kierowcow/ • http://www.igielski.com.pl • http://www.pigosk.pl/ • http://elmol.pl/symulator
Do these discussions differ from the ones on EU level? How do EU policies influence discussions in your country? (text, max. 150 words)	In Poland as a country belonging to the EU there are similar problems in teaching drivers. Since a large number of Polish drivers work in international transport, training is targeted at meeting the requirements for transport in the EU.

Possible sources: own elaboration; employers´ (associations); training providers;

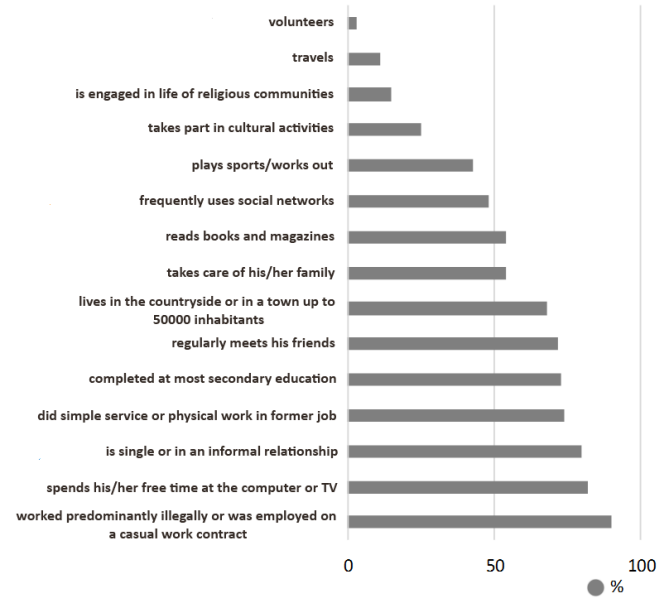
C. Target group-specific information

Question C.7

What is the situation of young (up to 29 years of age) unemployed people, specifically when labelled as NEET (not in employment, education and training) in your country?	
Please give a short overview of relevant statistical material (unemployment figures among this age group; share of NEETs among this age group) and refer to recent developments. Are there any campaigns on national/regional level and/or social programs encouraging the NEETs to enter PD training? (text, max. 300 words)	According to Eurostat, share of NEETs in Poland reached 15,5% in 2014 and was slightly higher than the average in EU-28 (15,4%). It is estimated that 1.27 million young Poles can be described as NEETs. According to certain age groups the share is as following: • 15-19 years – 3,8% (EU-28 average – 6,5%) • 20-24 years - 18,8% (EU-28 average - 18,0%) • 25-29 years – 21,2% (EU-28 average – 20,4%) Taking into account the fact that Poland has a high level of higher education scholarization, it can be stated that the actual share of NEETs is fairly high. It can be additionally confirmed with the high share of unemployment among the university graduates. A total of 7,5% of Polish NEETs is reported to actively search for job while 8,0% is professionally passive. 11,5% of this group reports its readiness to work which is higher than the EU-28 average of 10,9%. Situation of Polish NEETs is largely dependent on the region. The highest share is observed in Podkarpackie, Lubuskie and Warmińsko-Mazurskie voivodeships, mostly due to their overall underdevelopment and high unemployment rate. The overall NEET share in Poland is provided in the following graph:



Characteristics of a typical Polish NEET show a person who worked mainly illegally or on a mandatory contract, comes from the countryside or the a small town and completed at most the secondary education. Following graph presents the percentage of everyday activities taken by NEETs in Poland.



Since 2004 the intensity of stock usage in Poland has risen by 12-15%. while the rise of driver work intensity has risen by 20%. According to recent (Oct 2016) PwC "Driver job market in Poland" report there has been a deficit of 100-110.000 professional drivers in 2015. This number is likely to increase even more due to a

	fast increase of carriages which exceeds the increases in fleet and employment. The lack of workforce includes bus companies as well, especially in urban areas. In order to meet the transport performance needs, additional 20% of professional drivers need to be introduced onto the market. Due to the aforementioned necessity, TSL-related entities in Poland introduced a number of campaigns encouraging young individuals to become professional drivers. Unfortunately, most of theses campaigns have a limited range and recognition. The most comprehensive campaign introduced so far is called 'Gotowi do jazdy' (Eng. Ready To Drive). It is present on the Internet (www.gotowidojazdy.pl) as well as in social media (Facebook, Instagram). The main aim of the campaign is to acquaint young people with the pros of the occupation of professional driver by introducing its characteristics (mainly independence and working in one's own pace) and overall importance in the economy. Through the official website it is possible to take an interactive test on professional skills as well as to submit for becoming a professional driver or to change one's occupation. The campaign is run by Truckers Life Foundation (organization aiming at improving PDs' working conditions) and Trans.eu (a web portal dedicated to cooperation of haulage companies). Unfortunately, it has not yet created a desired impact, reaching around 400 followers on FB. A number of occupational development programmes in Poland (predominantly on regional level) provided funds for projects which resulted in schooling of candidates for professional drivers. The projects were run mostly by driver training centres.
Brief list of references for the statistical material and its interpretation (bullet points)	• *Eurostat regional yearbook 2015*, Eurostat Statistical Books 2015. • *Situation of NEETs on the Labor Market*, Saczyńska-Sokół S., Łojko M., Zeszyty Naukowe Uniwersytetu Przyrodniczo-Humanistycznego w Siedlcach. Administracja i Zarządanie, 2016, vol 35, pp.97-106. (available online: http://www.tstefaniuk.uph.edu.pl/zeszyty/archiwalne/108-2016_8.pdf)

	• *Wsparcie młodych osób na mazowieckim rynku pracy,* a report made by Mazowieckie voivodeship Labor Office (available online: http://obserwatorium.mazowsze.pl/pliki/files/Raport_finalny_z_badania_NEET_okl.pdf) • *Rynek pracy kierowców w Polsce*, a report by PwC and in cooperation with „Transport i Logistyka Polska" Employers' Association, October 2016 (available online: http://www.pwc.pl/pl/pdf/pwc-raport-rynek-pracy-kierowcow.pdf)
Are there any specific programmes or approaches available for this target group within PD training? (text, max. 150 words)	A number of PD trainings dedicated for NEETs have been organized by Job Offices and external entities through the financing from National Training Fund (a part of National Labour Fund which is aimed at VET activites for both employees and employers). Grupa CARGO has been implementing professional activation programmes by cooperating with theses entities.
Please give a short review of feedback and discussions from/by this target group around the application of ICT-based methods in professional driving. Are there methods to overcome their possible scepticism? (text, max. 150 words)	The feedback of the trainees reflects some skepticism about the simulations of real-world situations during the simulator. This skepticism can be reduced by demonstrating the ability to simulate various often difficult conditions.

Possible sources: own elaboration; reports by ministries, PES, country reports on EU level, training providers, employers(´ representatives)

Question C.8

What is the situation of unemployed people showing a long-term absence (without a job for 12 months or more) from labour market, specifically when are aged 50 years or older?	
Please give a short overview of relevant statistical material (unemployment figures – with long-term duration and among this age group;) and refer to recent developments. Are there any campaigns on national/regional level and/or social programs encouraging this social group to enter PD training? (text, max. 300 words)	Demographic processes in Polish society show that it is likely to become one of the oldest nations in the EU by 2050. It is estimated that by 2050 33% of the country's population (11.1 million people) will reach 65+ years, compared to current 15% (5.7 million). A total of 53% of 50-64 years old group has an occupation. The situation is worse for the 55-64 years old group in which the employment rate is significantly lower at 43,8%. By the end of 2015 people 50+ comprised 27.5% of the whole registered unemployed (429.8 thousand people). This percentage has been steadily growing since 2005 due to demographic changes. In spite of that, a slow (slower than in other age groups) but systematic growth of professional activity among the 50+ age group can be observed. During the 4th quarter of 2015 the total number of individuals employed in this group grew by 143 thousand (equivalent of 3,2%) while the overall employment rate grew from 32.4% to 33.4%. Still, statistics show that the average period of job search is significantly longer among this group, reaching 11 months for 50-55 age group and up to 40 months for 55-64 age group. 30.9% of the 50+ people unemployed in Poland have professional experience of 20-30 years. What is yet really concerning is that 4.6% individuals in this group has no experience on the job market and 7.9% has the experience of up to 1 year. The needs of 50+ age group were strongly highlighted in the Act on promoting employment and institutions on the job market (Dz. U. 2004 nr 99 poz. 1001). This act introduces a number of mechanisms which enable taking actions targeted specifically at the professional activation of these individuals, such as e.g. individualisation of the activities taken towards the unemployed. This takes into account e.g. the support in taking vocational courses. Additionally, when deciding to employ a person from that age group the employer is entitled to get a subsidy for first 12 months (taking into account individuals of up to 60 years old) or 24 months (for individuals above

	60 years old). The main condition to get the subsidy is to hire the unemployed for at least 6 months (for people up to 60 years of age) or 12 months (for people above 60) after the end of funding. A number of professional activation-targeted courses for PD candidates has been introduced in scope of numerous regional EU-funded programmes since the beginning of Poland's presence. Yet, all of these projects had a limited, regional level and were targeted to a rather small number of people. No national campaigns were introduced in this matter.
Brief list of references for the statistical material and its interpretation (bullet points)	• *Osoby powyżej 50 roku życia na rynku pracy w 2015 roku,* a report by the Ministry of Family, Labour and Social Policy, 2016. • *The special Status of Unemployed People Over the Age of 50 (Outline Issues),* Michajłow K., Studia Iuridica Lublinensia, 2016, vol. XXV, pp. 145-159 • *Situation of People over Fifty Years of Age on the Labor Market in Podparpackie Voivodeship,* Kuliga M., Janusz P. (available online: http://think.wsiz.rzeszow.pl/wp-content/uploads/2016/11/5.-Kuliga_Janusz_SYTUACJA-OS%C3%93B-W-WIEKU-50-NA-RYNKU-PRACY-NA-PRZYK%C3%BCADZIE-WOJEW%C3%B4DZTWA-PODKARPACKIEGO.pdf) • *Act from 20th April 2004 on promoting employment and institutions on the job market* (Dz. U. 2004 nr 99 poz. 1001)
Are there any specific programmes or approaches available for this target group within PD training? Please specify the role of ICT-training within these approaches. (text, max. 150 words)	No specific programmes or approaches are applied for this target group within the PD training. In spite of this, the driving simulators and e-learning are popular among the training taken in scope of professional activation projects. The main reason behind this approach is however the cost efficiency.
Please give a short review of feedback and discussions from/by this target group around the application of ICT-based methods in professional driving. Are there methods to overcome their possible scepticism?	The feedback of the trainees reflects some skepticism about the simulations of real-world situations during the simulator. This skepticism can be reduced by demonstrating

(text, max. 150 words)	the ability to simulate various often difficult conditions.

Possible sources: own elaboration; reports by ministries, PES, country reports on EU level, training providers, employers(´ representatives)

Question C.9

What is the situation of migrants from outside of the EU migrating to your country?	
Please give a short overview of relevant statistical material (migration figures; integration on the labour market) and refer to recent developments. What general pathways do exist for this target group to enter the domestic labour market? (text, max. 300 words)	There are two ways to enter Polish labour market by the migrants from outside of the EU. The most obvious way for the individuals having a temporary or a permanent residence is to obtain a work permit. Having this document, the foreigner is able to work for a certain time period for which the permit applies (no longer than 3 years). In most cases, the length of the permit is strictly related to the length of the obtained contract of employment. However, there is also a simplified way of entering the job market for the individuals coming from the following countries: Armenia, Belarus, Georgia, Moldova, Russia and Ukraine – they are entitled to work for up to 6 months during the subsequent 12 months based on a document issued by the employer. A so-called 'Statement of intention to entrust work to a foreigner' needs to be submitted to a relevant county Labour Office. The statement provides a basis for getting a resident working visa (given in the Polish outpost abroad) or a temporary residence (if the individual is already located in Poland). Even though, it is not equal to a contract of employment and only proves the right to be employed in a certain company. If the company is interested in employing an individual from the aforementioned countries for a period longer than 6 months, it needs to submit an application after 3 months of his/her work. Since a few last years, a steady growth in foreigner employment has been observed in Poland. It can be directly linked to the unstable political situation and military conflict in eastern Ukraine. Year 2016 was a record in that matter – ca. 123 thous. work permits were issued and more than 1.3 million Statements of intention to entrust work to a foreigner submitted. This corresponds to a 90% (work permits) and 65% (company-based statements) growth year-over-year. A dominant majority in both of these categories is represented by Ukrainians (82,8% and 97% respectively). Other nationalities comprise mainly Belarussians, Moldavians, Georgians, Armenians, Russians, Indians and Chinese. Migration to Poland as a whole has rather short-term and circulation character –

	an average Ukrainian migrant worked here 9 times, with an average stay of 5 months.. Transport in general (including both carriage of goods and passengers) has been one of the economy sectors with the largest number of permits issued (14.06% of the total number) A growing trend can be observed in this area – the share has been steadily growing, starting from 7.87% in 2012. No statistical data regarding the economy sectors is available for the company-based statements, but truck driver is listed as one of the most popular occupations. The most frequently chosen region by the foreigners is Mazowieckie voivodeship (including Warsaw) with 33.23% share of statements issued in 1st half of 2016 (no data for work permits is available). However, this percentage has been on decline since 2012 due to a growing number of job offers in other regions, especially in Lower Silesia (9.1%) and Greater Poland (9.08%).
Brief list of references for the statistical material and its interpretation (bullet points)	• Information of the Ministry of Family, Labour and Social Policy on hiring foreigners in Poland, December 2016. (Available online: https://www.mpips.gov.pl/gfx/mpips/userfiles/_public/1_NOWA%20STRONA/Analizy%20i%20raporty/cudzoziemncy%20pracujacy%20w%20polsce/zatrudnianie%20cudzoziemcow%202016.pdf) • Ukrainian citizens working in Poland – research-based report. Chmielewska I., Dobroczek G., Puzynkiewicz J. (Available online: https://www.nbp.pl/aktualnosci/wiadomosci_2016/20161212_obywatele_ukrainy_pracujacy_w_polsce_%E2%80%93_raport_z_badania.pdf)
Which legal framework is available for labour market access for people stemming from outside the EU? (text, max. 150 words) How is this legal framework related to EU-law? What does it mean for the actual acquisition	Polish legal framework covering the access to labour market through the recognition of vocational qualifications complies to the Directive 2005/36/EC of the European Parliament and of the Council on the recognition of professional qualifications and the Directive 484/2002/EC on the driver attestation. This framework as a whole entails a number of complex

of PD in your country? Are there any barriers which hinder working as a PD identified in scope of this framework?	procedures which need to be carried out separately in order to hire a driver from outside EU (including both the activities taken by the driver-to-be and the employer). They include: ○ procedures connected with the legalization of stay, ○ procedures connected with the legalization of work, ○ taking psychological and medical tests (all exams need to be taken in Polish languages), ○ finishing initial qualification & periodic training, ○ applying for a driver attestation certificate ○ Replacement of the driver's original driving license with a Polish license with a community code 95 added The biggest barrier in scope of that framework derives directly from its complexity. It also lack a desired consistency, since all of the procedures, applications etc. need be to taken and issued separately & through different state institutions.
What legal options do exist for migrants from outside of the EU for the recognition and validation of their qualifications? What methods are used? Are there any campaigns on national/regional level and/or social programs encouraging the qualified migrants to work as PDs? (text, max. 150 words)	According to Polish law, all foreigners applying for work as professional drivers are obliged to have EU Initial or Accelerated Initial Qualification training finished, as well as the periodic training. Their professional qualifications can be recognized and validated only regarding the driving license. Migrants working as professional drivers is a widely discussed topic in Poland, especially due to a gap of 30 thousand workforce in this area. Even though, no specific campaigns and social programs were carried out inside or outside Poland to encourage them. The possible reason may be the fact that the number of migrants working in this area has been constantly rising and is possible to rise even more. PwC in its report notes however that this tendency may stop in a few years due to poor demographics in the countries of origin of the migrant majority (primarily Ukraine and Belarus). This may result in a need to obtain more workforce from more distant countries, such as e.g. Kazakhstan.

Brief list of methods of recognition and validation of qualifications for this target group (bullet points)	• In accordance with Directive 2003/59 /WE, the provisions contained therein shall apply: • drivers of the EU countries and other drivers (outside the EU) who are employed in the EU countries or who work for such companies • Drivers of vehicles for which a driving license is required: C1, C1+E, C, C+E, D1, D1+E, D, D+E or equivalent licence • The driver is subject to compulsory initial qualification and mandatory periodic training
Are there any specific programmes or approaches available for this target group within PD training? Please specify the role of ICT-training within these approaches. (text, max. 150 words)	According to the data aforementioned in the statistics, driving schools foresee an increasing market potential in customizing their training services for the needs of individuals willing to work temporary or permanent as professional drivers in Poland. E-learning has been found especially useful in schooling foreign PD candidates. Since the vast majority of them are Ukrainian- or Russian-speakers, ICT-training provides the ability to teach them more efficiently than the Polish-speaking trainers in classes. It also gives them the ability to start the course even before coming to Poland and shorten the overall period of preparation to work as a professional driver. Eg. the e-c@rgo e-learning platform enables to cover the whole training in Russian language which is well known by the vast majority of the immigrants coming from Eastern Europe.
Please give a short review of feedback and discussions from/by this target group around the application of ICT-based methods in professional driving. Are there methods to overcome their possible scepticism? (text, max. 150 words)	The possibility of taking advantage of Russian language training is positively received. This eliminates the language barrier for citizens of Ukraine, Belarus and other eastern countries.

Possible sources: own elaboration; reports by ministries, PES, country reports on EU level, training providers, employers(´ representatives), legal acts, ministries´ papers and information sources

7.3 IO2 questionnaire filled in for Finland

ICT-INEX Project

Questionnaire

O2 –Analysis of the legal, organizational and technological context of PD candidate training

Prepared by: 3s research laboratory (IO-leader)

Country:	
Filled-in by:	
Date of delivery:	

By implementing this survey, ICT-INEX intends to collect material for a **guide dedicated to industry members** which will indicate the current state of PD candidate training in Europe, taking into account the ICT context and the situation of the end-users on this part of job market. This guide will provide a basis for the further tasks in the project.

Please fill in this questionnaire by referring to your **national**, but as far as possible also to the **European** context. As sources of information and methods of research you are – besides your **own expertise** – invited to use **desk research** and brief **expert interviews**, the latter e.g. with employers(´ representatives), training providers or ministries´/PES´ representatives. The final decision upon the concrete mix of research methods will be made by the responsible national partners – according to their specific demands and prerequisites. As additional source, the final report of WP2 of the project ICT Driver is attached. You will find further remarks and hints in the questionnaire. With your answers, please try to stay brief and to get to the point.

Please return the filled-in questionnaire by **March 3rd, 2017** to 3s research laboratory, Viktor Fleischer (**fleischer@3s.co.at**). You can also refer to this address in case of any questions and unclarities in regard of this questionnaire.

A. Context of professional driving and professional drivers´ training

Question A.1

How can PD training be accessed?	
Brief list of access pathways (bullet points) Please underline the most important ones.	• Vocational school for young students (3 years) • Driving licence, professional requirements training courses and professional driver skills training (6 month) • Driving licence and professional requirements training courses • Updating training courses • Apprenticeship training
Short description of access pathways and their relation to each other (text, max. 300 words) Please give short descriptions of these pathways, e.g. what prerequisites are in place; who are the main target groups, etc. Make us understand their relation to each other and their relation to the education and training landscape. What possible *(financial) barriers* do exist to access PD training? If available, give dimensions in terms of annual take-up.	Vocational school for young students is three years training for vocational upper secondary qualification in Logistics. Most of students at this training are aged from 16 – 19 yo. Possible for all after primary school. Training is free of charge. Driving licence, professional requirements training courses and professional driver skills training is mainly for unemployed and adult jobseekers. Training is free of charge for the student. Driving licence and professional requirements training courses are for individual persons and companies and student must pay costs by himself (or employeer). Usually costs are 3000 to 8000 € and in many times too expensive for individual person. Updating training courses is pathway to keep PD permission for people who got current class driving license before year 2008. Apprenticeship training is the best pathway to the working life, but difficult for students under 18-years (because driving license legislation). Usually apprenticeship training is a combination of apprenticeship training and a labour policy education

Possible sources: own elaboration; legal acts; training providers; freight carriers associations

Question A.2

What is the legal context of PD training?	
Brief list of relevant acts (bullet points) Please underline the most important ones.	• Law of driving licences • Law of professional qualification • Law of road transport • Health and driving ability • Law on Adult Education-, Vocational Education and Training
Short description of relevant legal acts and their relation to each other (text, max. 300 words) Please give short descriptions of these legal frameworks, e.g. what exactly do they regulate; to which policy field do they belong (education, labour law, social law); are they on federal or regional level; are there other (e.g. sectoral) regulations complementing them; Make us understand their relation to each other and the restrictions and demands stemming from there.	Law of driving licences that is contribution for EU directive 2006/126 Law of professional qualification that is contribution for EU directive 2003/59 Law of road transport where is exactly regulated driving license class for every vehicle type Health and driving ability Law on adult education-, vocational education and training gives the legal framework for PD training as a part of vocational education

Possible sources: own elaboration; legal acts; ministries´ papers

Question A.3

What is the scientific context of using ICT training tools, including the innovative solutions?	
Short description of scientific discussion and references available in your country (text, max. 300 words) Please give short descriptions of the discussion around and the usage of scientific results on ICT training tools in PD. Put a focus on innovative approaches such as augmented reality, virtual reality, gamification.	Active discussion of ICT based training effectivity, including self-learning, webinars, distance learning, ICT supported on-the-job learning, different types of simulators and simulations. ICT-based training is still not in active use at this area. Some test cases and pilots are running but those results are not clear yet.
What scientific references reflected on EU level are known and used in your country? (text, max. 150 words)	
Brief list of references (bullet points) Please underline the most important ones.	• ... •

Possible sources: own elaboration; scientific papers, industry reports, training providers

B. ICT-based training methods and tools in professional driving

Question B.4

What forms of ICT-based training are used for PD?	
Short description of application of ICT-based training methods in your country (text, max. 300 words) Please give short descriptions of the application of such methods, e.g. which methods are used (with a focus on innovative methods such as augmented reality, virtual reality, gamification); who are the main actors/organisations applying them; what role do they play within PD training in your country.	Driving simulators based learning. Simulator based training is combination of pre planed exercises (examples are listed below) and using instructor help and advice. **Basic driving** 6 hours to 15 hours, learning approach: student focused, Price comparison: very cost-effective (1:5), Percentage of the total time of a training program allocated to simulator use: driving20%, other 5%, how many trainees/drivers can be trained daily per simulator: 4-12, The training capacity (i.e. how many trainees can be trained) of SBT in comparison with that of training through real-life driving conditions: you can train more trainees with SBT **Rationalized use of a vehicle** 1hour to 2 hours, learning approach: student focused, Price comparison: very cost-effective (1:5), Percentage of the total time of a training program allocated to simulator use: driving20%, how many trainees/drivers can be trained daily per simulator: 4-12, The training capacity (i.e. how many trainees can be trained) of SBT in comparison with that of training through real-life driving conditions: you can train more trainees with SBT **Safety** 1hour to 10 hours, learning approach: student focused, Price comparison: very cost-effective (1:5), Percentage of the total time of a training program allocated to simulator use: 5%, how many trainees/drivers can be trained daily per simulator: 4-6, The training capacity (i.e. how many trainees can be trained) of SBT in comparison with that of training through real-life driving conditions: no difference or a little more **Eco-driving** 1hour to 2 hours, learning approach: student focused, Price comparison: cost-effective, Percentage of the total time of a training program allocated to simulator use: ?, how many trainees/drivers can be trained daily per simulator: 4-12, The training

	capacity (i.e. how many trainees can be trained) of SBT in comparison with that of training through real-life driving conditions: no difference or a little more Computer based learning. Computer based learning (training) is combination of theoretical material, applied exercises and videos/multimedia etc. One topic for example is Road Traffic Law; Law of work- and driving hours; Language skills; C and CE license driver training; traffic education, transportation, loading, proactive driving, problem-and hazardous substances, driving conditions, handling the heavy vehicles. Main actors are training institutes
How is the *application of ICT-based training methods legally regulated*? (text, max. 150 words)	Simulator training is allowed by law (Law of driving licences and Law of professional qualification) as a part of driving training within limits (law defines certain requirements for the simulator: screens or equivalent and also vehicle controls which have to be realistic enough. Law also defines the number of hours that can be used for simulator training per student. In driving license training 20 % of driving lessons can be fulfilled with simulator and 80 % with a real vehicle. Driver CPC training 4 of 10 and 8 of 20 hours of personal driving training can be trained with simulator in initial professional competence training). Other new and different training methods are mostly accepted for training pilots (also allowed by law within limits e.g. pilot training may need permission from Ministry of Transport). Computer based learning (distance learning and blended learning) is accepted by law for driving training, but only with support of instructor

Possible sources: own elaboration; legal acts; training providers; freight carriers associations

Question B.5

How are ICT-based training methods combined to maximize the educational efficiency?	
Please give a short introduction into successful and innovative training settings, i.e. the combination of ICT-based methods. (text, max. 150 words)	PD training is shared to modules including some needed skills each. Trainees is making test after they can continue to next module. Some modules are possible to make by ICT based systems partly or at all.
Brief list of good practice examples for ICT-based training settings (see above) (bullet points) Please underline the most important ones.	• Combination of simulator based training and training by real vehicle: e.g. - Vehicle manoeuver exercises at the beginning with simulator. Saving time and costs because you don't have to do same exercises with real vehicle anymore when continuing driving exercises. - Defensive driving exercises in simulator and economical driving lessons with the real vehicle. • Combination of computer based learning and practical exercises: e.g. studying bus lines with computer before practical driving lessons • Combination of computer based learning and simulator training: computer program (Moodle, Context LMS etc) gives you the theoretical part of studies e.g. vehicle maneuvering, vehicle controls, basics of defensive driving etc and then you can test your knowledge with practical exercises in simulator
Brief list of references to evaluation studies available for these training efforts (bullet points)	• ... •

Possible sources: own elaboration; employers´ (associations); training providers;

Question B.6

How are ICT-based training methods assessed by relevant players such as employers and training providers?	
Please give a short review of dominant opinions and discussions around the application of ICT-based methods in professional driving. (text, max. 150 words)	At public discussion ICT-based training is widely estimated to be most important part of training process in the future. It doesn't mean that all training is possible to change ICT-based. Some part of training is still important to give in the classroom or some other face to face method (for example ICT supported on-the-job learning).
If available: Brief list of references for the public perception of ICT-based training methods (e.g. articles in newspapers, websites) (bullet points)	• ... •
Do these discussions differ from the ones on EU level? How do EU policies influence discussions in your country? (text, max. 150 words)	

Possible sources: own elaboration; employers´ (associations); training providers;

C. Target group-specific information

Question C.7

What is the situation of young (up to 29 years of age) unemployed people, specifically when labelled as NEET (not in employment, education and training) in your country?	
Please give a short overview of relevant statistical material (unemployment figures among this age group; share of NEETs among this age group) and refer to recent developments. Are there any campaigns on national/regional level and/or social programs encouraging the NEETs to enter PD training? (text, max. 300 words)	The number of unemployed persons went up from the year before most in the age group of those aged 18 to 24. The number of unemployed persons aged under 25 increased by over 6,700, which is 15 per cent more than one year earlier. The number of unemployed women grew in the age group by nearly 19 per cent from 2013 (Statistics Finland)
Brief list of references for the statistical material and its interpretation (bullet points)	• Statistics Finland 2016
Are there any specific programmes or approaches available for this target group within PD training? (text, max. 150 words)	- In Finland is law that guarantee work or study place for all under 29 yo. persons at least 3 month after they leave unemployed. - Training program for young adults (18 – 29v.) that don't have any vocational upper secondary qualification
Please give a short review of feedback and discussions from/by this target group around the application of ICT-based methods in professional driving. Are there methods to overcome their possible scepticism? (text, max. 150 words)	Feedback of ICT-based training methods are welcome for current age group. PD driver training got not lot of scepticism from trainees

Possible sources: own elaboration; reports by ministries, PES, country reports on EU level, training providers, employers(´ representatives)

Question C.8

What is the situation of unemployed people showing a long-term absence (without a job for 12 months or more) from labour market, specifically when are aged 50 years or older?	
Please give a short overview of relevant statistical material (unemployment figures – with long-term duration and among this age group;) and refer to recent developments. Are there any campaigns on national/regional level and/or social programs encouraging this social group to enter PD training? (text, max. 300 words)	Over 50 years old, long-term unemployed persons have only small possibility to find new job. One of best practice is to get new profession (one powerful way is training e.g. bus driver)
Brief list of references for the statistical material and its interpretation (bullet points)	• Statistic Finland •
Are there any specific programmes or approaches available for this target group within PD training? Please specify the role of ICT-training within these approaches. (text, max. 150 words)	Public authorities buy training services for this group continuously. Role of ICT-based training in these courses are mostly limited to simulator - and distance learning based driving training.
Please give a short review of feedback and discussions from/by this target group around the application of ICT-based methods in professional driving. Are there methods to overcome their possible scepticism? (text, max. 150 words)	

Possible sources: own elaboration; reports by ministries, PES, country reports on EU level, training providers, employers(´ representatives)

Question C.9

What is the situation of migrants from outside of the EU migrating to your country?	
Please give a short overview of relevant statistical material (migration figures; integration on the labour market) and refer to recent developments. What general pathways do exist for this target group to enter the domestic labour market? (text, max. 300 words)	Biggest group of migrants in Finland are from Arabic countries, Russia and from Northern part of Africa. Every migrant have possibility to study Finnish language and training for Finnish society routines. Finland also give possibility for vocational training as many as possible. PD training is one of most popular at migrants group.
Brief list of references for the statistical material and its interpretation (bullet points)	• http://www.kotouttaminen.fi/kotouttaminen/alueet (in finnish) •
Which legal framework is available for labour market access for people stemming from outside the EU? (text, max. 150 words) How is this legal framework related to EU-law? What does it mean for the actual acquisition of PD in your country? Are there any barriers which hinder working as a PD identified in scope of this framework?	People stemming outside of EU will have work permit immediately after they got permit of residence. Finnish laws are at same line as EU laws of migration. Finland accept EU driving licences but outside licences outside EU need usually more training (higher driving licences than B)
What legal options do exist for migrants from outside of the EU for the recognition and validation of their qualifications? What methods are used? Are there any campaigns on national/regional level and/or social programs encouraging the qualified migrants to work as PDs? (text, max. 150 words)	Almost only way for PD work is government paid training courses, because of financial reasons. Public authorities organize PD training for migrants continuously.
Brief list of methods of recognition and validation of qualifications for this target group (bullet points)	• ... •
Are there any specific programmes or approaches available for this target group	There different kind of funding's for training migrant's and they are only for migrants and immigrants, but the approaches are very same kind as in "normal" PD

within PD training? Please specify the role of ICT-training within these approaches. (text, max. 150 words)	training – only the language support is usually implemented with ICT (computer based programs and driving simulators)
Please give a short review of feedback and discussions from/by this target group around the application of ICT-based methods in professional driving. Are there methods to overcome their possible scepticism? (text, max. 150 words)	

Possible sources: own elaboration; reports by ministries, PES, country reports on EU level, training providers, employers(´ representatives), legal acts, ministries´ papers and information sources