PRO DRIVER
SPRINTER

OUTPUT 4:
Sprinter Pro Driver - Training methodology and trasferability guide

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1. Introduction

Light Commercial Vehicles (LCV) under 3.5 tons are an important part of the vehicle fleet and over the past years have taken over a consistently increasing portion of the transport capacity in Europe. The transport with Light Commercial Vehicles is constantly growing. This fact also results in an increase in traffic accidents in this sector.

However, as things stand today, due to the small scaled nature of the companies in the industry, training courses for LCV drivers are seldom implemented, as hardly any time or financial resources for education and development of the drivers are available. Hence the need for uniform training content, as well as for developing methods and for making the training subject matter available to the drivers cost-effectively and independent of time and place.

This document "Training methodology and trasferability guide" suport trainers and VET providers in implementing the Sprinter pro Driver -training into the existing training and use the material as part of blended learning training. The training material developed in this project can also be used for self-study and as part of company-specific training.

2. The drivers' needs and regulations

The needs of LVC drivers in the partner countries were identified by examining driver profiles, training needs and labor market skills. Analysis of the survey results showed that training needs cover the following areas: Load Safety, Transport Planning, Vehicle Technology, Communication and Customer Service, Health, Occupational Safety and Soft Skills. Almost all drivers considered all the competences defined by the partnership as very important and important.

The Competence Map was designed to accurately reflect the topics mentioned in the survey and listed all the competences needed for the LCV profession. The Competence Map identified very specificly the learning units, learning outcomes, knowledge, skills, qualifications and taxonomy needed for the different areas of LVC drivers expertise.

Based on the survey, LCV drivers also stated that they mainly use smartphones at work and in private. Therefore, educational materials were designed to be available online for training and / or to the smartphone forum community.

3. The potential of the e-learning for professional drivers' training

The Spriter Pro Driver -project explored state-of-the-art technology for mobile learning technologies and games that can be useful in training LCV (Light Commercial Vehicle) drivers. The purpose of this is to support trainers and vocational training providers in the use of ICT technologies in the training courses for LCV professional drivers.

During this investigation, it was identified existing applications and games for LCV driver training collected through the Google+ flagging system. The project have also provided trainers with general tools and platforms for creating and delivering interactive materials, course management, etc.

The Spriter Pro Driver -project identified existing apps and games for LCV drivers training, collected through the Google+ online bookmarking system; project have also presented generic tools and platforms for trainers to create and deliver interactive material, manage courses, etc. Some of these tools will be used to create interactive educational resources.

These technologies will provide support to VET providers and trainers in their courses for professional LCV drivers and will support LCV drivers in their autonomous learning process.

3.1. Implementing and integrating ICT tools in training courses

The research showed different ICT tools and methodologies considered appropriate for the training of the drivers. Mobile learning has gained widespread use and distribution at a relatively low cost. The potential for implementing it as an educational tool has already been applied in other fields; however, in the transport sector this potential has not yet been realised. Smartphone's, tablets and other mobile technologies are used by drivers in their daily activities, but only for business purposes. ICT technologies and, in particular, mobile technologies can provide new opportunities for people who are often on the road.

The ability to learn anywhere and at any time is the most distinguishing feature. In addition, mobile learning can provide new opportunities for learners and teachers, including the flexibility of content creation and sharing, the support for communication and collaboration, the availability of location-based tools, and the support of new forms of learning such as game-based learning that can contribute to increased motivation and engagement.

3.2. The identification of the most suitable ICT tools to use in training courses for professional LCV drivers

The partners have identified useful Apps to train drivers on specific topics included in the Directive 2003/59. The existing apps and games identified by the research cover the following educational areas: "Load Securing", "Route planning", "Vehicle Technology", "Health" and "Safety work".

There are also a large number of games and simulators potentially used to acquire languages or other skills required of the drivers.

The research also included tools to create apps and games. It is possible to use free tools to create separate training apps or games with the needed content. These tools are particularly suitable for trainers and teachers.

The other tools identified by the research to support trainers are authoring tools: an e-learning authoring tool is a software application which teachers/trainers can use to create e-learning resources on the basis of multimedia content, and which they can package in different export formats (typically HTML5 on the web) for delivery to the learners. These tools can help generate, collect, organise and present didactic content to end-users in the form of single lessons or whole courses.

4. The Training path

The Sprinter Pro Driver project identified 6 general training areas that must be covered by the Sprinter Pro Driver Training Path. The Sprinter Pro Driver Training Material is EQF Qualified Level 2-3, allowing trainees to:
- Work or study with some degree of independence
- Take responsibility for work or study assignments
- Adapt your own behavior to circumstances to solve problems

4.1. Innovative contents for the training of LCV professional drivers

The 6 areas are covered in the training path with educational modules: Load Securing, Transport Planning, Vehicle Technology, Communication and Customer service, Health and Safety at Work. In addition to the 6 areas, partners have identified a list of soft skills that LCV drivers should have.

4.1.1. Load Securing

- **Aim:** to describe the different aspects related to the loading and unloading of goods. To describe the different types of securing cargo, the auxiliary means and the volumes of the cargo space.
- **Contents:** description of different types of goods and vehicles, the basic rules for transportation of particular goods, the stowage and lashing techniques and equipment, the physical forces to which the payload is subjected, and the responsibilities connected to the load.
- **Duration**: 4 hours.

4.1.2. Transport Planning

- **Aim:** to define the basic elements for the preparation of an appropriate route. To describe the different aspects related to the transport planning and plan route, deal with driving vans.
- **Contents:** description and identify the different type routes and elements selection, deliver the goods to the client and finalize the transport.
- **Duration:** 4 hours

4.1.3. Vehicle Technology

- **Aim:** to define the basic elements, parameters and equipment of vehicles; apply ecological driving in order to minimise consumption and polluting emissions. To describe the different types of hydraulics, electric and electronic systems on board of a vehicle defining the correct use and the actions in case of failure.
- **Contents:** description of the basic characteristics of the vehicle, how to have dynamic driving, management of the gears, brakes, management of the tires and the description and influence of forces applied to the movement of a vehicle. Specific features of hydraulic vacuum servo brake circuit, the limits in the use of brakes, the combined use of brakes and how to act in case of failure. Use of ICT technology onboard for drivers safety and eco-driving. Maintenance of the vehicle according to parameters and technical characteristics.
- **Duration**: 7 hours.

4.1.4. Communication and Customer service

- **Aim:** to define the basic rules to support the basic elements of communication, documentation, punctuality, processing of documentation. To describe the different types of documentation and their processing, the forms of communication with verbal and non-verbal clients.
- **Contents:** description of the basic elements of communication, documentation, punctuality, information to the user of the service and security guarantee and service satisfaction, company image, processing of documentation.
- **Duration: 4 h.**

4.1.5. Health

- **Aim:** to describe the basic rules to support the health of the drivers, the information related to the risk on the road and basic elements of communication. To describe the different types of information related to the prevention of occupational risk and the first aid.
- **Contents:** description of the basic rules which support the health of the drivers, the occupational risk, the movements of the load, activities to improve physical and mental conditions of the drivers, the basic elements of communication and collaboration, the risks on the road.
- **Duration:** 2,5h.

4.1.6. Safety at Work

- **Aim:** to describe the basic regulation of safety at work, Personal Protection Equipment, working time, and other laws related to the safety working. It describes security devices as well and how to drive safely.
- **Contents:** description of the basic rules which support the safety at work , correct communication, environmental protection, safe and economical basic driving, etc.
- **Duration: 5 hours**

4.1.7 Soft Skills

- Personality effective
- Self-presentation in public
- Reliability
- Accuracy
- Stress-resistance
- Ability to work independently
- Working techniques and problem solving
- Information and communication strategies
- Way of thinking and acting based on quality
- Learning strategies
- Autonomy and sense of responsibility
- Capacity to communicate and to work in group
- Capacity to manage conflicts
- Behavioural forms
- Capacity to work under pressure
- Ecologic behaviour

Each module was divided into units of learning outcomes. The subtopics are the smallest learning elements contained in the main topic; they describe how the topic can be divided within the training according to the contents; each subtopic was described in terms of Learning Outcomes. They define what the participant is expected to know after having participated in a training path on the subtopics.

Sprinter pro driver partnership for each learning module/subtopic/learning outcome listed some resources to achieve the learning outcomes. The resources are both existing materials that partners suggest for the training as well as interactive material produced

by Sprinter pro driver project. The partnership created different interactive educational material to cover at least two Learning Outcomes for each educational module. The interactive material consists of interactive videos or slides, apps and games usable with mobile devices.

5. Defining the Training Methodology with Sprinter pro Driver

Essential for the implementation of Sprinter pro driver training paths are:

5.1. Motivation

Motivation is a key factor for drivers (and for trainers). The trainers should adopt a positive and motivating approach in using ICT and material created by the partnership.

5.2. Gamification

The gamification process is directly related to the motivation. It refers to the integration of game design elements in training paths. This methodology will make the educational activities more enjoyable and motivating.

5.3. Technology

The added value of Technology for learning resides in access to:
- Resources.
- Information retrieval tools.
- Sharing knowledge.
- Communication tools.
- Mobile fruition.
- Interactivity of the material.
- Flexibility in the training path.
- Reduction of time and need to move in a specific place for the training.

Technology also introduces a new form of knowledge and pedagogy based on the idea that knowledge is distributed across a network of connections and that learning consists of the ability to construct and traverse those networks.
The trainers and project partners should encourage drivers to use ICT tools and support activities to put in practice their potentials.

5.4. Just-in-time learning

Sprinter pro driver material supports just in time learning approaches. The drivers will have the possibility to learn when and where they need it. For example, they could review the rules to load properly their truck just before the loading procedures or refresh their knowledge about driving or working time.

5.5. Group Oriented Activities (online platform)

Learning can be seen as a process of manipulating data and information to give meaning by communication with others. In that sense collaborative learning is another way of organizing learning in which trainees learn by externalizing knowledge among each other and constructs new knowledge. These dynamics can be achieved through the online platform created by the partnership. The project partners and the trainers involved in the testing phases should stress these possibilities and support the access to the platform for drivers and other trainers.

5.6. Professional Development of Teachers

This development of the trainers' competences needs to be an integral part of the model. Trainers do not change their pedagogy overnight, of course. Therefore trainer's preparation and readiness are of an on--going concern. The trainers will be one of the driving factors for a successful implementation of Sprinter pro driver project's results. All these elements should be kept in mind when we are approaching to implement the Sprinter pro driver methodology.

6. Experiences of pilot training

The training material produced in the Sprinter Pro Driver project was piloted in three different ways: pre-residency with drivers, fine-tuning with trainers, and fine-tuning with drivers.

In the pre-pilot, the trainers show the skills map and the traineeship pathway to the drivers and ask them about their content and relevance to the job and their needs. Thereafter, interactive training materials were reviewed and independently tested. Feedback was collected from the pilot to develop training material and training path.

The main aims of fine tuning for trainers was to enhance the use of ICT tools during training sessions with LCV drivers and to get useful feedback about the LCV driver Competence map, the created training path and the interactive educational resources produced by the project partners.

The fine tuning for drivers was about to test the Sprinter Pro Driver material. The trainers integrated their standard curriculum and materials with the interactive educational resources produced by the Sprinter Pro Driver partners. The trainers tested the training path and the Sprinter Pro Driver training material. Feedback was collected from the fine tuning pilot to evaluate training material and training path.

6.1 Results from pilot training

The pilot training was conducted using the blended learning method, where the trainer included some or all of the Sprinter Pro Driver material into the training. As LCV driver training can be a whole new set of training, it was good for the trainer to be actively involved in the discussions during the training. In this way he could monitor the necessity of the topic being discussed and the level of the subject being trained. The Sprinter Pro Driver material has been made interactive, which also allows for self-study of LCV drivers. Use of the material then requires a good and functional internet connection.

After the pilot training, feedback was collected on the evaluation of the training path, methodology and material. This was done in all partner countries. As a result, there is a complete good felling with the relevance of all the training material. Both the trainers and drivers think that the material is very complete and useful, easy to use and very interactive. In relation to the content of the training path, in general they think that all modules are excellent and good. Drivers stated that the training material contained areas that they did not know were related to the LCV driver profession (such as working time regulations, safety equipment).

As a positive summary of the pilot trainings, the training path, methodology and material produced by the Sprinter Pro Driver project are of high quality, up-to-date and focused on the work of the LCV driver.

As a more critical summary of the pilot training, the material is adapted better to computer and tablet than to a mobile phones, more informative and better pictures are needed, and the language of the national material should be checked and possibly video added in their own language.

Things to keep in mind- good:
- internet connection
- computers and tablets are available
- the language of the material used may cause problems
- the content of the training provokes discussion if there is something completely new to the audience

7. Recommendations and conclusions

Competence Map, Training Path, Training Methodology and Interactive Training Material implemented in the Sprinter Pro Driver project support up-to-date training for LCV drivers.

The positive feedback from the pilot training on the Sprinter Pro Driver training package is overall excellent and was considered necessary. Mobile devices were utilized in the trainings and the feedback received from them should be taken into account in the next implementations of the trainings.

At the beginning of the Sprinter Pro Driver project, a comprehensive study of the job responsibilities and requirements of the LCV driver was undertaken. This laid the foundation for Competence Map work. Thereafter, areas of learning material and learning outcomes were designed, followed by the creation of training material.

Making interactive material was not particularly difficult according to the project partners, but in the beginning it was challenging to adopt a new program (H5P) and a way to make the material. Now, that the material is ready and piloted, the project partners say it was worth the work.

The training methodology included driver motivation, game elements, technology utilization, on time learning, group learning perspective and professional development of the trainer. The Sprinter Pro Driver project succeeded in assembling a training package according to the chosen methodology.

The Sprinter Pro Driver training package opens up new opportunities to develop training that enhances driver safety and well-being. The now tested interactive training model also supports and promotes the professional development of trainers and challenges trainers to revamp their teaching methods and also to renew their skills in relation to the driver's daily work.